

2019 Capital Project Detail Report

Project Title: Automatic External Defibrillators (AED) Replacement Program

Project Number: Z1057

Department: Barrie Fire & Emergency Services

Summary: Replacement Program for LIFEPAK 15 Monitor/Defibrillator. LIFEPAK 15 is the standard monitor/defibrillator used during the vast majority of medical emergencies.

Rationale: A long-term replacement program was not put in place when the first eight - LP 15 units were purchased. Given the cost, potential for costly repair and the constantly evolving technology, a replacement program is needed to ensure consistent service delivery with properly maintained and functioning equipment. The proposed replacement program would spread out costs over a number of years and still ensure BFES has a current and well maintained inventory of defibrillators to ensure continuity of service.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$100	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170
Capital Purchase - Forecast	\$0	\$0	\$70	\$85	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$155
Total	\$100	\$70	\$70	\$85	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$325

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$100	\$70	\$70	\$85	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$325
Total	\$100	\$70	\$70	\$85	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$325

2019 Capital Project Detail Report

Project Title: Fire Communications Centre - Emergency Services Campus

Project Number: 000553

Department: Barrie Fire & Emergency Services

Summary: Fire and Police will co-locate their emergency communications centres at the Emergency Services Campus and Fire Headquarters in 2020. The project budget does not include fire dispatching desk and chairs at the Emergency Services Campus on Fairview.

Rationale: Specialized 24/7 desks and chairs are required for the fire emergency communications centre. The current equipment will remain at 155 Dunlop Street West to be used by police and fire. Dispatch desks and equipment need to be purchased for the Emergency Services Campus.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95
Total	\$0	\$95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95
Total	\$0	\$95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95

2019 Capital Project Detail Report

Project Title: Fire Hose Replacement

Project Number: Z52

Department: Barrie Fire & Emergency Services

Summary: Fire Hose upgrade and replacement program for current fire hose.

Rationale: Current BFES fire hose does not meet the Section 21 guidance note, or the NFPA 1410 standard establishing the minimum required water flow for a residential fire. Upgrade to current standards, and the establishment of a replacement program will be undertaken. Fire Hose lifecycle is primarily activity dependent. The environment, nature of the exposure and duration limit the lifecycle. Alternate interventions to extend the lifecycle are not available.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$80	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160
Total	\$80	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$80	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160
Total	\$80	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160

2019 Capital Project Detail Report

Project Title: Fire Mobile Response Technology Upgrade

Project Number: 000769

Department: Barrie Fire & Emergency Services

Summary: Upgrade of mobile response solutions that provide critical integration between units in the field and available information systems. Data is shared between communication centre, responding apparatus and the scene in real time providing a critical view of the event. This technology upgrade is on a system installed 8 years ago and has reached life cycle.

Rationale: Upgrade mobile response solutions that integrate critical systems. Information from many systems needs to be easily available in a secure environment and alerts and updates received in real time during emergency responses.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30
Total	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30
Total	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30

2019 Capital Project Detail Report

Project Title: Fire Training Facility Temporary Expansion

Project Number: 000642

Department: Barrie Fire & Emergency Services

Summary: Continue construction on the current facility to meet operational needs and reduce the rental of external or non- City facilities.

Rationale: BFES is obligated to provide all staff with adequate training. Recommendations, after the line of duty death of Barrie Firefighter Bill Wilkins referenced the need to provide more fire training. BFES is currently using our temp facility to its full potential and require expansion of the facility to meet best practice and industry standards. Increasing legislative requirements and industry standards across our service delivery areas require us to have adequate training facilities and this addition will be an interim solution until a permanent facility is built.

BFES has rented facilities outside the City, but this has become problematic. When attending remote training grounds, it creates extra implications to the training budget, such as travel time, tuition and overtime pay required to send crews outside the City. On duty personnel are required every day to cover the City, so if training is required outside the City it requires overtime. A normal live fire training session would require a minimum of 8 to 10 firefighters on overtime. The costs of renting an outside facility is another expensive cost and there are limited resources available in the immediate area, therefore compounding the implications of the overtime budget, due to travel times. Another problem when going outside the City for training is the availability of other sites for our usage. Many departments have their sites already booked for their own personnel, if not other outside clients.

It has been identified that the acquisition of a permanent site could be another 8 to 10 years away and this places BFES in a very precarious position in not realizing its training obligations. Such failure will also fall back on the Corporation; if a serious injury to a firefighter were to happen and it was found that it was due to the lack of training, it could lead to charges against the City under the OH&S Act.

The use of a training facility in Barrie would permit BFES to meet its requirements under the Occupational Health & Safety Act, the Section 21 Committee, FPPA, and NFPA Standards. This facility could also be used as a means of revenue generation by the City by renting it to other local fire services, which would offset some of the operational costs. Any training props that were acquired for a temporary site could be moved and re-used at the permanent site.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$100	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Capital Purchase - Forecast	\$0	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Total	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

2019 Capital Project Detail Report

Project Title: Heavy Extrication Equipment Replacement

Project Number: BF1006

Department: Barrie Fire & Emergency Services

Summary: Replacement of heavy extrication tools.

Rationale: The existing heavy extrication tools are at the end of their useful life due to age, level of service (technology and safety), and financial efficiency. The proposed equipment is battery operated which reduces trip hazards, is easier to transport and may be used indoors. The new tools are also more cost-effective, more versatile and safer to operate.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$80	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$120
Capital Purchase - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$45	\$45	\$45	\$0	\$0	\$135
Total	\$80	\$40	\$0	\$0	\$0	\$0	\$45	\$45	\$45	\$0	\$0	\$255

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$80	\$40	\$0	\$0	\$0	\$0	\$45	\$45	\$45	\$0	\$0	\$255
Total	\$80	\$40	\$0	\$0	\$0	\$0	\$45	\$45	\$45	\$0	\$0	\$255

2019 Capital Project Detail Report

Project Title: SCBA Fill Station CO Alarm Integration

Project Number: 000773

Department: Barrie Fire & Emergency Services

Summary: Installation of a Carbon Monoxide detection and alarm system with integrated system shut on all BFES compressed breathing air filling stations as per CSA standard Z180.

Rationale: Barrie Fire and Emergency Service operates two fixed location and one mobile compressed breathing air systems to fill SCBA air cylinders used by firefighters. The operation of compressed air filling stations are regulated by CSA standards to ensure these systems produce safe breathing air.

CSA standard Z180 has been updated and requires compressed breathing air systems to have Carbon Monoxide detection and alarm systems with an integrated system shutdown to prevent the contamination of breathing air if CO is detected in the air supply.

Barrie Fire and Emergency Service has a legislated requirement to take every precaution reasonable to protect the health and safety of our employees. Ensuring BFES is in compliance with legislative standards and industry best practise reduces occupational exposures and promotes a healthy workplace.

Failing to meet legislative standards, or industry best practice increases the probability and liability associated with occupational injury or disease. BFES tests our breathing air system every six months in compliance with CSA standards. Not installing the CO detection equipment could potentially expose staff to a CO contaminated air source for several months between air quality tests.

Notwithstanding the potential negative health effects the decontamination process required to clear over 250 air cylinders and every associated SCBA in the event of contamination exceed the value of the requested detection and alarm system.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20
Total	\$0	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20
Total	\$0	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20

2019 Capital Project Detail Report

Project Title: Self Contained Breathing Apparatus - 45 Minute Air Bottle Replacement

Project Number: Z47

Department: Barrie Fire & Emergency Services

Summary: Replacement of Self Contained Breathing Apparatus (SCBA) air bottles as required by CSA standard.

Rationale: Self Contained Breathing Apparatus air bottles have a life cycle of 15 years from manufacture date. No maintenance program, or alternate life cycle is permitted under current standards. To lessen the financial impact of replacement, a phased approach will be undertaken and maximize the lifecycle of the current inventory. These bottles are the primary SCBA bottles used for all firefighting operations.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$100	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265
Total	\$100	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$100	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265
Total	\$100	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265

2019 Capital Project Detail Report

Project Title: Self Contained Breathing Apparatus - 60 Minute Air Bottle Replacement

Project Number: Z45

Department: Barrie Fire & Emergency Services

Summary: Replacement of Self Contained Breathing Apparatus (SCBA) air bottles.

Rationale: Self Contained Breathing Apparatus air bottles have a life cycle of 15 years from manufacture date. No maintenance program, or alternate life cycle is permitted under current standards. To lessen the financial impact of replacement, a phased approach will be undertaken and maximize the lifecycle of the current inventory. These bottles are the primary SCBA bottles used for all firefighting operations.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$35	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Total	\$0	\$35	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$35	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Total	\$0	\$35	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70

2019 Capital Project Detail Report

Project Title: Thermal Imaging Camera Replacement

Project Number: Z48

Department: Barrie Fire & Emergency Services

Summary: Replacement of thermal imaging cameras over a 3 year period.

Rationale: BFES currently uses Thermal Imaging Cameras that are reaching their lifecycle limits. Maintenance and repair costs are exceeding the current value of the in service cameras. The current cameras do not meet the updated NFPA standard.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$165
Total	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$165

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$165
Total	\$55	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$165

2019 Capital Project Detail Report

Project Title: Tourism Master Plan

Project Number: 000796

Department: Business Development

Summary: A Tourism Sector Master Plan is required in order to leverage the sector as an economic driver and direct activity in the sector that aligns with the Invest Barrie strategy, Waterfront Master Plans and the overall vision for the City.

Rationale: The implementation of a Municipal Accommodation Tax (MAT) for Barrie effective January, 2019, validates the need for a Sector Master Plan to be completed in 2019. The City's 50% share of the MAT has been directed via Council direction to a Tourism Reserve Fund to be utilized for Capital Asset refurbishment that supports tourism, strategic initiatives, product development or marketing campaigns that support tourism. A Tourism Master Plan will establish sector development priorities and support decision-making for projects that help support and grow tourism within the city. A Tourism Sector Master Plan will also provide an inventory of assets, improvements needed to accommodate existing and future tourism and attainable goals for growing the tourism sector.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110
Total	\$0	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Reserves	\$0	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110
Total	\$0	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Updated Waterfront/Downtown Parking Study

Project Number: 000806

Department: Business Development

Summary: Update to the Waterfront/Downtown Parking Study to assess current utilization and projected utilization to inform and direct policy and strategy for the City. The Parking Study will directly support and inform work across several departments and is being led by a working group consisting of staff from Business Development, Access Barrie, and Roads, Parks & Fleet.

Rationale: Due to considerations of intensification and new developments proposed in the City Centre, an update to the 2013 Waterfront/Downtown Parking Study is required. The study would assist in evaluating existing parking facilities in the City Centre, and provide recommendations or revisions to parking policies, By-laws, the city-wide strategic parking plan, and suitability for parking along major roads. Furthermore, the study will update the utilization of the current City-owned downtown parking lots, and provide insight as to the opportunity to dispose of these assets in support of development. The study will also identify innovative and proactive parking solutions to improve utilization of lots within the City.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Rate Stabilization Reserve	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Allandale Recreation Centre Designated Substances Survey Abatement

Project Number: 000219

Department: Facilities Department

Summary: Future work is planned in the Refrigeration Room at Allandale Centre, however there have been designated substances and hazardous materials identified in the room. Before any future work can be completed, the hazardous material must be removed and disposed of safely in the proper manner.

Rationale: The DSS report completed identified areas and material which contain Asbestos and Lead Paint. In order to properly complete further work in the room, this material must be removed and disposed of safely. The recommended solution would be to follow proper abatement procedures. There would be a very limited impact to the operation of the building as it is in a restricted area. If not removed of safely, the material poses a risk to employees and contractors who attempt future work on the identified space.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Cash-In-Lieu Parkland Reserve	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Barrie - Simcoe Emergency Services Campus - Phase 1

Project Number: FC1020

Department: Facilities Department

Summary: The Barrie-Simcoe Emergency Services Campus Phase 1 has been approved by Council, as per Staff Report FCT006-17.

Rationale: The Barrie-Simcoe Emergency Services Campus Phase 1 has been approved by Council, as per Staff Report FCT006-17.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$621	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$621
Construction - Request	\$44,890	\$43,111	\$3,666	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$91,666
Total	\$45,510	\$43,111	\$3,666	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$92,287

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$7,048	\$6,634	\$564	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,247
Debenture Proceeds - Tax	\$18,201	\$17,134	\$1,457	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,792
Contribution from DC Reserves Tax	\$2,199	\$2,112	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,491
Contribution from Tax Capital Reserve	\$7,487	\$7,190	\$611	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,289
Intercompany - General	\$10,575	\$10,040	\$854	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,468
Total	\$45,510	\$43,111	\$3,666	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$92,287

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Barrie Molson Centre Arena Board and Glass Replacement

Project Number: 000712

Department: Facilities Department

Summary: This project is to replace the hockey arena glass and boards at the Barrie Molson Centre. The replacement is mandated by the OHL at all league facilities to comply with NHL safety standards.

Rationale: In order to comply with the lease agreement between the City of Barrie and the OHL's Barrie Colts, the City is required to replace the arena boards and glass. The replacement is mandated by the OHL at all league facilities to comply with NHL safety standards. The existing system will be replaced with a flex glass system. This includes an ice dam for easy removal, curved acrylic glass at the terminations for player safety, and quick release glass stations that allow for easy replacement and removal of the glass. As a result, this will also reduce time of conversions for live events and reduce costs.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$550
Total	\$0	\$550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$550

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$550
Total	\$0	\$550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$550

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: BAS Component Replacement

Project Number: 000549

Department: Facilities Department

Summary: The Surface Water Treatment Plant has a proprietary Johnson Metasys building automation system (BAS) that includes controllers, software and dashboard interface. Facility Operations and Energy Management conducted a re-commissioning exercise at the SWTP in 2016/2017 with a specific focus on the condition assessment on the current BAS.

The consultant (WSP) provided a number of comments and deficiencies:

- The Network Engine Controllers (NCE) and Field Equipment Controllers (FEC) are nearly 10-years old and approaching end of life.
- The BAS is currently utilizing Johnson Controls Metasys V.5 software, while the latest version in the market is 8.1. The software gap causes operational and maintenance issues.
- The original BAS was not commissioned during construction. Original installation deficiencies cause operational issues and reduce energy efficiency.

WSP has recommended, at a minimum, upgrading the BAS software to V.8.1, completing a full commissioning of the BAS, graphical update, and re-programming of the existing logic at a cost of \$65,000.

Rationale: A minimum of \$65,000 is required immediately to bring the system up to operation standards

- mitigate potential equipment downtime and failure
- improved occupant and process space, temperature and humidity controls
- opportunity for HVAC equipment optimization reducing utility consumption

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65
Total	\$0	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Water Capital Reserve	\$0	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65
Total	\$0	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: BFES Station 1 Renovation for Barrie Police Service Dispatch Communications Back-Up

Project Number: 000733

Department: Facilities Department

Summary: This project involves the renovation of the emergency services dispatch communications centre located at BFES Station #1. The renovation is required to ensure a functional back up communications dispatch is in place prior to the Barrie Police Service relocation into the new Barrie Simcoe Emergency Services Campus facility in 2020.

Rationale: The communications centre is responsible for all incoming emergency calls, and dispatching the appropriate resources as required. It is an integral department within the City of Barrie's emergency services. The back-up communications centre is proposed to be constructed adjacent to the current BFES communications department at BFES Headquarters. This will realize efficiencies and savings in construction, as many of the required IT & Communication services are in place. A back-up communications centre is needed to be up and running prior to the move in 2020 for Police from 29 Sperling to the new Campus facility. This project is required to ensure adequate redundancy is in place, should the main Fire & Police communications be working at or above capacity, or worse, are not operational.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350
Total	\$0	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350
Total	\$0	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: BFES Station 3 Facility Rehabilitation

Project Number: 000164

Department: Facilities Department

Summary: In January of 2017, a Facility Condition Assessment (FCA) report was completed by CCI Group at Fire Station 3. The purpose of the report is to investigate building components and identify areas requiring remediation or replacement. Also included is the estimated lifecycle and replacement cost of each component. In order to maintain the facility in a state a good repair, the City must be diligent and complete the recommended repairs.

Rationale: The recommended solution is to accept the findings in the FCA report and complete the repairs as identified. If the repairs are not completed as outlined in the FCA repair schedule, there is the potential for building component condition to worsen, causing further damage and costlier repairs. Deferring replacement and repairs are not recommended as this could also result in increased energy costs, maintenance costs, and usability resulting in an increase risk to occupants and users of the building.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$40	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198
Total	\$40	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$40	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198
Total	\$40	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: City Hall Expansion

Project Number: 000635

Department: Facilities Department

Summary: The existing city hall facility is at capacity and does not have space for future growth. A proactive approach will ensure that the corporation is not restricted to a minimum level of service to the residents of Barrie. A design/validation phase leading to a 2 year construction phase is required to accommodate future growth.

Rationale: The existing city hall facility is at capacity and does not have space for future growth. A proactive approach will ensure that the corporation is able to optimize service delivery to the residents of Barrie by supporting functionality and growth accommodations for staff and the public.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Design - Forecast	\$0	\$0	\$0	\$0	\$0	\$1,200	\$0	\$0	\$0	\$0	\$0	\$1,200
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$22,500	\$22,500	\$0	\$0	\$0	\$45,000
Total	\$0	\$300	\$300	\$0	\$0	\$1,200	\$22,500	\$22,500	\$0	\$0	\$0	\$46,800

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debt Proceeds - Tax	\$0	\$0	\$0	\$0	\$0	\$1,200	\$22,500	\$22,500	\$0	\$0	\$0	\$46,200
Contribution from Tax Capital Reserve	\$0	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Total	\$0	\$300	\$300	\$0	\$0	\$1,200	\$22,500	\$22,500	\$0	\$0	\$0	\$46,800

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: City Hall Uninterruptable Power Supply (UPS) Replacement-P1 - Battery replacement RoofUPS

Project Number: Z791

Department: Facilities Department

Summary: 2016 Approved Project

The UPS in P1 is nearing the end of its lifecycle. The UPS batteries on the roof are nearing the end of lifecycle Without either UPS there could be a disruption to the 911 service.

Rationale: The UPS in P1 is nearing the end of its lifecycle. It is required to provide emergency power backup until the generator starts. Install a new UPS in P1. The UPS batteries on the roof are nearing the end of lifecycle Without either UPS there could be a disruption to the 911 service. There is a report available upon request.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$0	\$0	\$0	\$0	\$250
Total	\$0	\$60	\$0	\$0	\$0	\$0	\$250	\$0	\$0	\$0	\$0	\$310

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$60	\$0	\$0	\$0	\$0	\$250	\$0	\$0	\$0	\$0	\$310
Total	\$0	\$60	\$0	\$0	\$0	\$0	\$250	\$0	\$0	\$0	\$0	\$310

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Dorian Parker Community Centre Flooring Replacement

Project Number: 000341

Department: Facilities Department

Summary: This project involves the replacement of the floor and subfloor in the main hall area of the Dorian Parker Community Centre.

Rationale: The existing floor (approx. 2500 sqft.) is old and piecemeal consisting of several types of coverings that neither blend nor function and have become hazardous in some areas. The flooring has outlived its useful life, and uneven surfaces have developed, creating a trip hazard. Replacement with a uniform surface, as well as repairing the subfloor throughout the main hall will rectify the issue.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: East Bayfield Community Centre Domestic Hot Water Boiler 1 and 2 Replacement

Project Number: Z695

Department: Facilities Department

Summary: This project involves the removal and replacement of domestic hot water boilers (DHW) #1 and #2 at the East Bayfield Community Centre.

Rationale: The boilers are original to the opening of the facility and are 15 years old. The lifecycle of these units is 10 years. The units provide domestic hot water for all areas of the facility including; pool change areas, gymnasium, dressing rooms and childcare centre, as well as heated water for the ice resurfacer (approx. 700,000 gallons annually). These units are integral to day to day operations. Proper water temperature is vital to good ice surface production and conditions. It is also a health department requirement in our pool showers. If not replaced before the boilers fail, it would cause the facility to close, and loss of revenue to the City. The replacement of these boilers also allow for the opportunity to receive government funded energy incentives, and reduce energy use. It is proposed to replace with Condensing Boilers, which are 99% efficient, meaning that all heat generated from the boilers is used, or captured and reused before exhausting.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: East Bayfield Community Centre Pool Tile Re Grouting

Project Number: 000268

Department: Facilities Department

Summary: This project involves the re grouting of the small and large pool tanks at the East Bayfield Community Centre.

Rationale: The facility is 15 years old and the tile in the pool is original to the building. The tiles in the pool tanks are a mosaic type and have a larger area of grout than the adjacent deck tiles. The failure of the grout can cause water penetration to the subfloor and start to degrade the base. Several patches and repairs have been made over the years to prevent water infiltration. Deferring this work is not recommended, as it is important to maintain tank integrity to prevent structural damage. This could result in both a safety hazard and potential unplanned extended shut down.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Total	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Total	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Energy Conservation Program

Project Number: 000622

Department: Facilities Department

Summary: Energy conservation projects over the previous three years have demonstrated significant cost avoidance and ROI ranging from 12 to over 20%. This program will fund initiatives identified by the Energy Management Branch that have a calculated ROI of 10% or more. The program will fund a variety of projects but will include; interior/exterior lighting conversions to LED, Variable frequency drives for motors and controls for energy using equipment.

Rationale: Multiyear program to fund energy conservation capital projects with an ROI over 10% to reduce utility costs within city facilities

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Capital Purchase - Forecast	\$0	\$0	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$300	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$300	\$270	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$840
Contribution from Tax Capital Reserve	\$0	\$30	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$300	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Environmental Centre Space Accommodation

Project Number: 000514

Department: Facilities Department

Summary: Following HVAC Upgrades that are taking place in 2018, the current design proposes a small renovation and open-office modular style furniture will maximize the usefulness of the space and create 3-6 new work stations.

Rationale: Small interior renovation to maximize the usefulness of the office space at the Environmental Centre will solve a shortage of work space and on site storage. This scenario is more cost effective alternative to a larger project such as an addition or new build.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

2019 Capital Project Detail Report

Project Title: Ferndale Operations Centre - Sign Shop Renovation

Project Number: 000717

Department: Facilities Department

Summary: Extend sign shop at Ferndale Operations Centre into first bay of adjacent storage garage, to allow for adequate layout and production areas.

Rationale: The City of Barrie print shop is responsible for creating all the traffic and street signage across the City Barrie. This process requires space for large printers, sign tables and templates. They are currently located on the first floor of the Operations Center and are proposing to expand into one bay of the storage garage area to allow for proper circulation and layout space to complete their work, in a conditioned space.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125
Total	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125
Total	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Georgian Theatre Catwalk Structural repairs

Project Number: 000812

Department: Facilities Department

Summary: Through a structural assessment conducted by Tacoma Engineering it was discovered that there were a number of building code deficiencies on the catwalk at the Georgian Theatre. This project will address any of the deficiencies related to the catwalk that were noted in the Tacoma report.

Rationale: Through a structural assessment conducted by Tacoma Engineering it was discovered that there were a number of building code deficiencies on the catwalk at the Georgian Theatre. The cat walk is suspended 30 to 40 feet above the floor, staff utilize the catwalk to install lighting etc for various shows. By completing these repairs, it will provide a safer work environment for staff members who have to access the catwalk.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25
Total	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25
Total	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25

2019 Capital Project Detail Report

Project Title: Holly Community Centre Glycol Piping Repair Under Ice Pad

Project Number: 000504

Department: Facilities Department

Summary: The glycol piping system installed under the arena ice pad is used to create ice for the arena. A small leak has been identified in the piping system under the slab. Removal of portions of the arena slab to investigate and determine the exact leak location is necessary. Repair to the glycol piping itself is required.

Rationale: The project is required to repair a leak to the glycol piping system used to create ice for the arena. Some options involve an inline repair of the leak, although this is not a reliable solution. A more secure option is to break up the concrete and repair the pipe from the exterior, or by replacing the pipe section altogether. If the pipe is not repaired, there is the potential for the leak to get worse and for the system to not hold glycol at all. This would have a negative impact on the arena operations, and would cause a major disruption to user groups and result in the potential loss of income.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25
Execute - Forecast	\$0	\$0	\$0	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$125
Total	\$0	\$25	\$0	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$25	\$0	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$25	\$0	\$0	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Marina End-of-life Dock Replacement

Project Number: Z823

Department: Facilities Department

Summary: The docks should be replaced for health and safety of the clients, staff and public using the docks.

Rationale: Replacement of the docks is required to ensure the safety / security of boaters requiring access to their vessels, and staff who operate the marina.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$25	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
Total	\$25	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Marina Reserve	\$25	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
Total	\$25	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Marina Public WiFi Implementation

Project Number: 000804

Department: Facilities Department

Summary: The implementation of a Marina public WiFi system, is a joint project that involves the IT Department, Capital Planning and Corporate Facilities. WiFi coverage should include the City of Barrie Marina seasonal slips, Fuel dock and the Bayfield Basin docks.

Rationale: Through a recent survey of marina patrons it was acknowledged that the implementation of a Marina Public WiFi service is required. The City of Barrie Marina is one of the largest Marina facilities on Lake Simcoe. Most marinas offer a public WiFi system included in marina fees. The City of Barrie has an opportunity to increase marina user fees to reflect market rates. The cost offering of a Marina Public WiFi system will be offset by these increases.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Marina Reserve	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Marina Welcome Centre New Building Development

Project Number: Z240

Department: Facilities Department

Summary: There are health and safety issues and the building does not meet Fire and Electrical standards.

Rationale: This facility will consolidate customer service and staffing facility needs into one building, to ensure that service to marine patrons and health & safety for staff is improved, within a space that provides adequate support for marina operations.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Construction - Request	\$0	\$0	\$597	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$597
Total	\$0	\$50	\$597	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$647

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Marina Reserve	\$0	\$50	\$597	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$647
Total	\$0	\$50	\$597	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$647

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Operations Centre Building Renovation

Project Number: 000282

Department: Facilities Department

Summary: Operations Centre renovations required to support growth and the new satellite yard operations.

Rationale: The Operations Master Plan was endorsed by Council in June 2016. This renovation work at Ferndale Operations is the first step in executing the phased approach from the Master Plan, to decrease operational costs and create an efficient delivery model to serve the existing boundary of the City and future growth in the secondary plan area.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Design - Request	\$400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400
Construction - Request	\$0	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
Design - Forecast	\$0	\$0	\$0	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000
Construction - Forecast	\$0	\$0	\$1,750	\$0	\$6,000	\$7,000	\$0	\$0	\$0	\$0	\$0	\$14,750
Total	\$600	\$250	\$1,750	\$2,000	\$6,000	\$7,000	\$0	\$0	\$0	\$0	\$0	\$17,600

Funding (in 000's):

	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$75	\$525	\$600	\$1,800	\$2,100	\$0	\$0	\$0	\$0	\$0	\$5,100
Debenture Proceeds - Tax	\$420	\$175	\$1,225	\$1,400	\$4,200	\$4,900	\$0	\$0	\$0	\$0	\$0	\$12,320
Contribution from DC Reserves Tax (Annex)	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180
Total	\$600	\$250	\$1,750	\$2,000	\$6,000	\$7,000	\$0	\$0	\$0	\$0	\$0	\$17,600

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Soccer Goal Replacement

Project Number: 000713

Department: Facilities Department

Summary: This project involves the replacement of the soccer goal posts and netting at the Huronia Park soccer fields.

