



City of Richmond

Report to Committee

To: Finance Committee

Date: January 11, 2019

From: Jerry Chong, CPA, CA
Director, Finance

File: 03-0985-01/2019-Vol 01

Re: **2019 Capital Budget**

Staff Recommendation

1. That the 2019 Capital Budget as presented in Appendix 3 totalling \$116,524,202 be approved and staff authorized to commence the 2019 Capital Projects; and
2. That the 2019 Capital Budget totalling \$116,524,202 and the 2020 - 2023 Capital Projects be included in the Consolidated 5 Year Financial Plan (2019 - 2023).

Jerry Chong, CPA, CA
Director, Finance
(604-276-4064)

App. 14

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
CONCURRENCE BY SMT	INITIALS:
APPROVED BY CAO	

Executive Summary

Capital funds are directed towards infrastructure and asset management programs ranked based on the highest priority projects to respond to Council direction and provide services to the citizens of Richmond. The 2019 Capital Budget totaling \$116.5 million includes significant investment in infrastructure renewal to maintain community viability. A more detailed breakdown of each program is included in the appendices to this report.

The following is an overview of selected program areas funded through the capital budget. The complete list of recommended projects are included in Appendix 3 starting on page 17.

Infrastructure – \$37.8M:



The City’s Infrastructure Program includes: dikes, roads, drainage and sanitary pump stations, drainage, water, and sanitary mains (pages 17-18).

Building – \$20.9M:



The Building Program includes major building renovation projects as well as minor facility upgrades (page 18).

Parks – \$11.8M:



The Parks program includes development of parks and parkland acquisition (page 19).

Land – \$10.0M:



The Land program includes funding for land acquisition. This amount is to ensure funding is in place to act on opportunities as they arise with Council approval required for each specific acquisition (page 19).

Equipment – \$12.3M:



The Equipment Program includes Information Technology hardware and software, fleet and equipment, as well as fire vehicle and equipment replacement (page 20).

Staff Report

Origin

Subsection 165(1) of the *Community Charter* requires the City to adopt a 5 Year Financial Plan (5YFP) Bylaw. The 5YFP Bylaw includes operating, utility and capital budgets for year 2019 and provides estimates for the remaining years of the five-year program. The Consolidated 5YFP (2019 - 2023) Bylaw provides the City with the authority to proceed with spending as outlined in the Bylaw. The 5YFP must be balanced and therefore includes proposed funding sources. The 5YFP provides authorization for the use of certain funding sources such as Development Cost Charges (DCCs) and Statutory Reserves.

The Capital Budget is one of the main components of the 5YFP. The budget includes all expenditures that improve, replace and extend the useful life of the City's asset inventory, which currently has a net book value greater than \$2.2 billion. The Capital Budget allows the City to sustain existing civic infrastructure, while also adding new assets and services to serve the growing community.

The Long Term Financial Management Strategy (LTFMS - Policy 3707) is a set of principles created by Council to guide the financial planning process. As per item 5, it is Council policy and a key component of the LTFMS to "*ensure that long term capital funding for infrastructure (e.g. parks, trails, facilities, roads etc.) is in place in order to maintain community liveability and generate economic development.*"

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

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

- 7.1. *Relevant and effective budget processes and policies.*
- 7.2. *Well-informed and sustainable financial decision making.*
- 7.3. *Transparent financial decisions that are appropriately communicated to the public.*
- 7.4. *Strategic financial opportunities are optimized.*

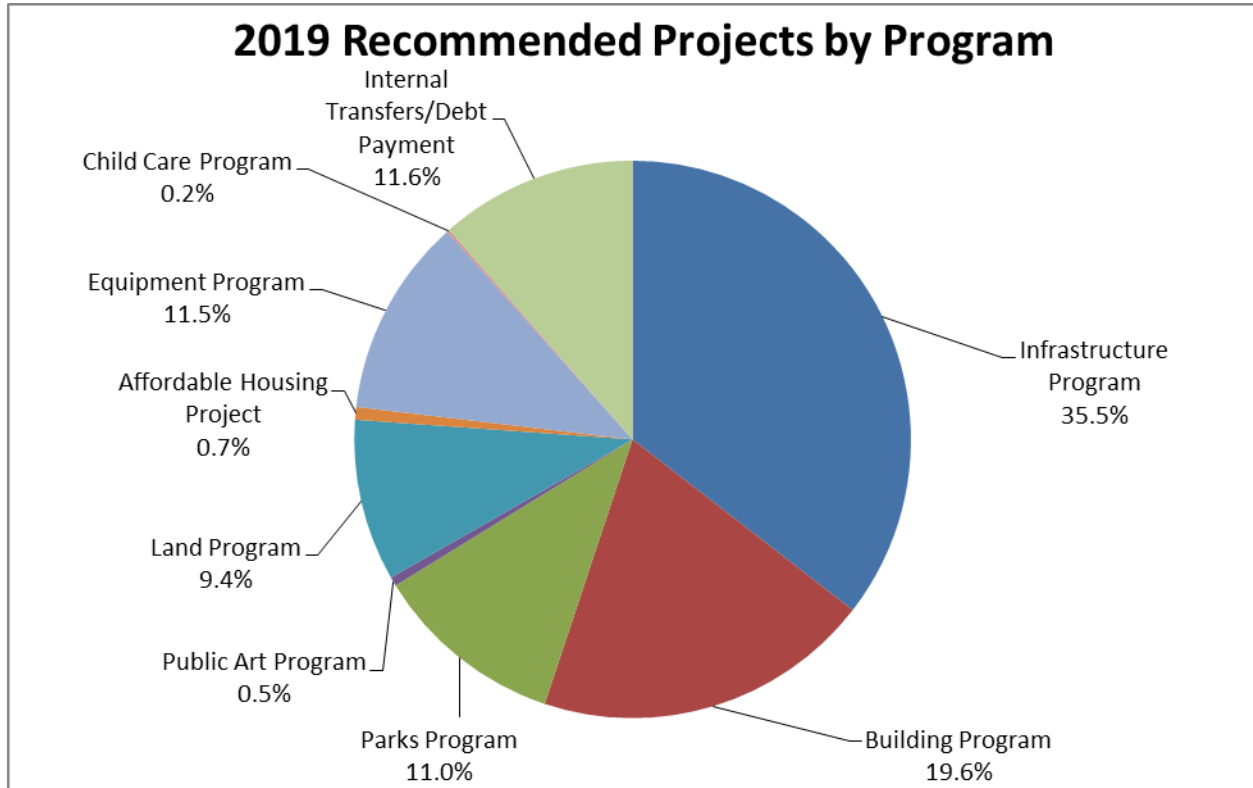
Analysis

This report presents the proposed 2019 Capital Budget and seeks Council review and approval on 2019 recommended projects and the operating expenditures associated with each respective project. The proposed Capital Budget for 2019 is \$116.5 million. This report also presents the projects currently planned for years 2020 - 2023 as required; however the projects will be subject to final approval in each subsequent year.

The City's Capital Budget ensures appropriate planning for required projects and their related funding to demonstrate the complete impact of major multi-year projects. Capital requirements are driven by many factors including growth, maintenance of current aging infrastructure and

ensuring that the City is consistently meeting industry standards as well as legislated, regulatory and safety requirements.

Figure 1 – 2019 Recommended Projects by Program



The City continues to see sustained population and economic growth. Significant additional growth is projected through 2041 under the Official Community Plan. This new growth requires expansion of City infrastructure in order to maintain the high level of civic services expected by new and current residents. As the City continues to mature, some of the existing infrastructure is nearing the end of its lifespan and/or capacity. Continuous, ongoing investment in replacement and maintenance of aging infrastructure is required to maintain service levels and protect civic assets. Capital investment allows the City to take advantage of new technology and building practices to improve operational efficiency and accrue environmental benefits from the use of more sustainable building practices and equipment. Finally, the Capital Budget also includes internal transfers and internal debt repayment to replenish reserve accounts used to provide interim funding for various projects.

2019 Capital Process

Each division sets priorities specific to their area of expertise. A project submission is completed detailing the scope of work, review of alternatives, financial impact, and proposed funding sources. In addition, the submission is self-ranked using established criteria summarized in Appendix 1. The process behind the 2019 - 2023 Capital Budget is illustrated in Appendix 2.

The Capital Review Committee (CRC) which is comprised of Directors/Managers from each City division reviewed and ranked each project submission. To ensure consistent application of

the established ranking criteria, the CRC determines the final ranking for each submission giving consideration to strategic and master plans, policies and Council priorities.

The ranked projects are consolidated and the projects are recommended based on funding availability. Project funding recommendations are then reviewed by the Senior Management Team (SMT) and the CAO. The final recommendation is consolidated to form the 2019 Capital Budget presented to Finance Committee for review, approval and inclusion in the 5YFP (2019-2023).

Finance Committee Input

Appendix 3 provides a list of the recommended projects. Appendix 4 provides a list of those projects not recommended for funding. The projects not recommended total \$7.0M. This includes the Garry Point Waterfront Floating Dock Construction for \$4.2M, which was endorsed by Council to be considered in the budget process. Projects were ranked based on the established ranking system and based on funding availability, this project could not be recommended. The details of projects not recommended for funding are included in Appendix 9.

At the Finance Committee's discretion, any capital project recommended for funding may be removed from the recommended list. In addition, any capital project that is not recommended for funding may be reconsidered for recommendation, subject to funding availability.

The following is an overview with selected highlights of the recommended Capital program that supports new infrastructure needs compared to the replacement of existing infrastructure. The details of each recommended project is attached in Appendix 8.

Major Facilities Phase 2 Highlights

At the Council meeting on December 12, 2016, Council approved the priority list of major facility projects for the period 2016-2026:

- Richmond Animal Shelter;
- Lawn Bowling Clubhouse;
- Britannia Shipyards National Historic Site and Phoenix Net Loft;
- City Centre Community Centre North (Developer Funded); and
- Steveston Community Centre and Branch Library;

Richmond Animal Shelter (Council approved \$8.0 million in the 2018 budget)

The current Animal Shelter is located at No.5 Road. The one story 4,580 ft² facility was built in 1978. Since then, the population of Richmond has grown from approximately 80,000 in 1978 to the current population of over 200,000. This project is for a replacement facility which will both increase the shelter capacity and modernize the facility and operations in order to address both current and future needs in the community. It is anticipated that concept level design will be presented to Council for consideration in 2019 after which the capital budget and operating budget impact will be refined.

Lawn Bowling Clubhouse (Council approved \$4.0 million in the 2018 budget)

This project will replace the current lawn bowling clubhouse in Minoru Park to provide users an improved experience as well as help to attract more provincial and national caliber events as a result of improved amenities and more space. The Richmond Lawn Bowling Club has been actively fundraising to support this project. It is anticipated that concept level design will be presented to Council for consideration in 2019 after which the capital budget and operating budget impact will be refined.

Britannia Shipyards National Historic Site and Phoenix Net Loft (Council approved \$11.5 million in the 2018 budget)

The existing Phoenix Net Loft building is located at the Imperial Landing. This project will replace/retrofit the existing structural elements and codes to bring the building up to the same preservation standard as the Seine Net Loft.

City Centre Community Centre North (Developer Funded)

The developers will construct a turnkey two-storey community centre of 33,439 ft² at the Capstan Village location. As with any new facility development, funding is also required for furnishings, fixtures and equipment to support the programs and services within the building.

Steveston Community Centre and Branch Library (Preliminary Estimate of \$90.0 million included in the 2020 plan)

This project is for a replacement facility which will both increase the capacity and modernize the facility and operations in order to address both current and future needs in the community. For the past year, the construction market has experienced significant cost escalation. This is partly attributed to the tariffs on steel and aluminum, the impact of which is still unfolding in the trades marketplace. Another contributing factor is related to supply and demand locally. With so much work available, general contractors, trade contractors, and consultants are at overcapacity. As they are not actively pursuing new projects, the competition level in the marketplace is reduced. For the trades that are available with the capacity to bid, many of them decline to bid on “unusual” or “difficult” projects. Further compounding this labour shortage is the sheer number of skilled trade contractors in the industry who will be retiring over the next decade.

Many recent public sector capital projects have been tendered at well above estimated budgets. The City of New Westminster’s Animal Shelter, which is currently under construction, received only one bid and had a tender cost that was 40% over budget.

Staff have contacted local professional cost estimators in order to identify the trends for the upcoming years. It was identified that the escalation rate was approximately 7% for 2017 and 8% for 2018. Despite slower growth within the region and forecasts of a housing recession, the projection is for the escalation rate to continue to increase to approximately 9% for 2019 and 2020. The budget estimates for the Steveston Community Centre and Branch Library included in the 5YFP reflect these levels of cost escalation.

New 2019 Capital Costs

The new capital costs total \$54.2M (46.5%) of the 2019 Capital Budget, which includes:

- Steveston Highway Multi-Use Pathway, Shell Road to Mortfield Gate - \$2.0M (page 40)
- Flood Protection and Dike Improvements - \$5.1M (page 52)
- Steveston Highway and No. 3 Road Pump Station Upgrade - \$2.0M (page 57)
- Watermain Replacement Program - \$5.4M (page 61)
- Minoru Park Lakes Renewal - \$1.8M (page 96)
- Parkland Acquisition - \$4.0M (page 105)
- Strategic Land Acquisition - \$10.0M (page 109)

Replacement 2019 Capital Costs

The replacement capital costs total \$39.9M (34.3%) of the 2019 Capital Budget, which includes:

- Annual Asphalt Re-Paving Program – Non-MRN - \$3.1M (page 31)
- Gateway Theatre Infrastructure Replacements Phase 2 - \$3.7M (page 80)
- Minoru Arena System Renewals - \$3.3M (page 85)
- Minoru Place Activity Centre Program – Implementation - \$2.5M (page 86)
- Watermania Aging Mechanical and Building Envelope Infrastructure Replacement Phase 2 - \$1.3M (page 88)
- Works Yard Mechanical Replacements - \$1.7M (page 89)
- Hugh Boyd Artificial Turf Sports Field - Turf Replacement - \$1.8M (page 93)
- Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet) - \$3.7M (page 116)
- Fire Vehicle Replacement Reserve Purchases - \$2.5M (page 118)

Other Items

Other items included in the capital budget amount to \$22.4M (19.2%) and do not fall into the new or replacement infrastructure categories.

Contingent External Contributions

Contingent External Contributions of \$10.0M (9.0%) (page 137) is an estimate of external grants that may be received throughout the year for various projects. Spending will only occur if funds are confirmed. Including an estimate in the Capital Budget will allow staff to request scope changes to existing projects without having to wait until the 5YFP Bylaw Amendment, which is typically in the fall of each year. It is unknown what contingent external contributions will be received and thus, not possible to determine if the project will be for new or replacement costs.

Internal Transfers and Debt Repayment

Internal Transfers and Debt Repayment total \$12.2M (10.0%) of the 2019 Capital Budget, including:

- 7080 River Road Repayment - \$2.3M (page 140)
- 9540 Alexandra Road and 9560 Odlin Road - \$2.1M (page 141)
- River Road/North Loop (2005) Repayment - \$1.7M (page 143)
- City Centre Community Police Office - \$5.1M (page 145)

This is an internal payment and therefore not applicable to classify as new or replacement.

Childcare Program

The childcare program of \$0.16M (0.2%) provides funding for grants and other childcare initiatives funded by statutory reserves and does not necessarily result in capital infrastructure.

2019 Capital Budget Funding Sources

The 2019 capital budget uses a variety of funding sources which include:

- Development Cost Charges (DCCs) – These contributions are made through development and are used for growth related projects.
- External Sources – These include grants awarded from Provincial and Federal Governments, developer contributions (other than DCCs) and other non-City related sources.
- Reserves – These are funds established by bylaws for specific purposes and are funded primarily by budgeted contributions from the Operating and Utility Budgets and developer contributions plus interest earned on fund balances.
- Appropriated Surplus – These are funds set aside for specific initiatives.
- Rate Stabilization Account (RSA) – This is a provision account established by Council and funded by prior year's surplus to provide funding to stabilize tax increases or for any one-time expenditure requests.

The funding of the recommended projects has been allocated while maintaining the long-term strategy of building reserve balances to fund future infrastructure replacement and improvements. Generally, projects are funded up to the annual amount transferred into each available reserve.

For information purposes, Appendix 5 summarizes the projects recommended for funding from the Revolving Fund. The Revolving Fund is used to fund a variety of general projects which do not have dedicated sources of funding and funds the assist factor for Roads and Parks DCC projects.

For 2019, there are 6 capital projects that were recommended by SMT and the CAO to be partially or fully funded from the Rate Stabilization Account. Appendix 6 summarizes the projects recommended for funding from the Rate Stabilization Account.

Appendix 7 summarizes all the 2019 recommended projects funded by Development Cost Charges, which are monies collected from developers to offset some of the infrastructure costs related to new growth. Under the *Local Government Act*, the City is required to fund the municipal assist factor portion for growth related projects; therefore, a project cannot be fully funded by DCCs.

The funding sources of the 2019 recommended projects are summarized in Table 1.

Table 1 – 2019 Funding Sources

Funding Sources	Amount
Reserves	\$65.9
Provisions	9.1
Rate Stabilization	5.7
<i>Subtotal - Internal</i>	<i>\$80.7</i>
DCCs	23.0
External Sources	12.8
<i>Subtotal - External</i>	<i>\$35.8</i>
Total 2019 Funding	\$116.5

Approximately \$80.7 million of this year's capital plan is funded by Reserves and Provisions, and \$35.8 million through external sources and DCCs, which are contributed by developers, significantly reducing the potential impact of these projects upon taxpayers.

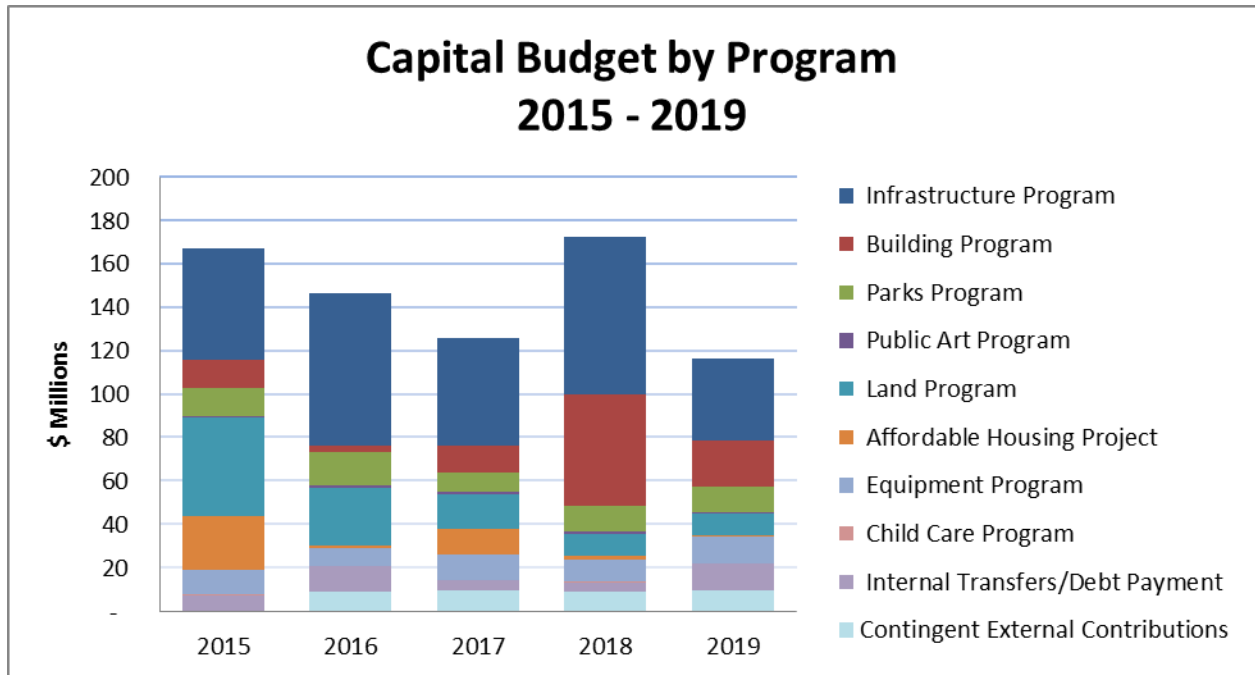
Appendix 3 includes a legend which summarizes the funding sources for each project. Funding details of each individual submission are included in Appendix 8.

Recommended 2019 versus Historical (2015 - 2018) Capital Budget Analysis

Figure 2 provides analysis of the program types of the capital budget as amended for the past four years compared to the 2019 recommended capital plan. For the years 2015 - 2018, the Capital Budgets as amended averaged \$152.2 million.

In 2014, Council approved \$124.1 million for major facilities, of which \$50.0 million was financed through Municipal Finance Authority (MFA). This included funding for the Minoru Centre for Active Living, No.1 Brighthouse Fire Hall and City Centre Community Centre.

Figure 2 – Capital Budget by Program 2019 vs. Historical



Proposed 2019 - 2023 Capital Budget

Figure 3 shows the 5 Year Capital Plan from 2019 to 2023, which proposes to continue to invest an average of \$121.7 million each year in the City’s assets.

Figure 3 – Proposed 5 Year Capital Plan by Program 2019 to 2023

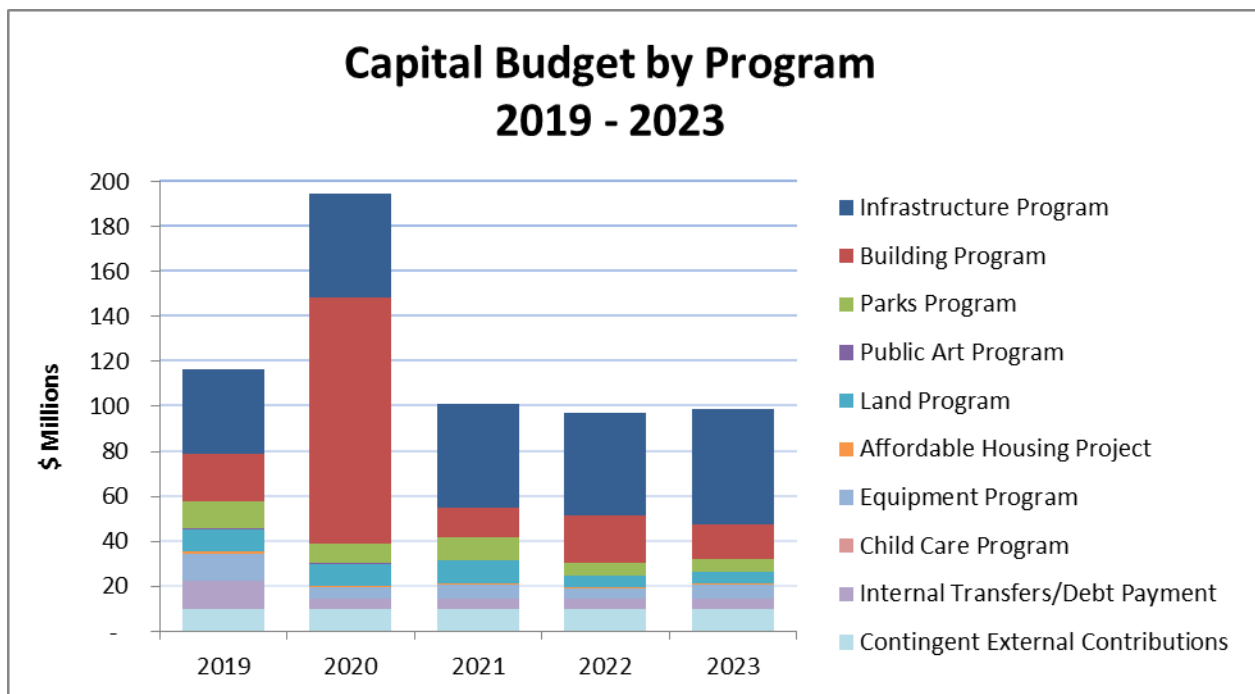


Table 2 presents a summary of the amount of proposed investment for Capital Projects for 2020 - 2023. A listing of the 2019 - 2023 Capital Projects is presented in Appendix 12. A summary of the 5 Year Capital Program presented in Appendix 10 and the Funding Sources are presented in Appendix 11. Highlights of the 2020 - 2023 projects are summarized in Appendix 13.

Table 2: Proposed 2020 to 2023 Capital Projects (in millions)

Year	Amount	OBI
2020	\$194.6	\$2.0
2021	\$101.4	\$2.4
2022	\$97.2	\$0.4
2023	\$98.8	\$0.4

2019 Operating Budget Impact

Upon completion of capital projects, new assets are added to the City’s inventory. There are costs associated with maintaining these new assets. For example, a new building will require staffing, janitorial services, gas and hydro utility costs; a new park will include annual maintenance and labour costs. This ongoing maintenance cost is the Operating Budget Impact (OBI) associated with the new asset which is added to the operating budget.

OBI's were reviewed by the Capital Review Committee as part of the Capital submission review process. The total OBI relating to the 2019 recommended projects is \$1.23 million. \$0.02 million of the OBI is associated with water and sewer utility projects. If the respective projects are approved, these will be incorporated into the 2020 utility budget, and therefore be included in the 2020 utility rates. The 2019 utility rates were previously approved by Council on October 9, 2018. The remaining \$1.21 million is included in the operating budget. To minimize the budget impact, an OBI phase-in plan is adopted each year. For the recommended 2019 Capital Program, the OBI is proposed to be phased in over three years.

The following table summarizes the 2019 recommended Capital Budget by program and the associated OBI, including a breakdown of the labour costs and other expenses/revenue.

Infrastructure

Infrastructure OBI is mainly due to new Roads infrastructure, such as improved roadways and bike paths as well as street signs and traffic signals. It is also due to new drainage improvements, including maintenance of dike improvements and upgraded pump stations. This includes additional hours for labour, increased electricity and other maintenance costs.

Table 3: Recommended 2019 Capital and OBI by Program (in millions)

Program (in millions)	Amount	Labour	Other Expenses (Revenue)	Total OBI
Infrastructure Program	\$ 37.8	\$ 0.16	\$ 0.18	\$ 0.34
Building Program	20.9	0.54	(0.19)	0.35
Parks Program	11.8	0.10	0.09	0.19
Public Art Program	0.6	-	0.01	0.01
Land Program	10.0	-	-	-
Affordable Housing Project	0.8	-	-	-
Equipment Program	12.2	0.04	0.30	0.34
Child Care Program	0.2	-	-	-
Contingent External Contribution	10.0	-	-	-
Internal Transfers/Debt Payment	12.2	-	-	-
Total 2019 Capital and OBI	\$116.5	\$0.84	\$0.39	\$1.23

Building

The Building Program OBI is primarily due to the Minoru Place Activity Centre which is proposed to be programmed as a new arts space. At the Council Meeting held on November 13, 2018, the staff report titled “Minoru Place Activity Centre Program Options as Arts Education and Program Space” was presented and Council approved the following:

- (1) That the recommended option, Option 1: Community Arts Education and Program Space with Pottery and Culinary Arts Studio, be approved as the preferred program of the Minoru Place Activity Centre as detailed in the staff report titled “Minoru Place Activity Centre Program Options as Arts Education and Program Space,” dated August 29, 2018, from the Director, Arts, Culture and Heritage; and
- (2) That a Capital request be considered during the 2019 budget process.

As outlined in the staff report, the 2019 Capital Budget includes a capital project which includes a net OBI of \$0.3M.

There are seven regular status staff positions included in this OBI amount:

- One (1) RFT Facility Clerk
- One (1) RPT Attendant
- Two (2) Building Service Workers (one shared with Cultural Centre)
- Two (2) RFT Arts Leaders
- One (1) RPT Ceramics and Visual Arts Technician

In addition to the regular status staff, auxiliary staff are required to ensure proper staffing levels during the standard hours of operation for the facility. The total staffing costs for this facility amount to \$0.5M, plus facility expenses estimated at \$0.3M. This is offset by additional revenues that will be generated estimated at \$0.5M, resulting in a total operating budget impact of \$0.3M.

Parks

Parks OBI is for the maintenance of new parks or expanded park amenities. This includes additional hours for labour as well as materials and equipment for ongoing landscaping and playground maintenance.

Equipment

The equipment program OBI includes new technology and software, which has increased operating costs due to software licensing and maintenance contracts. The labour increase in the equipment program relates to additional mechanic hours for the maintenance of vehicles and equipment.

Financial Impact

The 2019 Capital Budget with a total value of \$116,524,202 will enable the City to maintain and advance the asset inventory that continues to provide necessities and benefits to the community. The OBI associated with these projects is \$1,229,320 and will be phased into the 2019 - 2023 5YFP.

Conclusion

The recommended Capital budget for 2019 is \$116,524,202. The Capital Review Committee worked closely with SMT and the CAO to represent the interests of all stakeholders to ensure that the 2019 capital program addresses Council priorities and meets the needs of the community while effectively utilizing available funding.



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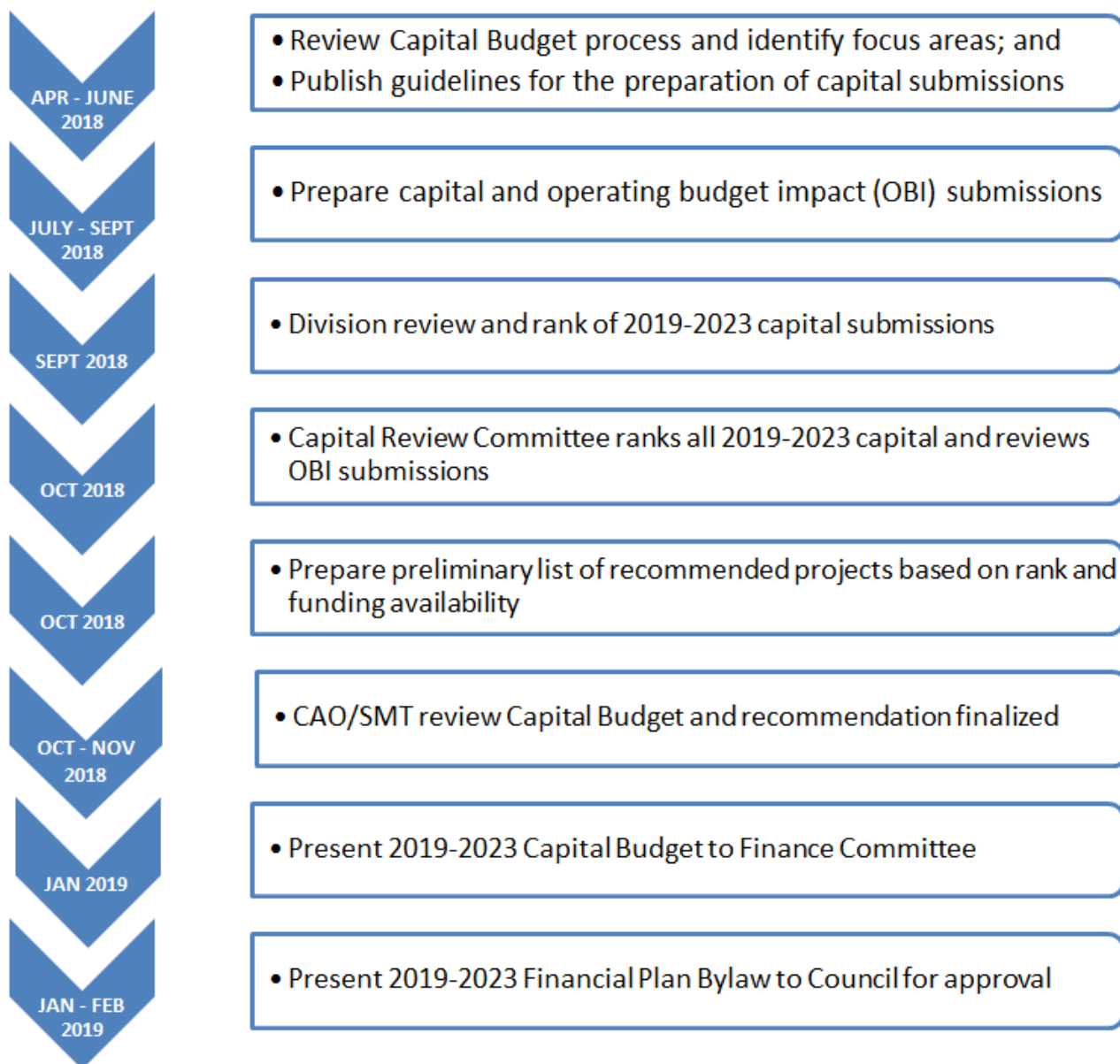
MS:yc

- Appendix 1: Capital Ranking Criteria
- Appendix 2: 2019 Capital Budget Process
- Appendix 3: 2019 Summary of Capital Projects - RECOMMENDED
- Appendix 4: 2019 Summary of Capital Projects - NOT RECOMMENDED
- Appendix 5: 2019 Summary of Projects Funded by Revolving Fund
- Appendix 6: 2019 Summary of Projects Funded by Rate Stabilization Account
- Appendix 7: 2019 Summary of Projects Funded by Development Cost Charges
- Appendix 8: 2019 Details of Recommended Projects by Program
- Appendix 9: 2019 Details of Not Recommended Projects by Program
- Appendix 10: 5 Year Capital Plan Summary (2019 - 2023)
- Appendix 11: 5 Year Capital Plan by Funding Sources (2019 - 2023)
- Appendix 12: 5 Year Capital Plan by Program (2019 - 2023)
- Appendix 13: 2020 - 2023 Capital Plan Highlights
- Appendix 14: Glossary of Terms

Capital Ranking Criteria



2019 Capital Budget Process



Project Name	Funding Source	Total Investment	Total OBI	Ref
INFRASTRUCTURE PROGRAM				
Roads				
Accessible Pedestrian Signal Program	D/R	250,000	9,750	28
Active Transportation Improvement Program	D/R/E	1,000,000	24,851	29
Annual Asphalt Re-Paving Program - MRN	E	1,150,560	-	30
Annual Asphalt Re-Paving Program - Non-MRN	E	3,131,100	-	31
Arterial Roadway Improvement Program	D/R/E	450,000	10,796	32
Bridge Rehabilitation Program	R	300,000	-	33
City-wide Cycling Network Plan	D/R	150,000	-	34
Garden City Road Pedestrian and Cyclist Enhancements, Westminster				
Highway to Lansdowne Road	D/R/E	1,000,000	7,225	35
LED Street Name Sign Program	D/R	200,000	8,320	36
Neighbourhood Walkway Program	D/R	500,000	22,992	37
Road Weather Information System	R	260,000	30,000	38
Special Crosswalk Program	D/R	350,000	14,625	39
Steveston Highway Multi-Use Pathway, Shell Road to Mortfield Gate	D/R/E	2,000,000	24,666	40
Streetlight LED Upgrade Program	E	430,000	(25,000)	41
Traffic Calming Program	D/R	150,000	8,013	42
Traffic Signal Power Backup System (UPS)	D/R	100,000	4,160	43
Traffic Signal Program	D/R/E	1,350,000	31,000	44
Traffic Video and Communication Program	D/R	400,000	23,400	45
Transit-Related Amenity Improvement Program	D/R/E	50,000	10,026	46
Transit-Related Roadway Improvement Program	D/R/E	400,000	9,221	47
Transportation Planning, Functional and Preliminary Design	D/R	253,000	-	48
Westminster Highway Pedestrian and Cyclist Enhancements, Smith Crescent to Fraserside Gate	D/R/E	1,100,000	16,942	49
Total Roads		\$ 14,974,660	\$ 230,987	
Drainage				
Development Coordinated Works - Drainage	R	250,000	9,399	51
Flood Protection and Dike Improvements	R	5,100,000	30,000	52
Heather Street Improvement	D/R	1,757,000	4,000	53
Invasive Species Management	R	220,000	-	54
Laneway Drainage Upgrade - Afton Drive (North)	R	1,373,000	10,000	55
Laneway Drainage Upgrade - Herbert East Lane	R	542,000	5,000	56
Steveston Highway and No. 3 Road Pump Station Upgrade	D/R	2,000,000	20,000	57
Total Drainage		\$ 11,242,000	\$ 78,399	
Water				
Development Coordinated Works - Water	R	250,000	-	59
Emergency Water Supply	A	150,000	-	60
Watermain Replacement Program	D/R	5,394,500	-	61
Watermain Tie-in and Restoration	R	400,000	-	62
Total Water		\$ 6,194,500	-	

Legend: **A**=Appropriated Surplus; **D**=Development Cost Charges; **E**=External Sources; **R**=Reserves; **S**=Rate Stabilization;

Project Name	Funding Source	Total Investment	Total OBI	Ref
INFRASTRUCTURE PROGRAM				
<i>Sanitary Sewer</i>				
Burkeville Utility Upgrades	R	1,133,000	15,000	64
Development Coordinated Works - Sanitary	R	150,000	-	65
SCADA System Improvements	R	150,000	-	66
Total Sanitary Sewer		\$ 1,433,000	\$ 15,000	
<i>Infrastructure Advanced Design and Minor Public Works</i>				
Public Works Infrastructure Advanced Design	D/R	1,780,000	-	68
Public Works Minor Capital - Drainage	R	475,000	-	69
Public Works Minor Capital - Roads	S	250,000	-	70
Public Works Minor Capital - Sanitary	R	400,000	6,000	71
Public Works Minor Capital - Sanitation and Recycling	A	300,000	-	72
Public Works Minor Capital - Traffic	S	250,000	7,425	73
Public Works Minor Capital - Water	R	500,000	-	74
Total Infrastructure Advanced Design and Minor Public Works		\$ 3,955,000	\$ 13,425	
TOTAL INFRASTRUCTURE PROGRAM		\$ 37,799,160	\$ 337,811	
BUILDING PROGRAM				
<i>Building</i>				
2019 Capital Buildings Project Development Advanced Design	S	500,000	-	76
City Hall Annex Transformer Replacement	R	500,000	-	77
City Hall Upgrades and Repairs	R	980,000	-	78
East Richmond Community Hall Envelope and Mechanical System Renewals	R	402,000	-	79
Gateway Theatre Infrastructure Replacements Phase 2	R	3,700,000	-	80
Japanese Canadian Cultural Centre - Front Entry Accessibility Upgrade	R	258,000	-	81
Library Cultural Centre Conveyance Replacements	R	709,000	-	82
London Farm House Envelope Renewals	S	376,000	-	83
Minoru Aquatics Centre Demolition	S	3,392,000	-	84
Minoru Arena System Renewals	R	3,300,000	-	85
Minoru Place Activity Centre Program - Implementation	R	2,511,000	324,400	86
RCMP Exhibit Compound Interim Upgrades	S	975,000	24,692	87
Watermania Aging Mechanical and Building Envelope Infrastructure Replacement Phase 2	S	1,341,000	-	88
Works Yard Mechanical Replacements	R	1,707,000	-	89
Works Yard Salt Shed Repairs	R	266,000	-	90
Total Building		\$ 20,917,000	\$ 349,092	
TOTAL BUILDING PROGRAM		\$ 20,917,000	\$ 349,092	

Legend: **A**=Appropriated Surplus; **D**=Development Cost Charges; **E**=External Sources; **R**=Reserves; **S**=Rate Stabilization;

Project Name	Funding Source	Total Investment	Total OBI	Ref
PARKS PROGRAM				
<i>Parks</i>				
Aberdeen Park Phase 3	D/R	800,000	56,948	92
Hugh Boyd Artificial Turf Sports Field - Turf Replacement	R	1,800,000	-	93
London Steveston Park Phase 2	D/R	300,000	13,624	94
Minoru Bowling Green Artificial Turf Replacement	E	350,000	-	95
Minoru Park Lakes Renewal	D/R	1,750,000	44,756	96
Parks Advance Planning and Design	D/R	400,000	-	97
Parks Aging Infrastructure Replacement Program	R	550,000	-	98
Parks General Development	D/R	400,000	4,374	99
Parks Identity Signage Program	D/R	200,000	42,928	100
Paulik Park Development of New Lots	D/R	300,000	12,510	101
Terra Nova Rural Park Viewpoint Seating Area	D/R	200,000	-	102
West Cambie Park Phase 2	D/R	770,000	22,002	103
Total Parks		\$ 7,820,000	\$ 197,142	
<i>Parkland</i>				
Parkland Acquisition	D/R	4,000,000	-	105
Total Parkland		\$ 4,000,000	-	
TOTAL PARKS PROGRAM		\$ 11,820,000	\$ 197,142	
PUBLIC ART PROGRAM				
<i>Public Art</i>				
Public Art Program	R	562,722	10,000	107
TOTAL PUBLIC ART PROGRAM		\$ 562,722	\$ 10,000	
LAND PROGRAM				
<i>Land</i>				
Strategic Land Acquisition	R	10,000,000	-	109
TOTAL LAND PROGRAM		\$ 10,000,000	-	
AFFORDABLE HOUSING PROGRAM				
<i>Affordable Housing</i>				
Affordable Housing 2019 Operating Initiatives	R	350,000	-	111
Affordable Housing Projects - City-wide	R	200,000	-	112
Affordable Housing Projects - West Cambie	R	225,000	-	113
Total Affordable Housing		\$ 775,000	-	
TOTAL AFFORDABLE HOUSING PROGRAM		\$ 775,000	-	

Legend: **A**=Appropriated Surplus; **D**=Development Cost Charges; **E**=External Sources; **R**=Reserves; **S**=Rate Stabilization;

Project Name	Funding Source	Total Investment	Total OBI	Ref
EQUIPMENT PROGRAM				
<i>Vehicle</i>				
Fleet Electrical Charging Infrastructure Installations	R/A	521,700	22,000	115
Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet)	R/A	3,740,662	38,023	116
Total Vehicle		\$ 4,262,362	\$ 60,023	
<i>Fire Dept Vehicles and Equipment</i>				
Fire Vehicle Replacement Reserve Purchases	R	2,521,532	-	118
Total Fire Dept Vehicles and Equipment		\$ 2,521,532	-	
<i>Information Technology</i>				
Annual Hardware Refresh	A	467,700	-	120
Budget Planning and Monitoring Solution	R/A	1,000,000	50,000	121
Contract Life Cycle Management	R	622,994	80,384	122
Digital Strategy Initiatives	R	900,000	25,000	123
IPS Mobility - Enterprise Deployment	R	507,054	51,293	124
Network Infrastructure Core Refresh	A	481,402	18,152	125
Office 2016 Licensing	A	494,909	6,573	126
Total Information Technology		\$ 4,474,059	\$ 231,402	
<i>Equipment</i>				
Digital Radio Hardware and Licensing	R	146,250	8,400	128
Energy Management Projects - Gas Equipment Replacement and Upgrade Phase 1	R/A	675,000	(19,800)	129
Fire Equipment Replacement - Auto Extrication Equipment	R	170,000	55,250	130
Fire Equipment Replacement - Fire Hose	R	27,325	-	131
Total Equipment		\$ 1,018,575	\$ 43,850	
TOTAL EQUIPMENT PROGRAM		\$ 12,276,528	\$ 335,275	
CHILD CARE PROGRAM				
<i>Child Care</i>				
Child Care - Administration	R	100,000	-	133
Child Care Projects - City-wide (Capital Grants)	R	50,000	-	134
Child Care Projects - City-wide (Non-Capital Grants)	R	10,000	-	135
TOTAL CHILD CARE PROGRAM		\$ 160,000	-	
CONTINGENT EXTERNAL CONTRIBUTION				
Contingent External Contribution	E	10,000,000	-	137
TOTAL CONTINGENT EXTERNAL CONTRIBUTION		\$ 10,000,000	-	

Legend: **A**=Appropriated Surplus; **D**=Development Cost Charges; **E**=External Sources; **R**=Reserves; **S**=Rate Stabilization;

Project Name	Funding Source	Total Investment	Total OBI	Ref
INTERNAL TRANSFERS/DEBT PAYMENT				
<i>Internal Transfers/Debt Payment</i>				
12040 Horseshoe Way Repayment	R	525,000	-	139
7080 River Road Repayment	D/R	2,341,384	-	140
9540 Alexandra Road and 9560 Odlin Road	D	2,100,000	-	141
Nelson Road Interchange Repayment	D	385,098	-	142
River Road/North Loop (2005) Repayment	D	1,685,056	-	143
Shovel - Ready Grant (2009) Repayment Lansdowne Road Extension	D	77,254	-	144
City Centre Community Police Office	R	5,100,000	-	145
TOTAL INTERNAL TRANSFERS/DEBT PAYMENT		\$ 12,213,792	-	

Total 2019 Capital Program	\$ 116,524,202	\$1,229,320
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OBI Type	
Operating OBI	\$ 1,208,320
Utility OBI	21,000
Total OBI	\$1,229,320

Legend: **A**=Appropriated Surplus; **D**=Development Cost Charges; **E**=External Sources; **R**=Reserves; **S**=Rate Stabilization;

Project Name	Funding Source	Total Investment	Revolving Fund	Total OBI	Ref
BUILDING PROGRAM					
Community Safety Building Heat Pump Replacement	R	459,000	459,000	-	147
Roofing and Infrastructure Replacements	R	277,000	277,000	-	148
TOTAL BUILDING PROGRAM		\$ 736,000	\$ 736,000	\$ -	
PARKS PROGRAM					
Garry Point Waterfront Floating Dock Construction	R	4,200,000	4,200,000	22,600	150
No. 3 Road Boulevard Beautification (Sunnymede Gate)	R	150,000	150,000	-	151
TOTAL PARKS PROGRAM		\$ 4,350,000	\$ 4,350,000	\$ 22,600	
EQUIPMENT PROGRAM					
Inter-Agency Command Vehicle Replacement	R	1,140,000	1,140,000	-	153
Triple Flail Mower Equipment Purchase	R	150,000	150,000	80,019	154
TOTAL EQUIPMENT PROGRAM		\$ 1,290,000	\$ 1,290,000	\$ 80,019	
INFORMATION TECHNOLOGY PROGRAM					
Business Continuity Remote Access	R	304,835	304,835	24,275	156
Production System Test Environment	R	368,000	368,000	25,500	157
TOTAL INFORMATION TECHNOLOGY PROGRAM		\$ 672,835	\$ 672,835	\$ 49,775	
Total 2019 Capital Program – Not Recommended		\$ 7,048,835	\$ 7,048,835	\$ 152,394	

Legend: *A*=Appropriated Surplus; *D*=Development Cost Charges; *E*=External Sources; *R*=Reserves; *S*=Rate Stabilization;

Each year, the Revolving Fund is utilized to fund various capital projects. This summary shows the 2019 capital projects and the corresponding amounts funded by the Revolving Fund.

Project Name	Total Investment	Revolving Fund	Total OBI	Ref
Roads				
Bridge Rehabilitation Program	300,000	300,000	-	33
Road Weather Information System	260,000	260,000	30,000	38
Total Infrastructure	\$560,000	\$560,000	\$30,000	
Building				
Japanese Canadian Cultural Centre – Front Entry Accessibility Upgrade	258,000	258,000	-	81
Total Building	\$258,000	\$258,000	-	
Parks				
Hugh Boyd Artificial Turf Sports Field – Turf Replacement	1,800,000	800,000	-	93
Parks Aging Infrastructure Replacement Program	550,000	550,000	-	98
Total Parks	\$2,350,000	\$1,350,000	-	
Information Technology				
Budget Planning and Monitoring Solution	1,000,000	250,000	50,000	121
Contract Life Cycle Management	622,994	622,994	80,384	122
Digital Strategy Initiatives	900,000	900,000	25,000	123
Equipment				
Energy Management Projects – Gas Equipment Replacement and Upgrade Phase 1	675,000	345,000	(19,800)	129
Total Equipment	\$3,197,994	\$2,117,994	\$135,584	
Total 2019 Projects Funded by Revolving Fund	\$6,365,994	\$4,285,994	\$165,584	

The City Assist Factor on Roads DCC and Parks DCC projects are also funded by the Revolving Fund.

City Assist Factor on Parks Acquisition	\$377,312
City Assist Factor on Parks Development	\$304,640
City Assist Factor on Roads DCC	\$427,093
Total Funding from Revolving Fund	\$5,395,039

The Rate Stabilization Account is used to fund one-time expenditure requests or to minimize tax increases.