Rationale: Huronia Park has 9 soccer pitches of various sizes for different levels of play as it relates to Soccer Canada's Long Term Player Development. Recent changes to field size and goal size through Soccer Canada now requires all 9 pitches to have the goals replaced to meet the size requirement through Soccer Canada. Currently, this is the main park servicing the Barrie Soccer Club in south Barrie. The club has proposed that they would like to partner with the City and purchase the 9 sets of goal posts and netting provided the City remove the current goal posts and install the new posts. The soccer club anticipates that they can offer 50% of this project cost.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45
Total	\$0	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Donations - General	\$0	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23
Contribution from Tax Capital Reserve	\$0	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23
Total	\$0	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Waste Water Treatment Facility Administrative Office Fit-Up

Project Number: 000797

Department: Facilities Department

Summary: Small office fit-up of 6 to 8 workstations in existing City facility (167 Bradford Street).

Rationale: Moving the administration staff will provide alleviation to the constrained operations space within the plant area, and provide adequate admin space at 167 Bradford Street, at the same location as Director and Manager of the Department.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: WwTF Tunnel Assessment

Project Number: 000518

Department: Facilities Department

Summary: An assessment to determine if the ceilings should be removed to expose the pipes which leak and cause damage to the walls and ceiling. The results of the leakage causes humidity and mould in the tunnels. The assessment would determine if a dehumidification system or asbestos removal is required in the tunnels.

Rationale: Before money is spent on repairing the WwTF tunnels, an assessment is required on the tunnels to determine the complex issues and to help determine the funding required to resolve the issues. Some of the issues consist of, but not limited to, mould and possible asbestos within the tunnel system.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30
Total	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30
Total	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Year Round Downtown Market New Development

Project Number: 000478

Department: Facilities Department

Summary: Completion of a design-build project for both a new Transit Hub Facility and the Market Precinct Project.

Rationale: Council approved an amendment to the 2017 budget request for completion of a financial and technical study to validate the Downtown Barrie Permanent Public Market Business Plan. Details were presented to Council in Staff Report FCT001-17 on January 23, 2017. The Business Plan was developed by the Market Steering/Working Group, formed by Council direction in 2015 to consider site selection, construction, operation, and programming of a year-round downtown public market. Investigations included a customer survey to seek input, gauge interest levels, and solicit programming suggestions. The survey results positively identified that 77.5% of respondents were 'very likely' to shop downtown if a public market was located there.

The Business Plan identified that the Transit Terminal building was the preferred of two locations. Of five potential options outlined in the Plan, a moderate renovation of the Transit Building site in conjunction with construction of a Farmers' Market structure (Option B) was selected as the move-forward option. Staff has recommended that a financial analysis, as well as a technical study including geotechnical investigations to confirm soil conditions and inform future planning and design, be completed to review the feasibility of Option B.

As identified, the technical and financial validation has been completed and staff recommendations were made in FCT006-17 which resulted in council motion 17-G-325 which approves the project subject to the following:

1. That the Downtown Barrie Permanent Public Market Technical and Financial Validation Study conducted by LETT Architects and attached as Appendix "A" to Staff Report FCT006-17, be received.
2. That Option C as set out in the Downtown Barrie Permanent Public Market Technical and Financial Validation Study, and the phased approach for Barrie Transit through a Multi Modal Transit Hub Study, be endorsed in principle, subject to future capital prioritization and approvals and subject to a report back to General Committee with options to reduce the overall project budget by \$2M and \$4M through design savings, with the proposed transit building being the first priority for reductions, and further, with options to shorten the overall project timelines by at least one year.
3. That funding for the Multi Modal Transit Hub Study that is being requested within the 2018 capital plan totaling \$100,000 to be funded from the Tax Rate Stabilization Reserve, be expedited and approved to commence immediately, and staff report back to General Committee with the results of the Study. (FCT006-17) (File: R00)

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Study - Request	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Construction - Request	\$2,600	\$3,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,500
Total	\$3,000	\$3,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,900

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$2,900	\$3,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,800
Contribution from Tax Rate Stabilization Reserve	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$3,000	\$3,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,900

2019 Capital Project Detail Report

Project Title: Anne Street Right of Way Expansion - Wellington to Edgehill (outside of CAH limits)

Project Number: 000659

Department: Engineering Department

Summary: Reconstruction of the Anne Street and Edgehill Drive intersection in coordination with the associated works on the Anne Street crossing of Highway 400. This project will be coordinated with project 000658.

Rationale: The Ontario Ministry of Transportation's reconstruction of the Anne Street Highway 400 crossing will require associated improvements to the intersection of Anne Street and Edgehill Drive.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$95
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$64	\$0	\$0	\$0	\$0	\$0	\$64
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$654	\$0	\$0	\$0	\$0	\$0	\$654
Total	\$0	\$95	\$0	\$0	\$0	\$718	\$0	\$0	\$0	\$0	\$0	\$813
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$0	\$62	\$0	\$0	\$0	\$467	\$0	\$0	\$0	\$0	\$0	\$528
Contribution from Tax Capital Reserve	\$0	\$33	\$0	\$0	\$0	\$251	\$0	\$0	\$0	\$0	\$0	\$285
Total	\$0	\$95	\$0	\$0	\$0	\$718	\$0	\$0	\$0	\$0	\$0	\$813

2019 Capital Project Detail Report

Project Title: Anne Street Right of Way Expansion - Wellington to Edgehill (within CAH limits)

Project Number: 000658

Department: Engineering Department

Summary: The City's contribution toward the Ontario Ministry of Transportation's planned reconstruction and widening of the Anne Street Highway 400 crossing within the controlled access highway limits (from Wellington Street to Edgehill Drive). This project will be coordinated with project 000659.

Rationale: The Anne Street crossing requires reconstruction and widening to address existing traffic congestion and accommodate planned growth and the expansion of Highway 400 to 10 lanes. The City has also identified additional improvements as per the Multi-modal Active Transportation Master Plan including buffered bicycle lanes, wider sidewalks, and provisions for future widening to 7 lanes. The Ontario Ministry of Transportation will construct the additional improvements subject to cost sharing with the City. It is recommended that the City contribute to the Ministry of Transportation's planned works for the additional improvements as completing this work jointly maximizes cost efficiencies.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$191	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$191
Property - Forecast	\$0	\$0	\$0	\$0	\$0	\$112	\$0	\$0	\$0	\$0	\$0	\$112
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$83	\$0	\$0	\$0	\$0	\$0	\$83
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$3,550	\$0	\$0	\$0	\$0	\$0	\$3,550
Total	\$0	\$191	\$0	\$0	\$0	\$3,744	\$0	\$0	\$0	\$0	\$0	\$3,935
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$0	\$124	\$0	\$0	\$0	\$2,434	\$0	\$0	\$0	\$0	\$0	\$2,558
Contribution from Tax Capital Reserve	\$0	\$67	\$0	\$0	\$0	\$1,310	\$0	\$0	\$0	\$0	\$0	\$1,377
Total	\$0	\$191	\$0	\$0	\$0	\$3,744	\$0	\$0	\$0	\$0	\$0	\$3,935

2019 Capital Project Detail Report

Project Title: Annual Parking Lot Improvement Program

Project Number: Z411

Department: Engineering Department

Summary: The Annual Parking Lot Improvement Program includes the expansion, upgrading, rehabilitation, and replacement of existing parking lot surfaces at City of Barrie parklands. The program aims to improve capacity issues, promote park and recreation activities, and improve deteriorating surfaces to better accommodate City of Barrie residents.

Rationale: With the continued growth of the City's population and on-going intensification plans, the use of recreational and public parks continues to increase. As such, current parking lot conditions no longer meet the physical condition or capacity requirements to provide residents with the levels of service they desire and also restrict City park and recreation activities because of this. The program aims to increase the quality and capacity of City owned parking lots which benefits the City socially through resident satisfaction while increasing revenues via the accommodation and promotion of outdoor recreation programs.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Construction - Request	\$100	\$85	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$185
Design - Forecast	\$0	\$0	\$18	\$50	\$0	\$10	\$110	\$85	\$175	\$0	\$0	\$448
Construction - Forecast	\$0	\$0	\$158	\$60	\$490	\$0	\$0	\$0	\$0	\$0	\$0	\$708
Total	\$200	\$85	\$175	\$110	\$490	\$10	\$110	\$85	\$175	\$0	\$0	\$1,440
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$200	\$85	\$175	\$110	\$490	\$10	\$110	\$85	\$175	\$0	\$0	\$1,440
Total	\$200	\$85	\$175	\$110	\$490	\$10	\$110	\$85	\$175	\$0	\$0	\$1,440

2019 Capital Project Detail Report

Project Title: Annual Playground Revitalization Program

Project Number: EN1117

Department: Engineering Department

Summary: The Annual Playground Revitalization Program identifies and addresses aging and worn-out playground infrastructure that poses safety concerns to the general public and liability risks to the City. The program also emphasizes upgrading existing parks to meet current accessibility standards.

Rationale: Deteriorated playground equipment and parklands result in decreased play-value and may result in the playground becoming unsafe or even unusable. The Annual Playground Revitalization Program reduces the likelihood of these risks as well as operation and maintenance costs. Additionally, many of the City's playgrounds do not meet current accessibility standards for people with disabilities. This program also includes upgrades to address this gap and increase the accessibility of the City's parks during revitalization work.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$270	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$540
Construction - Forecast	\$0	\$0	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$0	\$0	\$1,890
Total	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$0	\$0	\$2,430
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Cash-In-Lieu Parkland Reserve	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$0	\$0	\$2,430
Total	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$270	\$0	\$0	\$2,430

2019 Capital Project Detail Report

Project Title: Bayfield Street Water Tower - Repairs and Interior Lining Replacement

Project Number: 000696

Department: Engineering Department

Summary: At the Bayfield Street Water Tower it is proposed to replace the deteriorating interior protective coating and repair the corroding non-structural painters' safety rail. The scope of work includes: Technical/ Contractual Specifications preparation; Tendering; Interior coating removal; Coating Application and; Warranty.

Rationale: The Bayfield Street Water Tower protective coatings were reapplied in 1997. Interior coatings have a typical lifespan of approximately 10-20 years depending on water reactivity. During a recent tank inspection in 2017, it was found that the condition of the interior coating would require it to be fully replaced. In addition to the condition of the coating there are serious issues with safe access due to severe corrosion that need to be addressed. Failure to replace the interior coating may lead to non-compliance with the Safe Drinking Water Act.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$420	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440
Total	\$420	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Water Capital Reserve	\$420	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440
Total	\$420	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$440

2019 Capital Project Detail Report

Project Title: Bell Farm Road ROW Expansion - St. Vincent to Duckworth

Project Number: EN1164

Department: Engineering Department

Summary: Reconstruction and widening of Bell Farm Road to 3-lanes, bike lanes and sidewalks between St. Vincent Street to Duckworth Street.

Rationale: The existing 2-lane rural cross-section requires reconstruction to address renewal needs. This corridor has been identified for implementation of sidewalks to enhance pedestrian safety as well as stormwater management to improve drainage and mitigate environmental impacts. The existing watermain is approaching the end of its forecasted service life and is identified for replacement. This corridor is a primary route for both Barrie Fire and Emergency Services and Barrie Police Services. Implementation of cycling lanes and pedestrian facilities will promote the use of Active Transportation by Georgian College students to access student residences and St. Vincent Street.

In 2016/17, the City undertook a Schedule 'C' Class EA. The study recommends construction of two vehicular lanes with a two-way left turn lane, sidewalks and bicycle lanes. In June 2017, Council approved recommendations identified in the Class EA study.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$718	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$718
Property - Request	\$109	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$109
Utilities - Request	\$0	\$925	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$925
Construction - Forecast	\$0	\$0	\$3,573	\$3,694	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,267
Total	\$826	\$925	\$3,573	\$3,694	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,019
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$417	\$602	\$1,137	\$1,215	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,370
Contribution from Tax Capital Reserve	\$224	\$324	\$1,591	\$1,634	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,773
Contribution from WW Capital Reserve	\$79	\$0	\$507	\$507	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,092
Contribution from Water Capital Reserve	\$106	\$0	\$339	\$339	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$784
Total	\$826	\$925	\$3,573	\$3,694	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,019

2019 Capital Project Detail Report

Project Title: Big Bay Point New Transmission Watermain and Road Expansion - Prince William to Street N (Developer)

Project Number: Z282

Department: Engineering Department

Summary: Expansion of Big Bay Point Road potentially in phases, including urbanization and widening of the road from two to three or five lanes and installation of a new watermain from the former City limits to Collector 11.

Rationale: Proposed development south of Big Bay Point Road in the Hewitt's Secondary Plan area requires urbanizing Big Bay Point Road and increasing to three or five lanes. Trunk watermain is needed to provide potable water and fire protection in phase 1 of the Hewitt's Secondary Plan from Collector 11 to Street N. The Transportation MP recommended that Big Bay Point Road be urbanized and widened to 5 lanes to former Barrie Boundary. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Environmental Assessment - Request	\$135	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$135
Design - Request	\$262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$262
Property - Request	\$390	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$390
Utilities - Request	\$0	\$90	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90
Construction - Request	\$0	\$573	\$1,167	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,739
Total	\$786	\$663	\$1,167	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,615
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$672	\$563	\$992	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,227
Debenture Proceeds - Tax	\$114	\$99	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$213
Contribution from Tax Capital Reserve	\$0	\$0	\$175	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$175
Total	\$786	\$663	\$1,167	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,615

2019 Capital Project Detail Report

Project Title: Big Bay Point Rd., Painswick Bridge B Rehabilitation- (Metrolinx Corridor)- Ashford to Pine

Project Number: 000711

Department: Engineering Department

Summary: 0

Rationale: Structural inspection has shown the Painswick Bridge “B” requires construction rehabilitation and a conversion to semi-integral design to reduce the risk of structural failure. The structure was identified for design in 2019 and construction in 2020 to align with Metrolinx’s project to electrify the rail corridor in 2020 or later. Proceeding with this proposal will mitigate increases in repair costs. Furthermore, capital expenditures will be reduced by completing the project prior to Metrolinx construction. Project completion in the proposed timeline will also accommodate future planned growth for Wards nine and ten, while in causing considerably less disruption to traffic flow and emergency services should this work be delayed further. Given the age and risk of further deterioration to the substructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, repair, or replace) are not as cost effective and/or not expected to significantly extend the existing life of the asset.

PROJECT EXPENDITURE AND FUNDING												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130
Construction - Forecast	\$0	\$0	\$820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$820
Total	\$0	\$130	\$820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$130	\$820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950
Total	\$0	\$130	\$820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950

2019 Capital Project Detail Report

Project Title: Big Bay Point Road ROW Expansion - Bayview to Huronia

Project Number: 000308

Department: Engineering Department

Summary: Reconstruction and widening of Big Bay Point Road to 5-lanes, buffered bike lanes and sidewalk on the south side between Bayview Drive and Huronia Road. This link is a critical component of the Harvie Road / Big Bay Point Road Highway Crossing. The Bayview / Big Bay intersection will be reconstructed as part of the Harvie Hwy 400 Crossing.

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to construct a highway crossing at Harvie Road / Big Bay Point Road to accommodate existing traffic volumes and planned growth in the Secondary Plan Lands. The construction of this link is needed to be implemented in conjunction with the Harvie Road / Big Bay Point Road Highway Crossing to provide 5-lanes continuously on Big Bay Point Road from Bayview Drive (east terminus of crossing project) to Huronia Road.

The existing 2-lane rural cross-section is not sufficient to accommodate traffic volumes associated with the planned highway crossing. The City has completed a Schedule C Environmental Assessment; expansion to 5-lanes, buffered bike lanes and sidewalk is identified as the preferred solution.

The project is identified in the Council endorsed Multi-Modal Active Transportation Master Plan. Cash flow has been modified to reflect the elements to be constructed as part of the Harvie Crossing in 2019 and 2020.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$661	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$661
Property - Request	\$0	\$1,220	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,220
Construction - Request	\$0	\$634	\$634	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,267
Utilities - Forecast	\$0	\$0	\$1,108	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,108
Construction - Forecast	\$0	\$0	\$0	\$2,956	\$4,223	\$0	\$0	\$0	\$0	\$0	\$0	\$7,180
Total	\$661	\$1,853	\$1,741	\$2,956	\$4,223	\$0	\$0	\$0	\$0	\$0	\$0	\$11,435
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$813	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$813
Contribution from DC Reserves Tax	\$441	\$422	\$1,161	\$1,971	\$2,816	\$0	\$0	\$0	\$0	\$0	\$0	\$6,811
Contribution from Tax Capital Reserve	\$220	\$618	\$580	\$985	\$1,408	\$0	\$0	\$0	\$0	\$0	\$0	\$3,811
Total	\$661	\$1,853	\$1,741	\$2,956	\$4,223	\$0	\$0	\$0	\$0	\$0	\$0	\$11,435

2019 Capital Project Detail Report

Project Title: Biosolids Facility Roof Coating Rehabilitation

Project Number: Z458

Department: Engineering Department

Summary: Removal and replacement of the existing roof slab coatings on the Pump Room, Storage tanks 1 - 4, and Sludge Hopper/Supernatant Tank. The existing building exterior requires repair at certain locations.

Rationale: A 2013 Condition Assessment concluded that the concrete coatings were functionally sound but were showing increased wear and diminished performance which is negatively impacting operations. The cracks in the roof coating of the pump room are allowing moisture to penetrate through the slab, which is causing the ceiling insulation to fall off and allow mould to grow. Operations is constantly cleaning up the debris that lands on the Pump Room floor. The timing for this work is coordinated with other capital projects and therefore a phased approach will be undertaken to replace the coatings within 3 years. Concern is growing as the roof reinforcement steel will corrode causing a safety concern and increased costs to repair in the future if works aren't completed in the short term.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80
Construction - Forecast	\$0	\$0	\$0	\$1,170	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$1,520
Total	\$0	\$80	\$0	\$1,170	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$80	\$0	\$1,170	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600
Total	\$0	\$80	\$0	\$1,170	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600

2019 Capital Project Detail Report

Project Title: Biosolids Storage Facility Lagoons 1, 2 & 3 Hydraulic Upgrades and Overflow Protection Upgrades

Project Number: Z154

Department: Engineering Department

Summary: At the Biosolids Storage Facility upgrades are needed to improve hydraulics and to provide Overflow Protection for Lagoons 1, 2 and 3. This project includes interconnection piping between the 3 existing lagoons and catch basin upgrade including automation, electrical and SCADA.

Rationale: The Biosolids Storage Facility Lagoons were obtained in 1998. Since then, minimal upgrades to the lagoons have been completed and upgrades are now required to improve hydraulics and provide overflow protection. This project includes the necessary infrastructure and controls to provide operational flexibility and mitigate the risk of an overflow to the adjacent wetlands. Failure to capture the overflows could result in charges under the Environmental Protection Act.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80
Construction - Forecast	\$0	\$0	\$214	\$24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$238
Total	\$40	\$40	\$214	\$24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$318
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$40	\$40	\$214	\$24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$318
Total	\$40	\$40	\$214	\$24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$318

2019 Capital Project Detail Report

Project Title: Bryne Drive New Road Construction - Harvie to North of Caplan

Project Number: Z525

Department: Engineering Department

Summary: Construction of the unopened portion of Bryne Drive to 5-lanes, bike lanes and sidewalks between Harvie Road and north of Caplan Avenue. This link is required to support the Harvie Road / Big Bay Point Road Highway Crossing.

Rationale: The 2013 Council endorsed Multi-Modal Active Transportation Master Plan and Bryne ESR identified the need to construct a highway crossing at Harvie Road / Big Bay Point Road to reduce congestion in the south end of Barrie and to accommodate planned growth. The completion of Bryne Drive from Caplan to Harvie is needed to reduce traffic congestion at the Essa and Mapleview Drive interchanges by redirecting east / west traffic to the Harvie Road / Big Bay Point Road Highway Crossing.

The City has completed a Schedule C Environmental Assessment to determine the preferred alternative for implementation. The project is identified in the Council endorsed Multi-Modal Active Transportation Master Plan

Cash flow has been modified to reflect a segment of Bryne immediately south of Harvie being constructed as part of the Harvie Crossing in 2019 and 2020.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$1,045	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,045
Property - Request	\$136	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$136
Utilities - Request	\$0	\$357	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$357
Construction - Request	\$0	\$334	\$334	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$667
Construction - Forecast	\$0	\$0	\$0	\$2,669	\$3,337	\$0	\$0	\$0	\$0	\$0	\$0	\$6,006
Total	\$1,182	\$690	\$334	\$2,669	\$3,337	\$0	\$0	\$0	\$0	\$0	\$0	\$8,211
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$555	\$232	\$217	\$570	\$787	\$0	\$0	\$0	\$0	\$0	\$0	\$2,361
Contribution from Tax Capital Reserve	\$626	\$459	\$117	\$2,099	\$2,550	\$0	\$0	\$0	\$0	\$0	\$0	\$5,850
Total	\$1,182	\$690	\$334	\$2,669	\$3,337	\$0	\$0	\$0	\$0	\$0	\$0	\$8,211

2019 Capital Project Detail Report

Project Title: Bryne Drive New Road Construction - Harvie to South of Essa

Project Number: Z527

Department: Engineering Department

Summary: Construction of the unopened portion of Bryne Drive to 5-lanes, bike lanes and sidewalks between Harvie Road and south of Essa Road. This link will help direct traffic to the new Harvie Crossing of Hwy 400 and away from the Essa and Maplevue Interchanges.

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to construct a highway crossing at Harvie Road / Big Bay Point Road to reduce congestion in the south end of Barrie and to accommodate planned growth. The completion of Bryne Drive from Essa to Harvie is needed to reduce traffic congestion at the Essa and Maplevue interchanges by redirecting east / west traffic to the Harvie Road / Big Bay Point Road Highway Crossing.

The City has completed a Schedule C Environmental Assessment to determine the preferred alternative for implementation. The project is also identified in the Council endorsed 2013 Multi-Modal Active Transportation Master Plan.

Cash flow has been modified to reflect a segment of Bryne immediately north of Harvie being constructed as part of the Harvie Crossing in 2019 and 2020.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$1,141	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,141
Construction - Request	\$0	\$364	\$364	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$729
Utilities - Forecast	\$0	\$0	\$591	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$591
Construction - Forecast	\$0	\$0	\$0	\$2,915	\$3,644	\$0	\$0	\$0	\$0	\$0	\$0	\$6,558
Total	\$1,141	\$364	\$956	\$2,915	\$3,644	\$0	\$0	\$0	\$0	\$0	\$0	\$9,020
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$422	\$237	\$384	\$1,113	\$1,350	\$0	\$0	\$0	\$0	\$0	\$0	\$3,507
Contribution from Federal Gas Tax Reserve	\$0	\$0	\$364	\$1,202	\$1,566	\$0	\$0	\$0	\$0	\$0	\$0	\$3,132
Contribution from Tax Capital Reserve	\$719	\$128	\$207	\$600	\$727	\$0	\$0	\$0	\$0	\$0	\$0	\$2,380
Total	\$1,141	\$364	\$956	\$2,915	\$3,644	\$0	\$0	\$0	\$0	\$0	\$0	\$9,020

2019 Capital Project Detail Report

Project Title: Bunkers Creek Conveyance Improvements - Hwy 400 to Anne Street

Project Number: 000770

Department: Engineering Department

Summary: Replacement and expansion of the Bunkers Creek storm sewer from Highway 400 to Anne Street.

Rationale: These conveyance upgrades to Bunker's Creek are necessary to improve capacity and accommodate increased flows. It is recommended that these improvements occur concurrently with the Dunlop interchange reconstruction project to maximize cost efficiencies and minimize impact to the public.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$366	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$366
Construction - Forecast	\$0	\$0	\$1,260	\$1,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,520
Total	\$0	\$366	\$1,260	\$1,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,886

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$366	\$1,260	\$1,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,886
Total	\$0	\$366	\$1,260	\$1,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,886

2019 Capital Project Detail Report

Project Title: City Wide Cycling Network Program

Project Number: Z382

Department: Engineering Department

Summary: Construction of cycling infrastructure, including on-street and buffered bike lanes, or multi-purpose trails in locations identified in the 2013 Multi-Modal Active Transportation Master Plan (MMATMP). The Transportation Master Plan is currently being updated and once completed, additional locations will be available. The City has received grant funding to fund work to be completed in 2018, 2019 and 2020.

Construction in 2020 includes:

- Mapleview Drive West from County Road 27 to Essa Road
- Hurst Drive from Minets Point Road to Brennan Avenue

Rationale: The MMATMP identified proposed locations to advance the cycling network in Barrie. High priority locations have been proposed for the initial implementation. The Transportation Master Plan update is currently being updated and once completed, additional locations will be available. The City has received grant funding to fund work to be completed in 2018, 2019 and 2020.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900
Capital Purchase - Request	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40
Construction - Forecast	\$0	\$0	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$0	\$3,200
Total	\$40	\$900	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$0	\$4,140
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Province of Ontario Grant Revenue	\$32	\$720	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$752
Contribution from Tax Capital Reserve	\$8	\$180	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$0	\$3,388
Total	\$40	\$900	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$0	\$4,140

2019 Capital Project Detail Report

Project Title: Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent

Project Number: EN1166

Department: Engineering Department

Summary: Reconstruction of Duckworth Street from Bell Farm Road to St. Vincent Street including property acquisition for widening of the right-of-way, utility relocations, road & sidewalk reconstruction, buffered bike lanes, installation of a new transmission watermain, replacement of the existing distribution watermain and water services, replacement of sanitary sewers and sanitary laterals, replacement of the existing storm sewer system, upgrades to the streetlighting system, and replacement of the traffic signal systems at Duckworth/Codrington, Duckworth/Wellington/Steel, Duckworth/Grove, and Duckworth/Rose/Bernick.

Rationale: The existing road surface has failed, and with the increased growth of Georgian College and RVH there will be additional traffic volume on Duckworth Street. Phases 3 & 4 of the Class EA process were completed in 2015, and provided recommendations for road improvements and lane configurations which includes buffered bicycle lanes. The Water Storage and Distribution Master Plan prepared by Amec in 2013 identified the need for a 300mm watermain on Duckworth Street from Bell Farm Road to St Vincent Street for Zone 2N reinforcement. The Water Storage and Distribution Master Plan indicates that this improvement is required to be completed as early as 2017 and no later than 2021. Replacement of all existing municipal infrastructure (e.g., watermain, sanitary & storm sewers) is to be undertaken as part of this project in order to bundle the infrastructure components and thereby reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damage from unnecessary construction.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$351	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$351
Property - Request	\$450	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450
Utilities - Request	\$750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750
Construction - Request	\$4,354	\$0	\$4,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,708
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$5,905	\$0	\$4,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,259

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Development Charge Reserves	\$204	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$204
Contribution from DC Reserves Tax	\$1,752	\$0	\$1,459	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,211
Contribution from DC Reserves Water	\$873	\$0	\$719	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,592
Contribution from Tax Capital Reserve	\$1,653	\$0	\$1,424	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,077

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

Contribution from WW Capital Reserve	\$892	\$0	\$347	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,239
Contribution from Water Capital Reserve	\$531	\$0	\$405	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$936
Total	\$5,905	\$0	\$4,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,259

2019 Capital Project Detail Report

Project Title: Dunlop Street East Corridor Improvements - Toronto to Mulcaster

Project Number: EN1167

Department: Engineering Department

Summary: Reconstruction of the Dunlop Street East right of way, including new pavement structure (base granular to remain), enhancement of the pedestrian environment via sidewalk replacement/widening and creation of a flexible boulevard, curb replacement, landscape/streetscape programming replacement, street lighting and duct replacement and cathodic protection of existing watermain. Underground works are to remain in place.