Project Name	Total Investment	Rate Stabilization	Total OBI	Ref
Infrastructure Advanced Design and Minor Public Works				
Public Works Minor Capital - Roads	250,000	250,000	-	70
Public Works Minor Capital - Traffic	250,000	250,000	7,425	73
Total Infrastructure Advanced Design and Minor Public Works	\$500,000	\$500,000	\$7,425	
Building				
2019 Capital Buildings Project Development Advanced Design	500,000	500,000	-	76
London Farm House Envelope Renewals	376,000	376,000	-	83
Minoru Aquatics Centre Demolition	3,392,000	3,392,000	-	84
RCMP Exhibit Compound Interim Upgrades	975,000	975,000	24,692	87
Total Building	\$5,243,000	\$5,243,000	\$24,692	
2019 Capital Projects – Rate Stabilization Account	\$5,743,000	\$5,743,000	\$32,117	
2019 One-Time Expenditures - Recommended		1,315,909		
Total Funding from Rate Stabilization Account		\$7,058,909		

Project Name	Total Investment	DCC Funding	Total OBI	Ref
Roads				
Accessible Pedestrian Signal Program	250,000	235,125	9,750	28
Active Transportation Improvement Program	1,000,000	775,912	24,851	29
Arterial Roadway Improvement Program	450,000	211,612	10,796	32
City-wide Cycling Network Plan	150,000	141,075	-	34
Garden City Road Pedestrian and Cyclist Enhancements, Westminster Highway to Lansdowne Road	1,000,000	470,250	7,225	35
LED Street Name Sign Program	200,000	188,100	8,320	36
Neighbourhood Walkway Program	500,000	470,250	22,992	37
Special Crosswalk Program	350,000	329,175	14,625	39
Steveston Highway Multi-Use Pathway, Shell Road to Mortfield Gate	2,000,000	940,500	24,666	40
Traffic Calming Program	150,000	141,075	8,013	42
Traffic Signal Power Backup System (UPS)	100,000	94,050	4,160	43
Traffic Signal Program	1,350,000	1,128,600	31,000	44
Traffic Video and Communication Program	400,000	376,200	23,400	45
Transit-Related Amenity Improvement Program	50,000	23,512	10,026	46
Transit-Related Roadway Improvement Program	400,000	282,150	9,221	47
Transportation Planning, Functional and Preliminary Design	253,000	237,946	-	48
Westminster Highway Pedestrian and Cyclist Enhancements, Smith Crescent to Fraserside Gate	1,100,000	517,275	16,942	49
Total Roads	\$9,703,000	\$6,562,807	\$225,987	
Drainage				
Heather Street Improvement	1,757,000	1,695	4,000	53
Steveston Highway and No. 3 Road Pump Station Upgrade	2,000,000	464,063	20,000	57
Total Drainage	\$3,757,000	\$465,758	\$24,000	
Water				
Watermain Replacement Program	5,394,500	708,330	-	61
Total Water	\$5,394,500	\$708,330	\$-	
Infrastructure Advanced Design and Minor Public Works				
Public Works Infrastructure Advanced Design	1,780,000	188,100	-	68
Total Infrastructure Advanced Design and Minor Public Works	\$1,780,000	\$188,100	\$-	
Parks				
Aberdeen Park Phase 3	800,000	752,400	56,948	92
London Steveston Park Phase 2	300,000	282,150	13,624	94
Minoru Park Lakes Renewal	1,750,000	1,645,875	44,756	96
Parks Advance Planning and Design	400,000	376,200	-	97
Parks General Development	400,000	376,200	4,374	99
Parks Identity Signage Program Phase 2	200,000	188,100	42,928	100
Paulik Park Development of New Lots	300,000	282,150	12,510	101
Terra Nova Rural Park Viewpoint Seating Area	200,000	188,100	-	102
West Cambie Park Phase 2	770,000	724,185	22,002	103
Total Parks	\$5,120,000	\$4,815,360	\$197,142	
Parkland				
Parkland Acquisition	4,000,000	3,762,000	-	105
Total Parkland	\$4,000,000	\$3,762,000	\$-	

Project Name	Total Investment	DCC Funding	Total OBI	Ref
<i>Internal Transfers/Debt Payment</i>				
7080 River Road Repayment	2,341,384	2,202,072	-	140
9540 Alexandra Road and 9560 Odlin Road	2,100,000	2,100,000	-	141
Nelson Road Interchange Repayment	385,098	385,098	-	142
River Road/North Loop (2005) Repayment	1,685,056	1,685,056	-	143
Shovel - Ready Grant (2009) Repayment Lansdowne Road Extension	77,254	77,254	-	144
Total Internal Transfers/Debt Payment	\$6,588,792	\$6,449,480	\$-	
Grand Total	\$36,343,292	\$22,951,835	\$447,129	

Infrastructure Program 2019

The City’s Infrastructure Program assets include: road, drainage and sanitary pump stations, drainage, water, and sanitary mains.

2019 Recommended Infrastructure – Roads Program

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Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Accessible Pedestrian Signal Program	Submission ID:	5456

Location: Various

Cost: \$250,000 **OBI:** \$9,750

Funding Sources: Roads DCC: \$235,125
Roads City Assist: \$14,875

Scope: The general scope of work includes the installation of accessible devices at existing signalized intersections that exceed the minimum criteria for prioritized locations as per the 2008 guidelines published by the Transportation Association of Canada, by providing audible messaging, Braille signage, and other accessible friendly features. The proposed funding level and project locations are to allow the City to meet its target to outfit all existing city-owned traffic signals with Accessible Pedestrian Signal (APS) devices by year 2020. To date, all special crosswalks (102) and pedestrian signals (45) as well as 113 of 176 signalized intersections have been upgraded. The remaining signalized locations (63) are expected to be completed by the target year of 2020. The standard for all new traffic signals is to include APS.

The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from ICBC. Some locations may also be funded through development requirements of any relevant applications per Council direction (see report to Council on September 27, 2010 titled "Revised Implementation Strategy for Accessible Pedestrian Signal Devices."

For 2019, approximately 15 to 32 existing signalized intersections are proposed for upgrade to Accessible Signal systems. The actual locations will be determined in early 2019. The exact scope of improvement may be refined due to factors such as priority review, availability of external funding and/or opportunity to pursue these improvements as part of development frontage improvements.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Active Transportation Improvement Program	Submission ID:	5457

Location: Various Locations

Cost: \$1,000,000

OBI: \$24,851

Funding Sources: Roads DCC: \$775,912
 Roads City Assist: \$49,088
 Grant: \$175,000

Scope: The general scope involves implementing cycling and rolling (e.g., wheelchairs and scooters) improvements included as part of the Council-approved Cycling Network Plan by supporting: 1) the expansion of various on-street cycling routes and off-street multi-use pathways; and 2) cycling and rolling initiatives and on-going enhancements to existing cycling and rolling infrastructure.

Typical elements of the program include the construction of new on-street cycling facilities, off-street multi-use pathways primarily for transportation purposes, installation of bike racks, new signage, pavement markings, associated minor road geometric improvements, and other supplementary cycling and rolling amenity improvements required to facilitate the safe and efficient movement of cyclists and users of other wheeled devices.

This project is proposed to be funded by the DCC program and may be eligible for funding from external agencies such as the Provincial Government, TransLink and ICBC.

The following improvements are being planned for 2019 (subject to factors such as the completion of the detailed design, confirmation of external funding, outcome of public consultation, etc):

- Charles Street pathway, Sexsmith Road to pedestrian-cycling entrance to the Bridgeport Canada Line Station. Provision of a 3.0m paved pathway along the north side of Charles Street to form the continuation of a paved pathway to be constructed on Sexsmith Road to the south.

- Neighbourhood Bike Routes: To provide/enhance the following bike routes with general scope of work including: minor sidewalk widening and/or upgrade of existing pathway where necessary, crossing treatments at arterial roads, pavement markings, and signage.

- 1) Crosstown Neighbourhood Bike Route: completion of route along Bowcock Road-Garden City Road-Dayton Avenue to connect to the Parkside Neighbourhood Bike Route.
- 2) Midtown Neighbourhood Bike Route from Francis Road to Granville Avenue.
- 3) Saunders-Woodwards Neighbourhood Bike Route.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Annual Asphalt Re-Paving Program - MRN	Submission ID:	5388

Location: Various Locations

Cost: \$1,150,560

OBI: \$ -

Funding Sources: Other: \$1,150,560

Scope: To re-pave MRN roads in alignment with the City's Ageing Infrastructure Strategy. Project list as intended in the Proposed 2019 Paving Program report.

The project could also include the costs associated with ancillary work, including but not limited to, curb and gutter repairs, road base repair, asphalt parking re-paving, manhole and valve box adjustments, line painting, staff inspection time and similar.

The project includes the pavement component of other water, sanitary and drainage upgrades in the Capital Program that are co-ordinated by the Engineering department as well as consultant/contractor fees related to bridge upgrades and the Pavement Management Plan.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Annual Asphalt Re-Paving Program - Non-MRN	Submission ID:	5389

Location: City Wide

Cost: \$3,131,100 **OBI:** \$ -

Funding Sources: Other: \$3,131,100

Scope: To re-pave City owned Non-MRN roads (major and minor roads and lanes) in alignment with the City's Ageing Infrastructure Strategy. Project list as intended in the Proposed 2019 Paving Program report.

The project could also include the costs associated with ancillary work, including but not limited to, curb and gutter repairs, road base repair, asphalt parking re-paving, manhole and valve box adjustments, line painting, staff inspection time and similar.

The project includes the pavement component of other water, sanitary and drainage upgrades in the Capital Program that are co-ordinated by the Engineering department as well consultant/contractor fees related to bridge upgrades and the Pavement Management Plan.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Arterial Roadway Improvement Program	Submission ID:	5459

Location: Various Locations

Cost: \$450,000

OBI: \$10,796

Funding Sources: Roads DCC: \$211,612
 Roads City Assist: \$13,388
 Grant: \$225,000

Scope: The general scope includes implementing pedestrian and traffic safety improvements along arterial roads and at arterial road intersections in order to respond in a timely basis to requests from the public and/or Council on issues related to pedestrian and traffic safety. Typical improvements include the construction of new and/or enhancement of turn lanes, improved channelization, intersection signage enhancement, and installation of pedestrian safety enhancements at intersections. For sidewalks/walkways along arterial roads, priority would be given to those connecting locations with high pedestrian activities, such as schools, neighbourhood service centres, bus stops, recreational service centres, shopping/retail centres, etc., that are along arterial roads with high traffic volumes.

Projects from this program are proposed to be jointly funded by the City and external funding from TransLink and/or ICBC.

The following list of improvements is currently being planned for 2019 (subject to factors such as the completion of the detailed design, confirmation of external funding, etc):

- West side of Railway Avenue (Railway Greenway) at Francis Road, Blundell Road, and Williams Road: upgrade of intersections to enhance pedestrian and cyclist safety, operation with the provision of curb, gutter, landing area, ramps, tactile pavers, relocation of existing traffic signal poles, signage, and minor pathway and landscape enhancements approaching the intersections.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Bridge Rehabilitation Program	Submission ID:	6180

Location: City Wide

Cost: \$300,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$300,000

Scope: In 2017, the City completed inspections on a number of road and pedestrian bridges throughout the City. The inspection identified a number of bridges that are in need of repair or replacement. Prioritized improvements identified through the inspection report include:

- Repair or replacement of the West Dyke Trail Bridge, which may become a safety concern to pedestrians if deteriorating components are not repaired.
- Rehabilitation of the Jacombs Road Overpass, Bird Road Bridge, and No. 8 Road Overpass, where minor repairs will prevent further structural deterioration and more costly repairs or replacement in the future. If these bridges were left to deteriorate, full replacement of the structures is estimated to cost \$7 million.
- Inspection and minor repairs as required for the Cambie Road Overpass at Knight Street.

The scope of work for this project includes structural inspections, engineering design, and repair and replacement of bridge structures as recommended by the 2017 bridge inspection report, including any utility relocations, restoration, or ancillary works associated with the repair and replacement. This project will improve road user and pedestrian safety, and reduce the potential for unplanned maintenance that is unpredictable and costly through proactive management of aging infrastructure.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	City-wide Cycling Network Plan	Submission ID:	6167

Location: City Wide

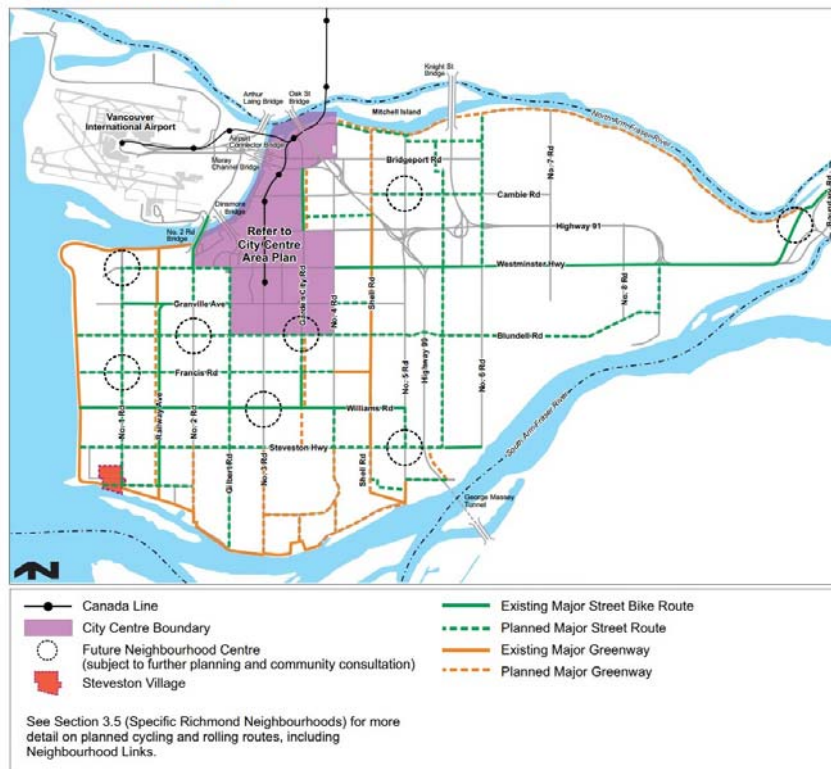
Cost: \$150,000 **OBI:** \$ -

Funding Sources: Roads DCC: \$141,075
Roads City Assist: \$8,925

Scope: The purpose of this project is to update the existing cycling plan as contained in the OCP to ensure it is reflective of the current needs and that it continues to support the long-term mobility objectives as identified in the OCP. An implementation strategy to advance the cycling network and cost estimates will also be included. In addition, this project will review and refine existing and/or develop new design concepts for different types of cycling infrastructure so that it is reflective of the latest industry standards. Accordingly, conceptual designs will be developed and associated high-level cost estimate will be prepared for each cycling facility.

This project will be integrated with the update of the City-Centre Cycling Network Plan that is currently underway (project funding was approved as part of the 2018 Capital Program and work is scheduled to be completed in 2019), to form a master plan for the cycling network for the entire City.

Cycling Network Map



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Garden City Road Pedestrian and Cyclist Enhancements, Westminster Highway to Lansdowne Road	Submission ID:	6448

Location: West Side of Garden City Road - Westminster Highway to Lansdowne Road

Cost: \$1,000,000

OBI: \$7,225

Funding Sources: Roads DCC: \$470,250
 Roads City Assist: \$29,750
 Grant: \$500,000

Scope: The general scope includes the provision of a 1.8m wide paved bike lane and a 1.5m wide asphalt walkway (or equivalent) along the west side of Garden City Road, between Lansdowne Road and Westminster Highway. An extruded curb (or equivalent) would be provided along the entire length of the project, physically separating the proposed bike lane and walkway from motor vehicles.

The proposed project would address on-going public requests/concerns regarding safety of pedestrians and cyclists as well as meeting the City’s long-term objective in providing physical separation between bike lanes and motor vehicles along arterial roads. Note that currently, there is a roadside shoulder (marked, but not physically protected) adjacent to traffic lanes that functions as an on-street bike lane and an area used by pedestrians.

This project is proposed to be jointly funded by the City (up to \$500,000) and external funding from TransLink and ICBC. The external funding from TransLink would be part of 2019 allocated funding committed to projects in Richmond. Any additional available funding from ICBC would be used to offset the City’s portion (i.e., Roads DCC).



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	LED Street Name Sign Program	Submission ID:	6153

Location: Various Locations

Cost: \$200,000

OBI: \$8,320

Funding Sources: Roads DCC: \$188,100
Roads City Assist: \$11,900

Scope: The general scope of work includes the installation of LED street name signs at various signalized intersections to enhance overall intersection visibility and legibility, allowing drivers more time to plan their actions at intersections. The benefits of this program are especially valuable at major, gateway, high-volume intersections and in tourist areas with a large proportion of visiting drivers and accordingly, priority for implementation will be given to those locations.


2018 was the first year of this dedicated program. Previous installations were funded through development and capital projects at new traffic signals. There are approximately 30 intersections completed to date. It is anticipated that the remaining major intersections (~154) in the City can be upgraded over the next 10-15 years, based on upgrading 10 to 15 locations per year.


The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from ICBC and TransLink. Some locations may also be funded through development requirements.

The following is the preliminary list of potential locations identified for 2019. The exact scope of improvement may be refined due to factors such as priority review, availability of external funding and/or opportunity to pursue these improvements as part of development frontage improvements.

- No. 2 Road: Williams Road, Blundell Road, and Granville Avenue
- Shell Road: Bridgeport Road, Cambie Road, and Alderbridge Way
- Alderbridge Way: Kwantlen Street, Hazelbridge Way
- No. 4 Road / Cambie Road
- Bridgeport Road: No. 5 Road, Simpson Road, and St. Edwards Road.



Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Neighbourhood Walkway Program		Submission ID:	5454
Location:	Various Locations			
Cost:	\$500,000	OBI:	\$22,992	
Funding Sources:	Roads DCC:	\$470,250		
	Roads City Assist:	\$29,750		
Scope:	<p>The general scope of this project includes the construction of new and/or enhancement of existing neighbourhood walkways/sidewalks in response to requests from the public and/or Council. Consistent with OCP goals to encourage the use of sustainable transportation modes, priority would be given to walkways/sidewalks connecting locations with high pedestrian activities such as schools, neighbourhood service centres, bus stops, recreational services centres, shopping/retail centres, etc., particularly roads with high traffic volumes/traffic conflicts. The major cost component of the program is the construction/upgrade of new/existing sidewalks, pathways, wheelchair ramps, minor curb cuts, boulevard modifications, and/or other supplementary improvements. Projects will be subject to neighbourhood residents' consultation, if applicable.</p> <p>The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from TransLink and ICBC.</p> <p>The exact scope will be determined depending the request and feedback expected to be received by members of the public and Council, as well as subject to factors such as outcome of public consultation, availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.</p> <p>The following list of improvements is currently being planned for 2019 (subject to factors such as the completion of the detailed design, confirmation of external funding, outcome of public consultation, etc):</p> <ul style="list-style-type: none"> - An interim 2.5 (min) to 3.0m (preferred) wide asphalt walkway along the west side of No. 6 Road, between Bridgeport Road and Cambie Road. 			
				

Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Road Weather Information System	Submission ID:	6525
Location:	City Wide		
Cost:	\$260,000	OBI:	\$30,000
Funding Sources:	Capital Revolving: \$260,000		
Scope:	<p>This project includes the installation of a Road Weather Information System (RWIS) at strategic locations to provide an early warning system of freezing temperatures and poor road conditions. Temperatures and road conditions vary in different areas of Lulu Island due to micro-climates identified by a forensic meteorologist. The RWIS is able to send alerts, record and store information. The RWIS uses laser technology to detect road surface traction and temperature and can be outfitted for humidity, wind and current type of precipitation.</p> <p>The system can provide an immediate text message to specific staff when traction on the roadway at the sensor gets below a predetermined level. With this information, the City's snow and ice response will be able to immediately target those critical areas. This will result in more efficient and effective use of City resources. This warning system will allow City crews to respond to freezing conditions earlier and prevent potential car accidents due to snow and ice.</p> <p>With weather sensing technology at key locations in these micro-climates, Richmond will have accurate information of each micro-climate and be able to strategically target the critical areas earlier than using its current methods.</p> <p>Benefits of having accurate localized weather:</p> <ul style="list-style-type: none"> - Provide accurate weather information for the various micro-climates within Richmond. - The City will be able to strategically target critical areas instead of blanketing the entire City. - Save on City resources: <ul style="list-style-type: none"> o Labour costs (snow plow operators and support staff) o Truck and fuel costs o Salt and brine material costs - The City will be able to address issues earlier and prevent potential vehicle accidents due to snow and ice. Otherwise, the road conditions will be addressed at the predetermined frequency. 		
			

Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Special Crosswalk Program	Submission ID:	5455

Location: Various Locations

Cost: \$350,000

OBI: \$14,625

Funding Sources: Roads DCC: \$329,175
Roads City Assist: \$20,825


Scope: The general scope involves implementing new traffic control standards that have been endorsed by Council, at existing crosswalks on arterial roads. Typical elements of the program include the upgrade of existing crosswalks on arterial roads (typically four-lane arterials) to include overhead illuminated signs with amber flashers, pedestrian-controlled push buttons, as well as enhanced accessible devices. The upgrade would include hardware such as poles, bases, junction boxes, underground/ communication conduits, controller, enhanced accessible devices, related wiring, pavement markings, illuminated crosswalk signs, amber flashers, push buttons, etc.

The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from ICBC. Some locations may also include funding contribution from nearby developments.

The following is the preliminary list of potential locations identified for 2019. The exact scope of improvement may be refined due to factors such as priority review, availability of external funding and/or opportunity to pursue these improvements as part of development frontage improvements.

- Garden City Road and Saunders Road
- Westminster Highway and Windsor Court
- Williams Road and Leonard Road



Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Steveston Highway Multi-Use Pathway, Shell Road to Mortfield Gate		Submission ID:	6451
Location:	South side of Steveston Highway, Shell Road to Mortfield Gate			
Cost:	\$2,000,000	OBI:	\$24,666	
Funding Sources:	Roads DCC: \$940,500 Roads City Assist: \$59,500 Grant: \$1,000,000			
Scope:	<p>The general scope includes the provision of a 2.5m (minimum) to 3.0m (preferred) wide paved multi-use pathway along the south side of Steveston Highway, from Shell Road to Mortfield Gate, as there is no existing pathway at this location. The pathway is proposed to be built south of the existing two eastbound traffic lanes, with a treed/landscaped boulevard (where feasible within existing city right-of-way) and necessary street lighting. Crossing (pavement marking) enhancements along the south side of the No. 4 Road and Shell Road intersections are proposed as part of the project.</p> <p>The proposed facility would enhance the connectivity for pedestrians and cyclists to access the existing bicycle/pedestrian facilities along Shell Road to the east and north as well as major pedestrian generators including South Arm Community Centre and Park, McRoberts School, etc. to the west and north, which are accessible via Mortfield Gate. Ultimately, a new multi-use pathway or equivalent will be pursued to connect this project to No. 2 Road, establishing a new key east/west connection for cyclists and pedestrians in the city by connecting two major north/south cycling/pedestrian routes along Shell Road and the multi-use pathway currently being constructed along the east side of No. 2 Road south of Steveston Highway.</p> <p>This project is proposed to be jointly funded by the City and externally by TransLink and ICBC. This project would only commence if the City secures the required external funding from TransLink, with any additional available funding from ICBC used to offset City's portion (i.e., Roads DCC). Staff will submit this project to TransLink for its 2019 regional competitive funding to maximize the amount of external funding contribution (up to 75% of the project cost). If not successful, this project will be included as part of the TransLink's allocated funding in 2020 that is committed for projects in Richmond with a maximum TransLink contribution capped at 50% of the project cost.</p>			
				

Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Streetlight LED Upgrade Program	Submission ID:	5662

Location: City Wide

Cost: \$430,000 **OBI:** (\$25,000)

Funding Sources: Gas Tax: \$430,000

Scope: The City has 3,780 aged HPS (High Pressure Sodium) light fixtures that are past the end of their useful life. Replacing HPS with LEDs (Light-Emitting Diodes) will improve energy efficiency by reducing energy consumption by ~800,000 kWh. This consumption reduction will result in over \$120,000 of cost avoidance savings.

This project is phase 3 of 4 and will replace approximately 1,000 fixtures. The first two phases have resulted in replacement of approximately 2,200 fixtures. It is estimated that this phase of the project will reduce electricity use from the existing infrastructure by 200,000 kWh, which will equal approximately \$30,000 in cost avoidance savings.

This project is recommended to be funded from the Gas Tax Provision and falls under the eligible project category "Community Energy Systems" as it is infrastructure that generates or increases the efficient usage of energy.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Calming Program	Submission ID:	5453

Location: Various Locations

Cost: \$150,000

OBI: \$8,013

Funding Sources: Roads DCC: \$141,075
Roads City Assist: \$8,925

Scope: The general scope involves the implementation of traffic control measures to address concerns regarding through (short-cutting) traffic and excessive speed on the City’s public roads. Specifically, these measures are intended to address concerns related to speed violations, neighbourhood through traffic intrusions and other traffic safety issues.

Typical elements of the program include retrofitting existing streets with traffic calming measures to address traffic safety concerns and enhancing neighbourhood livability. The major cost component of the program is the installation of traffic calming related improvements that includes the construction of curb extensions, centre medians, extruded curbs, traffic circles, speed humps, delineated walkways, traffic signage and other traffic calming measures. In addition, projects contained in this program may also include supplementary streetscape improvements, i.e. planting of trees and other landscaping improvements to enhance the local pedestrian environment and overall street appearance.

The exact scope will be determined pending the request and feedback received by members of public and Council, as well as subject to factors such as the availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from TransLink and ICBC.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Signal Power Backup System (UPS)	Submission ID:	6158

Location: Various Locations

Cost: \$100,000 **OBI:** \$4,160

Funding Sources: Roads DCC: \$94,050
Roads City Assist: \$5,950

Scope: This program involves the installation of Uninterruptible Power Supply (UPS) system at various signalized locations. Advantages of UPS systems include:

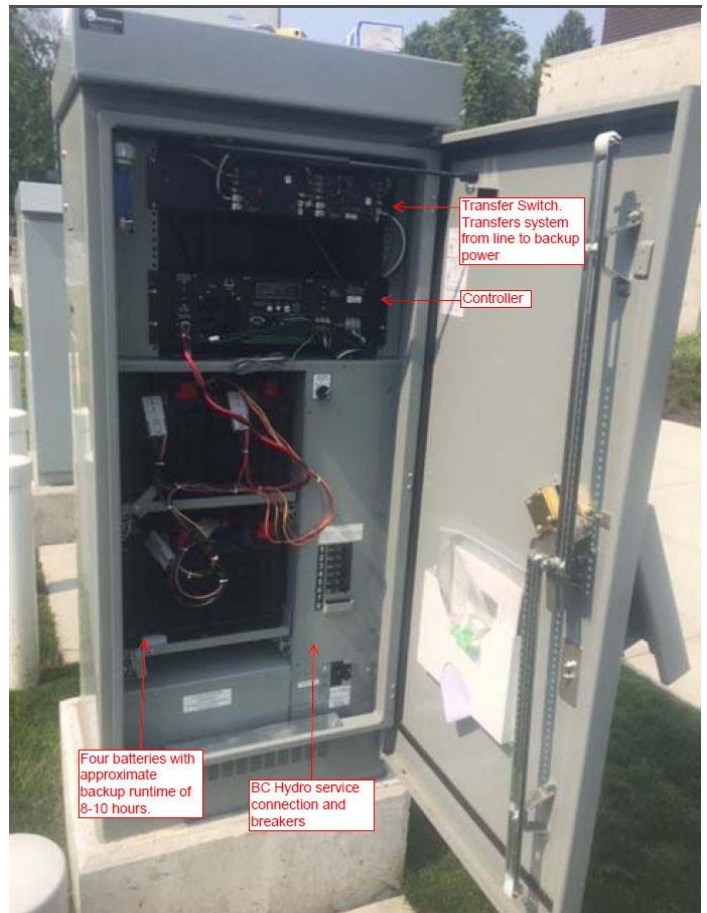
- Provide continual power to traffic signals in the event of a power outage, sag or brown out until regular power is restored.
- Condition and regulate the quality of the commercial power supply to the traffic signal system. Helps protect electronic hardware from power surge.
- Keep traffic flowing and prevent or minimize severe accidents

2019 will be the first year of this dedicated program. Previous installations were funded through development and capital projects at new traffic signals. There are approximately 50 intersections completed to date. It is anticipated that the remaining major intersections (~134) in the City can be upgraded over the next 12-15 years, based on upgrading 10 locations per year.

The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from ICBC. Some locations may also include funding contribution from nearby developments.

The following is the preliminary list of potential locations identified for 2019. The exact scope of improvement may be refined due to factors such as priority review, availability of external funding and/or opportunity to pursue these improvements as part of development frontage improvements.

- Lynas Lane and Westminster Highway
- Russ Baker Way and Cessna Drive
- Russ Baker Way and Inglis Way
- No. 2 Road and Granville Avenue
- No. 2 Road and Blundell Road



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Signal Program	Submission ID:	576

Location: Various Locations

Cost: \$1,350,000

OBI: \$31,000

Funding Sources: Roads DCC: \$1,128,600
 Roads City Assist: \$71,400
 Developer Contribution: \$150,000

Scope: The general scope of work includes installation of new or upgrade of existing traffic signals to respond to growth in traffic and public requests, to better manage pedestrian, cycling, and vehicular movements and to address traffic safety concerns.

The major cost component of the program is the installation of traffic controllers/cabinets, poles, bases, junction boxes, underground conduits, in ground and video detection systems, enhanced accessible devices, new signal heads and/or lenses, wiring and pavement markings, traffic signal communications, minor corner property acquisitions, minor curb cuts and boulevard modifications as necessary.

The program is proposed to be funded by the DCC program and may be eligible for external funding from TransLink and ICBC.

The exact scope and location will be determined pending requests from Council and members of the public, as well as subject to factors such as the availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

Currently, four potential sites have been identified for 2019 including:

- Railway Avenue and Garry Street (upgrade to full traffic signal \$400k)
- No. 5 Road and King Road (new traffic signal \$400k)
- No. 5 Road and Vulcan Way (new traffic signal \$400k)
- Park Road/Buswell Street (\$150k)



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Traffic Video and Communication Program	Submission ID:	5903

Location: Various Locations

Cost: \$400,000

OBI: \$23,400

Funding Sources: Roads DCC: \$376,200
Roads City Assist: \$23,800

Scope: The project includes the following two key components:

1) Install video detection cameras at select signalized intersections to enhance the detection of vehicles and bicycles, optimize traffic operations, provide real time video of traffic conditions to the Traffic Management Centre (TMC) for observing and enhancing operations, and providing photos (in one minute intervals) of approach traffic conditions for public information access on the City website. Note: this program is different and separate from the RCMP security camera program; and

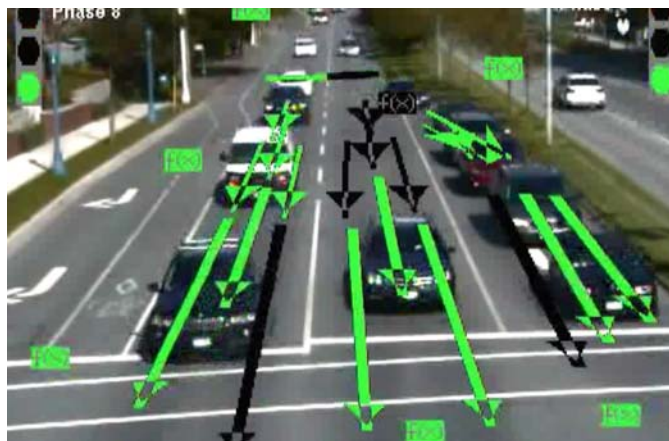
2) Upgrade conduit and cable infrastructure to install higher capacity fibre optic cable and electronics for Ethernet (computer networking technology) to communicate with multiple remote programmable devices at traffic signals. Includes conduit, junction boxes, fibre optic cable and electronic communications switching equipment as required to link multiple traffic signal electronic components to the TMC such as controllers, electronic switches, video cameras, accessible pedestrian devices, intersection power back-up systems (UPS systems), etc.

Status:

- Video detection cameras: 73 locations have been upgraded and the remaining major intersections (~111) can be upgraded over next 20 years, based on upgrading 5 locations per year.
- Communication conduits: Based on the current pace of upgrades, it is estimated the entire City can be upgraded over next 15-20 years.

The program is proposed to be funded by the DCC program and may be eligible for external funding contribution from TransLink and ICBC.

The exact scope will be determined by staff assessment of priority, requests from Council and public, as well as subject to factors such as the availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Transit-Related Amenity Improvement Program	Submission ID:	5452

Location: Various Locations

Cost: \$50,000

OBI: \$10,026

Funding Sources: Roads DCC: \$23,512
 Roads City Assist: \$1,488
 Grant: \$25,000

Scope: The general scope includes transit-related amenity improvements within municipal road right-of-way that are required to support the introduction of various transit service improvements as well as on-going enhancements to existing transit infrastructure. The major cost components are expected to include the installation of new non-advertising bus stop shelters, new benches along or near transit routes and other supplementary pedestrian amenity improvements required to facilitate pedestrian traffic generated by transit passengers.

The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from TransLink and ICBC. Some locations may also include funding contribution from nearby developments.

Locations for bus stop shelters will be prioritized based on boarding activity and customer requests subject to sufficient availability of right-of-way. The exact scope of improvements may be refined subject to factors such as the completion of detailed design, availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.

For 2019, approximately 20-25 bus stop locations would be proposed for upgrade. The actual locations will be determined in early 2019 in consultation with Pattison Outdoor, the City's contractor.



Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Transit-Related Roadway Improvement Program		Submission ID:	5451
Location:	Various Locations			
Cost:	\$400,000	OBI:	\$9,221	
Funding Sources:	Roads DCC:	\$282,150		
	Roads City Assist:	\$17,850		
	Grant:	\$100,000		
Scope:	<p>The general scope includes road and traffic improvements that are required to support the introduction of transit service improvements as well as on-going enhancements to existing transit infrastructure. The major cost components typically include the installation of new bus stop pads for wheelchair accessibility, minor road geometric improvements (e.g. intersection corner improvements), minor sidewalk/walkway construction, wheelchair ramps, upgrade of bus stops to accessible (wheelchair) standards, etc., required to facilitate pedestrian traffic generated by transit. Currently, approximately 76% of 727 existing bus stops are accessible.</p> <p>The program is proposed to be funded by the DCC program and may be eligible for external funding contributions from TransLink and ICBC. Some locations may also include funding contribution from nearby developments.</p> <p>Locations for bus stop wheelchair accessible improvements will be prioritized based on boarding/alighting activity and customer requests subject to sufficient availability of right-of-way. The exact scope of improvement may be refined subject to factors such as the completion of detailed design, availability of external funding, and/or opportunity to pursue these improvements as part of development frontage improvements.</p> <p>Potential upgrade of bus stops to wheelchair accessible for 2019 include the following locations and approximately 5 additional locations based on priority locations to be identified in consultation with Coast Mountain Bus Company and through public feedback.</p> <ul style="list-style-type: none"> - Westbound near-side (NS) and Eastbound far-side (FS) Westminster Highway at No. 7 Road - Southbound (SB) Railway Ave FS at Linfield Gate, FS at Williams Road, FS at Lancing Road, FS at Maple Road - Eastbound (EB) Steveston Highway FS at 4th Avenue, FS at 2nd Avenue - Northbound (NB) 4th Avenue FS at Chatham Street - EB Bridgeport Road FS at Olafson Road - EB Blundell Road FS at Minoru Boulevard, mid-block at 6300 Block, FS at Minler Road - NB No. 4 Road FS at Williams Road - NB No. 2 Road FS at Spender Drive 			



Program:	Infrastructure Program	Sub-program:	Roads
Project Name:	Transportation Planning, Functional and Preliminary Design	Submission ID:	5458

Location: Various

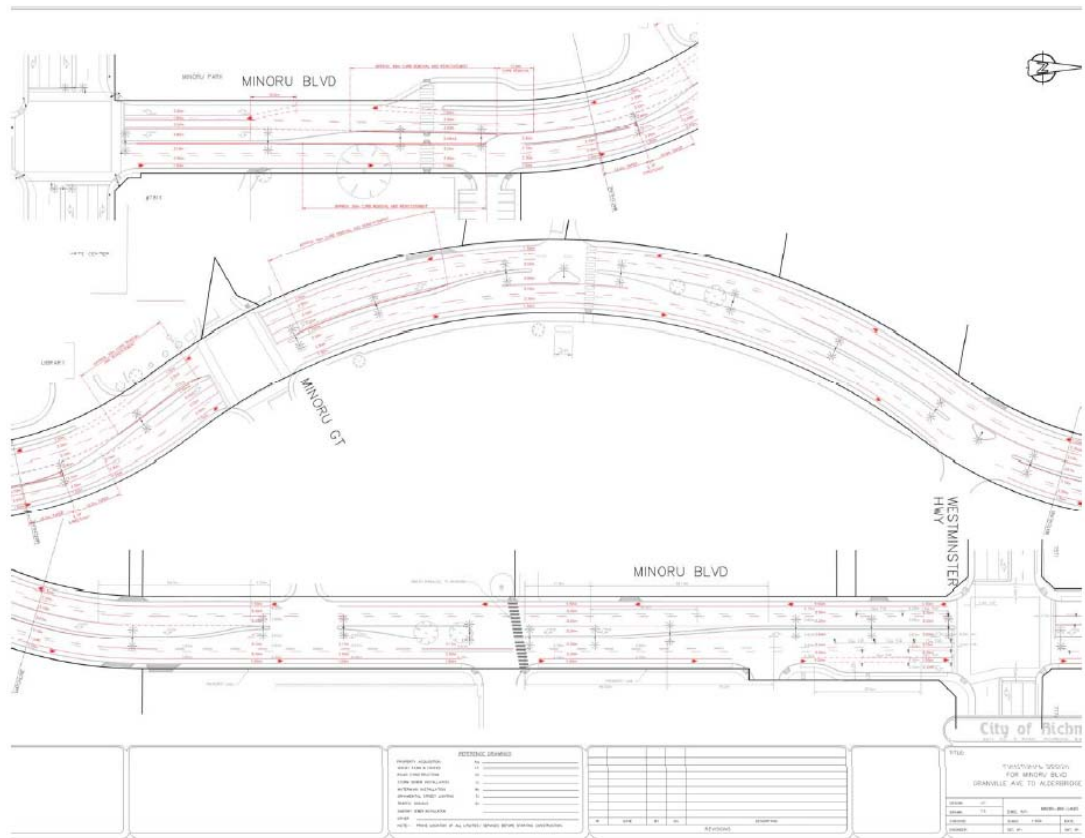
Cost: \$253,000


OBI: \$ -

Funding Sources: Roads DCC: \$237,946
Roads City Assist: \$15,054

Scope: The project includes the following two key components:

1. Project design (functional and preliminary design): Preparing the functional and preliminary designs and cost estimates required for various transportation capital projects identified within the Five-Year Capital Program. Specifically, the necessary functional road elements in horizontal alignment, cross-section, property impacts, etc. as well as high level cost estimates would be determined in order to carry out further detailed engineering design. A major component is for consultant and/or dedicated staff costs for design. The cost estimate is based on 5% of the cost estimate of capital projects included within annual capital programs that require functional designs; design funds for projects with more significant scope are included separately within those projects.
2. Project planning and coordination: To assist in the development, leading, coordinating and administering the planning, engineering, and design work on transportation-related capital projects approved as part of the Five-Year Capital Program and off-site improvements for new developments. The cost estimate is based on dedicated staff costs in Transportation to carry out such tasks.



Program:	Infrastructure Program		Sub-program:	Roads
Project Name:	Westminster Highway Pedestrian and Cyclist Enhancements, Smith Crescent to Fraserside Gate		Submission ID:	6452
Location:	North/West Side of Westminster Highway, Smith Crescent to Fraserside Gate			
Cost:	\$1,100,000	OBI:	\$16,942	
Funding Sources:	Roads DCC:	\$517,275		
	Roads City Assist:	\$32,725		
	Grant:	\$550,000		
Scope:	<p>The general scope includes the provision of a 1.8m wide paved bike lane and a 1.5m wide asphalt walkway (or equivalent) along the west / north side of Westminster Highway, between Smith Crescent and Fraserside Gate, as there is no existing pathway at this location. A new physical separation (e.g., extruded curb or equivalent) would be provided along the entire length of the project, physically separating the proposed bike lane and walkway from motor vehicles. Crossing (pavement marking) enhancements along the west / north side of the River Road and Fraserside Gate intersections are proposed to be included as part of the project.</p> <p>The proposed facility would enhance connectivity for pedestrians and cyclists by filling in the missing gap that currently exists. Specifically, with this project, a continuous bicycle facility and pedestrian sidewalk/walkway will be provided along the entire length of Westminster Highway, from the Hamilton Interchange to Boundary Road.</p> <p>This project is proposed to be jointly funded by the City and externally by TransLink and ICBC. This project would only commence if the City secures the required external funding from TransLink, with any additional available funding from ICBC used to offset City's portion (i.e., Roads DCC). Staff will submit this project to TransLink for its 2019 regional competitive funding to maximize the amount of external funding contribution (up to 75% of the project cost). If not successful, this project will be included as part of the TransLink's allocated funding in 2020 that is committed for projects in Richmond with a maximum TransLink contribution capped at 50% of the project cost.</p>			
				

2019 Recommended Infrastructure – Drainage Program

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Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Development Coordinated Works - Drainage	Submission ID:	5912


Location: City Wide

Cost: \$250,000 **OBI:** \$9,399

Funding Sources: Drainage Utility: \$250,000

Scope: This project will enable the City to leverage development over the next year to design and construct drainage infrastructure outside of what would be required as part of their development. These are upgrades and replacement of aging infrastructure that the City would complete separately but economic and engineering efficiencies can be achieved by having the developer complete this work at the same time the development takes place.



Program:	Infrastructure Program		Sub-program:	Drainage
Project Name:	Heather Street Improvement		Submission ID:	6268
Location:	Heather Street			
Cost:	\$1,757,000	OBI:	\$4,000	
Funding Sources:	Drainage Utility:	\$782,288		
	Water Utility:	\$789,000		
	Drainage DCC:	\$1,695		
	Drainage City Assist:	\$17		
	NIC:	\$184,000		
Scope:	<p>This project upgrades water, drainage, and the roadway on Heather Street between Francis Road and Dayton Road. This project is partially funded through Neighbourhood Improvement Charges (NIC) that have been collected for the purpose of neighbourhood improvements.</p> <p>Subsequent development will be assessed for improvement costs at the time of development per Cost Recovery Bylaw 8752. Recovered funds will be credited to the sources utilized to fund this project.</p> <p>This project consists of watermain replacement, drainage upgrades and installation of curb and gutter along Heather Street. This includes:</p> <ul style="list-style-type: none"> - replacement of 415m of 200mm watermain in alignment with the City's Ageing Infrastructure Replacement Strategy - Drainage improvements including removing existing private ditch infills, construction of one drainage main down the centre of the road and construction of the associated curb, gutter, catch basins, inspection chambers, and adjustment of existing lawn basins - roadway improvements include installation of new sidewalk, streetlights and landscaping 			
				

Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Invasive Species Management	Submission ID:	5928

Location: City Wide

Cost: \$220,000

OBI: \$ -

Funding Sources: Drainage Utility: \$220,000

Scope: The general scope includes the identification, mapping, research, removal and/or control of priority invasive species from the City drainage system and City lands, with a view to maintain the required performance of the drainage system. Typical activities will include control techniques to eliminate or minimize the spread of aggressive invasive species such as Parrot’s feather and purple loosestrife, mapping and control treatments for knotweed species which pose a threat to City infrastructure (i.e. pump stations) and biodiversity, and removal of wild chervil from roadside right-of-ways and City drainage infrastructure. The intent of this program is to reduce the spread of invasive species in order to reduce the impacts on the City drainage system.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Laneway Drainage Upgrade - Afton Drive (North)	Submission ID:	5938

Location: Broadmoor

Cost: \$1,373,000

OBI: \$10,000

Funding Sources: Drainage Utility: \$1,373,000

Scope: This project is to construct drainage improvements along 900m of laneway north of Afton Drive between 7951 Broadmoor Boulevard and 7171 Afton Drive. The project is estimated to take 2-3 months and be complete by October 2019.

Costs will be recovered through City Bylaw 8752 as development occurs.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Laneway Drainage Upgrade - Herbert East Lane	Submission ID:	6181

Location: Herbert East Laneways

Cost: \$542,000 **OBI:** \$5,000

Funding Sources: Drainage Utility: \$542,000

Scope: This project is to construct drainage improvements along 350m of laneway east of Herbert Drive between 7491 Bates Road and 9660 Herbert Road. The project is estimated to take 2-3 months and be complete by October 2019.

Costs will be recovered through City Bylaw 8752 as development occurs.



Program:	Infrastructure Program	Sub-program:	Drainage
Project Name:	Steveston Highway and No. 3 Road Pump Station Upgrade	Submission ID:	5387

Location: Steveston Highway and No. 3 Road

Cost: \$2,000,000

OBI: \$20,000

Funding Sources:

Drainage Utility:	\$1,531,250
Drainage DCC:	\$464,063
Drainage City Assist:	\$4,687

Scope: This project involves building a new drainage pump station at Steveston Highway and No. 3 Road. The pump station capacity will be increased as identified in the 2041 OCP Drainage Model.

This pump station replacement is a part of a larger strategy to increase the City’s drainage capacity, increase pump station reliability and reduce flooding.

Major Pump Station Cost Components:

Civil (65%)	\$1,300,000
Mechanical (19%)	\$380,000
Electrical (16%)	\$320,000
Total	\$2,000,000



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Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Development Coordinated Works - Water	Submission ID:	5309

Location: City Wide

Cost: \$250,000

OBI: \$ -

Funding Sources: Water Utility: \$250,000

Scope: This project will enable the City to leverage development over the next year to design and construct water infrastructure outside of what would be required as part of their development. These are upgrades and replacement of aging infrastructure that the City would complete separately but economic and engineering efficiencies can be achieved by having the developer complete this work at the same time the development takes place.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Emergency Water Supply	Submission ID:	6555

Location: Various Locations

Cost: \$150,000

OBI: \$ -

Funding Sources: Water Levy: \$150,000

Scope: The City's Emergency Water Supply strategy, last updated in 2002, addresses the supply of potable and firefighting water in the case of emergencies such as significant seismic events. This project aims to improve emergency water supply for the City of Richmond, and may include:

- An updated strategy that incorporates state of the art materials and technology to provide recommendations for improving the hazard resilience of the City's water distribution system or provides alternate sources of water in the case of emergencies;
- Implementation of recommended strategies to improve water system resilience or provide alternate water supply;
- Completion of pilot studies or projects to assess the feasibility of new innovations.

A compromised water supply system will not allow effective response during a major emergency; this project addresses a key hazard to the City's response and recovery from disasters by identifying potential water resources for use during emergencies.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Watermain Replacement Program	Submission ID:	5422

Location: Various Locations

Cost: \$5,394,500

OBI: \$ -

Funding Sources: Water Utility: \$4,646,062
 Water DCC: \$708,330
 Water City Assist: \$40,108

Scope: This project replaces aging watermains that are at the end of their service life and is in alignment with the City’s Ageing Infrastructure Replacement Strategy. Watermain replacement minimizes unplanned maintenance and improves fire protection.

This project includes installation of 5,658m of 200mm diameter watermain to replace the existing aging infrastructure.

The watermain replacement program is informed by watermain age, material and break history.



Program:	Infrastructure Program	Sub-program:	Water
Project Name:	Watermain Tie-in and Restoration	Submission ID:	5857

Location: Various

Cost: \$400,000

OBI: \$ -

Funding Sources: Water Utility: \$400,000

Scope: This project involves tie-in and restoration work for watermain and water service installations, including tie-in and restoration of watermain replacements completed as part of prior years' capital programs and restoration of water utility cuts.



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Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Burkeville Utility Upgrades	Submission ID:	5605

Location: Burkeville Area

Cost: \$1,133,000 **OBI:** \$15,000

Funding Sources: Water Utility: \$333,000
Sanitary Utility: \$800,000

Scope: Burkeville's sanitary sewer and water system was first constructed in 1950s. As the area is redeveloped, many aging sanitary sewer and water infrastructure needs to be upgraded and/or added. The current gravity sanitary sewer system, made up of vitrified clay, and approximately 333 meters of watermain requires replacement or rehabilitation.

This project will coordinate the construction of the utilities to allow construction and engineering efficiencies to be achieved. Additionally, public disruptions will be minimized by coordinating the utility improvements.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	Development Coordinated Works - Sanitary	Submission ID:	5636

Location: City Wide

Cost: \$150,000

OBI: \$ -

Funding Sources: Sanitary Utility: \$150,000

Scope: This project will enable the City to leverage development over the next year to design and construct sanitary infrastructure outside of what would be required as part of their development. These are upgrades and replacement of aging infrastructure that the City would complete separately but economic and engineering efficiencies can be achieved by having the developer complete this work at the same time the development takes place.