Rationale: The Class Environmental Assessment reviewed alternatives to provide a more equitable allocation of road space between all modes of transport in the downtown core. The Preferred Alternative (Reconfigurable Street) has been approved by Council. This option consists of two-way traffic, a reconfigurable boulevard that can be used for pedestrian space or parking and wider permanent sidewalks adjacent to the buildings. Construction work will be coordinated to minimize disruption during the peak summer patio and festival season.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$270
Utilities - Request	\$0	\$232	\$348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$580
Construction - Request	\$0	\$1,585	\$2,378	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,964
Utilities - Forecast	\$0	\$0	\$400	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500
Construction - Forecast	\$0	\$0	\$2,956	\$740	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,696
Total	\$270	\$1,817	\$6,082	\$840	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,009

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - Tax	\$0	\$1,663	\$2,726	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,389
Government of Canada Grant Revenue	\$0	\$155	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$155
Contribution from Tax Capital Reserve	\$270	\$0	\$3,356	\$840	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,466
Total	\$270	\$1,817	\$6,082	\$840	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,009

2019 Capital Project Detail Report

Project Title: Dunlop Street Right of Way and Interchange Expansion - Sarjeant to Anne (within CAH limits)

Project Number: 000657

Department: Engineering Department

Summary: The City's contribution toward the Ministry of Transportation's planned reconstruction and widening of the Dunlop Street interchange within the controlled access highway limits (from approximately Sarjeant Drive to Anne Street) including creek conveyance upgrades and replacement of the sanitary trunk sewer highway crossing.

Rationale: The Ministry of Transportation (MTO) will be undertaking the replacement and widening of the Dunlop Street interchange to accommodate the planned expansion of Highway 400 to 10 lanes. The City has identified additional improvements required to address existing traffic congestion, accommodate growth and improve pedestrian access. MTO will construct the additional improvements subject to cost sharing with the City. It is recommended that the City contribute to MTO's planned works for the additional improvements as completing this work jointly maximizes cost efficiencies. The City is continuing to discuss cost sharing with MTO to confirm the baseline requirements to accommodate traffic volumes at the 2031 horizon.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Environmental Assessment - Request	\$374	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$374
Design - Request	\$0	\$461	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$461
Construction - Forecast	\$0	\$0	\$2,921	\$921	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,843
Total	\$374	\$461	\$2,921	\$921	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,677
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$243	\$299	\$1,899	\$599	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,040
Contribution from Tax Capital Reserve	\$131	\$161	\$1,022	\$322	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,637
Total	\$374	\$461	\$2,921	\$921	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,677

2019 Capital Project Detail Report

Project Title: Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)

Project Number: Z372

Department: Engineering Department

Summary: Reconstruction and widening of Dunlop Street from Sarjeant Drive to Anne Street, outside of the controlled access highway limits, in coordination with the associated works planned by the Ontario Ministry of Transportation for the Dunlop Street and Highway 400 interchange. This project will be coordinated with projects 000770 and 000657.

Rationale: The Ontario Ministry of Transportation (MTO) will be undertaking the replacement and widening of the Dunlop Street interchange within the controlled access highway (CAH) limits. Improvements from Sarjeant Drive to the west CAH limit, and from the east CAH limit to Anne Street are not included in the MTO's project scope. Reconstruction of the noted segments are required to align with the proposed cross-section elements that will be constructed by the MTO.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Environmental Assessment - Request	\$267	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$267
Design - Request	\$0	\$666	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$666
Construction - Forecast	\$0	\$0	\$1,332	\$1,332	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,665
Total	\$267	\$666	\$1,332	\$1,332	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,598
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$173	\$433	\$866	\$866	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,338
Contribution from Tax Capital Reserve	\$93	\$233	\$466	\$466	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,259
Total	\$267	\$666	\$1,332	\$1,332	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,598

2019 Capital Project Detail Report

Project Title: Dunlop Street West ROW Replacement - Eccles to Toronto

Project Number: EN1071

Department: Engineering Department

Summary: Construction of an open flow channel north of Dunlop Street, increasing the culvert capacity by installing new culverts across Dunlop Street and Bradford Street and constructing an open flow channel south of Dunlop Street. This project includes the reconstruction of the right of way including sidewalks, watermains, and local storm and sanitary sewers.

Rationale: Kidds Creek currently experiences several issues including flooding through many areas of the watershed resulting in loss of use of property and property damage. Increased sedimentation and erosion problems have led to reduced conveyance capacity, a decline in water quality, and the alteration of fish and wildlife habitat. The Kidds Creek Master Drainage Plan (MDP) identified improvements necessary to mitigate these issues. To reduce the potential for increased flooding downstream as improvements are made, the MDP recommended that conveyance improvements ideally start at the most downstream portions of the watershed and be implemented in sequential order upstream. This project is at a key downstream location that must be improved before further improvements can be implemented upstream. Fire Station #1 is also located in this flood area and access to Dunlop Street east for emergency response is restricted during local flooding events. In addition to the drainage concerns, Dunlop Street from Eccles Street to Toronto Street has deficient road surface conditions and the sanitary sewer is in poor structural condition and requires replacement.

The City of Barrie has been approved for a grant under Intake 4 of the National Disaster Mitigation Program (NDMP) in the amount of \$1.5 million for the construction phase of this project, which has to be used by March 31, 2020.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$4,000	\$1,063	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,063
Total	\$0	\$4,000	\$1,063	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,063
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Government of Canada Grant Revenue	\$0	\$1,400	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500
Contribution from Federal Gas Tax Reserve	\$0	\$1,000	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200
Contribution from Tax Capital Reserve	\$0	\$1,150	\$691	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,841
Contribution from WW Capital Reserve	\$0	\$250	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$290
Contribution from Water Capital Reserve	\$0	\$200	\$32	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$232
Total	\$0	\$4,000	\$1,063	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,063

2019 Capital Project Detail Report

Project Title: Early Life Pavement Preservation Pilot Program

Project Number: 000522

Department: Engineering Department

Summary: An application of Early Life Pavement Preservation techniques such as Reclamite, micro surfacing, slurry sealing and fog sealing to extend the life of pavement surface assets that are in the early stages of deterioration.

Rationale: The City of Barrie currently has approximately 1600 Lane kms within its road network. Many of these roads were built between 1986 and 2013, with the largest amount of network growth in the last 60 years occurring roughly within this period. The City expects another large network increase with the development of the annexed lands in the upcoming years. Based on the existing network condition profile, estimated using Road Pavement Condition Index (PCI), year of construction and road type (Local, Collector and Arterial) data, best practice indicates that the City of Barrie should currently be concentrating on preserving the roads that were built between 1988 and 2017. Many of these roads are in the ideal condition to perform early life preservation to capitalize and extend the potential life of the roads. Not performing early life preservation techniques at this stage of the asset's life will result in the roads transitioning into a lower condition rating and costing more money to rehabilitate, at the same time that levels of service become increasingly difficult to meet. Through analysis, it is estimated that if the City continues with current processes (with no early life preservation), the overall network PCI for the City will decrease by 11 points and there will be more roads in the Fair to Very Poor condition.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40
Construction - Request	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Design - Forecast	\$0	\$0	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Construction - Forecast	\$0	\$0	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Total	\$0	\$240	\$350	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$940
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$0	\$200	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800
Contribution from Tax Capital Reserve	\$0	\$40	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$140
Total	\$0	\$240	\$350	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$940

2019 Capital Project Detail Report

Project Title: End of Life Pavement Replacement Program

Project Number: 000694

Department: Engineering Department

Summary: The End of Life Pavement Replacement Program will focus on roads where ride quality is poor or very poor, physical maintenance is trending high, and reconstruction is several years away or not currently planned. Typical candidates will be roads that are too far deteriorated for the Road Resurfacing Program and are not candidates for reconstruction in the short term. The program may act as a holding strategy.

This request is not intended to replace any of the preservation programs that are being requested in the upcoming Capital Plan, but instead, provide another tool for the City to work with to improve the level of service that the residents of Barrie experience on a daily basis.

Rationale: The program will address Barrie's worst pavement surfaces by replacing the surfaces or managing localized trouble areas to help reduce continuous operational dependencies. There are many streets that require larger scale asphalt replacements but due to budget constraints, these repairs are usually avoided and left until reconstruction. Reconstruction is often years away or there may be no plans for reconstruction as subsurface infrastructure is still in acceptable condition. These road sections are beyond preservation or rehabilitation and require regular pothole patching and provide poor ride quality.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$20	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45
Construction - Request	\$200	\$550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750
Design - Forecast	\$0	\$0	\$25	\$25	\$30	\$30	\$30	\$30	\$20	\$30	\$0	\$220
Construction - Forecast	\$0	\$0	\$575	\$600	\$625	\$625	\$625	\$625	\$625	\$625	\$0	\$4,925
Total	\$220	\$575	\$600	\$625	\$655	\$655	\$655	\$655	\$645	\$655	\$0	\$5,940
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$0	\$550	\$575	\$600	\$625	\$625	\$625	\$625	\$625	\$625	\$0	\$5,475
Contribution from Tax Capital Reserve	\$220	\$25	\$25	\$25	\$30	\$30	\$30	\$30	\$20	\$30	\$0	\$465
Total	\$220	\$575	\$600	\$625	\$655	\$655	\$655	\$655	\$645	\$655	\$0	\$5,940

2019 Capital Project Detail Report

Project Title: Essa Road New Transmission Watermain and Road Expansion - Athabaska to TCP (Developer)

Project Number: Z483

Department: Engineering Department

Summary: Expansion of Essa Road, including urbanization and widening of the road from two to three lanes, with buffered bike lanes, and installation of a trunk watermain.

Rationale: Increases in traffic volumes resulting from growth in the Annexation area justify increasing the number of lanes and urbanizing Essa Road. The trunk watermain is needed to provide potable water and fire protection in Phase 1 of the Salem Secondary Plan. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Environmental Assessment - Request	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180
Design - Request	\$1,230	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,230
Property - Request	\$444	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$444
Construction - Request	\$0	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800
Utilities - Forecast	\$0	\$0	\$0	\$413	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$413
Construction - Forecast	\$0	\$0	\$0	\$0	\$4,024	\$4,173	\$0	\$0	\$0	\$0	\$0	\$8,197
Total	\$1,854	\$800	\$0	\$413	\$4,024	\$4,173	\$0	\$0	\$0	\$0	\$0	\$11,264

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$1,591	\$740	\$0	\$351	\$3,458	\$3,547	\$0	\$0	\$0	\$0	\$0	\$9,687
Debenture Proceeds - Tax	\$263	\$0	\$0	\$62	\$566	\$626	\$0	\$0	\$0	\$0	\$0	\$1,517
Contribution from Tax Capital Reserve	\$0	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$1,854	\$800	\$0	\$413	\$4,024	\$4,173	\$0	\$0	\$0	\$0	\$0	\$11,264

2019 Capital Project Detail Report

Project Title: Essa Road Right of Way Expansion - Bryne to Fairview (outside of CAH limits)

Project Number: EN1015

Department: Engineering Department

Summary: Reconstruction and widening of Essa Road from Bryne Drive to Fairview Road, outside of the controlled access highway limits, in coordination with the associated works planned by the Ministry of Transportation for the Essa Road and Highway 400 interchange. This project will be coordinated with project 000655.

Rationale: The Ministry of Transportation (MTO) will be undertaking the replacement and widening of the Essa Road interchange within the controlled access highway (CAH) limits. Transportation Improvements outside of the CAH limits are not included in MTO's Essa interchange replacement project and are needed to improve traffic flow in the area and the performance of the interchange.

This project is required to occur in coordination with project 000655 - Essa Road Right of Way and Interchange Expansion - Bryne to Fairview Road (within CAH limits).

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$203	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$203
Construction - Forecast	\$0	\$0	\$0	\$5,849	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,849
Total	\$0	\$203	\$0	\$5,849	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,052
<u>Funding (in 000's):</u>												
	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$0	\$132	\$0	\$3,802	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,933
Contribution from Tax Capital Reserve	\$0	\$71	\$0	\$2,047	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,118
Total	\$0	\$203	\$0	\$5,849	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,052

2019 Capital Project Detail Report

Project Title: Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth

Project Number: 000465

Department: Engineering Department

Summary: Reconstruction of Eugenia Street including road reconstruction, transmission watermain installation, sanitary sewer replacement and upgrading to current City standards, sanitary lateral replacement to property line, storm sewer replacement and installation, sidewalk replacement and installation, and streetlight upgrades.

Rationale: There are two primary drivers for this project: the first is that the subsurface infrastructure along Eugenia St. (and surrounding neighbourhoods) is approaching its maximum potential life (MPL) and experiencing age-related deterioration, along with physical failure (watermain/sewer breaks, sanitary intrusions, etc.). Subsurface assets beneath Eugenia St. are rated fair to poor and do not meet current design standards for capacity, safety, and performance. The road surface is rated poor to very poor and there is a lack of sidewalks along Eugenia St. which poses accessibility concerns for City residents. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets or deliver expected service levels. Secondly, future growth and intensification forecasting has shown the need to increase the water capacity and supply network security of pressure zone 2N. Installing a 300mm transmission watermain along Eugenia St. will better connect the 2N pressure zone to the existing network, meet the potable water and fire flow capacity requirements for safe growth, and provide the level of service residents expect.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$344	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$344
Utilities - Forecast	\$0	\$0	\$560	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$560
Construction - Forecast	\$0	\$0	\$0	\$2,398	\$2,395	\$0	\$0	\$0	\$0	\$0	\$0	\$4,793
Total	\$0	\$344	\$560	\$2,398	\$2,395	\$0	\$0	\$0	\$0	\$0	\$0	\$5,697

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$191	\$560	\$1,377	\$1,376	\$0	\$0	\$0	\$0	\$0	\$0	\$3,504
Contribution from WW Capital Reserve	\$0	\$68	\$0	\$544	\$543	\$0	\$0	\$0	\$0	\$0	\$0	\$1,155
Contribution from Water Capital Reserve	\$0	\$85	\$0	\$477	\$476	\$0	\$0	\$0	\$0	\$0	\$0	\$1,038
Total	\$0	\$344	\$560	\$2,398	\$2,395	\$0	\$0	\$0	\$0	\$0	\$0	\$5,697

2019 Capital Project Detail Report

Project Title: Gunn Street ROW Replacement - Peel to St. Vincent

Project Number: EN1172

Department: Engineering Department

Summary: Replacement of the road and infrastructure on Gunn Street from Peel Street to St. Vincent Street, including road reconstruction, watermain replacement, sanitary sewer replacement, sanitary lateral replacement, storm sewer installation, sidewalk installation and replacement, and streetlight replacement.

Rationale: Gunn Street between Peel Street and St. Vincent Street is in very poor condition. The Right of Way was constructed between 1947 and 1958 and nearly every piece of infrastructure has experienced severe deterioration and no longer provides reliable service. Given the age and deteriorated condition of all infrastructure within this Right of Way, other lifecycle strategies (status quo, do nothing/run to failure, maintain differently, and/or rehabilitate) are not expected to significantly extend the existing remaining life of current assets. The proposed solution will ensure safe drinking water and adequate fire protection, adequate drainage and reduced risk of flooding, reliable wastewater collection, and improved road safety.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Utilities - Request	\$250	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450
Construction - Forecast	\$0	\$0	\$5,385	\$120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,505
Total	\$350	\$200	\$5,385	\$120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,055

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$18	\$10	\$163	\$6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$197
Contribution from Federal Gas Tax Reserve	\$0	\$0	\$1,800	\$114	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,914
Contribution from Tax Capital Reserve	\$293	\$190	\$1,302	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,784
Contribution from WW Capital Reserve	\$20	\$0	\$1,060	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,080
Contribution from Water Capital Reserve	\$20	\$0	\$1,060	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,080
Total	\$350	\$200	\$5,385	\$120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,055

2019 Capital Project Detail Report

Project Title: Harvie Road and Big Bay Point Road New Crossing - Highway400

Project Number: 000310

Department: Engineering Department

Summary: Construction of a new 5-lane Highway 400 crossing at Harvie Road and Big Bay Point Road between Bryne Drive and Bayview Drive. The crossing will include buffered bike lanes, sidewalks and protection for a future 7-lane crossing and interchange. The project has been and will continue to be accelerated where possible. Utility relocations are continuing through the winter of 2018/2019 and the crossing contractor has mobilized and is advancing construction of the crossing.

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to construct a Highway 400 crossing connecting Harvie and Big Bay Point Roads to reduce traffic congestion and accommodate planned growth in the south end of Barrie. The proposed construction of this crossing, coupled with transportation improvements on Bryne Drive, Harvie Road, Big Bay Point Road, and Bayview Drive, will reduce traffic congestion at the Essa Road and Maplevue Drive interchanges.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$244	\$244	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$488
Property - Request	\$2,172	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,172
Construction - Request	\$0	\$18,826	\$21,420	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,246
Total	\$2,172	\$19,070	\$21,664	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,906

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Contributions	\$0	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180
Debenture Proceeds - DCs	\$1,448	\$10,413	\$7,584	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,445
Debenture Proceeds - Tax	\$724	\$0	\$3,792	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,515
Province of Ontario Grant Revenue	\$0	\$0	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000
Contribution from Tax Capital Reserve	\$0	\$5,026	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,026
Contribution from WW Capital Reserve	\$0	\$555	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$555
Contribution from Water Capital Reserve	\$0	\$2,896	\$288	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,184
Total	\$2,172	\$19,070	\$21,664	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,906

2019 Capital Project Detail Report

Project Title: Harvie Road ROW Expansion - Essa to Bryne

Project Number: Z328

Department: Engineering Department

Summary: Urbanize the existing rural cross section of Harvie Road and widen to 3 lanes from Essa to Veterans and five lanes from Veterans Drive to Bryne Drive. This project will include buffered bike lanes and sidewalks. Timing of the construction costs have been adjusted to reflect anticipation of actual spending.

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to construct a highway crossing at Harvie Road / Big Bay Point Road to reduce traffic congestion in the south end of Barrie and to accommodate planned growth. A Schedule C Environmental Assessment was completed. The construction of these transportation improvements are a critical component of the Harvie Road / Big Bay Point Road Highway Crossing and required to connect the highway crossing to Veteran's Drive and Essa Road.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$1,589	\$120	\$120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,829
Property - Request	\$2,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,377
Utilities - Request	\$669	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$669
Construction - Request	\$1,083	\$4,599	\$6,688	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,370
Total	\$5,718	\$4,719	\$6,808	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,245

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Contributions	\$0	\$65	\$87	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$153
Local Improvements Revenue	\$0	\$148	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$148
Contribution from DC Reserves Tax	\$3,788	\$2,627	\$4,669	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,084
Contribution from Tax Capital Reserve	\$1,859	\$858	\$1,553	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,270
Contribution from WW Capital Reserve	\$71	\$549	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$620
Contribution from Water Capital Reserve	\$0	\$472	\$498	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$970
Total	\$5,718	\$4,719	\$6,808	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,245

2019 Capital Project Detail Report

Project Title: Henry Street ROW Replacement - Frances to Eccles

Project Number: EN1174

Department: Engineering Department

Summary: Right of way reconstruction of Henry Street between Frances Street and Eccles Street including road reconstruction, watermain replacement, water service replacement, sanitary sewer replacement, sanitary lateral replacement, storm sewer installation, and sidewalk replacement. This project is substantially complete. The top course asphalt remains to be placed in 2019.

Rationale: This section of Henry Street was constructed between 1947 and 1950 and nearly every piece of infrastructure has experienced severe deterioration and no longer provides reliable service. Sewer inspections performed in 2015 confirm that the existing sanitary sewers are in very poor condition. There is a strong likelihood that some or all laterals are bituminous fibre connections, which have a high risk of physical failure. Under Council Motion (94-G-339), sewer connections that are bituminous fibre pipe and that are in a state of failure, are the responsibility of the City including all costs associated with the replacement of the sewer connection from the sewer main to the property line. To mitigate the high probability of failure and to effectively control the City's responsibility with these assets, the proposed solution also includes the replacement of all sanitary laterals. The watermain is undersized, and well beyond its expected useful service life. It has begun to severely impact levels of service including water quality and restricted flow rates. There are no local storm sewers within this right of way. This results in a public safety concern with potential for roadway flooding during major storm events.

Reconstruction of the entire right of way is anticipated to enable the City to provide the required levels of service in drinking water provision, sanitary servicing, and stormwater management.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Utilities - Request	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Construction - Request	\$1,440	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,490
Total	\$1,540	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,590
<u>Funding (in 000's):</u>												
	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$980	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,030
Contribution from WW Capital Reserve	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Contribution from Water Capital Reserve	\$260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$260
Total	\$1,540	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,590

2019 Capital Project Detail Report

Project Title: Hewitt's Creek New Trunk Sanitary Sewer - Maplevue to Lockhart (Developer)

Project Number: EN1137

Department: Engineering Department

Summary: Construction of a new trunk sanitary sewer from Maplevue Drive East to Lockhart road, east of Hewitt's Creek, to service new development in the Hewitt's Secondary Plan area.

Rationale: The City of Barrie Growth Studies identified the need for the installation of a new trunk sanitary sewer in the Hewitt's Secondary Plan area to service growth. Installation of a sanitary sewer is included in both the Infrastructure Implementation Plan and the MOU with developers in Phase 1 of the secondary plan area. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$474	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,474
Construction - Forecast	\$0	\$0	\$1,000	\$1,000	\$0	\$1,000	\$1,000	\$0	\$0	\$56	\$672	\$4,728
Total	\$474	\$1,000	\$1,000	\$1,000	\$0	\$1,000	\$1,000	\$0	\$0	\$56	\$672	\$6,202
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$275	\$580	\$580	\$580	\$0	\$580	\$580	\$0	\$0	\$28	\$336	\$3,539
Contribution from WW Capital Reserve	\$199	\$420	\$420	\$420	\$0	\$420	\$420	\$0	\$0	\$28	\$336	\$2,663
Total	\$474	\$1,000	\$1,000	\$1,000	\$0	\$1,000	\$1,000	\$0	\$0	\$56	\$672	\$6,202

2019 Capital Project Detail Report

Project Title: Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin

Project Number: Z477

Department: Engineering Department

Summary: Replace and increase the capacity of the Hotchkiss Creek Culvert crossing Innisfil Street including the replacement and upgrading of subsurface infrastructure (storm sewer, local and trunk sanitary sewer, watermain) within culvert construction limits.

Rationale: The culvert conveying Hotchkiss Creek beneath Innisfil Street has failed and poses a threat to public and environmental safety. Delaying the replacement of the existing culvert exposes the City of Barrie to significant levels of risk and service interruptions; a failure of the road due to the condition of this culvert will result in the closure of Innisfil Street. Operating costs will continue to increase as the culvert structure deteriorates and fails further. Full replacement of the culvert will address the physical failure and inadequate capacity as well as lower operational costs and promote public and environmental safety.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$3,350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,350
Total	\$0	\$3,350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,350
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$521	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$521
Debenture Proceeds - Tax	\$0	\$2,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,084
Contribution from WW Capital Reserve	\$0	\$669	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$669
Contribution from Water Capital Reserve	\$0	\$76	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76
Total	\$0	\$3,350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,350

2019 Capital Project Detail Report

Project Title: Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)

Project Number: Z201

Department: Engineering Department

Summary: Sanitary servicing and transportation improvements to support proposed growth in the Salem Secondary Plan. Install trunk sanitary sewer under Huronia Road from Veteran's to McKay. The detailed design for Huronia Road is currently underway. The design will incorporate the ultimate reconstruction and widening of Huronia Road to 3-lanes, buffered bike lanes, sidewalks and trunk sanitary sewer between Lockhart Road and McKay Road. Interim design to be implemented in short term would maintain a rural cross section.

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to widen the existing 2-lane rural cross-section to 3-lanes, buffered bike lanes and sidewalks. A Schedule C EA was completed as part of the Annexation Transportation EA Studies. The Wastewater Collection Master Plan identified a trunk sanitary sewer to support growth in the Secondary Plan Lands.

The recommendation is to acquire property for the ultimate design at this point rather than approaching property owners in the future.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$2,006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,006
Property - Request	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000
Utilities - Request	\$0	\$890	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$890
Construction - Forecast	\$0	\$0	\$4,938	\$4,938	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,876
Total	\$4,006	\$890	\$4,938	\$4,938	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,772

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$0	\$286	\$286	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$571
Debenture Proceeds - Tax	\$442	\$134	\$0	\$639	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,214
Contribution from DC Reserves Tax (Annex)	\$2,503	\$757	\$3,619	\$3,619	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,499
Contribution from DC Reserves Wastewater (Annex)	\$901	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$901
Contribution from Tax Capital Reserve	\$0	\$0	\$639	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$639
Contribution from WW Capital Reserve	\$159	\$0	\$394	\$394	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$948
Total	\$4,006	\$890	\$4,938	\$4,938	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,772

2019 Capital Project Detail Report

Project Title: Huronia Road Right of Way Expansion and Watermain Replacement - Yonge to Herrell

Project Number: Z435

Department: Engineering Department

Summary: Huronia Road from Yonge to Herrell requires reconstruction to urban standards as well as improved drainage, implementation of Active Transportation, and watermain replacement. Proposed expansion will provide additional traffic capacity. A reinforcement watermain for Zone 2S is required on Little Avenue from Garden to Huronia (300mm) forms part of this project. Whiskey Creek Conveyance improvements include the BCRY crossing and Huronia Roadcrossing.

Rationale: Huronia Road from Yonge to Herrell requires reconstruction to urban standards as well as improved drainage, implementation of Active Transportation, and watermain replacement. Proposed expansion will provide additional traffic capacity. A reinforcement watermain for Zone 2S is required on Little Avenue from Garden to Huronia (300mm) forms part of this project. Whiskey Creek Conveyance improvements include the BCRY crossing and Huronia Roadcrossing.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Environmental Assessment - Request	\$0	\$120	\$120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$240
Design - Forecast	\$0	\$0	\$0	\$909	\$909	\$0	\$0	\$0	\$0	\$0	\$0	\$1,818
Property - Forecast	\$0	\$0	\$0	\$0	\$0	\$2,122	\$0	\$0	\$0	\$0	\$0	\$2,122
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$1,397	\$0	\$0	\$0	\$0	\$1,397
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,080	\$6,543	\$0	\$0	\$11,623
Total	\$0	\$120	\$120	\$909	\$909	\$2,122	\$1,397	\$5,080	\$6,543	\$0	\$0	\$17,200
<u>Funding (in 000's):</u>												
	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$0	\$78	\$78	\$242	\$242	\$1,379	\$908	\$1,075	\$2,026	\$0	\$0	\$6,028
Contribution from Tax Capital Reserve	\$0	\$42	\$42	\$637	\$637	\$743	\$489	\$3,813	\$4,325	\$0	\$0	\$10,729
Contribution from Water Capital Reserve	\$0	\$0	\$0	\$30	\$30	\$0	\$0	\$192	\$192	\$0	\$0	\$443
Total	\$0	\$120	\$120	\$909	\$909	\$2,122	\$1,397	\$5,080	\$6,543	\$0	\$0	\$17,200

2019 Capital Project Detail Report

Project Title: Hurst Drive Pavement Rehabilitation - Cox Mill to GoldenMeadow

Project Number: Z1043

Department: Engineering Department

Summary: The proposed work involves reconstruction of the road including full-depth granular and asphalt replacement.