Program:	Infrastructure Program	Sub-program:	Sanitary Sewer
Project Name:	SCADA System Improvements	Submission ID:	5370

Location: City Wide

Cost: \$150,000 **OBI:** \$ -

Funding Sources: Sanitary Utility: \$150,000

Scope: This project involves rehabilitating and upgrading computer, instrument and electrical installations throughout the SCADA network.

Through its SCADA system, the City monitors and controls over 150 sanitary system sites that contain mechanical and electrical equipment. This project will maintain and improve sanitary sewer system operation, as well as maintain system security and technological viability.

Failure to complete the work will result in increased risk of sanitary system failure, thereby reducing service levels and increasing cost and disruption of unplanned maintenance and emergency repairs.



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Program:	Infrastructure Program	Sub-program:	Advanced Design
Project Name:	Public Works Infrastructure Advanced Design	Submission ID:	5433

Location:	City Wide		
Cost:	\$1,780,000	OBI:	\$ -
Funding Sources:	Drainage Utility:	\$1,000,000	
	Water Utility:	\$430,000	
	Sanitary Utility:	\$150,000	
	Roads DCC:	\$188,100	
	Roads City Assist:	\$11,900	
Scope:	The scope of work includes hiring consultants and contractors to plan and design future capital projects and deliver reports that define long-term infrastructure upgrades.		
	Drainage Project Design, Planning and System Modelling	\$1,000,000	
	Water Project Design and Planning	\$380,000	
	Water System Modelling	\$50,000	
	Roads	\$200,000	
	Sanitary Project Design and Planning	\$100,000	
	Sanitary System Modelling	\$50,000	
	Total	\$1,780,000	



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Drainage	Submission ID:	6550

Location: City Wide

Cost: \$475,000

OBI: \$ -

Funding Sources: Drainage Utility: \$475,000

Scope: This project involves minor work related to drainage infrastructure, including installation of inspection chambers, rehabilitation of sewer pipes and manholes, minor repair of pump stations, installation of monitoring equipment, safety upgrades, testing of new technologies to improve efficiencies, and responding to resident complaints that require site specific repairs. Additionally, this project involves environmental monitoring and restoration for the construction of new drainage infrastructure, and environmental restoration for completed projects as part of prior years capital programs.

Every year, Engineering and Public Works receives a number of requests for minor projects. The infrastructure advanced design and minor public works program allows the department to respond to these requests in a timely and cost effective manner.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Roads	Submission ID:	5614

Location: City Wide

Cost: \$250,000

OBI: \$ -

Funding Sources: Rate Stabilization: \$250,000

Scope: This project includes minor work related to road infrastructure, including installation of wheelchair ramps, replacement of uneven sidewalks, curbs and small road sections that may have been damaged through tree root ingress or settlement, repair of streetlights, and response to resident complaints that require site specific repairs.

Every year, Engineering and Public Works receives a number of requests for minor projects. The infrastructure advanced design and minor public works program allows the department to respond to these requests in a timely and cost effective manner.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Sanitary	Submission ID:	5371

Location: City Wide

Cost: \$400,000 **OBI:** \$6,000

Funding Sources: Sanitary Utility: \$400,000

Scope: This project involves minor work related to the sanitary infrastructure, including pump station upgrades, sanitary pump replacements, modifications to improve operational efficiency and functionality, testing of new technologies, forcemain repairs, site-specific repairs in response to resident complaints, and manhole and valve box repairs.

Every year, Engineering and Public Works receives a number of requests for minor projects. The infrastructure advanced design and minor public works program allows the department to respond to these requests in a timely and cost effective manner.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Sanitation and Recycling	Submission ID:	6001

Location: City Wide

Cost: \$300,000

OBI: \$ -

Funding Sources: Solid Waste & Recycling: \$300,000

Scope: To provide for Recycling Depot general site upgrades, expansion projects and funding for streetscape recycling containers in public spaces.

To provide equipment/vehicle as required to support these program expansions as well as collection of overweight/heavy illegally dumped items.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Traffic	Submission ID:	5460

Location: Various Locations

Cost: \$250,000

OBI: \$7,425

Funding Sources: Rate Stabilization: \$250,000

Scope: The general scope of this program includes various improvements to traffic systems as required. The program includes the following major components:

- A. Traffic Improvements: for unforeseen capital improvements of a minor nature including wheelchair ramps, traffic signage, pavement markings and traffic safety improvements. These are separate from the programs which fund specific projects / locations.
- B. Traffic Signal/Communications Network: infrastructure renewal, physical plant upgrading, ongoing infrastructure development testing and communications network conduit/cable, installation of left turn arrows and related detection, controller upgrades, re-lamping of traffic signals, etc (whereas Roads DCC would fund new traffic signals).

This program is an annual recurring program funded by the revenues from non-DCC sources such as general revenue. Funding assistance from ICBC and TransLink's MRN sources for some of these projects may be available and applications would be submitted to the appropriate agency.



Program:	Infrastructure Program	Sub-program:	Minor Capital
Project Name:	Public Works Minor Capital - Water	Submission ID:	4819

Location: Various Locations

Cost: \$500,000

OBI: \$ -

Funding Sources: Water Utility: \$500,000

Scope: This project includes minor work related to the water infrastructure, including minor watermain repairs and replacements, operational efficiencies, changes to safety requirements, testing of new technologies, and response to resident complaints that require minor upgrades.

Every year, Engineering and Public Works receives a number of requests for minor projects. The infrastructure advanced design and minor public works program allows the department to respond to these requests in a timely and cost effective manner.



Building Program 2019

The building program includes major building construction and renovation projects as well as minor facility upgrades and repairs. The City's building assets include: arenas, pools, community centres, libraries, heritage buildings, police stations, fire halls and other government facilities.

2019 Recommended Building – Building Program

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Program:	Building Program	Sub-program:	Building
Project Name:	2019 Capital Buildings Project Development Advanced Design	Submission ID:	6367

Location: City Wide

Cost: \$500,000

OBI: \$ -

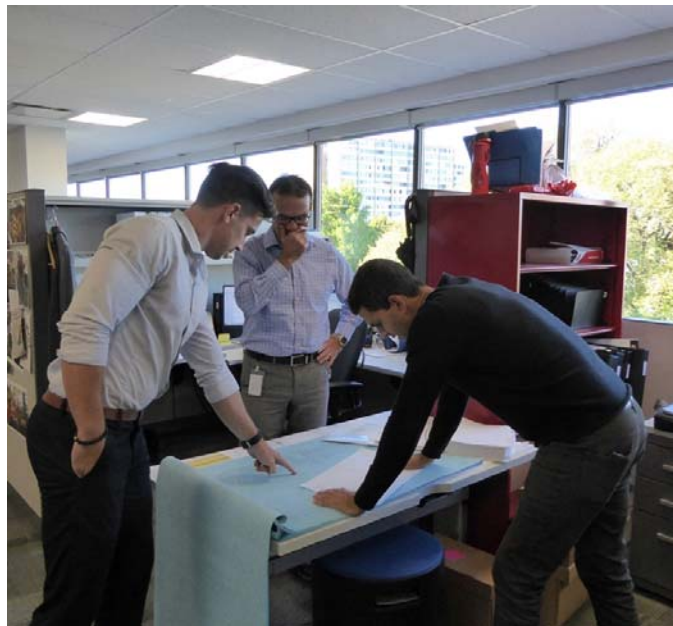
Funding Sources: Rate Stabilization: \$500,000

Scope: This funding will be used to provide feasibility and concept level consulting service required to complete the following:

- To respond to requests for feasibility and concept level design and costing services added to the 2019 work plan. Throughout the course of 2017 and 2018 there were approximately 30 such requests, examples of which include Rod and Gun Club relocation investigation, Minoru Place Activity Centre re-purposing feasibility/concept level design, and the Britannia washroom. The same level of requests are anticipated for 2019.

- Building and feasibility assessments required to develop the 2020 Capital Plan. Staff receive on average approximately 150 projects from User Groups on an annual basis by May of each year that require feasibility level review and costing in time for the Capital project process. Examples for the 2019 program include feasibility and costing for RCMP Exhibit Compound, Fleet Electrical Charging Installations, Japanese Canadian Cultural Centre Upgrade, Gateway Theatre Infrastructure Replacements, etc.

Without this funding, building improvement and infrastructure replacement projects have to be cancelled and funding reallocated to allow the feasibility and concept level design work to proceed.



Program:	Building Program	Sub-program:	Building
Project Name:	City Hall Annex Transformer Replacement	Submission ID:	6385

Location: 6900 Minoru Boulevard

Cost: \$500,000

OBI: \$ -

Funding Sources: Building and Infrastructure: \$500,000

Scope: The electrical transformer in this facility, has been in operation since 1972, and has reached the end of its life expectancy. If not addressed, power interruption to the building may occur.

This system renewal will also include associated miscellaneous items that will prolong the life of the building and ensure the health and safety of its occupants.



Program:	Building Program	Sub-program:	Building
Project Name:	City Hall Upgrades and Repairs	Submission ID:	6369

Location: 6911 No. 3 Road

Cost: \$980,000

OBI: \$ -

Funding Sources: Building and Infrastructure: \$980,000

Scope: Multiple systems in this facility, which was constructed in 2000, have reached the end of their life expectancy. The aging infrastructure will be replaced with modern, energy-efficient systems (where feasible). These system renewals, outlined below, will also include associated miscellaneous items that will prolong the life of the building and ensure the health and safety of its occupants.

Mechanical:

The electrical room AC unit has exceeded its life of expectancy. This unit maintains the room and power equipment at an operable temperature. If not addressed, and the AC unit fails, power interruption to the building will occur.

Building Envelope:

The buildings exterior is showing signs of deterioration, such as leaks and a building assessment will be conducted to determine the existing condition and scope of work for any required repairs.

Structural:

The parkade has multiple structural cracks in the ceiling. These structural components are integral to the health and safety of the building and its occupants, and will be remediated through crack injection to prevent further degradation.



Program:	Building Program	Sub-program:	Building
Project Name:	East Richmond Community Hall Envelope and Mechanical System Renewals	Submission ID:	6393

Location: 12360 Cambie Road

Cost: \$402,000

OBI: \$ -

Funding Sources: Building and Infrastructure: \$402,000

Scope: Multiple systems in this facility constructed in 1960 have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

Mechanical

The HVAC system, inclusive of the condensing units, heat and ventilation systems have all reached the end of their serviceable life cycle and will be replaced with new, modern, energy efficient units where possible.

Envelope and Finishes

The roof of this facility is well beyond its anticipated life cycle and will be replaced to prolong the life span of this building. Also, the interior flooring of the seniors room will be replaced to prevent a tripping hazard and ensure safe mobility for all occupants throughout the facility.



Program:	Building Program	Sub-program:	Building
Project Name:	Gateway Theatre Infrastructure Replacements Phase 2	Submission ID:	6366

Location: 6500 Gilbert Road

Cost: \$3,700,000 **OBI:** \$ -

Funding Sources: Building and Infrastructure: \$3,700,000

Scope: Multiple systems in this facility constructed in 1985 have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

Envelope:
The building envelope as a whole is well past its life expectancy and showing signs of deterioration. Envelope repairs will be completed to respond to areas of advanced deterioration. Phase 1 is currently underway, this submission is for phase 2.

Life / Safety:
Currently there is no safe way to service the existing stage equipment and rigging systems. The proposed upgrades will significantly improve life safety for staff, performers, service personnel and patrons of the theatre.

Interior Renovations:
The washrooms will receive an upgrade in the form of autoflush toilets and electric hand dryers in order to reduce energy consumption and maintenance costs.

Gateway staff have requested a concession area renovation to accommodate increased service levels to theatre patrons.

Installation of dressing room dividers to provide additional accessibility and inclusion to performers.



Program:	Building Program	Sub-program:	Building
Project Name:	Japanese Canadian Cultural Centre - Front Entry Accessibility Upgrade	Submission ID:	6388

Location: 4255 Moncton Street

Cost: \$258,000

OBI: \$ -

Funding Sources: Capital Revolving: \$258,000

Scope: This facility built in 1991 is not accessible to all members of the community and has an increasing need to provide accessible entry options to its patrons. These upgrades will also include associated miscellaneous items that will improve building accessibility, longevity and ensure the health and safety of its users / inhabitants.

Exterior and Envelope:

Remove and replace the deteriorating concrete front steps and wooden handrail with an accessible ramp, handrails and door opener into the facility. Alterations to landscaping and foliage as required.



Program:	Building Program	Sub-program:	Building
Project Name:	Library Cultural Centre Conveyance Replacements	Submission ID:	6387

Location: 7700 Minoru Boulevard

Cost: \$709,000 **OBI:** \$ -

Funding Sources: Building and Infrastructure: \$709,000

Scope: Multiple systems in this facility, which was constructed in 1992, have reached the end of their life expectancy.

Elevator / Loading Bay Lift:

- Elevator upgrade loading bay lift replacement is required to ensure safe and reliable elevator operation.
- Elevator upgrades include machines, motors, controllers, car and hall fixtures and associated equipment.

Roofing:

A fall protection system will also be installed to improve life safety of staff and service personnel that need to access the roof.



Program:	Building Program	Sub-program:	Building
Project Name:	London Farm House Envelope Renewals	Submission ID:	6482

Location: 6511 Dyke Road

Cost: \$376,000

OBI: \$ -

Funding Sources: Rate Stabilization: \$376,000

Scope: Multiple systems in this facility constructed in 1897 have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

Roofing:
The existing roofs and canopies have exceeded their serviceable life and will be replaced.

Exterior Painting:
The exterior walls and windows are all showing signs of paint degradation and will be replaced or repainted where needed.

Building Operator Requests:
London Farm Staff have requested lighting replacements to better match the heritage status of the building, as well as various upgrades to the barn supply room.

In addition to the work at the main farm house, the addition of an enclosed space at the back of the barn is recommended to provide secure storage for supplies, improve pest management and preserve the aesthetic value of the site.



Program:	Building Program	Sub-program:	Building
Project Name:	Minoru Aquatics Centre Demolition	Submission ID:	6245

Location: 7560 Minoru Gate

Cost: \$3,392,000

OBI: \$ -

Funding Sources: Rate Stabilization: \$3,392,000

Scope: Upon completion and opening of the new Minoru Centre for Active Living, the existing Minoru Aquatic Centre located at 7560 Minoru Gate in Minoru Park will be decommissioned and demolished as described in the Council approved staff report titled [Viability of Repurposing Minoru Aquatic Centre] dated April 21, 2017, from the Senior Manager, Capital Buildings Project Development and the Senior Manager, Parks.

If Council were to decide to consider re-purposing the current Minoru pool facility, the building would require additional annual operating budget impact funding of \$110,000 to maintain electrical, heating and ventilation systems operational in order for the building to not further deteriorate.



Program:	Building Program	Sub-program:	Building
Project Name:	Minoru Arena System Renewals	Submission ID:	5518

Location: 7551 Minoru Gate

Cost: \$3,300,000

OBI: \$ -

Funding Sources: Building and Infrastructure: \$3,240,486
 Mechanical Equipment: \$59,514

Scope: Multiple building systems have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

Stadium Arena:

The exterior doors and wall finishes have exceeded their serviceable life span will be replaced as needed.

Interior Upgrades:

The mezzanine area, player change rooms and skate shop areas are all dated and past their serviceable life span. These areas will be renovated and updated to provide increased accessibility and useability to our patrons.

Silver Arena:

The arena floor and underfloor heating have both exceeded their serviceable life span and will be replaced.

Additionally this arena has multiple HVAC components that have reached their expected life span and will be replaced.



Program:	Building Program	Sub-program:	Building
Project Name:	Minoru Place Activity Centre Program - Implementation	Submission ID:	6394

Location: Minoru Park - Minoru Place Activity Centre

Cost: \$2,511,000 **OBI:** \$324,400

Funding Sources: Leisure Facilities: \$2,511,000

Scope: This project implements the recommended program to repurpose the Minoru Place Activity Centre for Community Arts Program and Education Space.

This includes renovation of interior spaces to accommodate programs including provision of two dance studios (with ancillary spaces), pottery studio, media arts studio, three multipurpose program rooms, flex lobby space and reception/admin offices. The existing commissary kitchen would remain in use and be part of a culinary arts program. With the exception of building upgrades required to reopen the building for arts program use, other upgrades would be done on an as-needed basis during the term of use.

The OBI costs reflect efficiencies realized by coordination and combined supervision with the existing, nearby Cultural Centre and Arts Centre.

The estimated Project dates are from Q2 2019 to Q1 2020.



Program:	Building Program	Sub-program:	Building
Project Name:	RCMP Exhibit Compound Interim Upgrades	Submission ID:	6479

Location: Works Yard

Cost: \$975,000

OBI: \$24,692

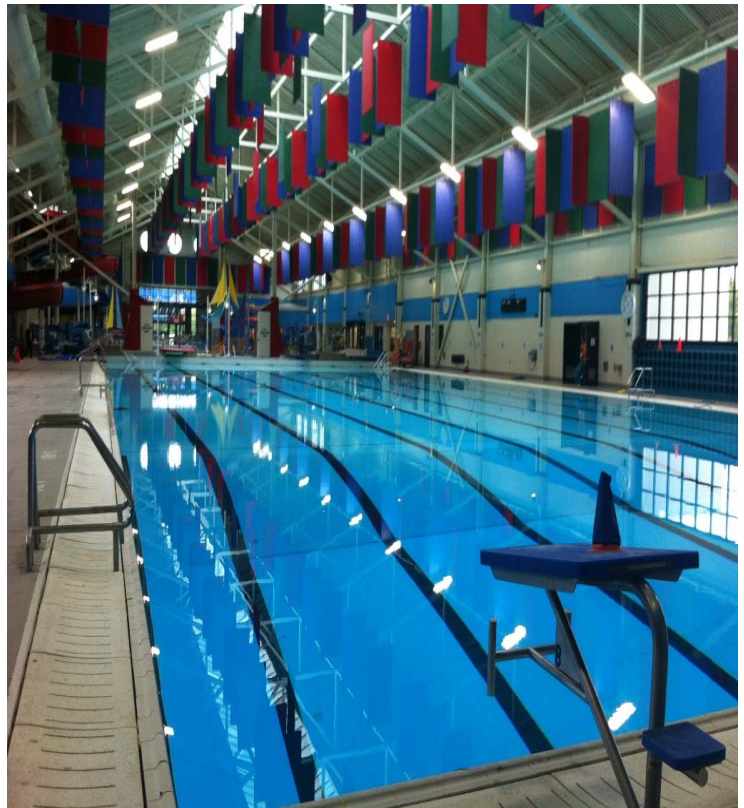
Funding Sources: Rate Stabilization: \$975,000

Scope: The current Physical Security Posture has many critical faults that also increase the vulnerability to the assets. There exists a significant threat of property crime, vandalism, loss or damage to RCMP exhibits. This vulnerability could significantly impact court proceedings.

As a result an RCMP Departmental Security Section physical security review and the resultant report, critical updates were identified and must be addressed in order to maintain the integrity of the exhibits for court proceedings.



Program:	Building Program		Sub-program:	Building
Project Name:	Watermania Aging Mechanical and Building Envelope Infrastructure Replacement Phase 2		Submission ID:	6368
Location:	14300 Entertainment Boulevard			
Cost:	\$1,341,000	OBI:	\$ -	
Funding Sources:	Building and Infrastructure: \$1,341,000			
Scope:	<p>Multiple systems in this facility constructed in 1997 have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These renewals will also include associated miscellaneous items and structural inspections that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.</p> <p>Roof: The roof has reached the end of its serviceable life span and will be replaced in 2 phases. Phase 1 was approved as part of the 2018 Capital Program and is underway. This submission is for Phase 2.</p> <p>Mechanical: Multiple HVAC system components have exceeded their serviceable life span and will be replaced. These include: air handling units, supply fans, wave pool air compressor, heat exchangers, chlorine sensors and pressure relief valve stations.</p> <p>Pool Equipment - The splash pool is currently leaking and will have its supply line replaced to prevent future leaking / damage to the facility.</p> <p>- A new ultraviolet water treatment system will be installed for the 50 meter pool and water slides to improve water quality and reduce chemical usage.</p> <p>Interior Renovations: The bleachers are aged, rusting and beyond their serviceable life span and will be replaced with a modern, more durable bleacher system.</p> <p>The fitness centre flooring has reached the end of its serviceable life span and will be replaced with durable flooring.</p> <p>End of Lease Term The lease for Watermania ends in 2026. At the expiration of the lease, we are obligated to return to the facility: the appurtenances, building systems and fixtures in good condition.</p>			



Program:	Building Program	Sub-program:	Building
Project Name:	Works Yard Mechanical Replacements	Submission ID:	6389

Location: 5599 Lynas Lane

Cost: \$1,707,000

OBI: \$ -

Funding Sources: Building and Infrastructure: \$1,707,000

Scope: Multiple systems at the Works Yard have reached the end of their life expectancy. These system renewals, as outlined below, will also include associated miscellaneous items that will prolong the life of the building and ensure the health and safety of its occupants.

Dispersal Building:
 Mechanical
 The unit heaters have exceeded life expectancy and replacement is required.

Stores Warehouse:
 Mechanical
 The I.T. Server Room AC Unit has exceeded its life expectancy and if not addressed power interruption to the building and I.T. Server Room may occur. This unit runs 24/7/365.

Conveyance
 Repairs and upgrades to the exterior of the building including doors, awnings, gutters and dock levellers.



Program:	Building Program	Sub-program:	Building
Project Name:	Works Yard Salt Shed Repairs	Submission ID:	6391

Location: 5599 Lynas Lane

Cost: \$266,000 **OBI:** \$ -

Funding Sources: Building and Infrastructure: \$266,000

Scope: Perform critical short-term repairs to the existing shed structure which houses the salt and brine for snow/ice response.

The existing structure was assessed in early 2018 and it has been recommended to be replaced in the next 2-3 years. The structure was originally constructed in the 1970's and the structure is now in poor shape due to deterioration and corrosion from contact with the salt and brine kept within the structure. It is recommended that this project for short-term repairs be approved to reduce the risk of delays or impedance in snow/ice response caused by structural failure.



Parks Program 2019

Richmond is renowned for its high quality parks and recreation facilities. The City's park system has over 145 parks that total approximately 1,700 acres. Parks are unique places designed and developed for the enjoyment of all city residents as well as visitors to Richmond. These sites usually contain a wide variety of recreational and sports facilities, play equipment and other specialized facilities. In addition to parks, Richmond has 50 kilometers of recreational trails.

2019 Recommended Parks – Parks Program

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Program:	Parks Program	Sub-program:	Parks
Project Name:	Aberdeen Park Phase 3	Submission ID:	6151

Location: 8311 Cambie Road

Cost: \$800,000 **OBI:** \$56,948

Funding Sources: Parks Development DCC: \$752,400
Parks Development City Assist: \$47,600

Scope: This submission pertains to Aberdeen Park - Phase 3, which will include the installation of a canopy to cover a portion of the park plaza and provide weather protection for daily activity and event use, and a public washroom facility. The canopy and washroom will serve to further activate the park and accommodate flexible programming and uses, which may include theatrical and musical performances, Tai Chi, yoga, food trucks, small markets, etc. This is the final phase of implementation of the park master plan that was approved by Council in 2013.

This project supports:

- Council Term Goal #2: A Vibrant, Active, and Connected City; Priority 2.3 - Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and
- Council Term Goal #3: A Well-Planned Community; Priority 3.2 - A strong emphasis on physical and urban design. This project also supports the City of Richmond Community Wellness Strategy.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Hugh Boyd Artificial Turf Sports Field - Turf Replacement	Submission ID:	5248

Location: Francis Road and No.1 Road

Cost: \$1,800,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$800,000
Special Sports: \$1,000,000

Scope: The purpose of this project is to replace the artificial turf field surface at Hugh Boyd Community Park which was constructed in 2006. The projected lifespan of a synthetic sports field is between 8 and 15 years depending on the usage and maintenance of the field. It is typically booked for up to 155 hours per week during the peak fall/winter season. The field is tested annually for its shock attenuation performance and is currently reaching the limits of what is acceptable for safe operation of an artificial turf field. The operating and replacement costs of the field are partially offset by the user fees collected through the Sports User Fee program and there is no increase in operating costs generated by this request.

The recommendation for the construction of the artificial turf field at Hugh Boyd Community Park was approved by Council in 2005. At the time of its construction, it was considered to be one the largest single synthetic sports fields built in Canada with the equivalent area of over three full size soccer fields. The facility now hosts annual major soccer tournaments such as the Nations Cup and the Provincial Finals and has become one of Richmond's premier fields for training and tournaments. It is used by over 15 soccer organizations as well as field lacrosse, field hockey, football and ultimate teams. Hugh Boyd Secondary also uses it for their physical activity programs during school hours.

This project supports Council Term Goal #2: A Vibrant, Active, and Connected City and promotes sports, fitness, and a healthy lifestyle for our communities.

Scope of Work includes:

Installation of the new turf layer	\$1,350,000
Removal and disposal of the existing turf layer	\$250,000
Drainage and sub base preparations	\$200,000
Estimated total	<u>\$1,800,000</u>



Program:	Parks Program	Sub-program:	Parks
Project Name:	London Steveston Park Phase 2	Submission ID:	6109

Location: London Steveston Park

Cost: \$300,000 **OBI:** \$13,624

Funding Sources: Parks Development DCC: \$282,150
Parks Development City Assist: \$17,850

Scope: The concept plan for London/Steveston Park, which was developed based on feedback received at a series of public open houses, was approved by Council in May 2015. The park plan will be implemented in phases. Phase One construction includes site grading, new trails and tree planting. Phase Two construction includes expansion of the playground and will address a strong desire by local residents to increase the range of play offered in this growing and densifying neighbourhood.

This project supports:

- Council's Term Goal #2: A Vibrant, Active, and Connected City: 2.3 Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and
- Council's Term Goal #3: A Well-Planned Community: 3.2 A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Minoru Bowling Green Artificial Turf Replacement	Submission ID:	6337

Location: Minoru Park

Cost: \$350,000

OBI: \$ -

Funding Sources: Gas Tax: \$228,000
Community Contribution: \$122,000

Scope: The Minoru Bowling Greens were originally constructed in 1966. In 2010, the natural grass greens were converted to a synthetic surfacing system which allowed for year-round use. Annual inspections and user feedback from the Club members suggest that the synthetic surfaces are near the end of useful life expectancy. Replacement of the Lawn Bowling Green support infrastructure will meet user needs, complement the proposed Lawn Bowling Clubhouse anticipated for construction in 2019-2020 and provide improved service for the 2020 55+ BC Games that the City of Richmond is hosting. There is an agreement with the Club for their contribution towards the replacement of the bowling greens. By 2019 the Club is projected to contribute approximately \$122,000 towards this project through its membership fees.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Minoru Park Lakes Renewal	Submission ID:	5948

Location: Minoru Park

Cost: \$1,750,000 **OBI:** \$44,756

Funding Sources: Parks Development DCC: \$1,645,875
Parks Development City Assist: \$104,125

Scope: The renewal of the Lakes at Minoru Park is one of the key pieces of the Minoru Park Vision and Guiding Principles, approved by Council in May of 2017. The primary objective is to increase the capacity of the Lakes area for public use in response to an anticipated doubling of the current population living within 400 metres (5 minute walking distance) of Minoru Park by 2045. The project scope will include construction of new Lakes infrastructure that is more sustainable, with more robust materials and construction methods. It also includes new and more accommodating trails, and numerous seating and gathering spaces according to the majority of responses received during the community consultation process for improved access to the Lakes. Native planting and sustainability measures such as rainwater capture will satisfy the community desire for more opportunities to connect with nature.

The Minoru Park Vision Plan public engagement process reinforced the value that the community places on Minoru Lakes Area as a place of peace, beauty and respite. Input received indicated a desire for Minoru Lakes to remain similar to their current size and configuration upon renewal.

This project supports Council's Term Goal #2 A Vibrant, Active, and Connected City: 2.3 Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and Goal #3 A Well-Planned Community: 3.2 A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Advance Planning and Design	Submission ID:	353

Location: Various locations

Cost: \$400,000

OBI: \$ -

Funding Sources: Parks Development DCC: \$376,200
Parks Development City Assist: \$23,800

Scope: This annual project submission for Parks Advance Planning and Design will provide resources for planning, research, public and stakeholder consultation, design and project management for a range of purposes, strategic planning projects, reports to City Council, meeting regulatory agency requirements (e.g., Vancouver Coastal Health, Provincial ministries), conceptual park design and technical reports for projects that require particular areas of expertise (e.g., environmental assessments).

This program supports Council Term Goal #2 A Vibrant, Active, and Connected City: Priority 2.3 Outstanding places, programs and services that support active living, wellness, and a sense of belonging; and Goal #3 A Well-Planned Community: Priority 3.2 A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks Aging Infrastructure Replacement Program	Submission ID:	303

Location: Various Locations

Cost: \$550,000

OBI: \$ -

Funding Sources: Capital Revolving: \$550,000

Scope: This program targets the replacement of aging parks and open space infrastructure. The types of infrastructure include waterparks, waterfront assets (e.g. piers, docks, moorage and boat launch facilities), trails and pathways, drainage systems, outdoor courts (e.g., tennis, basketball, lacrosse, and hockey), baseball backstops, sports lighting fixtures and other assets the replacement of which cannot be funded through the Parks Development Cost Charges program. Assets have been identified that have surpassed their respective life cycles resulting in the loss of structural and/or functional integrity due to wear and age and may present public safety issues. If not addressed these issues may lead to closure of some parks or park amenities and an increase in service requests to address safety concerns from the public and sports groups.

At the July 24, 2017 Council Meeting, the Parks Ageing Infrastructure Plan - 2017 Update report was presented:

The report outlined the high priority assets that require immediate attention and proposed the development of an Infrastructure Replacement Strategy and Financial Plan which is underway. The recommendations of the report were endorsed by Council.

2019 Projects include:

Sandfields upgrades	\$300,000
King George Spray Park UV System	\$100,000
Fencing	\$50,000
Tennis Court Surfacing	<u>\$100,000</u>
Total	<u><u>\$550,000</u></u>

This program supports the Council Term Goal #6 Quality Infrastructure Networks and Goal #1 A Safe Community.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Parks General Development	Submission ID:	5466

Location: Various Locations

Cost: \$400,000 **OBI:** \$4,374

Funding Sources: Parks Development DCC: \$376,200
 Parks Development City Assist: \$23,800


Scope: As the community grows, specific upgrades to existing parks are required to respond to ongoing growth in the community. This program funds improvements of various existing park amenities and facilities which are not part of other site specific park capital programs yet see increased use by residents as a result of an increasing population. This funding allows the City the ability to be responsive to Council direction and appropriate public requests which align with existing strategic plans as well. These discrete, site-specific park enhancements will address our community’s needs for ongoing park improvements to infrastructure, equipment and landscape amenities.

Examples of projects that have been funded by the General Development program include new community gardens, new off-leash dog areas, walkways and pathways, benches and picnic tables and new drainage systems for flooded areas.

This project supports:

- Council Term Goal #1: A Safe Community; and
- Council Term Goal #6: Quality Infrastructure Networks.



Program:	Parks Program		Sub-program:	Parks
Project Name:	Parks Identity Signage Program Phase 2		Submission ID:	6353
Location:	Various Locations			
Cost:	\$200,000	OBI:	\$42,928	
Funding Sources:	Parks Development DCC:	\$188,100		
	Parks Development City Assist:	\$11,900		
Scope:	<p>Completion of parks identification signage for 60+ neighbourhood parks as Phase 2 of an initiative started in 2018. The majority of the City's parks do not have signage to inform the public of the name of the park they are visiting, amenities within the park, or wayfinding in parks during special events. In order to adequately provide park identity, regulatory information and wayfinding for the public and community, Phase 2 of the signage fabrication and installation program needs to be completed to ensure an ongoing coordinated approach to site identity.</p> <p>The design/fabrication of parks and wayfinding signage takes into consideration the character, heritage and uniqueness of each park and trail. It also provides information about what each site has to offer, provides consistency in fabrication methods and materials, and takes into consideration the installation and ongoing maintenance of the signs.</p> <p>This project supports the following aspects of the Official Community Plan: Placemaking as a focus area, Special Places pillar, and the Unique Parks and Open Spaces outcome. This project also addresses the 2022 Parks and Open Space Strategy focus area of Connectivity: Linking People, Community and Nature - Outcome #2: The system is inviting, accessible, and safe, enabling residents and visitors to feel comfortable and connected to the community and the initiative to develop and implement a wayfinding and signage plan for the parks and open space system.</p> <p>The scope of work includes:</p> <ul style="list-style-type: none"> - Designing and completing an analysis per park identification and wayfinding location, - Developing site plans for park identification deployment, - Coordinating with signage vendor and/or in-house services for the fabrications of the signs, - Coordinating installation deployment of Phase 2 with in-house services and; - Preparing a resource management plan for the OBI. 			
				

Program:	Parks Program	Sub-program:	Parks
Project Name:	Paulik Park Development of New Lots	Submission ID:	6372

Location: Paulik Neighbourhood Park (McLennan South Park)

Cost: \$300,000 **OBI:** \$12,510

Funding Sources: Parks Development DCC: \$282,150
 Parks Development City Assist: \$17,850

Scope: The City purchased 7531 and 7511 Ash Street via the Parkland Aquisition program in 2017 to be developed for park use and to further contribute to Paulik Park (previously named McLennan South Park). Upon demolition of the existing facilities, the sites received an interim treatment which included rough grading and grass seed. Further development of the sites would include finished grading, new pathways, a new park entry point, a flexible lawn area with picnic tables, edible native planting and improved integration with the surrounding park site.

This project supports:

- Council Term Goal #2: A Vibrant, Active, and Connected City, Priority 2.3 Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and
- Council Term Goal #3: A Well-Planned Community, Priority 3.2: A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	Terra Nova Rural Park Viewpoint Seating Area	Submission ID:	6371

Location: Terra Nova Rural Park

Cost: \$200,000

OBI: \$ -

Funding Sources: Parks Development DCC: \$188,100
 Parks Development City Assist: \$11,900

Scope: The mound at Terra Nova Rural Park is a key park feature and city-wide viewpoint that offers extensive views of Sturgeon Banks and the Fraser River. In 2018 a temporary seating area was added at the top of the mound in response to a request from the community. This capital request is for development of a long-term seating area that would include a concrete masonry unit and stone seat wall, improved access to the top of the mound and interpretive signage.

This project supports:

- Council's Term Goal #2: A Vibrant, Active, and Connected City, Priority 2.3 - Outstanding places, programs, and services that support active living, wellness and a sense of belonging; and
- Council's Term Goal #3: A Well-Planned Community, Priority 3.2 - A strong emphasis on physical and urban design.



Program:	Parks Program	Sub-program:	Parks
Project Name:	West Cambie Park Phase 2	Submission ID:	6224

Location: West Cambie Planning Area

Cost: \$770,000

OBI: \$22,002

Funding Sources: Parks Development DCC: \$724,185
 Parks Development City Assist: \$45,815

Scope: This submission pertains to West Cambie Neighbourhood Park Phase 2, which will result in the addition of the following amenities:

- a children's playground
- a basketball court
- an off-leash dog park
- a rain garden feature
- circulatory routes
- ecological enhancements to improve habitat quality.

The park is being developed according to a Council-approved plan on March 12, 2018 that has been informed by public consultation, and will expand upon its range of opportunities for social interaction and recreational activities. The park is being constructed in phases in coordination with the expansion of the Alexandra District Energy Utility.

This 6+ acre park currently contains a number of significant trees, pathways, and open lawn, in addition to the Alexandra District Energy Utility Centre building and geo-exchange field.

The following additional work, funded under separate programs, will occur in the future and be coordinated with Parks efforts:

- Pergola Garden: an interactive public art piece
- Expansion of the District Energy Utility geo-exchange field

This project supports Council Term Goals (2014-2018), including Goal #2: A Vibrant, Active, and Connected City, Priority 2.3 - Outstanding places, programs, and services that support active living, wellness and a sense of belonging; Goal #3: A Well-Planned Community, Priority 3.2 - A strong emphasis on physical and urban design, and Priority 3.3 - Effective transportation and mobility networks; and Goal #4: Leadership in Sustainability, Priority 4.2 - Innovative projects and initiatives to advance sustainability.



2019 Recommended Parks – Parkland Program

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Parkland Acquisition..... 105

Program:	Parks Program	Sub-program:	Parkland
Project Name:	Parkland Acquisition	Submission ID:	5473

Location: As per Parks DCC Land Acquisition Plan

Cost: \$4,000,000 **OBI:** \$ -

Funding Sources: Parks Acquisition DCC: \$3,762,000
 Parks Acquisition City Assist: \$238,000

Scope: The purpose of the Parkland Acquisition program is to acquire land for park requirements to address development and population growth. The program is based on the City's population projections as per the OCP with the objective of maintaining the parks provision standard of 7.66 acres/1000 population. The program is funded through Parkland Acquisition Developer Cost Charges (DCC's) and is guided by the Council approved 2009 Park Land Acquisition Strategy which provides the criteria for evaluating proposed acquisitions. Funding is required each year to allow the City to be strategic and responsive as properties become available thus avoiding the need to borrow the funding from other City sources or pass bylaws to release the funds for each acquisition.



Public Art Program 2019

The Public Art Program is a self-sustaining project funded by private development contributions to the Public Art Reserve. Council approved the updated policy (Policy 8703, adopted July 27, 2010) and the Program is supported by a Council appointed Public Art Advisory Committee. The Public Art Program also supports the initiatives expressed in the Richmond Art Strategy 2012 - 2017, which was presented to and supported by Council in September 2012. The above proposal assists in its annual implementation, which is necessary to its success. Private sector, private donations and community contributions are successfully sought and received.

The public art program contributes to the Council Term Goals for 2014 - 2018, for a vibrant, active and connected city through a commitment to strong urban design, investment in public art and place making.

2019 Recommended Public Art Program

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Public Art Program 107

Program:	Public Art Program	Sub-program:	Public Art
Project Name:	Public Art Program	Submission ID:	5431

Location: Various locations

Cost: \$562,722

OBI: \$10,000

Funding Sources: Public Art Program: \$562,722

Scope: The scope of work consists of a variety of public art projects. The following are proposed projects (with estimated costs) which may change during the project's duration based on the Public Art Program's consideration of public art opportunities and priorities, and private development funding.

Community Public Art Projects

Funds from previously received contributions by private developers are proposed to be used as follows:

- Community public art projects: \$50,000
- Community education and promotion of the public art program: \$20,000
- Collaboration on educational opportunities with other City cultural facilities and programs, such as the Richmond Art Gallery, Media Lab, Cultural Centre and Richmond Museum: \$20,000
- Community public art partnerships: \$30,000
- Community Mural Program: \$30,000

Private Development Program

Developer contributions were received and deposited to the Public Art Reserve for implementation of projects integrated with new development, on either private lands or City-controlled land, with the expectation that the majority will be on City-controlled sites (parks, streets, greenways) in the city centre. The cost was determined based on contributions received in 2016-2018, with the net of transfers to the Public Art Provision Reserve for program administration, \$412,722 total, as follows:

- Ampar Ventures - 9451-9551 Bridgeport Road: \$125,769
- Oris Development - Hamilton - Parcels 2 and 3: \$125,368
- Park Riviera - 7691 River Road: \$125,800
- Anthem Properties - 10475-10631 No. 5 Road: \$35,785



Land Program 2019

The land acquisition program relates to the acquisition and disposition of real property for the City, as approved by Council.

2019 Recommended Land – Land Acquisition Program

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Strategic Land Acquisition..... 109

Program:	Land Program	Sub-program:	Land
Project Name:	Strategic Land Acquisition	Submission ID:	5415

Location: Various

Cost: \$10,000,000 **OBI:** \$ -

Funding Sources: Capital Industrial: \$10,000,000

Scope: Funds for land acquisition to meet the Council Approved Strategic Real Estate Investment Plan, other than DCC and other special reserve funded projects, are set aside in the Capital Reserve under the Industrial Use Fund. This capital budget submission is to use land acquisition monies from this fund as well as additional general funds approved by Council.
 \$10 million to be invested in investment class real estate.



Affordable Housing Program 2019

The City recognizes that a diverse range of housing choices for individuals and families of different incomes and circumstances is essential in creating a liveable community in Richmond. The purpose of the City’s Affordable Housing program is to address housing affordability concerns in partnership with senior governments, who have the primary responsibility, the private and non-profit sector. Through various programs and policies, the City has been successful in securing over 2,000 affordable housing units, including the following highlighted developments:

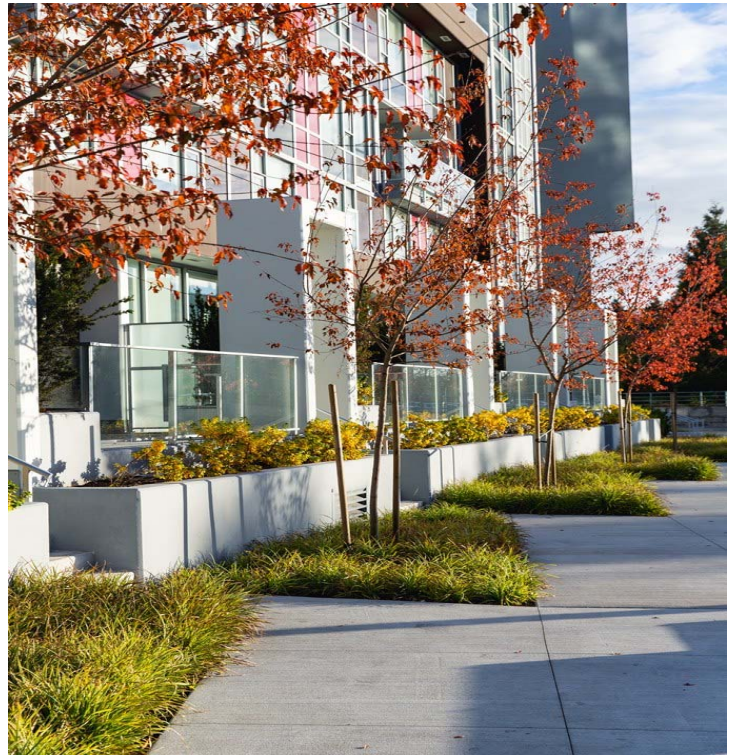
- The Kiwanis Towers, which provides 296 affordable rental units for low-income seniors;
- The Storeys, which provides 129 affordable rental units for Richmond residents at risk of homelessness; and
- The Richmond Temporary Modular Housing Project, which will provide 40 supportive housing units for residents experiencing homelessness.

2019 Recommended Affordable Housing Program

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Program:	Affordable Housing Project		Sub-program:	Affordable Housing
Project Name:	Affordable Housing 2019 Operating Initiatives		Submission ID:	6383
Location:	City Wide			
Cost:	\$350,000	OBI:	\$ -	
Funding Sources:	Affordable Housing: \$350,000			
Scope:	<p>Six Affordable Housing Operating Initiatives are proposed to be funded by the Affordable Housing Operating Reserve Fund.</p> <ol style="list-style-type: none"> 1. Legal Fees (\$50,000) - To offset the costs associated with external legal services required with respect to affordable housing developments and review of operating and housing agreements to be negotiated/entered into. All external legal services will be at the direction of the City's Law department. 2. Printing, Publication, Media and Advertising (\$15,000) - To offset costs associated with printing and publications associated with implementing the Affordable Housing Strategy throughout the course of the year, including meeting traditional and social media needs as they arise. 3. Affordable Housing Economic Analysis (\$15,000) - Throughout the course of the year, the receipt of complex development applications and policy work may require a detailed economic analysis to ensure the City is getting the best value in terms of the provision of affordable housing units. Currently, staff do not have the necessary skill set to undertake detailed economic analysis of complex projects. 4. Rental Housing Inventory Maintenance (\$5,000) - Maintain the rental housing inventory as required (creation of the inventory was approved by Council in October 2016). This inventory was developed by Atira Women's Resource Society and completed in 2018. 5. Homelessness Support (\$15,000) - Continue supporting homelessness initiatives in the community. 6. Affordable Housing Strategy and Homelessness Strategy Administration/Implementation (\$200,000) - Support short-term actions identified in the Affordable Housing Strategy (approved by Council on March 12, 2018). Support actions identified in the Homelessness Strategy, once approved by Council in Q1 2019. 7. Communications and Public Engagement (\$50,000) - Support communication and community engagement (i.e. translation, professional facilitation, engagement consultants) for projects that require extensive public engagement/education. 			



Program:	Affordable Housing Project	Sub-program:	Affordable Housing
Project Name:	Affordable Housing Projects - City-wide	Submission ID:	5480

Location: Various

Cost: \$200,000

OBI: \$ -

Funding Sources: Affordable Housing: \$200,000

Scope: The City's Affordable Housing Strategy 2017 - 2027 and Social Development Strategy 2013 – 2022 outline actions for strategic land acquisition, capital investment and partnering opportunities to support the development of affordable housing projects for the priority groups in need. These groups are defined in the Affordable Housing Strategy and include: families; low-moderate income earners; low-moderate income seniors; persons with disabilities; and vulnerable populations. Specifically, the City will purchase land and financially contribute to various projects as future funding opportunities arise. Past examples of partnership include the Kiwanis Towers, the Storeys Project, the Pathways project, and the emergency shelter expansion and relocation.



Program:	Affordable Housing Project	Sub-program:	Affordable Housing
Project Name:	Affordable Housing Projects - West Cambie	Submission ID:	5537

Location: West Cambie

Cost: \$225,000

OBI: \$ -

Funding Sources: Affordable Housing: \$225,000

Scope: To purchase land and financially contribute to various affordable housing projects in West Cambie as needs are identified, in accordance with the Council adopted Affordable Housing Strategy.



Equipment Program 2019

The equipment program includes machinery and vehicles for Public Works, Fire Rescue Services, City Hall computer hardware, software, and other miscellaneous equipment.

2019 Recommended Equipment – Vehicle Program

Fleet Electrical Charging Infrastructure Installations.....	115
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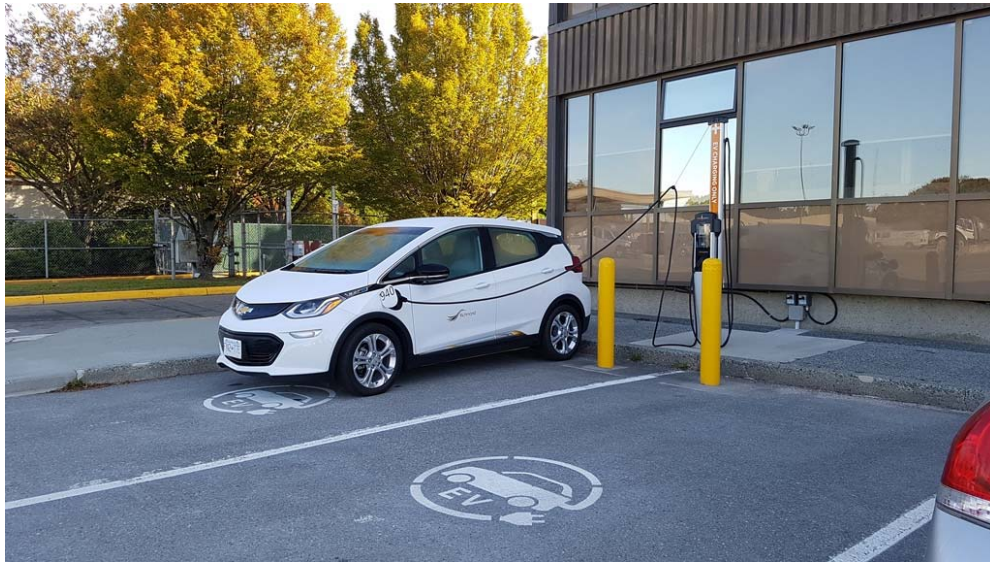
Program:	Equipment Program	Sub-program:	Vehicle
Project Name:	Fleet Electrical Charging Infrastructure Installations	Submission ID:	6390

Location: City Wide

Cost: \$521,700 **OBI:** \$22,000

Funding Sources: Public Works Equipment: \$181,500
Gas Tax: \$340,200

Scope: This project is for the installation of electric vehicle (EV) charging infrastructure and charging stations at City facilities to support vehicle replacements through to 2022.