Rationale: Hurst Drive from Cox Mill Road to Golden Meadow Road is in poor condition. The pavement in this location has failed. Substantial deterioration in the form of severe rutting and multiple transverse depressions are resulting in poor service level especially in ride comfort. Multiple solutions were considered, varying from techniques which would be less expensive, yet short-lived, to full depth reconstruction. This solution was selected to provide the best value in terms of performance and cost.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Construction - Request	\$0	\$2,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,200
Total	\$60	\$2,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,260
<u>Funding (in 000's):</u>												
	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - Tax	\$0	\$2,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,200
Contribution from Tax Capital Reserve	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Total	\$60	\$2,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,260

2019 Capital Project Detail Report

Project Title: Interim Watermain Replacement Pilot Program

Project Number: EN1178

Department: Engineering Department

Summary: Pilot program for the rehabilitation of various old and undersized galvanized watermain using trenchless technologies such as directional drilling and other approaches as appropriate.

Rationale: Throughout the City there are many small and/or galvanized watermain, many of them dead-ends, that are below the 150mm recommended minimum diameter as per City standards. Water Operations staff have identified substantial challenges in achieving adequate drinking water and fire flows at these mains, and are regularly required to perform maintenance activities in attempts to improve service to residents. Many of the mains are old and require upsizing and replacement. Through this program, watermain with deficient flows will be corrected by installing an interim watermain until a full watermain reconstruction can occur. This project will utilize trenchless technologies such as directional drilling to reduce the construction disruptions in the area. This project will reduce overall operational costs by reducing the need for frequent maintenance activities. The use of directional drilling will minimize road restoration costs.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$75	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90
Construction - Request	\$1,050	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,650
Design - Forecast	\$0	\$0	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15
Construction - Forecast	\$0	\$0	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Total	\$1,125	\$615	\$615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,355
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Water Capital Reserve	\$1,125	\$615	\$615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,355
Total	\$1,125	\$615	\$615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,355

2019 Capital Project Detail Report

Project Title: Kidds and Sophia Creek Storm Pond Upgrades - Irwin (KD03), Ford (KD06), and Ottaway (SP03)

Project Number: Z462

Department: Engineering Department

Summary: Kidds Creek and Sophia Creek Storm Pond expansion and water quality upgrades - Irwin (KD03), Ford (KD06), and Ottaway (SP03)

Rationale: The Sophia Creek Master Drainage Plan, the City Wide Master Drainage Plan as well as the City Growth Stormwater Management study identified several stormwater management facilities that could be expanded and upgraded to minimize flooding, property damage, and safety issues downstream and also reduce phosphorus loading to Lake Simcoe. The Sophia and Kidds Creek watersheds are underserved for water conveyance and water quality controls. The identified stormwater management facilities are critical conveyance peak flow controls and can also provide stream water quality enhancements to support the present and future drainage servicing needs of the City.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110
Property - Request	\$0	\$750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$750	\$0	\$0	\$0	\$0	\$0	\$750
Construction - Forecast	\$0	\$0	\$2,700	\$0	\$0	\$0	\$6,500	\$0	\$0	\$0	\$0	\$9,200
Total	\$110	\$750	\$2,700	\$0	\$0	\$750	\$6,500	\$0	\$0	\$0	\$0	\$10,810

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750
Contribution from DC Reserves Tax	\$110	\$0	\$2,700	\$0	\$0	\$750	\$6,500	\$0	\$0	\$0	\$0	\$10,060
Total	\$110	\$750	\$2,700	\$0	\$0	\$750	\$6,500	\$0	\$0	\$0	\$0	\$10,810

2019 Capital Project Detail Report

Project Title: Lampman to Anne New Transmission Watermain and Lampman to Leacock ROW Rehabilitation

Project Number: Z350

Department: Engineering Department

Summary: This project will improve the water distribution system for pressure Zone 3N by installing a new 300mm watermain from the Zone 3N Pumping Station on Anne Street to Leacock Drive by way of Letitia Street. This project also includes a 200mm watermain along Letitia Street from Callaghan Drive to Anne Street and full depth road resurfacing along Leacock Drive from Browning Trail to Cundles Road West. The pump station works are to be performed concurrently as part of project000629.

Rationale: The proposed 300mm watermain is the preferred solution required to provide water distribution system improvements for pressure Zone 3N. Pressure Zone 3N currently only has one pumping station and requires a second pumping station with associated transmission watermain to provide supply redundancy and system reinforcement in the event of a pumping station or watermain failure. The noted roadway outlined for full-depth resurfacing is in very poor to poor condition and is deteriorating rapidly. By conducting this work the City of Barrie will improve service levels to the community and provide capacity requirements for future growth.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$465	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$465
Utilities - Request	\$315	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$315
Construction - Request	\$0	\$890	\$922	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,812
Construction - Forecast	\$0	\$0	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,250
Total	\$780	\$890	\$2,172	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,842
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$31	\$890	\$922	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,843
Contribution from Water Capital Reserve	\$749	\$0	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,999
Total	\$780	\$890	\$2,172	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,842

2019 Capital Project Detail Report

Project Title: Lockhart Road New Watermain, Reservoir and ROW Expansion - Veterans to Bayview(City)

Project Number: Z467

Department: Engineering Department

Summary: Construction of a new 5-lane Highway 400 crossing at Lockhart Road / Salem Road, including reconstruction and widening to 5-lanes, buffered bike lanes, sidewalks, and construction of a new transmission watermain between Lockhart Road and McKay Road and a new reservoir/pumping station.

Rationale: The MMATMP identified the need to widen the existing 2-lane rural cross-section to 5-lanes, buffered bike lanes, sidewalks and construct a new highway crossing. A Schedule C EA is underway as part of the Annexation Transportation EA Studies. The road widening and highway crossing is required to accommodate growth in the AnnexedLands.

The transmission watermain, reservoir and pump station is required to provide potable water, fire protection, system security and redundancy to service growth in the AnnexedLands.

The road widening and highway crossing project is identified in the Council endorsed MMATMP. The transmission watermain, reservoir/pump station is identified in the Council endorsed Water Storage Distribution Master Plan.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$2,963	\$2,963	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,925
Property - Request	\$1,067	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,067
Property - Forecast	\$0	\$0	\$0	\$5,303	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,303
Utilities - Forecast	\$0	\$0	\$0	\$0	\$452	\$0	\$0	\$0	\$0	\$0	\$0	\$452
Construction - Forecast	\$0	\$0	\$0	\$0	\$5,413	\$12,320	\$12,320	\$6,677	\$0	\$0	\$0	\$36,729
Total	\$1,067	\$2,963	\$2,963	\$5,303	\$5,864	\$12,320	\$12,320	\$6,677	\$0	\$0	\$0	\$49,475

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$2,727	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,727
Contribution from DC Reserves Tax (Annex)	\$0	\$0	\$1,334	\$4,507	\$384	\$5,676	\$5,676	\$5,676	\$0	\$0	\$0	\$23,252
Contribution from DC Reserves Water (Annex)	\$1,067	\$0	\$1,393	\$0	\$5,413	\$5,642	\$5,642	\$0	\$0	\$0	\$0	\$19,157
Contribution from Tax Capital Reserve	\$0	\$235	\$235	\$795	\$68	\$1,002	\$1,002	\$1,002	\$0	\$0	\$0	\$4,339
Total	\$1,067	\$2,963	\$2,963	\$5,303	\$5,864	\$12,320	\$12,320	\$6,677	\$0	\$0	\$0	\$49,475

2019 Capital Project Detail Report

Project Title: Lockhart Road ROW Expansion and Trunk Watermain - Bayview to Huronia (City)

Project Number: Z472

Department: Engineering Department

Summary: Road expansion from two lanes to five lanes on Lockhart Road from Bayview Drive to Huronia Road, including an expanded grade separated railway crossing west of Huronia Road and a new transmission watermain.

Rationale: Lockhart Road between Bayview Drive and Huronia Road is a rural two lane road which needs to be widened to five lanes to support approved growth in the Salem and Hewitts Secondary Plan areas. In addition, a grade separated railway crossing and a transmission watermain are required.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$1,127	\$1,127	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,254
Property - Forecast	\$0	\$0	\$0	\$3,341	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,341
Utilities - Forecast	\$0	\$0	\$0	\$0	\$369	\$0	\$0	\$0	\$0	\$0	\$0	\$369
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$7,193	\$7,193	\$0	\$0	\$0	\$0	\$14,385
Total	\$0	\$1,127	\$1,127	\$3,341	\$369	\$7,193	\$7,193	\$0	\$0	\$0	\$0	\$20,350
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$960	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$960
Contribution from DC Reserves Tax (Annex)	\$0	\$0	\$703	\$2,840	\$314	\$4,483	\$4,483	\$0	\$0	\$0	\$0	\$12,824
Contribution from DC Reserves Water (Annex)	\$0	\$0	\$173	\$0	\$0	\$1,099	\$1,099	\$0	\$0	\$0	\$0	\$2,370
Contribution from DC Reserves Wastewater (Annex)	\$0	\$0	\$84	\$0	\$0	\$541	\$541	\$0	\$0	\$0	\$0	\$1,166
Contribution from Tax Capital Reserve	\$0	\$124	\$124	\$501	\$55	\$791	\$791	\$0	\$0	\$0	\$0	\$2,387
Contribution from WW Capital Reserve	\$0	\$44	\$44	\$0	\$0	\$279	\$279	\$0	\$0	\$0	\$0	\$645
Total	\$0	\$1,127	\$1,127	\$3,341	\$369	\$7,193	\$7,193	\$0	\$0	\$0	\$0	\$20,350

2019 Capital Project Detail Report

Project Title: Lovers Creek Channel Rehabilitation - Adjacent to Brunton Park

Project Number: Z894

Department: Engineering Department

Summary: Channel realignment with slope stabilization and toe protection of Lover's Creek, adjacent to Brunton Park, is required to prevent erosion of the existing creek bank and siltation in the creek. The project scope includes excavation of the valley slope to a stable inclination, channel realignment, complete armor protection of the channel toe-of slope, and the purchase of land required to accommodate proposed construction and realignment.

Rationale: The Lover's Creek main channel is eroding the toe of the valley slope east of Brunton Park as it moves through a sharp bend. As a safety precaution, the City installed a chain link fence in 2006 along the top of the valley slope to restrict public access to this area, however, the slope has continued to erode with storm events and has begun to encroach the fence. The proposed channel rehabilitation is required to mitigate public safety concerns and prevent further soil instability, slope failure, creek siltation and loss of table lands.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80
Property - Request	\$0	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10
Construction - Forecast	\$0	\$0	\$0	\$0	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$540
Total	\$80	\$10	\$0	\$0	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$630

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$80	\$10	\$0	\$0	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$630
Total	\$80	\$10	\$0	\$0	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$630

2019 Capital Project Detail Report

Project Title: Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill

Project Number: EN1169

Department: Engineering Department

Summary: Replacement of the existing Tollendal Mill Road culvert at Lovers Creek with a bridge structure to increase hydraulic capacity. The project includes road reconstruction, watercourse rehabilitation, and a new watermain.

Rationale: The existing Lovers Creek culvert under Tollendal Mill Road is in structurally poor condition. This large diameter culvert requires biennial inspection by a professional engineer as per the Ontario Structure Inspection Manual (OSIM); as a result of the most recent inspections, it was noted that the culvert barrels exhibited more severe invert deterioration and excessive deformations and that high velocity creek flows had compromised the stability of the Lovers Creek channel. The consultant recommended that replacement work be completed as quickly as possible to ensure that the culvert structure was physically sound. Engineering staff have also identified that the culvert is hydraulically deficient. Therefore replacement with a bridge structure is required along with creek restoration. There is no watermain on this section of Tollendal Mill Road and it should be installed as part of this project to reinforce the water distribution system in the area. Completion of the work is expected to improve stormwater conveyance capacity, and will help to safeguard local road networks and private property from flood damage.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Utilities - Request	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Construction - Request	\$0	\$2,685	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,735
Total	\$50	\$2,685	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,785
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$1,495	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,495
Contribution from DC Reserves Tax	\$33	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33
Contribution from Federal Gas Tax Reserve	\$0	\$805	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$805
Contribution from Tax Capital Reserve	\$18	\$160	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$228
Contribution from Water Capital Reserve	\$0	\$225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$225
Total	\$50	\$2,685	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,785

2019 Capital Project Detail Report

Project Title: Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer)

Project Number: Z463

Department: Engineering Department

Summary: Expansion of Mapleview Drive East, including installation of a sanitary sewer, and road widening from two lanes to three lanes with adjacent multi-use trail.

Rationale: Different sanitary servicing alternatives were examined in the Wastewater Collection MP for the Salem Secondary Plan area. The preferred alternative was to drain this sewer shed to the Hewitt's Trunk Sewer because this sewer has spare capacity. Anticipated increases in traffic volumes and active transportation resulting from growth in the Annexation area justifies urbanizing Mapleview Drive east of Prince William Way. The Transportation MP recommended three lanes plus buffered bike lanes. Within former Barrie the existing road is relatively new but the south side has not been urbanized. In consideration of this the project scope was adjusted to include a multi-use trail to retain as much of the existing road as possible. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$1,122	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,122
Property - Request	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Utilities - Request	\$0	\$656	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$656
Construction - Forecast	\$0	\$0	\$7,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,160
Total	\$2,122	\$656	\$7,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,938
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$1,851	\$558	\$6,387	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,795
Debenture Proceeds - Tax	\$271	\$98	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$369
Contribution from Tax Capital Reserve	\$0	\$0	\$773	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$773
Total	\$2,122	\$656	\$7,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,938

2019 Capital Project Detail Report

Project Title: Mapleview Dr E Road Expansion & New Trunk Watermain - East of Yonge to Prince William (City)

Project Number: Z465

Department: Engineering Department

Summary: Widening of Mapleview Drive East from Yonge to Prince William to 5-lanes with buffered bike lanes, sidewalk on the south side, multi-use trail on the north side, local sanitary sewer, trunk watermain and grade separated railway crossing (underpass).

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to widen Mapleview to 5 lanes between Yonge and Prince William with a grade separated railway crossing. The Water Distribution Master Plan and Waste Collection Master Plan recommends the installation of a trunk watermain and a local sanitary sewer. A Schedule C Environmental Assessment was completed. The transportation improvements and the trunk watermain are included in the Infrastructure Implementation Plan and the Memorandum of Understanding with developers in the Secondary Plan lands. The watermain is required to provide potable water and fire flow in Phase 1 of the Hewitt's Secondary Plan area.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$3,367	\$3,546	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,913
Property - Forecast	\$0	\$0	\$2,763	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,763
Utilities - Forecast	\$0	\$0	\$0	\$4,258	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,258
Construction - Forecast	\$0	\$0	\$0	\$0	\$13,311	\$14,018	\$0	\$0	\$0	\$0	\$0	\$27,329
Total	\$3,367	\$3,546	\$2,763	\$4,258	\$13,311	\$14,018	\$0	\$0	\$0	\$0	\$0	\$41,262

Funding (in 000's):

	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax (Annex)	\$2,862	\$3,014	\$2,348	\$3,619	\$11,314	\$11,916	\$0	\$0	\$0	\$0	\$0	\$35,073
Contribution from Tax Capital Reserve	\$505	\$532	\$414	\$639	\$1,997	\$2,103	\$0	\$0	\$0	\$0	\$0	\$6,189
Total	\$3,367	\$3,546	\$2,763	\$4,258	\$13,311	\$14,018	\$0	\$0	\$0	\$0	\$0	\$41,262

2019 Capital Project Detail Report

Project Title: Mapleview Drive East Improvements - Country Lane to Yonge (City)

Project Number: EN1097

Department: Engineering Department

Summary: Widening of Mapleview Dr. E from Country Lane to Yonge to 5 lanes including: road widening and reconstruction; sanitary sewer and service installation; local storm sewer installation; water service installation; new transmission watermain (750 from Country Lane to Madeline, 600 from Madeline to Yonge); multi-use asphalt trail on the north side; streetlight installation; and new traffic signal installation at Madeline and at Dean.

Rationale: Mapleview Drive East between Country Lane and Yonge is deficient with respect to traffic capacity, sidewalks, bicycle transportation, streetlights, domestic watermain and storm sewers. There is a transmission watermain and a sanitary trunk sewer required on this section of Mapleview Drive East. The proposed work will increase traffic capacity and resolve transportation and other servicing deficiencies, thereby allowing the City to provide the expected levels of service to the community while reducing risk associated with physically deteriorated and under-capacity roads and subsurface infrastructure.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Utilities - Request	\$1,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100
Construction - Request	\$6,750	\$6,850	\$1,440	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,040
Total	\$7,850	\$6,850	\$1,440	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,140

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Tax Additions	\$75	\$100	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198
Debenture Proceeds - Tax	\$728	\$563	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,290
Contribution from DC Reserves Tax (Annex)	\$4,123	\$3,188	\$723	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,033
Contribution from DC Reserves Water (Annex)	\$2,000	\$2,000	\$400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,400
Contribution from Federal Gas Tax Reserve	\$700	\$700	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500
Contribution from Tax Capital Reserve	\$0	\$0	\$128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$128
Contribution from WW Capital Reserve	\$225	\$300	\$68	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$593
Total	\$7,850	\$6,850	\$1,440	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,140

2019 Capital Project Detail Report

Project Title: Mapleview Drive West Sanitary Forecmain Twinning and Pumping Station 5 Upgrades & Expansion (City)

Project Number: EN1143

Department: Engineering Department

Summary: Expansion and upgrade of the Holly Pump Station (located on Logan Court) to increase pumping capacity to 207 L/s, provide emergency storage, increase standby power supply and upgrade the building. Construct 1940m of new 400mm forcemain to service growth and provide redundancy to the existing 350mm forcemain.

Rationale: The City Growth Studies and Waste Water Collection Master Plan identified the need to provide increased Holly Pumping Station and forcemain capacity to service Phase 1 growth within the Salem Secondary Plan. The new 400mm forcemain will provide redundancy and address existing operational and maintenance limitations. The project will increase pumping capacity and emergency storage, upgrade standby power capacity, electrical supply, and control equipment.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$13,330	\$1,480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,810
Total	\$13,330	\$1,480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,810
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Wastewater (Annex)	\$13,330	\$1,480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,810
Total	\$13,330	\$1,480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,810

2019 Capital Project Detail Report

Project Title: McKay Road New Interchange - Highway 400(City)

Project Number: 000138

Department: Engineering Department

Summary: Design and construction of a new highway interchange at McKay Road and widening of the structure to a 5-lane cross section.

Rationale: McKay Road is currently a two lane rural road in poor condition except for the crossing over Highway 400 which was recently reconstructed by MTO with financial contribution from the City so that it will accommodate a future interchange and structure widening. The Multi-Modal Active Transportation Master Plan indicates that a McKay interchange, and widening of the crossing from two to five lanes with buffered bike lanes and sidewalks, is required to support transportation growth in the area and is a critical infrastructure capacity improvement required in Phase 1 development.

The existing Mapleview Drive / Highway 400 interchange operates at a poor level of service and without the McKay Interchange in Phase 1, growth cannot be accommodated.

The McKay Interchange is included in the Infrastructure Implementation Plan and the Memorandum of Understanding with developers.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$1,920	\$1,737	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,657
Property - Forecast	\$0	\$0	\$4,364	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,364
Utilities - Forecast	\$0	\$0	\$0	\$114	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$114
Construction - Forecast	\$0	\$0	\$0	\$0	\$13,839	\$13,839	\$0	\$0	\$0	\$0	\$0	\$27,678
Total	\$1,920	\$1,737	\$4,364	\$114	\$13,839	\$13,839	\$0	\$0	\$0	\$0	\$0	\$35,812
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax (Annex)	\$1,592	\$1,441	\$3,709	\$97	\$11,525	\$11,525	\$0	\$0	\$0	\$0	\$0	\$29,889
Contribution from DC Reserves Water (Annex)	\$46	\$42	\$0	\$0	\$280	\$280	\$0	\$0	\$0	\$0	\$0	\$649
Contribution from Tax Capital Reserve	\$281	\$254	\$655	\$17	\$2,034	\$2,034	\$0	\$0	\$0	\$0	\$0	\$5,275
Total	\$1,920	\$1,737	\$4,364	\$114	\$13,839	\$13,839	\$0	\$0	\$0	\$0	\$0	\$35,812

2019 Capital Project Detail Report

Project Title: McKay Road New Trunk Sanitary Sewer and Road Expansion - Hwy 400 to Huronia (City)

Project Number: Z204

Department: Engineering Department

Summary: Construction of a trunk sanitary sewer and the associated road restoration and expansion of the two lane rural road to a 5-lane road from Huronia Road to Highway 400.

Rationale: The Wastewater Collection Master Plan indicated that the development of the Salem Secondary plan is fully dependent upon the installation of a trunk sanitary sewer from Huronia Road west to Highway 400. The Wastewater Collection Master Plan recommended drainage of the Salem Secondary Plan sewershed to the Lover's Trunk Sewer as it has significant available capacity. Road reconstruction as a result of the sewer installation will improve the safety and drivability, with increases in traffic volume necessitating an expansion from two lanes to four. Additional expansion and urbanization of the right of way to support later phases of development will not be required until post 2031, and is recommended to occur with future watermain construction.

A Schedule C Environmental Assessment was completed. The two infrastructure elements have been included in both the Infrastructure Implementation Plan and the Memorandum of Understanding with developers. The project timing needs to be maintained as this project delivers critical sanitary servicing to the Salemlands.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$2,771	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,771
Property - Request	\$4,205	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,205
Utilities - Request	\$0	\$1,467	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,467
Construction - Forecast	\$0	\$0	\$6,800	\$11,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,300
Total	\$6,976	\$1,467	\$6,800	\$11,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,743

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$1,247	\$4,000	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,247
Debenture Proceeds - Tax	\$762	\$220	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$982
Contribution from DC Reserves Tax (Annex)	\$4,316	\$0	\$2,380	\$6,375	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,071
Contribution from DC Reserves Wastewater (Annex)	\$1,898	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,898
Contribution from Tax Capital Reserve	\$0	\$0	\$420	\$1,125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,545
Total	\$6,976	\$1,467	\$6,800	\$11,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,743

2019 Capital Project Detail Report

Project Title: McKay Road ROW Expansion - County Road 27 to Highway 400 (Developer)

Project Number: Z229

Department: Engineering Department

Summary: Construction of a trunk sanitary sewer and watermain from Highway 400 westerly. Expansion of the McKay Road right of way to a five lane urban road from Reid Drive to Highway 400 and a three lane rural road from portions of County Road 27 to Reid Drive.

Rationale: Installation of a sanitary sewer, trunk watermain and associated transportation improvements are included in both the Infrastructure Implementation Plan and the MOU with developers in Phase 1 of the secondary plan area. The Transportation Master Plan identified the need to expand McKay from two lanes to three (west of Reid) and five (Reid to Highway 400) lanes. The Wastewater Collection Master Plan recommended drainage of the Salem Secondary Plan sewershed to Lover's Trunk Sewer as it has significant available capacity, while the Water Distribution Master Plan identified a need for a trunk watermain to provide potable water and fire protection in Phase 1 development. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$4,116	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,116
Property - Request	\$3,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000
Utilities - Request	\$0	\$632	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$632
Construction - Request	\$0	\$10,336	\$5,541	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,877
Design - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$291	\$0	\$0	\$0	\$0	\$291
Property - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$542	\$0	\$0	\$0	\$542
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$90	\$0	\$0	\$90
Construction - Forecast	\$0	\$0	\$4,964	\$3,989	\$1,431	\$0	\$0	\$0	\$0	\$1,855	\$0	\$12,239
Total	\$7,116	\$10,968	\$10,505	\$3,989	\$1,431	\$0	\$291	\$542	\$90	\$1,855	\$0	\$36,786

Funding (in 000's):

	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$6,049	\$9,930	\$9,673	\$3,989	\$1,216	\$0	\$247	\$461	\$76	\$1,577	\$0	\$33,219
Debenture Proceeds - Tax	\$1,067	\$95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,162
Contribution from Tax Capital Reserve	\$0	\$943	\$831	\$0	\$215	\$0	\$44	\$81	\$13	\$278	\$0	\$2,405
Total	\$7,116	\$10,968	\$10,505	\$3,989	\$1,431	\$0	\$291	\$542	\$90	\$1,855	\$0	\$36,786

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Minets Point Sewage Pump Station Relocation

Project Number: 000628

Department: Engineering Department

Summary: Relocate the existing Minets Point Sewage Pump Station Building which is currently located in Minets Point Park away from the Whiskey Creek channel widening. The proposed solution includes, construction of a new control building and public washroom facilities as well as a review for the potential replacement of the existing pumps. The existing wet well is not expected to move, however consideration is being given to retrofits to allow for twinning the forcemain.

Rationale: The Whiskey Creek channel is being widened as part of larger drainage improvements throughout the watershed. The pump station control building and public washrooms will need to be relocated to avoid the widened channel. This work is to be completed prior to the commencement of the watercourse improvements. Further, the pumps in the wet well are at their end of life and therefore need to be replaced. No change in location is planned for the wetwell.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$430	\$430	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$860
Construction - Forecast	\$0	\$0	\$2,500	\$2,000	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$5,040
Total	\$430	\$430	\$2,500	\$2,000	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$5,900
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$430	\$430	\$2,500	\$2,000	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$5,900
Total	\$430	\$430	\$2,500	\$2,000	\$540	\$0	\$0	\$0	\$0	\$0	\$0	\$5,900

2019 Capital Project Detail Report

Project Title: NRP- HNS Allandale A Neighbourhood Reconstruction

Project Number: Z84

Department: Engineering Department

Summary: Reconstruction of right of way assets in the HNS Allandale A Neighbourhood, including Jacobs Terrace (Innisfil to Alfred), Marcus Street (Jacobs to Campbell), Alfred Street (Jacobs to Campbell), Campbell Street (Anne to End), Wood Street (Alfred to End), Centre Street (Anne to Caroline), and Caroline Street (Alfred to Innisfil). This incorporates road reconstruction, watermain replacement, sanitary sewer replacement, sanitary lateral replacement, storm sewer replacement and upgrades, local drainage improvement, major creek channel improvements, large diameter culvert replacement and upgrade, sidewalk replacement/installation, traffic signal replacement, and streetlighting upgrades.

Rationale: Most of the infrastructure in this neighbourhood was constructed in the early to mid-1950s and is at or approaching the end of its maximum potential life. It has experienced age-related deterioration or physical failure (watermain breaks, etc.), and is in need of replacement. This neighbourhood was identified as a candidate for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets or deliver expected service levels.
Full reconstruction of the Right of Way will improve service levels to the community, allow the City to monitor the performance of the assets over time, and bundle the application of future lifecycle activities together. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damages from construction.