Program:	Equipment Program	Sub-program:	Vehicle
Project Name:	Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet)	Submission ID:	5735

Location: Works Yard and Various City Departments

Cost: \$3,740,662

OBI: \$38,023

Funding Sources: Drainage Utility: \$150,000
 Public Works Equipment: \$2,790,662
 Sewer Levy: \$300,000
 Water Levy: \$500,000

Scope: This project involves meeting with user groups to establish needs and develop specifications for vehicle/equipment replacements. Bid documentation is then issued to the marketplace, with purchases combined where possible to achieve best value. Submissions are evaluated with user input, and awards are made accordingly. Scope also includes vehicle outfitting as required to coincide with individual user department needs. The work commences upon receiving Council approval, with timing dependent on delivery timeframes/availability of product from successful vendors.

This project involves replacement of the following:
 1 Flusher Truck, 4 heavy duty trucks with dump/flatdeck, 1 heavy duty work van, 3 trailers, 1 small equipment, 2 backhoes/excavators, 4 cars, 3 vans, 5 pickups, 2 buses, 1 utility vehicle, 3 ride on mowers, 1 tractor, 1 vactor, 1 speaker system for stage, 1 dual site control for redundancy backup at fuel pumps, GPS Pilot extension 1 year, salary for special vehicle/equipment related projects, related activities to ensure sound asset management for vehicle tracking (including system upgrades, consultant support, and business process improvements, and unallocated allowance for unplanned.



2019 Recommended Equipment – Fire Vehicle Program

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Fire Vehicle Replacement Reserve Purchases 118

Program:	Equipment Program	Sub-program:	Fire vehicle
Project Name:	Fire Vehicle Replacement Reserve Purchases	Submission ID:	5411

Location: City Wide

Cost: \$2,521,532 **OBI:** \$ -

Funding Sources: Fire Equipment: \$2,521,532

Scope: Front line fire apparatus replacement follows a life cycle replacement schedule based on best practices and industry standards. In addition a condition inspection is conducted annually to evaluate the mechanical status of the vehicles to determine replacement need. To ensure we are able to provide fire services to the community, Richmond Fire-Rescue has a designated "Vehicle & Equipment Reserve". The replacement plan for all apparatus is funded through the reserve.

This replacement plan for 2019 includes a front line quint (75 ft) budgeted at \$1,531,068.

Additionally 4 support vehicles are being replaced at \$140,464, Hazmat Response Vehicle at \$650,000 and two operational support vehicles for \$200,000.



2019 Recommended Information Technology Program

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IPS Mobility - Enterprise Deployment 124

Network Infrastructure Core Refresh 125

Office 2016 Licensing..... 126

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Annual Hardware Refresh	Submission ID:	5477

Location: City Hall

Cost: \$467,700 **OBI:** \$ -

Funding Sources: Hardware Upgrade: \$467,700

Scope: This project scope is to perform the scheduled replacement of end-of-lifecycle City computer hardware, which includes computer desktops, laptops, backup printers, monitors, cellular phones and iPads.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Budget Planning and Monitoring Solution	Submission ID:	6359
Location:	City Hall and Various City Departments		
Cost:	\$1,000,000	OBI:	\$50,000
Funding Sources:	Capital Revolving: \$250,000 Corporate: \$750,000		
Scope:	To acquire and implement a comprehensive budget solution, with integration of actual data from PeopleSoft. This will support the Operating, Utility, and Capital budgets, the 5 Year Financial Plan, the 5 Year Financial Plan Amendment, and facilitate the preparation of the related Reports to Committee, which includes the comprehensive document that is made available in the public consultation process of the Consolidated 5-Year Financial Plan.		
			

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Contract Life Cycle Management	Submission ID:	6355

Location: City Hall and Various City Departments

Cost: \$622,994

OBI: \$80,384

Funding Sources: Capital Revolving: \$622,994

Scope: To acquire and implement a Contract Life Cycle Management (CLCM) solution that will be an end to end solution for Purchasing to more effectively and efficiently manage contract activities.

Currently, the City does not have an efficient or effective system for administering and tracking procurement lifecycle activities or a single repository of contracts. All Request For Proposal (RFP) and contracts are maintained manually in various spreadsheets and documents.

This project is for professional services and software implementation for a CLCM which will:

- Provide effective resource deployment and customer service
- Provide key performance indicators (KPI's) and Reporting to identify bottlenecks, delays and opportunities for improvement in the procurement process.
- Allow greater transparency of the organization's procurement activities
- Streamline and automate time-consuming manual, error prone tasks to increase operational efficiency
- Better mitigate organizational risk through a more systematic process of alerting both Purchasing and Business Units in advance of when contracts are due to expire or renewed.
- Tighter management of contracts and compliance to contract, applicable policies and trade agreements.
- Consolidate corporate spending by reducing duplication, encourage more City-wide collaboration while leveraging the organization's total spend, and enhance monitoring of contracted rates to ensure compliance to contract terms.
- Allow the City to better engage with suppliers through online bidding, evaluations, debriefs and contract performance management.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Digital Strategy Initiatives	Submission ID:	6234

Location: City Hall

Cost: \$900,000 **OBI:** \$25,000

Funding Sources: Capital Revolving: \$900,000

Scope: The 2019 implementation of the Digital Strategy approved by Council to support Council's Term Goal to "Continue to develop and provide programs and services that ensure the Richmond community is well-informed and engaged on City business and decision making". This implementation will build upon the current Digital Strategy foundation and bring on board:

- MyRichmond Let's Talk and Target Content Notifications
- MyRichmond Mobile Application

These initiatives will enhance the customer online portal and give residents access to their accounts and services by phone or tablet through the City's mobile apps. This will reduce volumes to other channels of contact, improve data analytics, and extend the reach of the City.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	IPS Mobility - Enterprise Deployment	Submission ID:	6365

Location: City Wide

Cost: \$507,054 **OBI:** \$51,293

Funding Sources: Computer Equipment: \$507,054

Scope: The activities that this mobile solution will achieve have been outlined in a requirements gathering exercise.

The scope of this project would provide the ability to view and update Infor Public Sector (IPS) related information in the field, such as:

- Improving our responsiveness and communication to customer inquiries,
- Increase the efficiency and accuracy when processing Service Requests, Work Orders, Preventative Maintenance and Asset Inspections
- Empower staff with as much information that is necessary for them to complete scheduled and ad-hoc work activities
- Enable field workers to stay on top of trends, innovation and technology



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Network Infrastructure Core Refresh	Submission ID:	6240

Location: City Hall

Cost: \$481,402 **OBI:** \$18,152

Funding Sources: Hardware Upgrade: \$481,402

Scope: New Network Core Switch technology and implementation of a new design that provides full network redundancy services to all locations on the City network, including City Hall and Works Yard. Network redundancy is a process through which additional or alternate instances of network devices, equipment and communication mediums are installed within network infrastructure. It is a method for ensuring network availability in case of a network device or path failure and unavailability.

Existing edge switches located in floor wiring closets and at other facilities will be integrated to the new Network Core infrastructure.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Office 2016 Licensing	Submission ID:	6428

Location: City Hall

Cost: \$494,909 **OBI:** \$6,573

Funding Sources: Software: \$494,909

Scope: To purchase Office 2016 licensing over a 2 year period for City staff requirements (single desktop user and users with more than 2 devices - desktop, tablet, cell phone etc).



2019 Recommended Equipment Program

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Fire Equipment Replacement - Fire Hose..... 131

Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Digital Radio Hardware and Licensing	Submission ID:	6524

Location: Emergency Programs

Cost: \$146,250

OBI: \$8,400

Funding Sources: Other Equipment: \$146,250

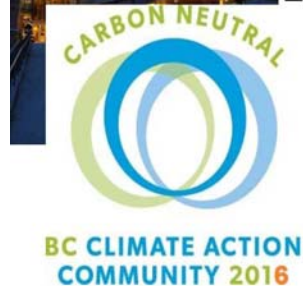
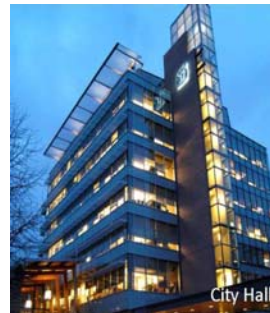
Scope: Replacement of the handheld commercial radios acquired in 2010 for use during the Olympics to ensure inter-agency communications. Since then, the analog repeater has been replaced by a digital repeater. The current handheld radios are obsolete.


Handheld radios are used by city community groups to ensure functionality of the system, but also become familiar with using radios for communications. With the increase in functional use of the commercial radios, 200 handheld radios are anticipated with growth in Community Preparedness and partnership with School District 38. Having functional hardware is the cornerstone of ensuring communications are established between partners, striving to meet Council Term Goal #5: Partnership and Collaboration.

Commercial radio would supplement emergency communications as a tool during a response and recovery to ensure participating agencies are able to connect with the City.



Program:	Equipment Program		Sub-program:	Equipment
Project Name:	Energy Management Projects - Gas Equipment Replacement and Upgrade Phase 1		Submission ID:	6370
Location:	Various Locations			
Cost:	\$675,000	OBI:	(\$19,800)	
Funding Sources:	Capital Revolving:	\$345,000		
	Enterprise:	\$180,000		
	Carbon Tax:	\$150,000		
Scope:	<p>This project consists of replacing and upgrading natural gas using equipment at the select facilities listed below that is inefficient and/or near their end of servicable life. As well as some new efficiency measures to reduce corporate gas use.</p> <ol style="list-style-type: none"> 1. Britannia Heritage Complex - upgrade controls and heaters 2. City Hall - install exhaust heat recovery 3. South Arm Community Centre - install exhaust heat recovery 4. Steveston Tennis Shed - upgrade controls 5. Thompson Community Hall - heating equipment replacement 6. Works Yard - upgrade controls and heating equipment <p>Council set a target to reduce building related GHG emissions by 65% by 2020 from 2007 levels. These planned measures are anticipated to reduce GHG emissions by approximately 170 tonnes of CO2e annually - equal to 4.0% of the corporate 2020 target, and are estimated to save \$20,000 annually in energy cost avoidance savings.</p> <p>As compared to the costs of replacing this equipment with similar efficiency gas using models, the estimated incremental costs to replace this equipment with higher efficient and less natural gas using equipment is \$270,000.</p> <p>The value of these emissions reductions to the City is at a minimum \$6,000 annually, at cost of \$35/tonne of GHG emissions. This value is expected to rise over the coming years, through increases to the Provincial carbon tax.</p> <p>In order to reduce the needed funding from the Capital Reserve - Revolving Fund, capital funding for this project is also being requested from Carbon Tax Provision (\$150,000) and the Enterprise Fund (\$180,000) accounts.</p>			



Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Fire Equipment Replacement - Auto Extrication Equipment	Submission ID:	6523
Location:	Fire-Rescue		
Cost:	\$170,000	OBI:	\$55,250
Funding Sources:	Fire Equipment: \$170,000		
Scope:	<p>Richmond Fire-Rescue (RFR) provides emergency road rescue services to the community as a core service. As a component of road rescue services, RFR staff provide extrication services that require equipment capable of cutting the metal components of a vehicle damaged in a traffic accident away from a person who is trapped within a vehicle. In the past, RFR has used equipment that require hydraulic pumps, hoses and cord reels which are replaced on a seven year rotation. Currently there are 6 vehicles that have the hydraulic equipment as part of their inventory these units are several years past their normal end of life. RFR requires the replacement of Auto Extrication equipment on all 6 vehicles as this equipment works at high pressure and failure is a significant safety risk. RFR will replace the current equipment with the new industry standard which is battery powered (opposed to hydraulic) which is cost effective, operationally efficient and safer for both the public and responders.</p>		
			

Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Fire Equipment Replacement - Fire Hose	Submission ID:	5412

Location: Various Fire Halls

Cost: \$27,325

OBI: \$ -

Funding Sources: Fire Equipment: \$27,325

Scope: Fire Hose is replaced using a multi faceted consideration criterion. The age of the hose, the use of the hose as well as testing results are used to determine the replacement of deteriorating fire hose. To ensure operational readiness based on these criteria, 30 lengths are required.

To ensure we are able to provide fire services to the community, Richmond Fire-Rescue (RFR) maintains an inventory of hose. Hose Replacement is planned and funded by the Fire Equipment Reserve for 2019.



Child Care Program 2019

Child care is an important service for Richmond residents and an essential need for many parents. The 2017-2022 Richmond Child Care Needs Assessment and Strategy was adopted by City Council on July 24, 2017 and outlines the City’s commitment to child care through the establishment and maintenance of a comprehensive child care system to help children and families thrive and to address the need for quality, affordable, accessible child care spaces in Richmond.

The City supports the creation of child care spaces by accepting voluntary contributions from developers in the form of built child care facilities or cash in lieu contributions to the Child Care Statutory Reserves. The City manages and maintains nine existing City-owned child care facilities and is in the process of developing two additional City-owned child care facilities and two Early Childhood Development Hubs. Dedicated City staff resources help to develop, maintain and support the child care system in Richmond. Child Care grants support the work of non-profit child care providers seeking to improve the quality or capacity of care in their facility, or non-profit societies supporting quality programming and/or providing professional development opportunities for the broader child care community in Richmond.

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Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care - Administration	Submission ID:	6398

Location: City Hall

Cost: \$100,000

OBI: \$ -

Funding Sources: Child Care Development Reserve: \$100,000

Scope: Child Care - Administration: A source of funding is required to assist the implementation of specific actions adopted by Council in the 2017-2022 Richmond Child Care Needs Assessment and Strategy. These funds will be used to pay for costs related to: expenses to support the child care work program; research; production of reports; consultant fees to provide additional advice for finalizing the City's updated child care design guidelines and developer resources; and to support the ongoing development of four new amenities under development including two Early Childhood Development (ECD) Hubs and two additional child care facilities.

The Child Care Operating Reserve is an appropriate source of funding for such expenses. It was established to support grants, conduct research and fund expenses to support the development of quality child care within the City.



Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care Projects - City-wide (Capital Grants)	Submission ID:	5527


Location: Various

Cost: \$50,000 **OBI:** \$ -

Funding Sources: Child Care Development Reserve: \$50,000

Scope: To ensure there is sufficient funding available to administer the City's Child Care Capital Grants Program.



Program:	Child Care Program	Sub-program:	Child Care
Project Name:	Child Care Projects - City-wide (Non-Capital Grants)	Submission ID:	6142
Location:	Various		
Cost:	\$10,000	OBI:	\$ -
Funding Sources:	Child Care Development Reserve: \$10,000		
Scope:	To ensure there is sufficient funding to support the 2019 Child Care Professional and Program Development Grants (non-capital). Grants are advertised in September 2018 and with Council approval, awarded in February 2019.		
			

Contingent External Contributions 2019

Contingent external contributions is an estimate of external grants that may be received throughout the year for a variety of approved capital projects.

2019 Recommended Contingent External Contributions

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Contingent External Contribution 137

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment
Project Name:	Contingent External Contribution	Submission ID:	5811
Location:	City Wide		
Cost:	\$10,000,000	OBI:	\$ -
Funding Sources:	Grant: \$10,000,000		
Scope:	<p>The Financial Plan includes an estimate for external grants that may be received throughout the year for various projects. Spending will only occur if the funds are confirmed. Including an estimate in the Financial Plan will allow staff to request scope changes to existing projects without having to wait until the Bylaw Amendment, which is typically adopted in the fall.</p>		

Internal Transfers/Debt Payment Program 2019

The internal transfers/debt program relates to the use of capital funding for repayment of capital funds borrowed from other internal sources of funding.

2019 Recommended Internal Transfers/Debt Payment Program

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Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	12040 Horseshoe Way Repayment		Submission ID:	6322		
Location:	12040 Horseshoe Way					
Cost:	\$525,000	OBI:	\$ -			
Funding Sources:	Affordable Housing: \$525,000					
Scope:	<p>The purpose of this submission is to repay the Capital Reserve - Industrial Use Fund for the previous Affordable Housing acquisition of 12040 Horseshoe Way from the Affordable Housing Reserve.</p> <p>The 2019 payment of \$525,000 is the 2nd of 15 payments.</p>					
	Payments	Year	Balance	Payment	Interest	Principal
	1	2018	6,250,000	(525,000)	187,500	337,500
	2	2019	5,912,500	(525,000)	177,375	347,625
	3	2020	5,564,875	(525,000)	166,946	358,054
	4	2021	5,206,821	(525,000)	156,205	368,795
	5	2022	4,838,026	(525,000)	145,141	379,859
	6	2023	4,458,167	(525,000)	133,745	391,255
	7	2024	4,066,912	(525,000)	122,007	402,993
	8	2025	3,663,919	(525,000)	109,918	415,082
	9	2026	3,248,837	(525,000)	97,465	427,535
	10	2027	2,821,302	(525,000)	84,639	440,361
	11	2028	2,380,941	(525,000)	71,428	453,572
	12	2029	1,927,369	(525,000)	57,821	467,179
	13	2030	1,460,190	(525,000)	43,806	481,194
	14	2031	978,996	(525,000)	29,370	495,630
	15	2032	483,366	(497,867)	14,501	483,366

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	7080 River Road Repayment		Submission ID:	6016		
Location:	7080 River Road					
Cost:	\$2,341,384		OBI:	\$ -		
Funding Sources:	Parks Acquisition DCC: \$2,202,072		Parks Acquisition City Assist: \$139,312			
Scope:	<p>The purpose of this submission is to repay the Capital Reserve - Industrial Use Fund for previous Parkland Acquisitions from Parkland Acquisition Developer Cost Charges (DCC's).</p> <p>The 2019 payment of \$2,341,384 is the 3rd of 8 payments.</p>					
	Payments	Year	Balance	Payment	Interest	Principal
	1	2017	15,763,942	(2,341,384)	630,558	1,710,826
	2	2018	14,053,116	(2,341,384)	562,125	1,779,259
	3	2019	12,273,857	(2,341,384)	490,954	1,850,430
	4	2020	10,423,427	(2,341,384)	416,937	1,924,447
	5	2021	8,498,980	(2,341,384)	339,959	2,001,425
	6	2022	6,497,555	(2,341,384)	259,902	2,081,482
	7	2023	4,416,073	(2,341,384)	176,643	2,164,741
	8	2024	2,251,332	(2,341,384)	90,052	2,251,332

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment
Project Name:	9540 Alexandra Road and 9560 Odlin Road	Submission ID:	6339
Location:	9540 Alexandra Road and 9560 Odlin Road		
Cost:	\$2,100,000	OBI:	\$ -
Funding Sources:	Parks Acquisition DCC: \$2,100,000		
Scope:	<p>The purpose of this submission is to repay the DCC Park Land Acquisition General Fund for the previous acquisition of 9540 Alexandra Road and 9560 Odlin Road from the DCC Park Land Acquisition West Cambie fund.</p> <p>The current balance outstanding as of 2018 is \$2,582,705 based on calculated interest. Outstanding amounts will vary dependant on repayment terms based on interest calculated.</p> <p>The 2019 payment will be \$2,100,000. The future actual payment amount is contingent on actual funds available in the DCC Park Land Acquisition West Cambie fund.</p>		

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment			
Project Name:	Nelson Road Interchange Repayment	Submission ID:	5498			
Location:	Finance					
Cost:	\$385,098	OBI:	\$ -			
Funding Sources:	Roads DCC: \$385,098					
Scope:	A total of \$2.54M is to be repaid from Roads DCC to Surplus over 8 years.					
	The 2019 payment of \$385,098 is the 6th of 8 equal payments.					
	Payment	Year	Balance	Payment	Interest	Principal
	1	2014	\$2,540,065	\$(385,098)	114,303	270,795
	2	2015	\$2,269,270	\$(385,098)	102,117	282,981
	3	2016	\$1,986,289	\$(385,098)	89,383	295,715
	4	2017	\$1,690,574	\$(385,098)	76,076	309,022
	5	2018	\$1,381,552	\$(385,098)	62,170	322,928
	6	2019	\$1,058,624	\$(385,098)	47,638	337,460
	7	2020	\$ 721,164	\$(385,098)	32,452	352,646
	8	2021	\$ 368,518	\$(385,098)	16,583	368,515

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	River Road/North Loop (2005) Repayment		Submission ID:	2344		
Location:	Finance					
Cost:	\$1,685,056		OBI:	\$ -		
Funding Sources:	Roads DCC: \$1,685,056					
Scope:	<p>In 2005, \$18.2M was borrowed from surplus for the acquisition of the CP Rail land between No. 2 and No. 3 Road and for the re-alignment of River Road.</p> <p>This \$18.2M was separated as \$17.1M borrowed in 2005 with repayments commencing in 2006 and a second amount of \$950,000 beginning repayment in 2008. A total of \$18.2M is to be repaid from Roads DCCs to Surplus over 18 years.</p> <p>The 2019 payment of \$1,685,056 is the 14th of 18 payments.</p>					
	Payments	Year	Balance	Payment	Interest	Principal
	1	2006	17,100,000	(1,769,576)	598,500	1,171,076
	2	2007	15,928,924	(1,200,000)	557,512	642,488
	3	2008	16,236,436	(1,867,000)	568,275	1,298,725
	4	2009	14,937,712	(1,867,000)	522,820	1,344,180
	5	2010	13,593,532	(468,210)	475,774	(7,564)
	6	2011	13,601,095	(300,000)	476,038	(176,038)
	7	2012	13,777,133	(200,000)	482,200	(282,200)
	8	2013	14,059,333	(1,939,202)	492,077	1,447,125
	9	2014	12,612,208	(1,317,000)	441,427	875,573
	10	2015	11,736,635	(1,685,056)	410,782	1,274,274
	11	2016	10,462,361	(1,685,056)	366,183	1,318,873
	12	2017	9,143,488	(1,685,056)	320,022	1,365,034
	13	2018	7,778,454	(1,685,056)	272,246	1,412,810
	14	2019	6,365,644	(1,685,056)	222,798	1,462,258
	15	2020	4,903,386	(1,334,953)	171,618	1,163,335
	16	2021	3,740,051	(1,334,953)	130,902	1,204,051
	17	2022	2,536,000	(1,334,953)	88,760	1,246,193
	18	2023	1,289,807	(1,334,950)	45,143	1,289,807

Program:	Internal Transfers/Debt Payment		Sub-program:	Internal Transfers/Debt Payment		
Project Name:	Shovel - Ready Grant (2009) Repayment Lansdowne Road Extension		Submission ID:	3784		
Location:	Finance					
Cost:	\$77,254	OBI:	\$ -			
Funding Sources:	Roads DCC: \$77,254					
Scope:	A total of \$626,666 is to be repaid from Roads DCC to the Watermain Replacement Reserve over 10 years.					
	The 2019 payment of \$77,254 is the 10th of 10 equal payments					
	The loan amortization schedule is:					
	Payment	Year	Balance	Payment	Interest	Principal
	1	2010	626,666	\$(77,263)	25,067	52,196
	2	2011	574,470	\$(77,263)	22,979	54,284
	3	2012	520,185	\$(77,263)	20,807	56,456
	4	2013	463,730	\$(77,263)	18,549	58,714
	5	2014	405,016	\$(77,263)	16,201	61,062
	6	2015	343,954	\$(77,263)	13,758	63,505
	7	2016	280,449	\$(77,263)	11,218	66,045
	8	2017	214,404	\$(77,263)	8,576	68,687
	9	2018	145,717	\$(77,263)	5,829	71,434
	10	2019	74,283	\$(77,254)	2,971	74,283

Program:	Internal Transfers/Debt Payment	Sub-program:	Internal Transfers/Debt Payment
Project Name:	City Centre Community Police Office	Submission ID:	6583
Location:	City Centre		
Cost:	\$5,100,000	OBI:	\$ -
Funding Sources:	City Centre Facility: \$5,100,000		
Scope:	<p>At the Council meeting on September 24, 2018, Council approved the following:</p> <ul style="list-style-type: none"> (1) <i>That Council approve the Enhanced City Centre Community Police Office project in the amount of \$5.1 million, to be funded from the Capital Building and Infrastructure Reserve as outlined in the staff report titled "Temporary Funding for the Enhanced City Centre Community Police Office" from the General Manager, Community Safety, dated August 16, 2018; and</i> (2) <i>That the future repayment of the \$5.1 million and interest to the Capital Building and Infrastructure Reserve be funded from the voluntary developer amenity contributions and received from the developer of RZ 15-692485, at 7960 Alderbridge Way and 5333, 5411 No. 3 Road (South Street Development).</i> <p>The City received the cash-in-lieu contribution from the developer of RZ 15-692485 which was deposited to the City Centre Facility Development Fund.</p> <p>The 2019 payment will be \$5,100,000 from the City Centre Facility Development Fund to Capital Building and Infrastructure Reserve Fund.</p>		

Building Program 2019 – Not Recommended

Due to funding constraints and higher priority projects, the following building projects are not recommended for funding.