PROJECT EXPENDITURE AND FUNDING												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Design - Request	\$471	\$471	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$942
Utilities - Forecast	\$0	\$0	\$605	\$605	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,210
Construction - Forecast	\$0	\$0	\$0	\$0	\$5,935	\$5,935	\$5,935	\$0	\$0	\$0	\$0	\$17,805
Total	\$541	\$471	\$605	\$605	\$5,935	\$5,935	\$5,935	\$0	\$0	\$0	\$0	\$20,027
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Contributions	\$0	\$0	\$0	\$0	\$22	\$4	\$3	\$0	\$0	\$0	\$0	\$28
Contribution from Tax Capital Reserve	\$347	\$299	\$605	\$605	\$4,030	\$4,048	\$4,049	\$0	\$0	\$0	\$0	\$13,984
Contribution from WW Capital Reserve	\$96	\$85	\$0	\$0	\$978	\$978	\$978	\$0	\$0	\$0	\$0	\$3,116
Contribution from Water Capital Reserve	\$98	\$87	\$0	\$0	\$905	\$905	\$905	\$0	\$0	\$0	\$0	\$2,899
Total	\$541	\$471	\$605	\$605	\$5,935	\$5,935	\$5,935	\$0	\$0	\$0	\$0	\$20,027

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: NRP- HNS Allandale B Neighbourhood Reconstruction

Project Number: Z82

Department: Engineering Department

Summary: Reconstruction of right of way assets in the HNS Allandale B Neighbourhood which includes Holgate Street (Innisfil St. to Bayview Dr.), William Street (Burton Ave. to Baldwin Lane), and Granville Street (Burton Ave. to Holgate St.). The proposed solution includes road reconstruction, watermain, sanitary sewer, storm sewer, sidewalk, traffic signal and streetlighting replacement/upgrading.

Rationale: Much of the infrastructure in this area is approaching the end of its useful life and needs to be replaced. This neighbourhood was identified as a candidate for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets or deliver expected service levels. In addition, numerous assets in the project area are undersized based on current City standards.

Full reconstruction of the Right of Ways in this neighbourhood will improve service levels to the community and reduce the risk of asset failures and service disruptions. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damage from construction.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Design - Request	\$210	\$210	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$420
Utilities - Forecast	\$0	\$0	\$798	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$798
Construction - Forecast	\$0	\$0	\$0	\$0	\$4,883	\$4,883	\$0	\$0	\$0	\$0	\$0	\$9,765
Total	\$280	\$210	\$798	\$0	\$4,883	\$4,883	\$0	\$0	\$0	\$0	\$0	\$11,053

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Contributions	\$0	\$0	\$0	\$0	\$6	\$4	\$0	\$0	\$0	\$0	\$0	\$9
Contribution from Federal Gas Tax Reserve	\$43	\$0	\$0	\$0	\$2,942	\$2,944	\$0	\$0	\$0	\$0	\$0	\$5,929
Contribution from Tax Capital Reserve	\$127	\$127	\$798	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,052
Contribution from WW Capital Reserve	\$55	\$41	\$0	\$0	\$960	\$960	\$0	\$0	\$0	\$0	\$0	\$2,016
Contribution from Water Capital Reserve	\$55	\$42	\$0	\$0	\$975	\$975	\$0	\$0	\$0	\$0	\$0	\$2,048
Total	\$280	\$210	\$798	\$0	\$4,883	\$4,883	\$0	\$0	\$0	\$0	\$0	\$11,053

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: NRP- HNS Brock Park Neighbourhood Reconstruction

Project Number: 000027

Department: Engineering Department

Summary: Reconstruction of right-of-way assets on Sanford St. (Vespra to Brock), Vespra St. (Innisfil to Bradford), Victoria St. (Innisfil to Bradford), John St. (Innisfil to Bradford), Frederick St. (Innisfil to end), and Innisfil St. (Vespra to 100m south of Fredrick) in the Brock Park Neighbourhood. This includes; road reconstruction, watermain replacement/ upgrade, sanitary sewer replacement/ upgrade, sanitary lateral replacement (to property line), storm sewer replacement/ upgrade, large diameter culvert replacement/ upgrade, sidewalk replacement/installation, and street light upgrades.

Rationale: Most of the infrastructure in this neighbourhood was constructed in the early to mid-1950s and is at or approaching the end of its maximum potential life. It has experienced age-related deterioration or physical failure (watermain breaks, etc.), and is in need of replacement. This neighbourhood was identified as a candidate for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets or deliver expected service levels.

Full reconstruction of the Right of Ways in this neighbourhood will improve service levels to the community and reduce the risk of asset failures and service disruptions. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damage from construction.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$280	\$233	\$233	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$746
Utilities - Forecast	\$0	\$0	\$0	\$1,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100
Construction - Forecast	\$0	\$0	\$0	\$0	\$2,777	\$2,777	\$4,377	\$0	\$0	\$0	\$0	\$9,931
Total	\$0	\$280	\$233	\$1,333	\$2,777	\$2,777	\$4,377	\$0	\$0	\$0	\$0	\$11,777

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$214	\$178	\$1,278	\$1,770	\$1,770	\$3,370	\$0	\$0	\$0	\$0	\$8,581
Contribution from WW Capital Reserve	\$0	\$66	\$55	\$55	\$504	\$504	\$504	\$0	\$0	\$0	\$0	\$1,688
Contribution from Water Capital Reserve	\$0	\$0	\$0	\$0	\$503	\$503	\$503	\$0	\$0	\$0	\$0	\$1,509
Total	\$0	\$280	\$233	\$1,333	\$2,777	\$2,777	\$4,377	\$0	\$0	\$0	\$0	\$11,777

2019 Capital Project Detail Report

Project Title: NRP- HNS Queens Park A1 Neighbourhood Reconstruction

Project Number: Z73

Department: Engineering Department

Summary: This project includes the reconstruction and upgrading of pavement, watermain, sanitary sewer, storm sewer, sidewalk and street lights of the HNS Queens Park A1 neighbourhood. It also includes the relocation of the Sophia Creek culvert into the Sophia Street Right of Way. This project area encompasses approximately half of the HNS Queens Park A1 neighbourhood, which contains some of the oldest infrastructure in the City. This includes Mary Street (Wellington St. W. to Sophia St. W), Maple Avenue (Wellington St. W to Sophia St. W), Sophia St. W. (Ross St. to Bayfield St.), and Wellington St. (Mary St. to Maple St.).

Rationale: Sophia Creek runs just north of Sophia St. W, and flow is directed southwest toward Toronto Street via two box culverts installed between 1920 and 1950. These culverts run beneath several residential properties and two businesses. Both are in poor to very poor condition, and pose significant flooding and safety risks. Other buried infrastructure in the neighbourhood, including watermain, sanitary sewers, and storm sewers, is in poor to very poor physical condition and much of it is under-sized. This infrastructure has a high probability of failure. This neighbourhood was identified as a candidate for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Given the age and deteriorated condition of infrastructure, other life-cycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the remaining life of current assets or deliver expected service levels. Full reconstruction of the Right of Ways in this neighbourhood will improve service levels to the community and reduce the risk of asset failures and service disruptions. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damage from construction.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Design - Request	\$256	\$29	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$285
Utilities - Forecast	\$0	\$0	\$851	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$851
Construction - Forecast	\$0	\$0	\$0	\$2,838	\$2,838	\$0	\$0	\$0	\$0	\$0	\$0	\$5,675
Total	\$326	\$29	\$851	\$2,838	\$2,838	\$0	\$0	\$0	\$0	\$0	\$0	\$6,881
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$259	\$29	\$851	\$2,163	\$2,163	\$0	\$0	\$0	\$0	\$0	\$0	\$5,464
Contribution from WW Capital Reserve	\$34	\$0	\$0	\$340	\$340	\$0	\$0	\$0	\$0	\$0	\$0	\$714
Contribution from Water Capital Reserve	\$34	\$0	\$0	\$335	\$335	\$0	\$0	\$0	\$0	\$0	\$0	\$704
Total	\$326	\$29	\$851	\$2,838	\$2,838	\$0	\$0	\$0	\$0	\$0	\$0	\$6,881

2019 Capital Project Detail Report

Project Title: NRP- HNS Queens Park B Neighbourhood Reconstruction

Project Number: Z74

Department: Engineering Department

Summary: The project includes pavement, watermain, sanitary sewer, storm sewer, and sidewalk replacements along with expansion of the Kidd's Creek watercourse and culvert located on Thomson Street. This project area encompasses the majority of the HNS Queens Park B neighbourhood, which contain some of the oldest operational infrastructure in the City. This includes Thomson Street from Wellington Street to Sophia Street, Sophia Street from Parkside Drive to Eccles Street, Florence Street from Sophia Street to Park Street, Park Street from Eccles Street to Toronto Street, Parkside Drive from Ross Street to Dunlop Street West, and High Street from Park Street to Dunlop Street West.

Rationale: Most of the subsurface infrastructure in this neighbourhood was constructed in the early 1910's to 1930's and is at or approaching the end of its maximum potential life. It has experienced age-related deterioration or physical failure (watermain breaks, sanitary lateral backups, etc.), and is in need of replacement. Roadways in this area were identified as candidates for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Although the MPL for roadways in this area should generally be acceptable, actual PCI values rate the physical condition of these roadways in the range of fair to very poor, the majority of which are poor. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets. Full reconstruction of the Right of Way will improve service levels to the community, allow the City to monitor the performance of the assets over time, and bundle the application of future lifecycle activities together. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damages from construction.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Design - Forecast	\$0	\$0	\$381	\$381	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$761
Utilities - Forecast	\$0	\$0	\$0	\$0	\$570	\$570	\$0	\$0	\$0	\$0	\$0	\$1,140
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$3,465	\$3,465	\$3,465	\$0	\$0	\$0	\$10,395
Total	\$0	\$100	\$381	\$381	\$570	\$4,035	\$3,465	\$3,465	\$0	\$0	\$0	\$12,396
<u>Funding (in 000's):</u>												
	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$300	\$0	\$0	\$0	\$0	\$300
Contribution from Tax Capital Reserve	\$0	\$100	\$233	\$233	\$570	\$2,692	\$1,822	\$2,122	\$0	\$0	\$0	\$7,772
Contribution from WW Capital Reserve	\$0	\$0	\$100	\$100	\$0	\$905	\$905	\$905	\$0	\$0	\$0	\$2,914
Contribution from Water Capital Reserve	\$0	\$0	\$48	\$48	\$0	\$438	\$438	\$438	\$0	\$0	\$0	\$1,410
Total	\$0	\$100	\$381	\$381	\$570	\$4,035	\$3,465	\$3,465	\$0	\$0	\$0	\$12,396

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: NRP- Wellington D1 Neighbourhood Reconstruction

Project Number: 000052

Department: Engineering Department

Summary: Reconstruction of four streets (Berczy, Amelia, Theresa, and Worsley) in the Wellington D neighbourhood, including road reconstruction, watermain replacement, sanitary sewer replacement and upgrading to current City standards, sanitary lateral replacement to property line, storm sewer replacement and installation, sidewalk replacement, and streetlight upgrades.

Rationale: This neighbourhood contains some of the City's oldest subsurface infrastructure outside of the downtown core. This neighbourhood was identified as a candidate for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets or deliver expected service levels.

Full reconstruction of the Right of Ways in this neighbourhood will improve service levels to the community and reduce the risk of asset failures and service disruptions. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damage from construction.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Design - Request	\$86	\$81	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$167
Utilities - Forecast	\$0	\$0	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$650
Construction - Forecast	\$0	\$0	\$0	\$2,499	\$2,499	\$0	\$0	\$0	\$0	\$0	\$0	\$4,998
Total	\$156	\$81	\$650	\$2,499	\$2,499	\$0	\$0	\$0	\$0	\$0	\$0	\$5,885

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$77	\$29	\$650	\$1,458	\$1,458	\$0	\$0	\$0	\$0	\$0	\$0	\$3,672
Contribution from WW Capital Reserve	\$51	\$37	\$0	\$548	\$548	\$0	\$0	\$0	\$0	\$0	\$0	\$1,184
Contribution from Water Capital Reserve	\$28	\$15	\$0	\$493	\$493	\$0	\$0	\$0	\$0	\$0	\$0	\$1,029
Total	\$156	\$81	\$650	\$2,499	\$2,499	\$0	\$0	\$0	\$0	\$0	\$0	\$5,885

2019 Capital Project Detail Report

Project Title: NRP- Wellington D2 Neighbourhood Reconstruction

Project Number: 000071

Department: Engineering Department

Summary: Reconstruction of Three streets (Amelia, Albert, and Dundonald) in the Wellington D neighbourhood, including road reconstruction, distribution watermain replacement, sanitary sewer replacement and upgrading to current City standards, sanitary lateral replacement to property line, storm sewer replacement and installation, sidewalk replacement and installation, and streetlight upgrades.

Rationale: Most of the infrastructure in this neighbourhood was constructed in the early to mid-1950s and is at or approaching the end of its maximum potential life. It has experienced age-related deterioration or physical failure (watermain breaks, etc.), and is in need of replacement. This neighbourhood was identified as a candidate for full Right of Way reconstruction based on aggregated risk associated with surface and subsurface infrastructure. Given the age and deteriorated condition of infrastructure, other lifecycle strategies (status quo, do nothing/run to failure, operate/maintain differently, and/or rehabilitate/refurbish) are not expected to significantly extend the existing remaining life of current assets or deliver expected service levels.

Full reconstruction of the Right of Ways in this neighbourhood will improve service levels to the community and reduce the risk of asset failures and service disruptions. This will reduce capital and operating costs in the long term, minimize disruption to the community, and limit environmental damage from construction.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70
Design - Request	\$0	\$229	\$229	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$458
Utilities - Forecast	\$0	\$0	\$0	\$410	\$410	\$0	\$0	\$0	\$0	\$0	\$0	\$820
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$2,590	\$2,590	\$2,590	\$0	\$0	\$0	\$7,770
Total	\$70	\$229	\$229	\$410	\$410	\$2,590	\$2,590	\$2,590	\$0	\$0	\$0	\$9,118

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$70	\$138	\$138	\$410	\$410	\$1,570	\$1,570	\$1,570	\$0	\$0	\$0	\$5,876
Contribution from WW Capital Reserve	\$0	\$48	\$48	\$0	\$0	\$540	\$540	\$540	\$0	\$0	\$0	\$1,716
Contribution from Water Capital Reserve	\$0	\$43	\$43	\$0	\$0	\$480	\$480	\$480	\$0	\$0	\$0	\$1,526
Total	\$70	\$229	\$229	\$410	\$410	\$2,590	\$2,590	\$2,590	\$0	\$0	\$0	\$9,118

2019 Capital Project Detail Report

Project Title: Painswick Park Rehabilitation

Project Number: EN1182

Department: Engineering Department

Summary: Rehabilitation and expansion of Painswick Park to become a larger multi-use destination park for inner-city baseball league games and various public and charity tournaments while providing community park programs and activities for existing and future residents.

Rationale: The City is deficient in baseball facilities and requires additional senior adult slow pitch baseball to meet the current need. The project includes the design and reconstruction of the park including the provision of deficient utility infrastructure such as hydro, water and sanitary connections. The project scope will also include the reconstruction of the existing baseball diamond, construction of a 2nd baseball diamond, rehabilitation of the tennis court facility, parking lot and potential for additional amenities.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$1,935	\$1,382	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,317
Total	\$1,935	\$1,382	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,317
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$1,604	\$1,382	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,985
Contribution from Cash-In-Lieu Parkland Reserve	\$332	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$332
Total	\$1,935	\$1,382	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,317

2019 Capital Project Detail Report

Project Title: Pavement Condition Assessment

Project Number: 000521

Department: Engineering Department

Summary: A complete network level pavement condition assessment, including roads, public pay-and-display parking lots, and a complete pavement management analysis. The project will deliver a fully inspected road network, a fully inspected parking lot portfolio, a functional database of the inspection results, modeling and reporting, as well as pavement management recommendations based on the inspection results.

Rationale: City staff use pavement condition data on a daily basis to conduct analysis related to infrastructure maintenance and renewal, levels of service, and forecasting financial needs.

The City's Road Resurfacing Program, Crack Sealing Program, and Neighbourhood Renewal Program all rely on accurate and up-to-date pavement condition data in order to make cost effective decisions that maximize the life of pavement assets at the lowest overall life-cycle cost. The data is also used to evaluate options and determine priorities and timing with regards to major right of way renewal and expansion activities.

Road condition data is also used for annual reporting under the Municipal Performance Measurement Program (MPMP) and is anticipated to be used by the City as a Key Performance Indicator (KPI) to measure and report to City Council on how effectively the City is maintaining its road network and ensuring adequate service levels.

Road condition assessments are typically undertaken every four years. The last assessment was undertaken in 2014.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$270	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$345
Study - Forecast	\$0	\$0	\$0	\$0	\$340	\$0	\$0	\$0	\$370	\$0	\$0	\$710
Total	\$270	\$75	\$0	\$0	\$340	\$0	\$0	\$0	\$370	\$0	\$0	\$1,055
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$270	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$345
Contribution from Tax Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$340	\$0	\$0	\$0	\$370	\$0	\$0	\$710
Total	\$270	\$75	\$0	\$0	\$340	\$0	\$0	\$0	\$370	\$0	\$0	\$1,055

2019 Capital Project Detail Report

Project Title: PRV Chamber Replacement Program

Project Number: Z131

Department: Engineering Department

Summary: A program to annually upgrade two existing Pressure Reducing Valves (PRVs) in the water distribution system to the new standard.

Rationale: The City of Barrie has 29 Pressure Reducing Valves (PRVs) and chambers, excluding those installed in the last 1 to 2 years, on the water distribution system supplying water between pressure zones. They reduce pressure spikes and increase fire water supply. They are a critical component of the water supply, with some of the pressure zones having only one PRV. Many PRV chambers throughout the City are deficient and require significant maintenance to keep running, and do not have SCADA capabilities. The City has also adopted a new standard for PRV chambers, which the older assets do not meet. Staff recently completed a condition assessment and strategic plan for its existing PRVs and chambers to determine their current condition, remaining useful life, major maintenance and/or replacement needs. The proposed solution includes immediate (0-2 years), medium (3-5 years), and long term (6-10 years) replacement requirements. The PRVs in need of immediate replacement were replaced in 2015. This program is to replace the PRV chambers where the replacement was noted as medium and long term in the 2014 PRV Condition Assessment Report. This will minimize risk of PRV and chamber failure, and ensure safe and adequate drinking water and fire protection supplies for the community.

PROJECT EXPENDITURE AND FUNDING												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$100	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Construction - Request	\$500	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$850
Design - Forecast	\$0	\$0	\$100	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$175
Construction - Forecast	\$0	\$0	\$650	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$1,650
Total	\$600	\$400	\$750	\$575	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$2,825
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Water Capital Reserve	\$600	\$400	\$750	\$575	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$2,825
Total	\$600	\$400	\$750	\$575	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$2,825

2019 Capital Project Detail Report

Project Title: Road Resurfacing Program

Project Number: 000333

Department: Engineering Department

Summary: Annual program focused on road resurfacing to restore and preserve road pavement condition at various locations selected each year. Road resurfacing preserves the road structure and addresses problems on the surface of the roadway by replacing all or part of the asphalt pavement. Resurfacing roads using well-timed and appropriate preservation strategies is substantially less expensive than the full reconstruction of a road. The goal of the program is to maximize the life of road assets at the lowest overall life-cycle cost.

Rationale: The City owns and maintains over 1500 lane km of roads all of which require renewal activities at various points in their life-cycle to ensure that service levels to the public are met in the most financially efficient way possible. Timely application of road resurfacing activities preserves and protects the road structure, thereby preventing rapid deterioration in pavement condition and the need for costly reconstruction. Risks due to unsafe driving conditions are also reduced. Resurfacing has been demonstrated to be effective in reducing the life-cycle cost of roads when applied at the right time as a part of a comprehensive pavement preservation approach.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$275	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$475
Construction - Request	\$5,500	\$3,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,000
Design - Forecast	\$0	\$0	\$225	\$250	\$300	\$325	\$375	\$400	\$400	\$400	\$0	\$2,675
Construction - Forecast	\$0	\$0	\$4,000	\$4,500	\$5,500	\$6,500	\$7,500	\$8,000	\$8,000	\$8,000	\$0	\$52,000
Total	\$5,775	\$3,700	\$4,225	\$4,750	\$5,800	\$6,825	\$7,875	\$8,400	\$8,400	\$8,400	\$0	\$64,150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$5,500	\$3,515	\$4,014	\$4,513	\$5,510	\$6,500	\$7,500	\$8,000	\$8,000	\$8,000	\$0	\$61,051
Contribution from Tax Capital Reserve	\$275	\$185	\$211	\$238	\$290	\$325	\$375	\$400	\$400	\$400	\$0	\$3,099
Total	\$5,775	\$3,700	\$4,225	\$4,750	\$5,800	\$6,825	\$7,875	\$8,400	\$8,400	\$8,400	\$0	\$64,150

2019 Capital Project Detail Report

Project Title: Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Veterans (Developer)

Project Number: Z484

Department: Engineering Department

Summary: Construction of a trunk watermain from County Road 27 to Veterans Drive. Expansion of the Salem Road right of way including widening of the road from two to three lanes from Country Road 27 to Veterans; urbanization of the south half of the road from Essa to Veterans.

Rationale: The City of Barrie Growth Studies Multi-Modal Active Transportation Master Plan identified Salem Road as a rural road in poor condition, with no current City subsurface infrastructure. The Water Distribution Master plan recommends the installation of a trunk watermain along with the associated local wastewater collection and transportation improvements be implemented. Salem Road is a rural road in poor condition, and anticipated traffic volume increases associated with Phase 1 development in the secondary plan area have resulted in a need to proactively address capacity issues. Transportation improvements are included in both the Infrastructure Implementation Plan and the MOU with developers in the secondary plan area, as well as the Transportation Master Plan. Road widening will increase traffic capacity, and construction of the sidewalks adjacent to developing areas will allow for safer and accessible movement of pedestrians. The Water Distribution Master Plan calls for additional potable water and fire protection to service growth related to Phase 1 of the Salem Secondary Plan. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$2,839	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,839
Property - Request	\$3,430	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,430
Construction - Request	\$0	\$265	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265
Property - Forecast	\$0	\$0	\$0	\$0	\$0	\$1,648	\$0	\$0	\$0	\$0	\$0	\$1,648
Utilities - Forecast	\$0	\$0	\$517	\$0	\$0	\$0	\$301	\$0	\$0	\$0	\$0	\$818
Construction - Forecast	\$0	\$0	\$0	\$9,113	\$0	\$2,624	\$0	\$6,118	\$0	\$0	\$0	\$17,855
Total	\$6,269	\$265	\$517	\$9,113	\$0	\$4,272	\$301	\$6,118	\$0	\$0	\$0	\$26,855

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$5,329	\$265	\$440	\$7,932	\$0	\$3,631	\$256	\$5,200	\$0	\$0	\$0	\$23,052
Debenture Proceeds - Tax	\$940	\$0	\$78	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,018
Contribution from Tax Capital Reserve	\$0	\$0	\$0	\$1,181	\$0	\$641	\$45	\$918	\$0	\$0	\$0	\$2,785
Total	\$6,269	\$265	\$517	\$9,113	\$0	\$4,272	\$301	\$6,118	\$0	\$0	\$0	\$26,855

2019 Capital Project Detail Report

Project Title: Sewer Rehabilitation Program

Project Number: EN1184

Department: Engineering Department

Summary: Pilot program for the rehabilitation of sanitary sewers using trenchless technologies such as cured-in-place pipe lining, slip lining, and other approaches as appropriate.

Rationale: Throughout the City there are many sanitary sewers, both mains and laterals, which require rehabilitation but not necessarily total replacement. A program of sanitary rehabilitation using trenchless technologies, such as lining, will reduce capital costs over replacement by reducing road restoration requirements and will also reduce operational costs and staff time associated with repeated maintenance activities or emergency repairs.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$40	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Construction - Request	\$600	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750
Design - Forecast	\$0	\$0	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$0	\$160
Construction - Forecast	\$0	\$0	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$300	\$2,700
Total	\$640	\$160	\$320	\$320	\$320	\$320	\$320	\$320	\$320	\$320	\$300	\$3,660

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$640	\$160	\$320	\$320	\$320	\$320	\$320	\$320	\$320	\$320	\$300	\$3,660
Total	\$640	\$160	\$320	\$320	\$320	\$320	\$320	\$320	\$320	\$320	\$300	\$3,660

2019 Capital Project Detail Report

Project Title: Sidewalk Infill Program

Project Number: EN1185

Department: Engineering Department

Summary: This program will include construction of sidewalks to eliminate mid-block sidewalk terminations, increase sidewalk connectivity by eliminating sidewalk dead ends, and install sidewalks in locations that are not serviced to meet City service standards. Locations will be identified in accordance with the Council approved Infill Sidewalk Policy.

Rationale: Sidewalks are an integral part of the community and allow people of all abilities to safely traverse the Right of Way. Under the Accessibility for Ontarians with Disabilities Act, specifically the Integrated Accessibility Standards Regulation (Ontario Regulation 191/11), municipalities are required to improve accessibility in both new and existing areas as of January 1st, 2015. The secondary significant benefit of this program is that these projects are relatively low cost allowing numerous projects throughout the City to be completed on a yearly basis. The infill program will also generate operational efficiencies in snow removal, and will reduce public health and safety risks by providing well-connected active transportation networks.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$68	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$118
Construction - Request	\$833	\$350	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,183
Design - Forecast	\$0	\$0	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$0	\$400
Construction - Forecast	\$0	\$0	\$350	\$350	\$350	\$350	\$450	\$450	\$450	\$450	\$0	\$3,200
Total	\$900	\$400	\$400	\$400	\$400	\$400	\$500	\$500	\$500	\$500	\$0	\$4,900
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$855	\$350	\$350	\$350	\$350	\$350	\$450	\$450	\$450	\$450	\$0	\$4,405
Contribution from Tax Capital Reserve	\$45	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$0	\$495
Total	\$900	\$400	\$400	\$400	\$400	\$400	\$500	\$500	\$500	\$500	\$0	\$4,900

2019 Capital Project Detail Report

Project Title: Sophia Creek -Grove Street spillway 207- 229 Grove St

Project Number: 000721

Department: Engineering Department

Summary: Acquisition of land from the County of Simcoe to facilitate future flood way construction for Sophia Creek south of Grove Street and west of Lay Street. This includes the partial acquisition of 12 properties.

Rationale: Sophia Creek between St Vincent and Lay Street is prone to flooding. The floodway recommended in the Sophia Creek MDP south of Grove Street will reduce this flooding. Simcoe County is willing to work with the City to transfer the lands needed for the floodway to the City prior to selling these properties which will reduce what the City would have to normally pay to acquire these lands from up to 12 property owners in the future.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Property - Request	\$0	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Construction - Request	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Total	\$0	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$650
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$650
Total	\$0	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$650

2019 Capital Project Detail Report

Project Title: Stormwater Management Asset Management Plan Update

Project Number: 000611

Department: Engineering Department

Summary: Update to the existing stormwater infrastructure Asset Management Plans (AMP). Comprising the storm infrastructure component of the 2011 Environmental Appendix to the City's AMP and the 2012 Stormwater Management Facility AMP. Project deliverables will include a stand-alone, comprehensive Stormwater Management Systems AMP. This project will be under taken in conjunction with the Stormwater Utility Finance Study

Rationale: The City faces many infrastructure challenges, including the need to support services and growth by building new infrastructure while maintaining, rehabilitating, and replacing existing assets such as stormwater management systems. While many storm assets are relatively new, some sewers and culverts are approaching the end of their useful lives. Many sewers, culverts, and ponds are anticipated to be under capacity for water quantity control and/or water quality control. The City designed a path to sustainable management of all existing assets in 2009 through the Asset Management Strategy, with five Asset Management Plan (AMP) appendices, including one for Environmental infrastructure (water, wastewater and stormwater, etc.). Provincial initiatives such as the Municipal Infrastructure Strategy also recognize the importance of asset management planning, and require that municipalities seeking capital grants submit detailed AMPs to be eligible for funding. More recently, a provincial municipal asset management planning regulation was proposed under the Infrastructure for Jobs and Prosperity Act, 2015. When enacted, Phase 1 implementation of this future legislation will require completion of an up-to-date stormwater AMP, among others, by January 1st, 2020. Updating the Stormwater Management Systems AMP in 2018-2019 is recommended to help the City better understand investment needs, plan for renewal and growth more effectively, meet future legislative requirements associated with upcoming asset management planning regulations, and support investigation of a stormwater utility to secure predictable funding going forward. The project supports Council's strategic goals related to responsible spending as it will assist in building a community that respects current and future taxpayers. Other alternatives, including doing nothing, delaying work on the AMP, and reducing its scope were considered. None of these are recommended, as they could result in lost grant opportunities and financial penalties in future, which would have a negative impact on the City's ability to deliver needed stormwater projects.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
Total	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
Total	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375

2019 Capital Project Detail Report

Project Title: Stormwater Utility Finance Study

Project Number: 000567

Department: Engineering Department

Summary: The Stormwater Utility Finance Study will assess funding needs and alternative options to fund all aspects of the City's stormwater management infrastructure. This project will be coordinated with the Stormwater Asset Management Plan update.

Rationale: In an effort to increase the resiliency of the City's stormwater management infrastructure to climate change and implement identified capital improvements to protect public safety, private property and improve water quality, significant investment is required. Dedicated stormwater funding would facilitate the long term implementation of stormwater infrastructure improvements that have been identified in Drainage Master Plans as well as operations, maintenance, renewal, and replacement needs.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$75	\$225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$75	\$225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Rate Stabilization Reserve	\$75	\$225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$75	\$225	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

2019 Capital Project Detail Report

Project Title: St. Vincent Street and Duckworth Street ROW Replacement

Project Number: 000726

Department: Engineering Department

Summary: The existing watermain along St. Vincent St. is undersized, does not provide adequate fire flow, and is in a state of physical failure. The installation of a new 300mm watermain is required to mitigate the risks associated with the watermain in the area. A pre-design investigation and subsequent recommendations will be used to determine the feasibility, requirements, and full scope of the project to potentially reduce design and construction cost associated with the project.

Rationale: The existing watermain along St. Vincent Street is undersized, does not provide adequate fire flow, and is in a state of physical failure. The installation of a new 300mm watermain is required to mitigate the risks associated with the watermain in the area. However, a pre-design phase in 2019 should be undertaken to potentially find an interim solution to the problem as the asphalt along St. Vincent Street was recently paved and treated. Conducting intrusive construction to replace the watermain at this time will result in throw away cost incurred by the City from damaging asphalt that is new and in good condition. Further to this, by finding a solution to delay construction will allow for the watermain replacement to align with the future replacement of the sanitary sewer which was recently lined in 2017 and no longer requires immediate replacement. By conducting a pre-design to establish potential alternative construction methods for the replacement of the watermain, the City will potentially be able to reduce financial considerations and follow asset management best practices by extending the useful life of other infrastructure assets while aligning their end of service life for replacement together.

PROJECT EXPENDITURE AND FUNDING												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$0	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80
Design - Forecast	\$0	\$0	\$0	\$0	\$307	\$152	\$0	\$0	\$0	\$0	\$0	\$459
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$345	\$345	\$0	\$0	\$0	\$690
Construction - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,143	\$3,143	\$0	\$6,286
Total	\$0	\$80	\$0	\$0	\$307	\$152	\$345	\$345	\$3,143	\$3,143	\$0	\$7,515
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$80	\$0	\$0	\$183	\$91	\$345	\$345	\$1,876	\$1,876	\$0	\$4,796
Contribution from WW Capital Reserve	\$0	\$0	\$0	\$0	\$19	\$9	\$0	\$0	\$191	\$191	\$0	\$410
Contribution from Water Capital Reserve	\$0	\$0	\$0	\$0	\$105	\$52	\$0	\$0	\$1,076	\$1,076	\$0	\$2,309
Total	\$0	\$80	\$0	\$0	\$307	\$152	\$345	\$345	\$3,143	\$3,143	\$0	\$7,515

2019 Capital Project Detail Report

Project Title: Sunnidale: Letitia-Wellington Transmission Watermain

Project Number: EN1013

Department: Engineering Department

Summary: Installation of a new transmission watermain to join the existing 500mm diameter watermain sections at Wellington Street and at Letitia Street, crossing Highway 400.

Rationale: The new 500 transmission watermain will provide security of supply to and from the Sunnidale Road reservoir to downtown Barrie. There are existing 500mm diameter watermain sections at Wellington and at Letitia ready to be interconnected.

MTO is proposing to reconstruct the Sunnidale Crossing starting around 2020.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$235	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$235
Utilities - Request	\$0	\$68	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$68
Construction - Request	\$0	\$1,840	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,840
Total	\$0	\$2,143	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,143
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Water	\$0	\$729	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$729
Contribution from Water Capital Reserve	\$0	\$1,414	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,414
Total	\$0	\$2,143	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,143

2019 Capital Project Detail Report

Project Title: Sunnidale Road Hwy 400 Crossing Reconstruction (within CAH limits)

Project Number: 000656

Department: Engineering Department

Summary: The City's contribution toward the Ontario Ministry of Transportation's planned reconstruction of the Sunnidale Road Highway 400 crossing within the controlled access highway limits. This project includes construction of a new sanitary sewer to replace the existing sewer crossing Highway 400 at this location.

Rationale: The Sunnidale Road crossing requires reconstruction to support the planned expansion of Highway 400 to 10 lanes and address life-cycle requirements. The City has also identified additional improvements as per the Multi-modal Active Transportation Master Plan including bicycle lanes, sidewalks on both sides and wider sidewalks. The Ontario Ministry of Transportation will construct the additional improvements subject to cost sharing with the City. It is recommended that the City contribute to the Ministry of Transportation's planned works for the additional improvements as completing this work jointly maximizes cost efficiencies.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Environmental Assessment - Request	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Design - Request	\$0	\$129	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$129
Utilities - Request	\$0	\$12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12
Construction - Request	\$0	\$586	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$586
Construction - Forecast	\$0	\$0	\$0	\$242	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$242
Total	\$0	\$777	\$0	\$242	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,019
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$36	\$0	\$242	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$278
Contribution from WW Capital Reserve	\$0	\$741	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$741
Total	\$0	\$777	\$0	\$242	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,019

2019 Capital Project Detail Report

Project Title: Tennis Court Rehabilitation Program

Project Number: EN1140

Department: Engineering Department

Summary: Rehabilitation of tennis court facilities with a primary focus on full surface asphalt replacement. Where necessary, rehabilitation may also include colour coat resurfacing, perimeter fence repair or replacement, and lighting upgrades or replacement.

Rationale: The repair or replacement of tennis courts is required when physical deterioration results in a much lower quality playing surface or an increased risk of personal injury. Deteriorated courts (uneven, cracked or broken asphalt) are identified during annual surface assessments conducted by the Roads, Parks, and Fleet department. Recreation Services loses approximately \$1,000 per court per season in lost revenue from bookings when this occurs. The courts also serve a local recreational need for other activities such as pickleball and winter ice rinks. For courts with a colour coat surface, maintenance is required every ten years to continue to provide the expected level of service to residents.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$580	\$216	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$796
Construction - Forecast	\$0	\$0	\$432	\$400	\$206	\$467	\$216	\$86	\$216	\$70	\$52	\$2,145
Total	\$580	\$216	\$432	\$400	\$206	\$467	\$216	\$86	\$216	\$70	\$52	\$2,941
<u>Funding (in 000's):</u>												
	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Federal Gas Tax Reserve	\$580	\$194	\$389	\$360	\$185	\$420	\$194	\$77	\$194	\$63	\$47	\$2,705
Contribution from Cash-In-Lieu Parkland Reserve	\$0	\$22	\$43	\$40	\$21	\$47	\$22	\$9	\$22	\$7	\$5	\$236
Total	\$580	\$216	\$432	\$400	\$206	\$467	\$216	\$86	\$216	\$70	\$52	\$2,941

2019 Capital Project Detail Report

Project Title: Utilization of Wastewater Collection System as Active Storage

Project Number: 000744

Department: Engineering Department

Summary: A study to quantify the use of the active storage within the wastewater collection system to attenuate flows to the Wastewater Treatment Facility during major inflow and infiltration events.

Rationale: There is currently extra capacity within the trunk wastewater collection system near the Wastewater Treatment Facility because most regular flow events are not as large as the design event which includes an allowance for inflow and infiltration. This excess capacity can be effectively used as active storage to attenuate flows through the Wastewater Treatment Facility thereby optimizing operations. This study will quantify available active storage at various elevations allowing the system operators to use this active storage effectively while minimizing risk.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Total	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Total	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75

2019 Capital Project Detail Report

Project Title: Veterans Drive New Trunk Watermain and Road Expansion - Salem to City Limits (Developer)

Project Number: Z230

Department: Engineering Department

Summary: Construction of a trunk watermain from Salem Road southerly to the City limits, Expansion of Veterans Drive right of way, urbanization and widening of the road from two to five lanes, with buffered bike lanes (Salem to McKay) and from two to three lanes, with buffered bike lanes (McKay to City Limits).

Rationale: The City of Barrie Growth Studies and Multi-Modal Active Transportation Master Plan identified Veterans Drive as a rural road in poor condition, with no current City subsurface infrastructure. The Water Distribution Master plan recommends the installation of a trunk watermain along with the associated local wastewater collection and transportation improvements recommended. These infrastructure elements are included in the Infrastructure Implementation Plan and the MOU with developers in the secondary plan area. The watermain is required to provide potable water and fire flow in Phase 1 of the Salem Secondary Plan area. Road reconstruction will improve safety and drivability, with increases in traffic volume necessitating an expansion from two lanes. Funding for this project is partially front-ended by Developers to provide servicing required for Phase 1 of growth-related development in the secondary plan area.

PROJECT EXPENDITURE AND FUNDING												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$2,103	\$1,110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,213
Property - Request	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,600
Utilities - Request	\$0	\$557	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$557
Construction - Request	\$0	\$3,363	\$4,536	\$4,536	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,435
Total	\$4,703	\$5,030	\$4,536	\$4,536	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,804
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Developer Front Ending (Annex) - Developer Build	\$4,021	\$4,375	\$3,765	\$3,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,926
Debenture Proceeds - Tax	\$682	\$83	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$766
Contribution from Tax Capital Reserve	\$0	\$571	\$771	\$771	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,113
Total	\$4,703	\$5,030	\$4,536	\$4,536	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,804

2019 Capital Project Detail Report

Project Title: Wastewater Asset Management Plan

Project Number: 000727

Department: Engineering Department

Summary: Update to the existing wastewater Asset Management Plan (AMP) from 2011. The main deliverable will be a stand-alone, comprehensive AMP for the City's wastewater collection and treatment system assets, which satisfies the requirements of O. Reg. 588/17 - Asset Management Planning for Municipal Infrastructure. The AMP will focus on documenting existing asset inventory, condition and level of service information, as well as capital and operating cost requirements to meet existing levels of service.

Rationale: In 2017 the Province passed O. Reg. 588/17 – Asset Management Planning for Municipal Infrastructure, which requires municipalities to have asset management plans (AMPs) for core infrastructure assets (which include wastewater assets) in place by July 1, 2021. Updating the Wastewater AMP will help the City better understand present and long-range investment needs and plan for renewal and growth more effectively. Furthermore, by undertaking this process the City will gain better understanding of how service is impacted by changing infrastructure performance and needs, as well as the risk associated with failure. This is key to effective decision making related to investment in and management of the wastewater assets - in particular, in the development of capital and operating and maintenance programs. It is also important to understand the investment required in the newer assets so that they continue to support service delivery at an acceptable level of risk, into the future.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
Total	\$0	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375
Total	\$0	\$245	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$375

2019 Capital Project Detail Report

Project Title: Watermain Cathodic Protection Program

Project Number: EN1189

Department: Engineering Department

Summary: Installation of watermain cathodic protection on existing ductile iron watermain. The anodes will be connected to ductile iron watermain by insulated copper wires; the anodes will corrode rather than the watermain to which they are attached, thereby extending the life of the watermain.

Rationale: Ductile iron watermain are more prone to corrosion than non-ferrous pipes. This results in damage to the pipe surface, including pitting, scaling, and other depressions, which eventually leads to cracks, holes and other physical failures. Such damage substantially reduces the maximum potential life of these mains, resulting in increased operational and emergency repair costs as well as service disruptions.

This program is intended to apply cathodic protection to all ductile iron mains that are not otherwise proposed for replacement in other capital projects, and that fall within the recommended age (40 years or younger) to maximize the benefit of cathodic protection. Installation of cathodic protection is expected to increase the life of ductile iron watermain by up to 15 years.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$80	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$120
Construction - Request	\$2,160	\$960	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,120
Design - Forecast	\$0	\$0	\$40	\$40	\$40	\$40	\$40	\$0	\$0	\$0	\$0	\$200
Construction - Forecast	\$0	\$0	\$960	\$960	\$960	\$960	\$960	\$960	\$0	\$0	\$0	\$5,760
Total	\$2,240	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$960	\$0	\$0	\$0	\$9,200
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debt Proceeds - Water	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Contribution from Water Capital Reserve	\$2,240	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$960	\$0	\$0	\$0	\$8,200
Total	\$2,240	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$960	\$0	\$0	\$0	\$9,200

2019 Capital Project Detail Report

Project Title: Watermain CIPP Lining Program

Project Number: 000545

Department: Engineering Department

Summary: Pilot program for the rehabilitation of watermain using trenchless technologies such as cured-in-place pipe lining in existing ductile and cast iron watermain as part of an annual rehabilitation program.

Rationale: A third of the City's water distribution network is composed of cast and ductile iron mains, and many are approaching or at the end of their Maximum Potential Life. Metallic mains are prone to corrosion, which can result in pipe wall thinning and pitting leading to cracks, fractures, and breaks, further reducing the remaining useful life. This represents a significant challenge in meeting service requirements when numerous breaks occur on the same main. Repeated, reactive repairs to watermain necessitate excavation of and damage to other assets, such as roadways and sidewalks, which shortens these other assets' remaining useful lives as well. If the City does not invest in rehabilitation for these watermain assets, it will assume the increased risk associated with repeated break failures and public safety concerns with inadequate fire flows as service levels decrease.

Cured-in-place pipe creates a fully structural, corrosion-resistant, pipe-within-a-pipe, without the need to remove the old main. This has several advantages when road and other subsurface infrastructure replacement is not required. Construction time is typically shorter and disruption to water service is minimized, with many projects completed in days rather than weeks or months. Traffic disturbances are also minimized since only a handful of excavation pits may be required instead of shutting down entire lanes. Rehabilitating pipes with CIPP rather than replacing them with more conventional methods can achieve up to 40% savings.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$32	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$82
Construction - Request	\$0	\$970	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$970
Design - Forecast	\$0	\$0	\$20	\$16	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$58
Construction - Forecast	\$0	\$0	\$970	\$180	\$310	\$445	\$0	\$0	\$0	\$0	\$0	\$1,905
Total	\$32	\$1,020	\$990	\$196	\$333	\$445	\$0	\$0	\$0	\$0	\$0	\$3,015

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - Water	\$0	\$1,020	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,020
Contribution from Water Capital Reserve	\$32	\$0	\$990	\$196	\$333	\$445	\$0	\$0	\$0	\$0	\$0	\$1,995
Total	\$32	\$1,020	\$990	\$196	\$333	\$445	\$0	\$0	\$0	\$0	\$0	\$3,015

2019 Capital Project Detail Report

Project Title: Water Service and Backflow Prevention Upgrades for Parks and Open Spaces

Project Number: EN1152

Department: Engineering Department

Summary: Installation of backflow prevention devices and water meters for Parks and Open Spaces to reduce the risk of water distribution system contamination and to improve water consumption/usage data.

Rationale: Water services for many Parks and Open Spaces pose a potential risk for contamination of the drinking water system due to the lack of backflow prevention devices and/or the improper installation of devices. The City's Backflow Prevention By-law 2010-102 (as amended) requires the City to upgrade these Parks and Open Spaces water service connections to comply with this municipal standard and ensure the protection of the municipal drinking water system from potential cross connections. Additionally, over 90% of all Parks and Open Spaces water services are un-metered resulting in a large quantity of water that is un-accounted for. This lack of metering significantly impacts the ability to accurately calculate water loss values and subsequently the leakage index for the water distribution system.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30
Construction - Request	\$390	\$195	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$585
Design - Forecast	\$0	\$0	\$30	\$30	\$30	\$30	\$0	\$0	\$0	\$0	\$0	\$120
Construction - Forecast	\$0	\$0	\$195	\$195	\$195	\$195	\$0	\$0	\$0	\$0	\$0	\$780
Total	\$390	\$225	\$225	\$225	\$225	\$225	\$0	\$0	\$0	\$0	\$0	\$1,515

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Water Capital Reserve	\$390	\$225	\$225	\$225	\$225	\$225	\$0	\$0	\$0	\$0	\$0	\$1,515
Total	\$390	\$225	\$225	\$225	\$225	\$225	\$0	\$0	\$0	\$0	\$0	\$1,515

2019 Capital Project Detail Report

Project Title: WwTF Alum System Upgrade at Secondary Clarifiers

Project Number: EN1192

Department: Engineering Department

Summary: Upgrade the temporary secondary clarifier alum system with a new permanent system at the WwTF. The project includes new alum metering pumps, day tanks, mixing, flow pacing, and ancillary equipment to make the system functional.

Rationale: A pilot test performed by the WWOB Optimization group determined that injecting alum into the Secondary Clarifiers improved reliability and helped to stabilize the treatment process, while reducing the amount of alum used thereby saving approximately 20% in chemical costs. This project will provide the WWTF with the ability to flow pace the chemical thereby further fine tuning the treatment performance.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$1,150	\$36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,186
Total	\$0	\$1,150	\$36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,186
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - DCs	\$0	\$403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$403
Contribution from DC Reserves Wastewater	\$0	\$0	\$13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13
Contribution from WW Capital Reserve	\$0	\$748	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$771
Total	\$0	\$1,150	\$36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,186

2019 Capital Project Detail Report

Project Title: WwTF Biosolids Storage Facility Hydro Upgrades

Project Number: 000822

Department: Engineering Department

Summary: This project is to upgrade external and internal power supply lines and install a new substation at the Biosolids Storage Facility (BSF) in partnership with Hydro One. The scope of the work includes contribution to the Hydro One-owned upsized transmission feeder, a new local internal power line from the Hydro One switch at the property limit to the BSF new sub-station/transformer, and, upgraded internal building power equipment. The funding for these upgrades was approved through motion 18-G-137 so that the work could begin in 2018.

Rationale: The City of Barrie has implemented a successful and award winning biosolids land application program and the resulting stabilized biosolids produced through Barrie's wastewater treatment process are in high demand by many farm operators in the surrounding agricultural community. It is considered to be an essential service facility for the City, with strict legislative, regulatory and environmental compliance and permitting requirements.

Hydro One has advised the City that the current electrical supply at the Biosolids Storage Facility is not sufficient to provide the additional power that is needed to support the current BSF needs and therefore an upsized transmission feeder is needed. A number of energy saving alternatives have already been implemented, however the proposed upgrades are still needed to meet the short and long term power requirements of the facility.

The upsized power lines will supply power to the equipment that the City needs to store biosolids during the wet months in accordance with the Nutrient Management Act and efficiently deliver biosolids to the end users when needed.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

2019 Capital Project Detail Report

Project Title: WwTF Biosolids Storage Tank Mixers

Project Number: EN1127

Department: Engineering Department

Summary: The existing mechanical mixers in the circular storage tanks installed in 1998 do not perform up to standards and provide incomplete mixing in the biosolids tanks. This results in increased operation maintenance costs, downtime when mixers are taken out of service for repairs, and/or replacement of the mixer. To improve operations and provide the desired mixing, a 2012/2013 study investigated different mixing technologies and recommended the mixers be replaced with advanced jet mixing. In 2016, the preliminary design phase identified Hydro One power lines and upgrades to the BSF electrical distribution system were required to support the mixer project.

Rationale: Replacement of the BSF mixers with an advanced jet mixing system will improve operations at the Biosolids Facility. In 2016, the preliminary design phase identified upgrades to the Hydro One power line and electrical upgrades to the BSF distribution system are recommended in 2018 to support the proposed jet mixing system upgrades. The BSF Mixer Replacement Project will improve mixing efficiency in the circular tanks, reduce operating and maintenance costs, reduce transportation costs, and provide operation flexibility at the BSF to provide a better quality Biosolids for land application and compliance with the Nutrient Management Act.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$1,700	\$900	\$401	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,001
Total	\$0	\$1,700	\$900	\$401	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,001
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - Wastewater	\$0	\$1,600	\$348	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,948
Contribution from WW Capital Reserve	\$0	\$100	\$552	\$401	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,053
Total	\$0	\$1,700	\$900	\$401	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,001

2019 Capital Project Detail Report

Project Title: WwTF/BSF/SPS Condition Assessments for Wastewater Asset Management Plan

Project Number: 000765

Department: Engineering Department

Summary: The facility condition assessments will be a comprehensive, multi-discipline, visual inspection of wastewater facilities and their components. The facilities to be inspected include all the Wastewater Facility (WwTF), Biosolids Storage Facility (BSF) and the nine (9) Wastewater Pumping Stations (WwPS). The condition assessments will be used for establishing future maintenance, repairs and refurbishment requirement for the preparation of a Wastewater budgets. Maintenance data collected will be entered into the WWOB Computerized Maintenance Management System.

Rationale: At the Wastewater Treatment Facility (WwTF), the Biosolids Storage Facility (BSF), and the nine (9) Wastewater Pump Stations (WwPS), the provision of municipal wastewater treatment services requires that the physical infrastructure be in sound condition. If the infrastructure is not maintained then there is increased probabilities of environmental spills, shortening equipment life, increased costs of replacement, health & safety incidences, unplanned repairs and emergencywork.

The condition assessments will be a comprehensive multi-discipline evaluation of wastewater facilities and their components. The data collected from the condition assessments will feed into the WWOB Computerized Maintenance Management System and the City's Capital Planning process. It will be used to establish future maintenance, repairs, and refurbishment requirements in accordance with the City's Asset Management Plan.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$400	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Total	\$0	\$400	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$400	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Total	\$0	\$400	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600

2019 Capital Project Detail Report

Project Title: WwTF Chemical Building Upgrade

Project Number: 000108

Department: Engineering Department

Summary: This project is to upgrade the chemical building at the Wastewater Treatment Facility to meet current chemical storage requirements and to reduce odour when the biosolids truck loading arm is in use. The scope for the upgrades, and potential building expansion, include, structural, electrical, mechanical and life safety systems.

Rationale: The City of Barrie is obliged to comply with growing number of legislative requirements. Achieving compliance is becoming increasingly difficult given the aging asset portfolio and other pressures on limited financial resources. The obligations include these related to fire and life safety requirements, hazardous substances, and environmental protection. Within the context of managing assets, the existing chemical building currently houses on different levels two incompatible chemicals without a scrubber for the off gases, and there is no odour control. The proposed study will recommend preferred engineered controls to protect the workers and that relevant codes and standards are adhered too.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

2019 Capital Project Detail Report

Project Title: WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment

Project Number: 000745

Department: Engineering Department

Summary: Clean and rehab Primary Digester 3 at the Barrie Wastewater Treatment Facility. The project includes a study to determine how to take Primary Digester 3 offline so that it may be cleaned out. Followed by a condition assessment, and construction phase to rehab the tank.

Rationale: The Primary Digester 3 overflow box is severely corroded and liquids have been observed leaking into the adjacent pump room. This project was identified as necessary and efforts are underway to install a temporary stainless steel liner in the overflow box. If the Primary Digester is not cleaned out and inspected there is increased risk of further deterioration and if the leaking into the pump room is not corrected an ongoing health and safety issue. Furthermore, it is recommended good practice to clean out these tanks every 5 to 7 years. This project supports Council's strategic goal of responsible spending by understanding the current condition the tank and equipment are in and taking steps to extend the useful life of the asset.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$125	\$275	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400
Construction - Forecast	\$0	\$0	\$2,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,200
Total	\$0	\$125	\$2,475	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,600
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$125	\$2,475	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,600
Total	\$0	\$125	\$2,475	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,600

2019 Capital Project Detail Report

Project Title: WwTF Electrical Substation and Transformer Upgrade

Project Number: 000562

Department: Engineering Department

Summary: At the Wastewater Treatment Facility (WwTF), it is proposed to replace the existing electrical infrastructure, including substation and transformers, in coordination with the new electrical requirements for the Membrane Bio-Reactor (MBR) project. The new MBR electrical infrastructure construction is anticipated to start in 2019, ahead of the main project.

Rationale: The existing electrical substation and transformers were installed in 1984 and have a typical lifespan of 25 to 30 years. Recent maintenance reports have observed leaking that has resulted in ongoing clean up and monitoring since 2015 to mitigate environmental contamination. Further the proposed MBR will require additional power requirements above what is existing to run the plant resulting in the eventual upgrade of the electrical substation and transformers. To lessen the schedule impacts to the MBR project it is proposed to replace the electrical infrastructure now in coordination with the electrical requirements for the MBR project. The substation and transformer replacements are needed to keep the equipment in a state of good repair. At this time temporary measures have been instituted to ensure the operation of the equipment to cover the duration to design and construct. The WwTF is dependent upon this equipment to remain in compliance with the Environmental Protection Act and in particular, the Environmental Compliance Approval.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$150	\$160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$310
Construction - Forecast	\$0	\$0	\$1,230	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,430
Total	\$150	\$160	\$1,230	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,740
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$150	\$160	\$1,230	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,740
Total	\$150	\$160	\$1,230	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,740

2019 Capital Project Detail Report

Project Title: WwTF In-plant Peak Attenuation/Equalization Tank Retrofit

Project Number: 000565

Department: Engineering Department

Summary: Repurposing existing Secondary Clarifier tanks to perform as dual purpose tanks for equalization and peak flow attenuation.

Rationale: The flows to the WwTF increase during intense storm events and rapid snow melts. If the WwTF is not properly protected then the biological treatment processes may be affected, causing operational challenges.

Repurposing the existing tanks will assist with equalization to provide a more steady flow feeding the biological process. The tanks will also be used for peak attenuation to protect the treatment processes by providing temporary storage during peak flow events.

This work should proceed in coordination with the Membrane Bio-reactor construction so that it can be used to help protect the biological processes during construction, when there will be reduced operational flexibility at the plant. This project could also benefit residents near the plant since the tanks would mitigate the risk of wastewater flooding the streets and basements near the WwTF.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Pre-Design - Request	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60
Design - Request	\$0	\$175	\$175	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350
Construction - Forecast	\$0	\$0	\$0	\$0	\$720	\$1,440	\$230	\$0	\$0	\$0	\$0	\$2,390
Total	\$60	\$175	\$175	\$0	\$720	\$1,440	\$230	\$0	\$0	\$0	\$0	\$2,800

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$60	\$175	\$175	\$0	\$720	\$1,440	\$230	\$0	\$0	\$0	\$0	\$2,800
Total	\$60	\$175	\$175	\$0	\$720	\$1,440	\$230	\$0	\$0	\$0	\$0	\$2,800

2019 Capital Project Detail Report

Project Title: WwTF MBR Project Concrete Tanks Rehabilitation

Project Number: 000548

Department: Engineering Department

Summary: Concrete rehabilitation of Secondary Treatment Tanks dedicated to the MBR Project. The work includes a Condition Assessment of the interior of the tanks, Detailed Design, and Construction Administration for concrete resurfacing, caulking of expansion joints, and crack repair. The timing of this work is to align with the MBR project.

Rationale: The Secondary Clarifier Tanks 1 and 2 were reconstructed in 1998 when Secondary Clarifier 3 was built. The 2007 Condition Assessment identified notable signs of concrete deterioration. Most notably failure of the caulking sealing expansion joints and degradation to the concrete surfaces caused by chemical attack and mechanical abrasion. These tanks will be dedicated to the proposed MBR project. In the interest of mitigating potential risks to the new MBR and increased asset longevity, concrete surface restoration is required. This work is to be completed prior to the construction of the MBR so as to not delay the installation of the membranes.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$110	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$220
Construction - Forecast	\$0	\$0	\$900	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,700
Total	\$110	\$110	\$900	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,920

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$110	\$110	\$900	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,920
Total	\$110	\$110	\$900	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,920

2019 Capital Project Detail Report

Project Title: WwTF - Prepare a 3D Model of theWwTF

Project Number: 000566

Department: Engineering Department

Summary: Establish a 3D base model of the WwTF to take advantage of technology to improve work processes, reduce cost extras, and to capture historic knowledge from those that are retiring. The Scope of Services include set-up, structure survey, data verification, model calibration, and hydraulic flow verification.

Rationale: There are a number of design consultants that currently use the City's record drawing database for projects related to the WwTF. This has led to some inconsistencies in format and outdated information. Currently available technology and software such as Building Information Modelling (BIM) can increase the value of the existing information. The City has started building pieces of the BIM model as-needed for specific projects. This project will fill the gaps in the current model that is being developed for various projects that are underway such as the Membrane Bio-Reactor. Other alternatives were considered, however BIM was identified as the preferred approach because of its flexibility and compatibility with other software.

This project will allow the City will to leverage the latest technology to control accurate information, reduce engineering and construction costs, minimize errors, improve design efficiency, integrate several software packages, and to improve end-users' understanding of the WwTF and its processes.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$320
Total	\$0	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$320
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$320
Total	\$0	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$320

2019 Capital Project Detail Report

Project Title: WwTF Septage/Supernating Dosing Tank Pre-Treatment Upgrade

Project Number: 000743

Department: Engineering Department

Summary: Investigate the potential of pretreating septage and supernatant waste streams before they enter the WWTF.

Rationale: At the WwTF, the septage receiving has been temporarily suspended due to past treatment upsets relating to septage, adjusting to new regulations and disruptions from construction. A study is proposed to determine the implementation strategy of recommencing the receiving of septage including, impacts on the treatment processes, safety and security considerations for public users, odour control and various additional elements.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
Total	\$0	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
Total	\$0	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250

2019 Capital Project Detail Report

Project Title: WwTF Sludge Thickening System Process - Polymer System Replacement

Project Number: 000049

Department: Engineering Department

Summary: Replacement of the existing Polymer System at the Wastewater Treatment Facility. The project includes design changes to the Sludge Thickening Room and construction including mechanical, electrical, heating and ventilation upgrades, and ancillary work to make the system functional.

Rationale: The existing dry polymer batching system poses health and safety concerns to the operators and require them to wear their personal protective equipment when they make a new batch. There is not enough space to safely operate a forklift and heating and ventilation upgrades are required to bring the room up to code. Changing to a liquid polymer system will improve polymer delivery and reduce operating costs. The WWOB will procure the liquid polymer and require Engineering to design the delivery system.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$165	\$165	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$330
Construction - Forecast	\$0	\$0	\$1,442	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600
Total	\$165	\$165	\$1,442	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,930
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$165	\$165	\$1,442	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,930
Total	\$165	\$165	\$1,442	\$158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,930

2019 Capital Project Detail Report

Project Title: WwTF UNOX To Aeration Tanks Conversion (Phase 1)

Project Number: 000560

Department: Engineering Department

Summary: Upgrade the UNOX reactors 1 and 2 with proposed fine bubble aeration. The project includes the preliminary design to blank off the High Purity Oxygen (HPOX) Supply to these tanks, demolition of the existing HPOX equipment, and installation of fine bubble aeration equipment.

Phase 2, Intake 589, will convert the remainder of UNOX tanks from HPOX to proposed fine bubble diffusion aeration and the total removal of the High Purity Oxygen system.

Rationale: Upgrading the UNOX Reactors with conventional aeration is recommended as it is technically feasible requiring no new tankage, cost effective with a payback estimated to be in the 5 to 10 year range, and has value added benefits that could render the other existing Wastewater Treatment Facility (WwTF) equipment redundant in the future.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$370	\$370	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$740
Construction - Forecast	\$0	\$0	\$0	\$0	\$3,000	\$3,000	\$810	\$0	\$0	\$0	\$0	\$6,810
Total	\$370	\$370	\$0	\$0	\$3,000	\$3,000	\$810	\$0	\$0	\$0	\$0	\$7,550

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$370	\$370	\$0	\$0	\$3,000	\$3,000	\$810	\$0	\$0	\$0	\$0	\$7,550
Total	\$370	\$370	\$0	\$0	\$3,000	\$3,000	\$810	\$0	\$0	\$0	\$0	\$7,550

2019 Capital Project Detail Report

Project Title: WwTF Ventilation Upgrades at Ultraviolet Disinfection Building

Project Number: Z635

Department: Engineering Department

Summary: At the Wastewater Treatment Facility, ventilation improvements are recommended at the Ultraviolet Process Area to address heat and moisture concerns leading to corrosion of equipment and performance issues due to overheating. The scope includes building ventilation upgrades with ancillary work associated with structural, electrical, and SCADA.

Rationale: At the Wastewater Treatment Facility, currently there are concerns related to excessive heat and moisture in the Ultraviolet Process Area. This has led to equipment corrosion and performance issues due to overheating. The Scope of work includes the investigation of alternatives including increased ventilation and dehumidification.

The benefits of this project include extending the life of equipment, increased capture of chemical cleaning materials, increased capture of heat for other purposes, and improved ventilation to keep UV equipment and instruments cool.

<u>PROJECT EXPENDITURE AND FUNDING</u>												
<u>Expenditure (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110
Construction - Forecast	\$0	\$0	\$0	\$500	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$580
Total	\$0	\$55	\$55	\$500	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$690
<u>Funding (in 000's):</u>												
	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$55	\$55	\$500	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$690
Total	\$0	\$55	\$55	\$500	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$690

2019 Capital Project Detail Report

Project Title: Yonge Street ROW Expansion - Mapleview to Lockhart (City)

Project Number: Z313

Department: Engineering Department

Summary: Reconstruction and widening of Yonge Street to 5 lanes, buffered bike lanes and sidewalks between Mapleview Drive and Lockhart Road.

Rationale: The Multi-Modal Active Transportation Master Plan identified the need to widen Yonge Street to accommodate planned growth in the Secondary Plan lands, which will support the proposed mixed-use development that is identified for this corridor in the Hewitt's Secondary Plan.

The existing 2 lane rural cross-section is not sufficient to accommodate traffic volumes associated with planned growth. The preferred alternative identified the need to widen Yonge Street to 5 lanes and include buffered bike lanes and sidewalks.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$716	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$716
Property - Request	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Utilities - Request	\$0	\$183	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$183
Property - Forecast	\$0	\$0	\$0	\$0	\$0	\$284	\$0	\$0	\$0	\$0	\$0	\$284
Utilities - Forecast	\$0	\$0	\$0	\$0	\$0	\$0	\$177	\$0	\$0	\$0	\$0	\$177
Construction - Forecast	\$0	\$0	\$4,568	\$0	\$0	\$0	\$0	\$3,970	\$0	\$0	\$0	\$8,538
Total	\$916	\$183	\$4,568	\$0	\$0	\$284	\$177	\$3,970	\$0	\$0	\$0	\$10,097

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - Tax	\$137	\$27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$165
Contribution from DC Reserves Tax (Annex)	\$778	\$156	\$3,883	\$0	\$0	\$242	\$150	\$3,374	\$0	\$0	\$0	\$8,583
Contribution from Tax Capital Reserve	\$0	\$0	\$685	\$0	\$0	\$43	\$26	\$595	\$0	\$0	\$0	\$1,350
Total	\$916	\$183	\$4,568	\$0	\$0	\$284	\$177	\$3,970	\$0	\$0	\$0	\$10,097

2019 Capital Project Detail Report

Project Title: Barrie Environmental Centre Recycling Depot Expansion and additional 40 Yard Bins

Project Number: 000691

Department: Environmental Services

Summary: This request is for the purchase of 20 - 40 yard bins for the collection and disposal of residentially deposited waste and recyclables at the City of Barrie Landfill Site.

Rationale: Forty yard bins are the method with which waste that is dropped off at the landfill site is collected and transported for disposal. A number of the current bins being used at the Waste and Recycling Depot are past their expected useful life and need replacing. In 2017, an additional Recycling Depot was constructed to assist with the further collection of recyclables and hazardous waste and will require 40 yard bins.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Frozen Water Service Repair

Project Number: ES1022

Department: Environmental Services

Summary: Remediation of previously prioritized residential water services throughout the city that have been identified as subject to freezing. This involves excavation and replacement in accordance with current City Standards, including lowering, insulating, and rerouting water services below major infrastructure crossings to ensure they remain protected from freezing.

Rationale: This project is necessary to ensure continuous delivery of residential Drinking Water during periods of extended cold temperatures. It is in alignment with the Council approved Staff Report ENV003-15, 15-06-22. Following the completion of 2016 remediation works, 180 services in various locations throughout the City still require remediation works to ensure they're adequately protected from freezing.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$600	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600
Total	\$600	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Debenture Proceeds - Water	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Contribution from Water Capital Reserve	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600
Total	\$600	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,600

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Historic Waste Site Landfill Gas New Preventative/Remedial Action

Project Number: 000519

Department: Environmental Services

Summary: The remediation of landfill gas (LFG) migration from City-owned lands within Historic Waste Site 6 (Frederick St area).

Rationale: Monitoring of Landfill gas (LFG) within publicly owned lands on Historic Waste Site 6 indicates that elevated (above 5%) methane is present around the Frederick Street Area. A LFG Impact and Action Plan study completed by Golder and Associates has recommended that remediation of LFG migration from City-owned lands within Site 6 be undertaken. This will include the procurement of a consultant for the design and installation of a LFG barrier and venting system. The installation of this system will be limited to public lands around the area of concern and is estimated that a maximum length of 300 meters is necessary. This project is a Corporate Need from a liability aspect.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Total	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Reserves	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Total	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Landfill Household Hazardous Recycling Depot

Project Number: 000720

Department: Environmental Services

Summary: Replace the Household Hazardous Waste Satellite Facility Trailer with a permanent household hazardous waste structure at the Barrie Landfill Site 272 Ferndale Drive North to reduce safety and compliance risk. The scope of proposed works would include the construction of a modular building with a gas monitoring system and secondary containment.

Rationale: At the Barrie Landfill Site (272 Ferndale Drive North) there is currently a Household Hazardous Waste Satellite Facility (HHWSF) Trailer located at the Recycling Depot on site. A consultant's review of the Household Hazardous Waste Program identified the need to replace the existing trailer as it is well past its useful life and poses a safety and compliance risk. The intent of the project would be to replace the HHWSF trailer with a permanent household hazardous waste depot. The scope of proposed works would include the construction of a modular building with a gas monitoring system and secondary containment.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Total	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Province of Ontario Grant Revenue	\$0	\$56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$56
Contribution from Tax Capital Reserve	\$0	\$944	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$944
Total	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Public Space Bin Upgrade Program

Project Number: 000598

Department: Environmental Services

Summary: In 2017 a Public Space Bin Rationalization Study was initiated and driven by the need to find efficiencies, develop standardization and respond to impacts changing legislation. Of certainty is the fact that the legislation promotes the expansion of diversion programs which will definitely impact this 'Program'. The study identified changes to the program that will require funding for, at a minimum, a 2 year implementation period.

Rationale: A comprehensive Public Space Bin Rationalization Study was conducted in response to the need to update the Public Space Bin Program. This update was driven by the need to reduce contamination rates, increase diversion, to find efficiencies and standardization (given that processes are shared between 2 departments), to address changing legislation and its potential impacts as well as to implement a second priority initiative within the Sustainable Waste Management Strategy. Of certainty is the fact that the legislation promotes the expansion of diversion programs which will definitely impact this 'Program'. The study identified changes to the program that will require a 2 year implementation.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$238	\$238	\$238	\$238	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950
Total	\$238	\$238	\$238	\$238	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$238	\$238	\$238	\$238	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950
Total	\$238	\$238	\$238	\$238	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$950

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: WwTF Administration Building Retrofit of Laboratory Fume Hood Ventilation Unit - Laboratory Room

Project Number: 000774

Department: Environmental Services

Summary: This project involves the retrofit of the exhaust system of an existing fume hood in the City of Barrie WwTF Laboratory. The existing fume hood is not effectively removing contaminants potentially placing employees at risk for exposure to dangerous airborne contaminants.

Rationale: The existing fume hood and exhaust system for the Wastewater Treatment Facility (WwTF) laboratory ventilation unit is no longer performing as intended and is not effectively removing potential airborne contaminants during wastewater sample analysis. The nature of the sample analysis exposes WwTF employees to potentially health hazardous vapours, particles, and odours and is therefore not meeting workplace safety requirements. Modifying the exhaust system of the fume hood would reduce employee exposure to potential health hazards and promote workplace health and safety. Retrofitting the existing exhaust system to other fume hoods is the appropriate lifecycle activity as it will be prove to be more cost-effective than full replacement. It will also be less intrusive to WwTF staff and reduce project time by avoiding regulatory approvals required with new construction.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25
Total	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25
Total	\$0	\$25	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: WwTF Redundant Power Feed to Secondary Effluent Pumps

Project Number: 000771

Department: Environmental Services

Summary: Installation of additional power disconnects, electrical hardware cabinetry, cables and wiring needed to create a redundant power supply to the secondary effluent pumps. The secondary effluent pumps are critical pieces of equipment that all wastewater must pass through to receive complete treatment. Proper function of the pumps at all times is essential to ensure that regulatory compliance limits are met and bypass events are avoided.

Rationale: Proper and continuous operation of the secondary effluent pumps is essential to ensure that the municipality can continuously meet or exceed provincial effluent quality criteria. Presently there is only one line from the switchgear to the pumps. If there is an issue with the electrical panels either in the main switchgear or in the MCC room at the pumps, or an issue with the line itself that results in a loss of power to the pumps, there is no means to restore the power in a timely manner. This project will provide a secondary power feed from the switchgear to the pumps, allowing WWOB staff the ability to quickly switch the power supply from the faulty line to the backup, minimizing or eliminating pump downtime.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from WW Capital Reserve	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: 2018-2019 DC Background Study Update

Project Number: 000612

Department: Finance Department

Summary: Update of City-wide and area specific Development Charge By-laws.

Rationale: In order to continue to collect development charges, the City is required to complete a background study and pass an updated development charges by-law at least every 5 years. The current City-wide by-law 2014-108 expires in August 2019; therefore a new background study must be completed and a new by-law passed prior to that time. The background study takes several months to complete and will involve several meetings with stakeholders in most departments within the City. It is anticipated that the work will start mid-2018 and finish before August 2019.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130
Total	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$36	\$36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72
Contribution from DC Reserves Tax (Annex)	\$23	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45
Contribution from Tax Capital Reserve	\$2	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
Contribution from WW Capital Reserve	\$2	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
Contribution from Water Capital Reserve	\$2	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
Total	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130

2019 Capital Project Detail Report

Project Title: County of Simcoe Capital Program - Long Term Care & Senior Services

Project Number: 000449

Department: County of Simcoe

Summary: Capital Plan for Long Term Care & Senior services delivered by the County of Simcoe. The costs included are the City of Barrie's share.

Rationale: The City of Barrie is party to an agreement with the County of Simcoe that requires the City to contribute funding toward the County's capital plan on a prescribed basis. This project reflects the County's 10 year Capital Plan, as it relates to long term care and senior services needs, at the time of budget preparation. The plan is subject to change.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Service Partner - Request	\$91	\$74	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$165
Service Partner - Forecast	\$0	\$0	\$161	\$118	\$97	\$33	\$118	\$125	\$74	\$100	\$0	\$826
Total	\$91	\$74	\$161	\$118	\$97	\$33	\$118	\$125	\$74	\$100	\$0	\$991

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Reserves	\$91	\$74	\$161	\$118	\$97	\$33	\$118	\$125	\$74	\$100	\$0	\$991
Total	\$91	\$74	\$161	\$118	\$97	\$33	\$118	\$125	\$74	\$100	\$0	\$991

2019 Capital Project Detail Report

Project Title: County of Simcoe Capital Program - Paramedic Services

Project Number: 000450

Department: County of Simcoe

Summary: Capital Plan for Paramedic services delivered by the County of Simcoe. The costs included are the City of Barrie's share.

Rationale: The City of Barrie is party to an agreement with the County of Simcoe that requires the City to contribute funding toward the County's capital plan on a prescribed basis. This project reflects the County's 10 year Capital Plan, as it relates to paramedic services, at the time of budget preparation. The plan is subject to change.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Service Partner - Request	\$2,942	\$1,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,017
Service Partner - Forecast	\$0	\$0	\$1,514	\$1,698	\$1,585	\$1,395	\$1,475	\$1,740	\$1,988	\$2,094	\$0	\$13,489
Total	\$2,942	\$1,075	\$1,514	\$1,698	\$1,585	\$1,395	\$1,475	\$1,740	\$1,988	\$2,094	\$0	\$17,506

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$1,171	\$575	\$764	\$728	\$732	\$888	\$860	\$870	\$819	\$814	\$0	\$8,221
Contribution from Reserves	\$1,771	\$500	\$750	\$970	\$853	\$507	\$615	\$870	\$1,169	\$1,280	\$0	\$9,285
Total	\$2,942	\$1,075	\$1,514	\$1,698	\$1,585	\$1,395	\$1,475	\$1,740	\$1,988	\$2,094	\$0	\$17,506

2019 Capital Project Detail Report

Project Title: County of Simcoe Capital Program - Social Housing & Community Services

Project Number: 000451

Department: County of Simcoe

Summary: Capital Plan for Social Housing & Community services delivered by the County of Simcoe. The costs included are the City of Barrie's share.

Rationale: The City of Barrie is party to an agreement with the County of Simcoe that requires the City to contribute funding toward the County's capital plan on a prescribed basis. This project reflects the County's 10 year Capital Plan, as it relates to social housing and community services, at the time of budget preparation. The plan is subject to change.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Service Partner - Request	\$1,635	\$1,938	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,573
Service Partner - Forecast	\$0	\$0	\$1,948	\$1,826	\$2,252	\$2,685	\$2,965	\$2,873	\$2,977	\$2,826	\$0	\$20,352
Total	\$1,635	\$1,938	\$1,948	\$1,826	\$2,252	\$2,685	\$2,965	\$2,873	\$2,977	\$2,826	\$0	\$23,925

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$763	\$1,384	\$1,391	\$1,405	\$1,689	\$2,014	\$2,400	\$2,298	\$2,165	\$2,153	\$0	\$17,663
Contribution from Reserves	\$873	\$554	\$557	\$421	\$563	\$671	\$565	\$575	\$812	\$673	\$0	\$6,263
Total	\$1,635	\$1,938	\$1,948	\$1,826	\$2,252	\$2,685	\$2,965	\$2,873	\$2,977	\$2,826	\$0	\$23,925

2019 Capital Project Detail Report

Project Title: Georgian College - Advanced Technology, Innovation and Research Centre

Project Number: 000448

Department: Other Service Partners & Grants

Summary: Transfer of \$5 million, or a maximum of 25% of total project costs, whichever is less, to Georgian College in support of its proposed Advanced Technology, Innovation and Research Centre.

Rationale: If Georgian College is successful in securing government funding for a proposed Advanced Technology, Innovation and Research Centre, the City is to provide up to \$5 million (or a maximum of 25% of the total project, whichever is less) over a four year period.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Service Partner - Request	\$1,250	\$1,250	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,750
Total	\$1,250	\$1,250	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,750

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Community Benefit Reserve	\$0	\$1,250	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500
Contribution from Tax Capital Reserve	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,250
Total	\$1,250	\$1,250	\$1,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,750

2019 Capital Project Detail Report

Project Title: Barrie Fire and Emergency Services Technology Program

Project Number: 000105

Department: Information Technology

Summary: The Barrie Fire and Emergency Services (BFES) Technology Program is intended to modernize the data infrastructure required by BFES to maintain their high level of service to the community. Locations include Fire Stations 1, 2, 3, 4, and 5.

Rationale: Required to modernize and maintain essential City services provided by the Barrie Fire and Emergency Services. This program is directly required to support critical services and benefits the entire City. Some of existing technical data infrastructure has reached end of lifecycle and is required to ensure dependability.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Plan - Request	\$275	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$275
Capital Purchase - Request	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Capital Purchase - Forecast	\$0	\$0	\$75	\$75	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$275	\$50	\$75	\$75	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$625

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$275	\$50	\$75	\$75	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$625
Total	\$275	\$50	\$75	\$75	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$625

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: BFES Next Gen 911 Phone System

Project Number: 000793

Department: Information Technology

Summary: The City of Barrie is required to comply with updating the existing Barrie Fire and Emergency Services (BFES) dispatch phone system to meet compatibility with the Canadian Radio-television and Telecommunications Commission (CRTC) directed Next Gen 911 (NG9-1-1) phone network upgrades.

Rationale: Telephone companies will be responsible for the construction, operation, and maintenance of the NG9-1-1 networks, with CRTC oversight. City of Barrie will be required to update the BFES dispatch phone system to be compatible with NG 911.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Capital Purchase - Forecast	\$0	\$0	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$100	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$100	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$0	\$100	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: City of Barrie Facilities Wi-Fi Expansion

Project Number: 000790

Department: Information Technology

Summary: This project is to provide support to City staff through the city-wide distribution and expansion of the current City of Barrie Wi-Fi technology infrastructure to all City facilities that currently do not provide it.

Rationale: WiFi is a prevalent technology in most work places. Providing the agility for staff to move around to different collaboration spaces while maintaining connectivity.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Capital Purchase - Forecast	\$0	\$0	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$100	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$100	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$0	\$100	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Cloud and Hosted Services Security Review

Project Number: 000805

Department: Information Technology

Summary: 3rd Party Independent review of all cloud and hosted services used throughout the city.

Rationale: As more city departments embrace digitalization, hosted services can provide a cost effective solution that can be quickly implemented. This spreads the city's data across multiple platforms. With the city ultimately accountable for ensuring the safety of citizen data. This review is part of the city due diligence to ensure our vendors are taking all reasonable precautions to protect that data.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Corporate Audio Visual Technology Infrastructure

Project Number: IT1029

Department: Information Technology

Summary: The City's Corporate Audio Visual Technology Infrastructure Program replaces older audio and visual equipment with modern equipment with additional functionality at a lower cost to operate and support.

Rationale: The City utilizes various audio and visual technologies ranging from desktop monitors, projectors, sound systems and presentation equipment. This program supports the replacement of aged visual equipment deployed throughout the City's offices and meeting rooms, with newer more energy efficient, functional and reliable devices. This program also promotes the expansion of current communications methods like unified communications (instant messaging) and virtual meeting room technology reducing traveling time/costs while increasing staff productivity.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$75	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125
Capital Purchase - Forecast	\$0	\$0	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$75	\$50	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$225

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Reserves	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
Contribution from Tax Capital Reserve	\$73	\$50	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$223
Total	\$75	\$50	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$225

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Corporate Communications Infrastructure Program

Project Number: IT1013

Department: Information Technology

Summary: Renewal and maintenance of the City's corporate telecommunications infrastructure including hardware upgrades, accessories (handsets, soft phones, headsets), and IP gateways to meet the City's growing voice and data communication needs.

Rationale: Several components of the existing communication infrastructure are beyond their useful life. Renewal and maintenance of the City's corporate communications infrastructure is required to sustain level of service. Additionally, the opportunity to replace all digital communication infrastructures with an IP based solution will reduce the risk of failure and satisfy the City's future communication needs.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Plan - Request	\$253	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$253
Capital Purchase - Request	\$250	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500
Capital Purchase - Forecast	\$0	\$0	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$503	\$250	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$953

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$502	\$221	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$923
Contribution from WW Capital Reserve	\$1	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11
Contribution from Water Capital Reserve	\$0	\$19	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19
Total	\$503	\$250	\$100	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$953

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Corporate Computer Monitor Lifecycle Management Program

Project Number: IT1037

Department: Information Technology

Summary: The lifecycle for computer monitors is 3 years. This program seeks to renew the fleet of computer monitors to allow for the standardization and lifecycle management of these devices.

Rationale: In conjunction with the Corporate PC Infrastructure program, the IT department ensures lifecycle management of monitors and other hardware for the corporation.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Corporate PC Infrastructure Program

Project Number: IT1015

Department: Information Technology

Summary: The City's Corporate PC Technology Infrastructure Program is for the workstation computers used by all City Staff. This program refreshes leased desktop and laptop hardware every 3 years.

Rationale: Corporate PC Technology Infrastructure Program is managed through a corporate lease agreement paid annually on a three year cycle. It ensures the City's PC technology is current and up to date.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$838	\$411	\$422	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,671
Capital Purchase - Forecast	\$0	\$0	\$0	\$433	\$455	\$477	\$501	\$526	\$553	\$580	\$609	\$4,135
Total	\$838	\$411	\$422	\$433	\$455	\$477	\$501	\$526	\$553	\$580	\$609	\$5,806

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$838	\$411	\$422	\$433	\$455	\$477	\$501	\$526	\$553	\$580	\$609	\$5,806
Total	\$838	\$411	\$422	\$433	\$455	\$477	\$501	\$526	\$553	\$580	\$609	\$5,806

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Corporate Printing Infrastructure

Project Number: IT1014

Department: Information Technology

Summary: The City's Corporate Printing Technology Infrastructure Program replaces hardware with current multi-function device solutions that are technically advanced and more efficient to operate and support.

Rationale: Corporate imaging technology infrastructure renewal is required based on the industry standard, 5 year replacement cycle to reduce the risk of failure. Imaging systems (print, scan, fax, and copy functionality) are used by over 75% of staff to produce a variety of documents in varying formats, colours, and sizes for public distribution, City staff use, reporting, billing, and records management.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Plan - Request	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
Capital Purchase - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Capital Purchase - Forecast	\$0	\$0	\$100	\$25	\$25	\$25	\$0	\$0	\$0	\$0	\$0	\$175
Total	\$250	\$100	\$100	\$25	\$25	\$25	\$0	\$0	\$0	\$0	\$0	\$525

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$250	\$100	\$100	\$25	\$25	\$25	\$0	\$0	\$0	\$0	\$0	\$525
Total	\$250	\$100	\$100	\$25	\$25	\$25	\$0	\$0	\$0	\$0	\$0	\$525

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Microsoft Office 365 and Windows Enterprise

Project Number: 000789

Department: Information Technology

Summary: Upgrading the computer fleet operating system to Windows 10 Enterprise, Office 365, and leveraging the Microsoft Azure cloud.

Rationale: Keeping our systems running the current suite of Microsoft Enterprise solutions ensures we have access to the latest management and security tools provided by Microsoft. Leveraging Microsoft's Azure Cloud provides a flexible and agile technology foundation to keep pace with the innovative business process changes happening throughout the City.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Capital Purchase - Forecast	\$0	\$0	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$0	\$200	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$177	\$266	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$443
Contribution from WW Capital Reserve	\$0	\$8	\$12	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20
Contribution from Water Capital Reserve	\$0	\$15	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$38
Total	\$0	\$200	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500

2019 Capital Project Detail Report

Project Title: Mobility Technology Program

Project Number: IT1019

Department: Information Technology

Summary: Scope of this intake form includes; purchase and replacement of all City deployed cellular phones, smartphones, tablets and licensing of mobile device management software. Also includes protective casing and screen protectors.

Rationale: Moving forward with mobility is mobilizing the City's workforce by providing mobile technology to aid in the delivery of City services to the community. Mobility technology is limited to cellular phones, smartphones, tablets and laptops (although laptops are not in the funding scope of this intake form covered by PC Replacement Program). Mobile technology enables secure real time access to City business applications and data available to all City staff management deems beneficial. Mobile device governance has been established through corporate policy; mobile device security is managed through mobile device management (MDM) software supported by the City's IT Department.

The IT Department has recognized the City's growing need for mobile technology supporting mobile office and field workers in delivering services for the community.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Plan - Request	\$310	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$310
Capital Purchase - Request	\$0	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80
Capital Purchase - Forecast	\$0	\$0	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$640
Total	\$310	\$80	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$1,030

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$310	\$80	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$1,030
Total	\$310	\$80	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$1,030

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Network Technology Infrastructure Program

Project Number: IT1010

Department: Information Technology

Summary: The network technology infrastructure program includes the renewal and deployment of core devices and services associated with network switches, load balancers, firewalls, Wi-Fi access points and other network hardware across the City's facilities and data centres required for the continued delivery of corporate data and voice communication.

Rationale: Networking infrastructure renewal and improvements are required to meet performance requirements of the existing and upcoming technology projects. This program is based on a 5 year replacement cycle for all networking infrastructure including switches, routers, load balancers and firewalls to reduce the risk of failure. Should the network infrastructure not be replaced and a hardware failure occurs, extended outages would be experienced by staff due to their inability to access applications, data, and voice communications via the corporate network.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$900	\$765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,665
Capital Purchase - Forecast	\$0	\$0	\$765	\$765	\$765	\$765	\$0	\$0	\$0	\$0	\$0	\$3,060
Total	\$900	\$765	\$765	\$765	\$765	\$765	\$0	\$0	\$0	\$0	\$0	\$4,725

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$900	\$679	\$679	\$679	\$679	\$679	\$0	\$0	\$0	\$0	\$0	\$4,295
Contribution from WW Capital Reserve	\$0	\$30	\$30	\$30	\$30	\$30	\$0	\$0	\$0	\$0	\$0	\$150
Contribution from Water Capital Reserve	\$0	\$56	\$56	\$56	\$56	\$56	\$0	\$0	\$0	\$0	\$0	\$280
Total	\$900	\$765	\$765	\$765	\$765	\$765	\$0	\$0	\$0	\$0	\$0	\$4,725

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Public Safety Communication Program

Project Number: IT1043

Department: Information Technology

Summary: The City's IT Department maintains a public safety radio system used by BFES, Barrie Police and the City's Water Operations. This program supports the ongoing support, maintenance and lifecycling of radio system hardware and software.

Rationale: This is required to maintain the City's public safety radio system used by BFES, Barrie Police and the City's Water Operations. This program covers the ongoing support, maintenance and lifecycling of radio system hardware and software, ensuring this vital communication environment is always available

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$600	\$440	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,040
Execute - Forecast	\$0	\$0	\$440	\$530	\$510	\$240	\$240	\$240	\$240	\$0	\$0	\$2,440
Total	\$600	\$440	\$440	\$530	\$510	\$240	\$240	\$240	\$240	\$0	\$0	\$3,480

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Police Srv Board Capital Reserve	\$0	\$147	\$220	\$410	\$390	\$120	\$120	\$120	\$120	\$0	\$0	\$1,647
Contribution from Tax Capital Reserve	\$400	\$147	\$220	\$120	\$120	\$120	\$120	\$120	\$120	\$0	\$0	\$1,487
Contribution from WW Capital Reserve	\$0	\$73	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73
Contribution from Water Capital Reserve	\$0	\$73	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73
Intercompany - General	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Total	\$600	\$440	\$440	\$530	\$510	\$240	\$240	\$240	\$240	\$0	\$0	\$3,480

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Server and Desktop Software Program

Project Number: IT1024

Department: Information Technology

Summary: Corporate wide program for the annual licensing renewal of the City's server and desktop software. This program includes a range of Enterprise software applications that require yearly renewal.

Rationale: Annual renewal of server and desktop software licenses is required in part through an existing contractual obligation with various vendors including Microsoft which require payments in 2017, 2018 and 2019, based on a new 3 year agreement signed in 2017. These license bundles offer volume pricing discounts, timely upgrades, and access to support.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$1,228	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,878
Capital Purchase - Forecast	\$0	\$0	\$675	\$700	\$725	\$0	\$0	\$0	\$0	\$0	\$0	\$2,100
Total	\$1,228	\$650	\$675	\$700	\$725	\$0	\$0	\$0	\$0	\$0	\$0	\$3,978

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Reserves	\$7	\$4	\$4	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18
Contribution from Tax Capital Reserve	\$1,218	\$645	\$669	\$694	\$725	\$0	\$0	\$0	\$0	\$0	\$0	\$3,951
Contribution from WW Capital Reserve	\$2	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
Contribution from Water Capital Reserve	\$2	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
Contribution from Parking Capital Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
Total	\$1,228	\$650	\$675	\$700	\$725	\$0	\$0	\$0	\$0	\$0	\$0	\$3,978

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Server and Storage Technology Infrastructure Program

Project Number: IT1012

Department: Information Technology

Summary: The City's computing server and storage technology infrastructure program estimates a 60% growth of electronic files/data annually. Replacing old technology with new increases the City's capacity and ability to manage electronic information.

Rationale: The City's server and storage infrastructure hardware throughout City sites and data centres is renewed every three years aligning with industry best practices. Replacement and upgrade of server and storage technology infrastructure (including physical and virtual servers) increases capacity and mitigates the risk of failure of the server and storage infrastructure.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$615	\$785	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,400
Capital Purchase - Forecast	\$0	\$0	\$590	\$605	\$620	\$635	\$0	\$0	\$0	\$0	\$0	\$2,450
Total	\$615	\$785	\$590	\$605	\$620	\$635	\$0	\$0	\$0	\$0	\$0	\$3,850

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$615	\$716	\$544	\$559	\$574	\$589	\$0	\$0	\$0	\$0	\$0	\$3,597
Contribution from WW Capital Reserve	\$0	\$24	\$16	\$16	\$16	\$16	\$0	\$0	\$0	\$0	\$0	\$88
Contribution from Water Capital Reserve	\$0	\$45	\$30	\$30	\$30	\$30	\$0	\$0	\$0	\$0	\$0	\$165
Total	\$615	\$785	\$590	\$605	\$620	\$635	\$0	\$0	\$0	\$0	\$0	\$3,850

Expense amounts in **bold text** – 2019 Budget Request

Expense amounts in shaded text – Previously Committed Funding

2019 Capital Project Detail Report

Project Title: Citizen Relationship Management (CRM) Solution

Project Number: IT1031

Department: Centre for Continuous Improvement

Summary: This project focuses on the implementation of a technology solution to enable the Corporation to centrally and electronically manage all of its customers. The need for this system is identified and further defined in the City's Corporate Technology Strategy and its Customer Service Plan. This new CRM system will manage customer complaints, requests and interactions as a single point of reference for all customer data.

Rationale: Phase One of the Customer Contact Centre—now known as Service Barrie—is operational as of November 2016. Additional services will be incorporated through the following 4 phases, which will greatly increase the volume and type of customer interactions. These interactions will have a higher degree of complexity, requiring accurate and reliable tracking. They will also incorporate data and processes from several different departments and database systems. A centralized CRM will track the volume, type and resolution to all inquiries from multiple channels, allowing the City to identify trends and emerging issues both city wide and neighbourhood specific. The ability to implement future phases of Service Barrie will be limited without adequate technology systems to support these multi-channel services. Easy access to comprehensive metrics will improve the ability to plan, enabling the City to increase efficiencies and improve communication in order to promote a consistent customer experience. A CRM will support customer service problem management, issue ticketing and case management; a single view of the customer experience and history (customer data integration); consistent treatment of the customer across channels; real-time decision support (analytics) to understand customer intentions, and customize services and interactions accordingly; real-time feedback and surveys; and future self-service systems.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$610	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$810
Total	\$610	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$810

Funding (in 000's):

	Prior Approval	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$340	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450
Contribution from WW Capital Reserve	\$120	\$20	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160
Contribution from Water Capital Reserve	\$120	\$20	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160
Contribution from Parking Capital Reserve	\$30	\$5	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40
Total	\$610	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$810

2019 Capital Project Detail Report

Project Title: ERP Sustainment Program

Project Number: 000335

Department: Centre for Continuous Improvement

Summary: The new SAP system is slated to go live in 2018, which additional functionality going live in 2019. This system will house the City's, Police, BIA, LSRA and the Library's financial, procurement and HR information. It also contains the City's new business intelligence system (reporting system).

Rationale: The new SAP system is slated to go live in 2018, which additional functionality going live in 2019. This system will house the City's, Police, BIA, LSRA and the Library's financial, procurement and HR information. It also contains the City's new business intelligence system (reporting system). We will continue to grow our knowledge base internally and train our staff. However, SAP is a very complex system and external support will be required to ensure that any problems that cannot be solved by internal staff, will be remedied quickly using external support.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Execute - Request	\$700	\$850	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,550
Execute - Forecast	\$0	\$0	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$0	\$0	\$2,450
Total	\$700	\$850	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$0	\$0	\$4,000

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$385	\$468	\$193	\$193	\$193	\$193	\$193	\$193	\$193	\$0	\$0	\$2,200
Contribution from WW Capital Reserve	\$140	\$170	\$70	\$70	\$70	\$70	\$70	\$70	\$70	\$0	\$0	\$800
Contribution from Water Capital Reserve	\$140	\$170	\$70	\$70	\$70	\$70	\$70	\$70	\$70	\$0	\$0	\$800
Contribution from Parking Capital Reserve	\$35	\$43	\$18	\$18	\$18	\$18	\$18	\$18	\$18	\$0	\$0	\$200
Total	\$700	\$850	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$0	\$0	\$4,000

2019 Capital Project Detail Report

Project Title: Integration Engine

Project Number: 000803

Department: Centre for Continuous Improvement

Summary: Communication and collaboration are now easier than ever thanks to technology and mobility. Employees can access and use data wherever there's an internet connection, allowing them to work from home, on the road, or even abroad. Despite these capabilities, however, it's still common for communication to break down between teams and between systems.

This occurs because one system, or team, has the information that another system or team requires. An interface is a connection between two systems, where data is exchanged from one system to another. Integration blends applications and data, via communication, to enable sharing of information between applications within a company and between businesses. The City would greatly benefit from the implementation of an interface/integration engine.
Integration engines function to create workflow, communications, and messaging between systems, while also providing a means of central monitoring these flows.

Rationale: The City does not have a true integration engine to facilitate communication between systems. The following integrations are recommended: 4 Financial; 6 Customer Information; 7 Work Order Management/Service Requests; 5 Business Intelligence Reporting/Advanced Analytics; & 3 Project Tracking Interfaces
Benefits of an integration engine:

- Less expensive & takes less time to initially implement an interface
- Connected systems drive business process automation
- Better agility - automated business processes are easier to maintain
- Lower IT costs

An interface engine will ensure that the City is not wasting time on duplicated data entry, can easily monitor communications between systems, and can do advanced analytics for City performance in general, once hooked into the business intelligence system.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$499	\$395	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,165
Total	\$0	\$499	\$395	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,165

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$499	\$395	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,165
Total	\$0	\$499	\$395	\$270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,165

2019 Capital Project Detail Report

Project Title: Municipal Innovation Exchange (MiX) Project

Project Number: 000834

Department: Innovate Barrie Administration

Summary: The City of Barrie, in partnership with the cities of London and Guelph, as well as MaRS Discovery District (MaRS), is embarking on an exciting three-year Municipal Innovation Exchange (MIX) project.

Rationale: This program is based on the successful Civic Accelerator model in Guelph, and the MaRS' Innovation Partnership: Procurement by Co-Design health innovation program. These programs have developed successful new products to improve service delivery, as well as key learnings from the co-design process for products that were not implemented.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$140	\$140	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350
Total	\$0	\$140	\$140	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Province of Ontario Grant Revenue	\$0	\$70	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$140
Contribution from Reserves	\$0	\$70	\$70	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$210
Total	\$0	\$140	\$140	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$350

2019 Capital Project Detail Report

Project Title: Corporate Records & Information Management Strategy System Upgrade

Project Number: 000336

Department: Legislative & Court Services

Summary: A Corporate Records and Information Management Program Review was completed in early 2017. A number of recommendations were made by the consultants on methods to enhance/improve the current Program Review.

Rationale: The Strategy has evaluated the Corporation's current program and provided practical recommendations for enhancing it to ensure compliance with the Municipal Freedom of Information and Protection of Privacy Act and Municipal Act. Through a staged approach to implementing new technology including the RMAIS System, Email Capture and an EDRMS it will assist address the exponential growth in electronic records, ensure consistent record keeping practices across the Corporation reducing exposure related to being unable to access required records and information when needed or releasing records/information in contravention of the legislation. An EDRMS system will also reduce the staff time spent searching for information. A Corporate Records and Information Management Program has a significant impact on employee productivity as it is estimated that in a typical organization, staff spend approximately 20% of their time looking for information. Through implementing these three systems, it is anticipated that a staff time to look for information will be reduced.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Initiate - Request	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Capital Purchase - Request	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200
Capital Purchase - Forecast	\$0	\$0	\$200	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800
Total	\$200	\$100	\$200	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$200	\$100	\$200	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100
Total	\$200	\$100	\$200	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100

2019 Capital Project Detail Report

Project Title: Official Plan Comprehensive Update

Project Number: 000552

Department: Planning & Building Services

Summary: Preparation of a comprehensive new Official Plan and Zoning Bylaw to respond to Barrie's status as an Urban Growth Centre, new legislative requirements and the City's Strategic and Capital Plans for the next 20+ years.

Rationale: Recently released provincial growth expectations for Barrie will continue to urbanize the city to greater extents than what has been seen before. Ensuring alignment between intensification policies and capital investment decisions through the Official Plan is essential to ensuring future growth can be appropriately accommodated across the community. It is also essential for the Zoning By-law to align with the OP in order for the vision to be achieved.

With the secondary plan lands opening up for development, increasing expectations to intensify within the built-boundary, and all major infrastructure Master Plans now being updated, it is timely to advance this key land use policy tool that supports managing growth and development recommendations for the City.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$125	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$325
Study - Forecast	\$0	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Total	\$125	\$200	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from DC Reserves Tax	\$113	\$180	\$68	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$360
Contribution from Tax Rate Stabilization Reserve	\$13	\$20	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40
Total	\$125	\$200	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400

2019 Capital Project Detail Report

Project Title: 2019 Streetlight Infill

Project Number: 000779

Department: Roads, Parks, & Fleet

Summary: Street lighting improvements in the following areas:

- Intersection of Clapperton and Grove
- Intersection of Cundles and Cartwright
- Codrington between Cook and Rodney
- Cook between Codrington and Napier
- 13 Drury Lane
- Penetanguishene between 98 and Blake

Rationale: In older neighbourhoods throughout Barrie, the streetlighting levels are based on old standards and are often dimly lit. Traffic Services staff receive requests to review these areas from Mayor and Council or through Service Barrie. Staff consider future renewal and recommend areas that will not be identified for reconstruction for several years, but will benefit from interim lighting upgrades. Staff focus on corner areas, heavily treed areas or short dimly lit stretches of older neighbourhoods.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Total	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50
Total	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50

2019 Capital Project Detail Report

Project Title: Accessible Pedestrian Pushbutton New Installation

Project Number: 000139

Department: Roads, Parks, & Fleet

Summary: In 2016 the Accessibility Advisory Committee identified the following locations for Accessible Pedestrian Pushbuttons.

- Hurst and Little
- Little and Bayview
- Collier and Mulcaster
- Collier and Claperton
- Kozlov/Bayfield/Coulter
- Mapleview and Bayview
- Madeline and Dean
- Esther and Madeline
- Milburn and Burton
- Veterans and Essa

Rationale: The additional pushbuttons are required to increase the accessibility of these crossings and promote inclusive communities. The Accessibility Advisory Committee has recommended the locations.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Initiate - Request	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130
Total	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130
Total	\$65	\$65	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130

2019 Capital Project Detail Report

Project Title: Alectra Pole Betterment and Capital Upgrade Program - Street Lighting Equipment Relocation

Project Number: 000526

Department: Roads, Parks, & Fleet

Summary: Relocation of City of Barrie street lighting plants as directed by Alectra due to their capital upgrade program.

Rationale: The City has third party attachment agreement with Alectra (formerly Powerstream) for the attachment of streetlights to Alectra hydro poles. Under the Electricity Act the city is required to bring to code and relocate their equipment as identified by Alectra.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$300	\$300	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200
Total	\$300	\$300	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$300	\$300	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200
Total	\$300	\$300	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200

2019 Capital Project Detail Report

Project Title: Downtown Sidewalk Replacement Program

Project Number: RP1006

Department: Roads, Parks, & Fleet

Summary: A program to implement planned and prioritized replacement of sidewalk paving stones in the downtown area.

Rationale: Existing paver conditions in the downtown are deteriorating at a high rate resulting in uneven surfaces, trip hazards, increasing maintenance cost and a negative impact on the aesthetics of the downtown area. Downtown sidewalks constructed with pavers have been assessed and it has been determined that the most effective way of replacement and ongoing maintenance is to completely replace sections in a planned and prioritized approach rather than focusing on repairs to isolated areas.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$120	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180
Construction - Forecast	\$0	\$0	\$60	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$120
Total	\$120	\$60	\$60	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$120	\$60	\$60	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$120	\$60	\$60	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300

2019 Capital Project Detail Report

Project Title: Fleet Replacement Program

Project Number: 000832

Department: Roads, Parks, & Fleet

Summary: This program consolidates the fleet replacement needs for all areas of the organization with the exception of Transit. The program will fund the replacement of end-of-life light, medium, and heavy duty vehicles, equipment, and trailers. The program will address existing fleet units only and does not include fleet expansion to service growth.

Rationale: A significant percentage of the City's fleet is in poor condition and incurring excessive repair and maintenance costs as a result of a failure to replace fleet assets within a reasonable time after exceeding the asset's economic useful life. This program will bring fleet replacements in line with the economic life of each asset, thereby avoiding the greater escalation of costs that will otherwise be required to keep the City's fleet in operation.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$10,207	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,207
Capital Purchase - Forecast	\$0	\$0	\$6,053	\$4,400	\$5,606	\$5,797	\$2,156	\$1,217	\$2,884	\$1,853	\$201	\$30,166
Total	\$0	\$10,207	\$6,053	\$4,400	\$5,606	\$5,797	\$2,156	\$1,217	\$2,884	\$1,853	\$201	\$40,373

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Reserves	\$0	\$10,207	\$6,053	\$4,400	\$5,606	\$5,797	\$2,156	\$1,217	\$2,884	\$1,853	\$201	\$40,373
Total	\$0	\$10,207	\$6,053	\$4,400	\$5,606	\$5,797	\$2,156	\$1,217	\$2,884	\$1,853	\$201	\$40,373

2019 Capital Project Detail Report

Project Title: Heritage Park Redevelopment - Master Plan

Project Number: 000616

Department: Roads, Parks, & Fleet

Summary: The Master Plan is to undertake a detailed review of the park's future rehabilitation including its current and future programming as a major year-round waterfront park while determining the role and uses as a landscaped park with floral displays, a gateway to the North Shore Trail, the site of our only waterfront water feature/splash pad, a location to host arts and culture programming and how the park will function with its role connecting the waterfront to the downtown core, Memorial Square and Meridian Place with its outdoor stage. The redevelopment plan will allow the park to continue to be a destination waterfront attraction for the City.

Rationale: This plan is needed to address aging infrastructure in the park and ensure continued service and public safety.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Study - Request	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Cash-In-Lieu Parkland Reserve	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Total	\$0	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100

2019 Capital Project Detail Report

Project Title: Hotchkiss Creek, Downstream Channel and Drainage Improvements- 213 & 215 Phillip St

Project Number: 000740

Department: Roads, Parks, & Fleet

Summary: Drainage improvements to the downstream end of the Crawford Street and Phillips Street subdivision areas, between 213 and 215 Phillips Street. The project includes channel design and construction for the entire catchment area in 2019 and 2020.

Rationale: Since 2008, the Technical, Stormwater and Rail Operations Section have received several service requests from residents requesting drainage improvements to the watercourse including addressing overflow of the channel that is eroding the base of a retaining wall adjacent to 213 Phillips St. The subject watercourse is at the downstream end of a large drainage catchment. The current open channel requires new engineering design to meet current stormwater capacity as result of updated rainfall intensity (IDF) characteristics in 2009. Roads Operations staff has looked into the alternative to remove sediment and regrade upstream ditches, but this approach would exacerbate the downstream drainage issues.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$35
Construction - Forecast	\$0	\$0	\$0	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300
Total	\$0	\$35	\$0	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$335

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$35	\$0	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$335
Total	\$0	\$35	\$0	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$335

2019 Capital Project Detail Report

Project Title: Kidd's Creek Watershed, KD02 Storm Water Management Pond- Repair

Project Number: 000113

Department: Roads, Parks, & Fleet

Summary: Reconstruct stormwater management pond KD02 that has severe damage from intense storms. Extensive erosion is occurring downstream as the pond no longer functions to provide quantity control.

Rationale: Storm water management pond KD02 was severely damaged by intense rain falls and the culverts and check dams providing quantity control have been washed out. Over the past 15 years receiving storm water is passing through the facility unchecked, greatly increasing the quantity and velocity with extensive erosion occurring.

Storm water management pond KD02 is north of Cundles Road West inside the loop of Lillian Crescent. This pond, in the Kidds Creek watershed, was originally a dry pond, providing only quantity control of storm water. Some washouts are up to 3m deep. Parks Operations is currently maintaining a safety fence behind Victoria Woods Park as the largest washout is encroaching on a trail. This facility discharges into Sunnidale Park which at one time had a resident population of Brook Trout. Due to the increase in velocity and quantity of stormwater entering Sunnidale Park, some washouts have already occurred here as well but so far the repairs have been manageable.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100
Construction - Request	\$0	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900
Total	\$100	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$100	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Total	\$100	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000

2019 Capital Project Detail Report

Project Title: Lovers Creek Watershed, LV05 SWMF- Rehabilitation

Project Number: 000767

Department: Roads, Parks, & Fleet

Summary: Rehabilitation of LV5, a Stormwater Management Facility (SWMF) located between highway 400 and Bayview Drive, south of Costco.

Rationale: This SWMF is not functioning as designed due to major erosion along the inlet channel. Eroded material is collecting within the SWMF which was cleaned in 2015 and now needs to be cleaned again. In comparison, other SWMFs across the City do not require cleaning for up to 25 years. This project will ensure compliance with the Stormwater Management System Environmental Compliance Approval (ECA) with the Province. As a requirement of the ECA, the City is to act in resolving operational and maintenance noncompliance when identified. This project is deemed to be a required repair under the ECA.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Design - Request	\$0	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Construction - Forecast	\$0	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000
Total	\$0	\$150	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$150	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,150
Total	\$0	\$150	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,150

2019 Capital Project Detail Report

Project Title: Pay and Display Machine Replacement

Project Number: 000766

Department: Roads, Parks, & Fleet

Summary: Replacement of failing pay and display machines.

Rationale: The City currently has pay and display machines at the end of their lifecycle and we are unable to fix the parts on the older machines as parts are no longer available. When the machines are out of service the parking lots do not generate revenue as there is no other source of payment. The 4 machines we are replacing each year generate approximately \$50/hr at each machine when in use. The replacements will upgrade the current machines to provide credit card readers.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40
Capital Purchase - Forecast	\$0	\$0	\$40	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$120
Total	\$0	\$40	\$40	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$160

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Parking Capital Reserve	\$0	\$40	\$40	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$160
Total	\$0	\$40	\$40	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$160

2019 Capital Project Detail Report

Project Title: Pine Dr. Subdivision Retaining Wall Removal

Project Number: 000041

Department: Roads, Parks, & Fleet

Summary: Removal of retaining walls and re-grading in the Pine Dr. subdivision.

Rationale: City owned retaining walls on Pine Drive are deteriorating rapidly with complete failure anticipated within 1-5 years and need to be replaced. They pose a potential safety concern to the public if they collapse and for slips and falls due to inadequate snow clearing operations. It is anticipated that replacement and repair needs will occur annually and will cost more on a piecemeal basis than a full scale solution. The operating budget is not adequate to carry out repairs.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Construction - Request	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Capital Purchase - Request	\$0	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Total	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150
Total	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150

2019 Capital Project Detail Report

Project Title: Traffic Signal Cabinet Replacement Program

Project Number: 000756

Department: Roads, Parks, & Fleet

Summary: Traffic Signal Cabinet Replacement at the following locations:

- Grove and Nelson
- Tiffin and Patterson
- Livingston and Kozlov
- Dunlop and Sarjeant
- St. Vincent & Penetang
- Livingstone and Ford
- Little and Huronia

Rationale: The traffic signal control cabinet and components at these intersections are over 20 years old and are from a line of products that have not been supported for several years. The city had several surplus units similar to these as backups for replacement parts. These surplus parts have been exhausted and we are unable to replenish them.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$66	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$66
Total	\$0	\$66	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$66

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$66	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$66
Total	\$0	\$66	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$66

2019 Capital Project Detail Report

Project Title: Conventional Transit Bus Replacement 2019

Project Number: 000529

Department: Transit & Parking Strategy

Summary: Replacement of two conventional buses.

Rationale: Barrie Transit's current 20 year contract with MVT Barrie Bus Inc. identifies minimum maintenance requirements based on a fleet management strategy of run to failure. Barrie Transit's fleet has a life cycle expectancy of 12 years. By the end of its anticipated useful life the probability of failure on this in service asset is high and would cause significant impact on the service level provided to residents. As such Transit is obligated under the contractual agreement to purchase two replacement buses and retire the existing assets which have reached end of their useful service lives.

PROJECT EXPENDITURE AND FUNDING

Expenditure (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Capital Purchase - Request	\$0	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300
Total	\$0	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300

Funding (in 000's):

	Prior Approvals	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Contribution from Tax Capital Reserve	\$0	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300
Total	\$0	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300