2019 Not Recommended Building – Building Program

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Community Safety Building Heat Pump Replacement	147
Roofing and Infrastructure Replacements	148

NOT RECOMMENDED

Program:	Building Program	Sub-program:	Building
Project Name:	Community Safety Building Heat Pump Replacement	Submission ID:	6386

Location: 11411 No. 5 Road

Cost: \$459,000 **OBI:** \$ -

Funding Sources: Capital Revolving: \$459,000

Scope: The heat pump system in this facility has reached the end of its life expectancy. They are unreliable with frequent failures, and some components are not available locally. These system renewals will also include associated miscellaneous items that will extend the life of the building. This capital submission is for the replacement of Heat Pump #2. There are 4 heat pumps in total:

- Heat Pump 4 was replaced in May 2018, funded through capital project.
- Heat Pump 1 is scheduled to be replaced in December 2018, funded through Facility Services Operational Maintenance and Repair Budget.
- Heat Pump 2 is proposed to be replaced in 2019 through capital.
- Heat Pump 3 is proposed to be replaced in 2020 through capital.

If one of the heat pumps fail, the cooling system will not have the capacity to provide sufficient cooling to the building in the summer months.



Program:	Building Program	Sub-program:	Building
Project Name:	Roofing and Infrastructure Replacements	Submission ID:	5519

Location: City Wide

Cost: \$277,000 **OBI:** \$ -

Funding Sources: Building and Infrastructure: \$277,000

Scope: Multiple building systems have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items such as fall protection systems that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

West Richmond Pitch and Putt (9751 Pendleton Road) - This facility was constructed in 1975 and following a building assessment, the roof is well past its life expectancy. The roof will be replaced as well as miscellaneous related building systems.

Terra Nova South Caretaker Roof (2491 Westminister Hwy) - Parks Programs requested that the roof on this caretaker facility be replaced as it is over 30 years old and has reached the end of its serviceable life. The request was reviewed and confirmed by Facility Services. The existing roof will be removed and replaced with a new one.

South Arm Community Hall Roof (9020 Williams Road) - This facility constructed in 1966 and the roof most recently replaced in 1983. This roof is past its serviceable life span and will be replaced with a new one.



Parks Program 2019 – Not Recommended

Due to funding constraints and higher priority projects, the following parks projects are not recommended for funding.

2019 Not Recommended Parks – Parks Program

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Garry Point Waterfront Floating Dock Construction.....	150
No. 3 Road Boulevard Beautification (Sunnymede Gate)	151

NOT RECOMMENDED

Program:	Parks Program	Sub-program:	Parks
Project Name:	Garry Point Waterfront Floating Dock Construction	Submission ID:	6070

Location: Garry Point Park Waterfront Development

Cost: \$4,200,000

OBI: \$22,600

Funding Sources: Capital Revolving: \$4,200,000

Scope: At the November 14, 2017 Council Meeting, the report titled "2017 Garry Point Legacy Pier and Floating Dock" was adopted by Council. Staff was directed to proceed with the planning, design and capital submission for a new breakwater floating dock at Garry Point Park. Scope of work includes the design and construction of a 30 x 600-foot floating dock and 10-foot wide gangway ramps. This project will support both maritime and special events allowing the public to access the water's edge or recreationally fish at one of Richmond's most desirable riverfront locations. The structure will be engineered to accommodate vehicle access, large vessels and approach landing areas.

During the planning phase for this project, with consideration of its location in proximity to the open channel leading into the Strait of Georgia, staff was directed to design a removable perimeter guard rail system around the dock that would provide a limited safety barrier.

Estimated costs:

Float Construction	\$4,000,000
Design, engineering, permitting and contingencies	<u>\$200,000</u>
Total	<u><u>\$4,200,000</u></u>

This proposed legacy project is responsive to Council's adopted Steveston Waterfront Strategy vision of: "A world-class, internationally recognized maritime waterfront that respects the past and lives the future." The Steveston Waterfront area, with its working fishing harbour, historic village centre, active street life, festivals and beautiful riverfront setting, will be a unique and popular place to live, work and play, and a key visitor destination for the region.



Program:	Parks Program	Sub-program:	Parks
Project Name:	No. 3 Road Boulevard Beautification (Sunnymede Gate)	Submission ID:	6402

Location: 8000-8200 Block of No. 3 Road (west side)

Cost: \$150,000

OBI: \$ -

Funding Sources: Capital Revolving: \$150,000

Scope: The scope of work for this project includes the removal of approximately 260 lineal metres of hedge that has grown too large for its street side location and is in decline. The hedge is located on a median that separates a side road subsection of No. 3 Road, that provides access to the Sunnymede subdivision and the main travel lanes. The hedge has outgrown the median creating poor sightlines and has generated a number of complaints from nearby residents. The hedge will be replaced with a species of cedar shrub that is smaller and narrower at maturity. It will provide the same level of screening between the roads but will not become overgrown.

Construction Estimate:

Labour, equipment and materials	\$70,000
Landscaping and tree planting	\$60,000
Contingency	\$20,000
Total	\$150,000



Equipment Program 2019 – Not Recommended

Due to funding constraints and higher priority projects, the following equipment projects are not recommended for funding.

2019 Not Recommended Equipment – Equipment Program

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Inter-Agency Command Vehicle Replacement.....	153
Triple Flail Mower Equipment Purchase	154

NOT RECOMMENDED

Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Inter-Agency Command Vehicle Replacement	Submission ID:	6478

Location: Various Locations

Cost: \$1,140,000

OBI: \$ -

Funding Sources: Capital Revolving: \$34,117
Other: \$1,105,883

Scope: An Inter-Agency Command Vehicle is a mobile Incident Command Post for emergency response and support operations for use by Richmond Fire, RCMP, BC Ambulance Service, Public Works, Coast Guard and Emergency Programs.

The vehicle operates as both a dispatch centre and a command centre to provide incident commanders with access to multiple communication systems in a fully integrated command centre.

The City of Richmond utilized a 1997 Inter-Agency Command Vehicle that was years beyond the end of its expected life cycle. The vehicle had cracks in the exterior facade due to the age of the vehicle and exposure to the elements. These cracks were identified in 2014 as the source for the black mould that appeared in the main cabin and was ultimately taken out of service for this reason.

Replacement of this vehicle is needed as the loss of the Inter-Agency Command Vehicle has impaired the City’s ability to respond to emergencies or disasters in a coordinated manner resulting in potentially higher response costs and a poorer response.



Program:	Equipment Program	Sub-program:	Equipment
Project Name:	Triple Flail Mower Equipment Purchase	Submission ID:	6563

Location: Various

Cost: \$150,000 **OBI:** \$80,019

Funding Sources: Capital Revolving: \$150,000

Scope: Currently Parks Operations utilizes three long arm flail mowers which are designed to mow our dikes, ditches and small rough areas within the City, roadway and Parks systems. Over the last several years, parks asset areas have expanded and parks designs have changed incorporating large tracks of passive grass areas requiring different types of equipment to maintain these passive grass areas. These Parks include Terra Nova, Railway Greenway, Garden City Lands, traffic circle interfaces etc. With the replacement and upgrade of one of the existing flail units to a large surface triple flail mower, we can meet the demands of these large grass areas more efficiently.



NOT

Information Technology Program 2019 – Not Recommended

Due to funding constraints and higher priority projects, the following information technology projects are not recommended for funding.

2019 Not Recommended Information Technology – Information Technology Program

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Business Continuity Remote Access	156
Production System Test Environment.....	157

NOT RECOMMENDED

Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Business Continuity Remote Access	Submission ID:	6364

Location: City Hall

Cost: \$304,835 **OBI:** \$24,275

Funding Sources: Capital Revolving: \$304,835

Scope: To support the City's business continuity planning by providing remote access to City business applications for staff who are unable to be physically onsite, during a serious incident or afterhours. This initiative will implement a remote access desktop environment which will be securely accessible by all employees offsite, enabling access to work files and applications remotely. The functionality will enable business continuity, increased security access, updated hardware, and improved disaster recovery capabilities.



Program:	Equipment Program	Sub-program:	Information Technology
Project Name:	Production System Test Environment	Submission ID:	6363

Location: City Hall

Cost: \$368,000 **OBI:** \$25,500

Funding Sources: Capital Revolving: \$368,000

Scope: To design and implement a full test environment to mimic the City's production environment which will allow testing of any system changes without impacting users.



NOT RECOMMENDED

CITY OF RICHMOND
5 YEAR CAPITAL PLAN SUMMARY (2019 - 2023)
(in \$000s)

	2019	2020	2021	2022	2023
Infrastructure Program					
Roads	14,975	10,299	11,591	9,936	9,595
Drainage	11,242	14,454	14,578	16,755	23,408
Water	6,194	7,318	9,000	8,665	8,445
Sanitary Sewer	1,433	10,353	7,250	6,390	6,250
Infrastructure Advanced Design and Minor Public Works	3,955	3,880	3,780	3,780	3,780
Total Infrastructure Program	\$ 37,799	\$ 46,304	\$ 46,199	\$ 45,526	\$ 51,478
Building Program					
Building	20,917	109,370	13,100	21,231	15,000
Total Building Program	\$ 20,917	\$109,370	\$ 13,100	\$ 21,231	\$ 15,000
Parks Program					
Parks	7,820	4,750	6,380	3,850	3,900
Parkland	4,000	4,000	4,000	2,000	2,000
Total Parks Program	\$ 11,820	\$ 8,750	\$ 10,380	\$ 5,850	\$ 5,900
Public Art Program	\$ 563	\$ 150	\$ 150	\$ 150	\$ 150
Land Program	\$ 10,000	\$ 10,000	\$ 10,000	\$ 5,000	\$ 5,000
Affordable Housing	\$ 775	\$ 625	\$ 625	\$ 625	\$ 625
Equipment Program					
Vehicle	4,262	2,637	2,528	2,334	3,995
Fire Vehicle	2,521	716	1,185	1,221	1,257
Information Technology	4,474	860	455	460	516
Equipment	1,019	578	2,099	580	581
Total Equipment Program	\$ 12,276	\$ 4,791	\$ 6,267	\$ 4,595	\$ 6,349
Child Care Program	\$ 160	\$ 60	\$ 60	\$ 60	\$ 60
Internal Transfers/Debt Payment	\$ 12,214	\$ 4,586	\$ 4,587	\$ 4,201	\$ 4,201
Contingent External Contributions	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Total Capital Program	\$ 116,524	\$194,636	\$101,368	\$97,238	\$98,763

CITY OF RICHMOND
5 YEAR CAPITAL PLAN BY FUNDING SOURCES (2019 - 2023)
(in \$000s)

	2019	2020	2021	2022	2023
DCC Reserves					
Drainage DCC	466	464	-	-	1,057
Park Development DCC	4,092	2,869	1,740	2,822	2,774
Park Development DCC – West Cambie	724	-	969	-	188
Park Land Acquisition DCC	8,064	5,964	5,964	4,083	4,083
Roads DCC	8,898	6,405	8,052	5,788	5,791
Sanitary DCC	-	1,175	1,428	149	-
Water DCC	708	138	1,798	812	-
Total DCC	\$22,952	\$17,015	\$19,951	\$13,654	\$13,893
Statutory Reserves					
Affordable Housing	1,300	1,150	1,150	1,150	1,150
Capital Building and Infrastructure	13,845	44,520	10,450	20,131	11,600
Capital Reserve	15,395	73,800	16,399	9,312	7,778
Child Care	160	60	60	60	60
Drainage Improvement	11,428	13,904	14,383	17,314	22,380
Equipment Replacement	6,404	2,832	3,392	3,310	4,833
Leisure Facilities	7,611	5,400	2,000	-	3,400
Neighbourhood Improvement	184	-	-	-	-
Public Art Program	563	150	150	150	150
Sanitary Sewer	1,650	10,477	7,022	6,791	7,500
Watermain Replacement	7,388	7,556	7,689	8,234	8,655
Total Statutory Reserves	\$65,928	\$159,849	\$62,695	\$66,452	\$67,506
Other Sources					
Enterprise Fund	180	550	550	550	550
Grant and Developer Contribution	12,847	10,125	10,125	10,125	10,125
Other Sources	7,624	4,957	4,587	4,592	4,649
Rate Stabilization	5,743	-	1,320	-	-
Sewer Levy	300	50	100	-	50
Solid Waste and Recycling	300	300	300	300	300
Water Levy	650	1,790	1,740	1,565	1,690
Total Other Sources	\$27,644	\$17,772	\$18,722	\$17,132	\$17,364
Total Capital Program	\$116,524	\$194,636	\$101,368	\$97,238	\$98,763

City of Richmond
5 Year Capital Plan by Program
(in \$000s)

	2019	2020	2021	2022	2023
Infrastructure Program					
Roads					
Accessible Pedestrian Signal Program	250	250	-	-	-
Active Transportation Improvement Program	1,000	600	600	600	600
Annual Asphalt Re-Paving Program - MRN	1,151	1,151	1,151	1,151	1,151
Annual Asphalt Re-Paving Program - Non-MRN	3,131	2,982	2,982	2,982	2,982
Arterial Roadway Improvement Program	450	350	350	350	350
Bridge Rehabilitation Program	300	300	300	643	300
City-wide Cycling Network Plan	150	-	-	-	-
Citywide Street Light Replacement and Sidewalk Repair Program	-	500	500	500	500
Francis Road Enhancements, from St. Albans Road to Garden City Road	-	-	2,000	-	-
Garden City Road Pedestrian and Cyclist Enhancements, Westminster Highway to Lansdowne Road	1,000	-	-	-	-
LED Street Name Sign Program	200	200	200	200	200
Neighbourhood Walkway Program	500	500	500	500	500
Road Weather Information System	260	-	-	-	-
Special Crosswalk Program	350	350	350	350	350
Steveston Highway Multi-Use Pathway, Shell Road to Mortfield Gate	2,000	-	-	-	-
Streetlight LED Upgrade Program	430	460	-	-	-
Traffic Calming Program	150	150	150	150	150
Traffic Signal Power Backup System (UPS)	100	100	100	100	100
Traffic Signal Pre-emption Program	-	100	100	100	100
Traffic Signal Program	1,350	1,200	1,200	1,200	1,200
Traffic Video and Communication Program	400	400	400	400	400
Transit-Related Amenity Improvement Program	50	50	50	50	50
Transit-Related Roadway Improvement Program	400	400	400	400	400
Transportation Planning, Functional and Preliminary Design	253	256	258	260	262
Westminster Highway Pedestrian and Cyclist Enhancements, Smith Crescent to Fraserside Gate	1,100	-	-	-	-
Total Roads	\$14,975	\$10,299	\$11,591	\$9,936	\$9,595
Drainage					
Aztec Street Drainage Upgrade	-	-	1,260	-	-
Box Culvert Repair	-	1,000	-	1,000	-
Burkeville Utility Upgrades	-	2,486	2,495	1,741	2,271
Canal Stabilization	-	2,375	-	-	-
Development Coordinated Works - Drainage	250	250	250	250	250
Drainage Pump Station Generator Upgrade	-	-	130	130	130
Drainage Pump Station Rehabilitation	-	250	250	250	250
East Richmond Drainage and Irrigation Upgrades	-	300	300	300	-

	2019	2020	2021	2022	2023
Ewen Road Pump Station Upgrade	-	-	-	-	8,520
Flood Protection and Dike Improvements	5,100	3,300	3,300	3,300	2,000
Headwall Replacement and Ditch Infills	-	300	-	-	-
Heather Street Improvement	1,757	-	-	-	-
Invasive Species Management	220	175	175	175	175
Laneway Drainage Upgrade - 10,000 Block No. 4 Road	-	-	-	-	374
Laneway Drainage Upgrade - Afton Drive (North)	1,373	-	-	-	-
Laneway Drainage Upgrade - Aintree Crescent (East)	-	-	-	-	578
Laneway Drainage Upgrade - Ashwood Drive/Francis Road	-	-	803	-	-
Laneway Drainage Upgrade - Bates Road - East Lane	-	-	740	-	-
Laneway Drainage Upgrade - Bates Road - South Lane	-	-	-	597	-
Laneway Drainage Upgrade - Greenlees East Lane	-	313	-	-	-
Laneway Drainage Upgrade - Herbert East Lane	542	-	-	-	-
Laneway Drainage Upgrade - Reeder Road	-	-	-	432	-
McCallan Road North Pump Station Upgrade	-	-	-	-	8,860
Montego Street Drainage Upgrades	-	1,575	-	-	-
No. 6 Road South Pump Station Upgrade	-	-	-	8,580	-
Steveston Highway and Gilbert Road Pump Station Upgrade	-	2,000	-	-	-
Steveston Highway and No. 3 Road Pump Station Upgrade	2,000	-	-	-	-
Williams Road 6000 Block Drainage Pipe Upgrade	-	-	500	-	-
Woodhead Road Drainage Upgrade	-	-	1,855	-	-
Drainage Pump Station Upgrade (Generator)	-	130	-	-	-
No. 9 Road and Westminster Highway Drainage (Dog Kennels) Pump Station	-	-	2,520	-	-
Total Drainage	\$11,242	\$14,454	\$14,578	\$16,755	\$23,408
Water					
Development Coordinated Works - Water	250	250	250	250	250
Emergency Water Supply	150	-	-	-	-
Pressure Reducing Valve Upgrades	-	-	-	1,000	-
Water Metering Program	-	1,890	1,890	1,890	1,890
Watermain Replacement Program	5,394	4,778	6,560	5,225	6,005
Watermain Tie-in and Restoration	400	400	300	300	300
Total Water	\$6,194	\$7,318	\$9,000	\$8,665	\$8,445
Sanitary Sewer					
Aquila Road Sanitary Sewer Replacement	-	-	-	160	-
Bennett West Pump Station Replacement	-	2,190	-	-	-
Burkeville Utility Upgrades	1,133	-	-	-	-
Development Coordinated Works - Sanitary	150	250	250	250	250
Fibre Reinforced Plastic Gravity Sewer Replacement	-	-	-	1,800	1,800
Gravity Sanitary Sewer Upgrade on River Road / Beckwith Road / Charles Street	-	-	2,500	-	-
Gravity Sewer Assessment and Upgrade Program	-	250	250	250	250
Hammersmith Forcemain Replacement	-	1,200	-	-	-

	2019	2020	2021	2022	2023
Leslie Pump Station Replacement	-	2,913	-	-	-
Leslie Road Forcemain Replacement	-	-	-	560	-
Manhole and Inspection Chamber Replacement Program	-	250	250	250	250
Sanitary Pump Station and Forcemain Assessment, Upgrade and Grease Management	-	600	600	600	600
Sanitary Pump Station Rehabilitation	-	300	300	300	300
Sanitary Sewer Tie-in and Restoration	-	150	150	150	150
SCADA System Improvements	150	150	150	150	150
Steveston and Broadmoor Forcemain Replacements	-	1,100	-	-	-
Steveston Gravity Sewer Replacement and Rehabilitation	-	1,000	-	-	-
Steveston Pump Station Replacement	-	-	-	-	2,500
Van Horne Pump Station Replacement	-	-	2,800	-	-
Williams Road Sanitary Forcemain Replacement	-	-	-	1,920	-
Total Sanitary Sewer Infrastructure Advanced Design and Minor Public Works	\$1,433	\$10,353	\$7,250	\$6,390	\$6,250
Public Works Infrastructure Advanced Design	1,780	1,780	1,780	1,780	1,780
Public Works Minor Capital - Drainage	475	400	300	300	300
Public Works Minor Capital - Roads	250	250	250	250	250
Public Works Minor Capital - Sanitary	400	400	400	400	400
Public Works Minor Capital - Sanitation and Recycling	300	300	300	300	300
Public Works Minor Capital - Traffic	250	250	250	250	250
Public Works Minor Capital - Water	500	500	500	500	500
Total Infrastructure Advanced Design and Minor Public Works	\$3,955	\$3,880	\$3,780	\$3,780	\$3,780
Total Infrastructure Program	\$37,799	\$46,304	\$46,199	\$45,526	\$51,478
Building Program					
Building					
2019 Capital Buildings Project Development Advanced Design	500	-	-	-	-
Britannia Shipyards Complex Rehabilitation	-	2,200	-	-	-
City Hall - Electrical and Interior Renovations	-	11,100	-	-	-
City Hall Annex Transformer Replacement	500	-	-	-	-
City Hall Upgrades and Repairs	980	-	-	-	-
City Hall Window and Flooring System Renewals	-	-	-	-	5,500
Citywide Caretaker Suite Renewals	-	-	-	-	2,500
East Richmond Community Hall Envelope and Mechanical System Renewals	402	-	-	-	-
Gateway Theatre Infrastructure Replacements Phase 2	3,700	-	-	-	-
Japanese Canadian Cultural Centre - Front Entry Accessibility Upgrade	258	-	-	-	-
Japanese Duplex and First Nations Bunkhouse Reconstruction and Exhibit Development	-	4,150	-	-	-
Library Cultural Centre Conveyance Replacements	709	-	-	-	-
London Farm House Envelope Renewals	376	-	-	-	-
Minoru Aquatics Centre Demolition	3,392	-	-	-	-

	2019	2020	2021	2022	2023
Minoru Arena System Renewals	3,300	-	-	-	-
Minoru Place Activity Centre Program - Implementation	2,511	-	-	-	-
RCMP Exhibit Compound Interim Upgrades	975	-	-	-	-
Watermania Aging Mechanical and Building Envelope Infrastructure Replacement Phase 2	1,341	-	-	-	-
Works Yard Mechanical Replacements	1,707	-	-	-	-
Works Yard Salt Shed Repairs	266	-	-	-	-
Community Safety Building Heat Pump Replacement	-	470	-	-	-
Sea Island Hall Exterior Envelope	-	350	-	-	-
Works Yard Building System Renewals	-	-	1,100	-	-
Gateway Theatre Mechanical and HVAC Renewals	-	-	5,500	-	-
West Richmond Community Centre - Envelope and Life Safety Renewals	-	-	1,400	-	-
Mechanical and HVAC Renewals	-	-	-	120	-
Fire Hall 7 Envelope Renewals	-	-	-	125	-
Kwantlen Courthouse - HVAC and Interior Finish Renewals	-	-	-	2,500	-
Library Cultural Centre - Envelope and Plumbing Renewals	-	-	-	1,600	-
East Richmond Library Interior Finish Renewals	-	-	-	186	-
Richmond Ice Centre - Refrigeration and Envelope Renewals	-	-	-	13,700	-
Thompson Community Centre - Interior Finish Renewals	-	-	-	1,100	-
South Arm Community Centre - Envelope and Interior Finish Renewals	-	-	-	800	-
Watermania Mechanical and Pool Equipment Renewals	-	-	-	1,100	-
Watermania Major Maintenance	-	1,100	1,100	-	3,000
Thompson Community Centre Major Maintenance	-	-	2,000	-	-
Richmond Ice Centre Major Maintenance	-	-	2,000	-	-
City Hall Major Maintenance	-	-	-	-	4,000
Steveston Community Centre and Branch Library	-	90,000	-	-	-
Total Building Program	\$20,917	\$109,370	\$13,100	\$21,231	\$15,000
Parks Program					
Parkland					
Parkland Acquisition	4,000	4,000	4,000	2,000	2,000
Total Parkland	\$4,000	\$4,000	\$4,000	\$2,000	\$2,000
Parks					
Aberdeen Park – Phase 3	800	-	-	-	-
Garden City Lands Phase 4	-	1,000	-	-	-
Garden City Lands Phase 5	-	-	500	-	-
Garden City Lands Phase 6	-	-	-	500	-
Garden City Lands Phase 7	-	-	-	-	750
Hollybridge Pier Phase 2	-	-	2,000	-	-
Hugh Boyd Artificial Turf Sports Field - Turf Replacement	1,800	-	-	-	-
King George Artificial Turf Sports Fields - Turf Replacement	-	-	750	-	-

	2019	2020	2021	2022	2023
Lang Park Completion	-	200	-	-	-
London/Steveston Park Dog Park Phase 3	-	150	-	-	-
London Steveston Park Phase 2	300	-	-	-	-
Lulu Island Park	-	-	500	1,000	1,000
Minoru Bowling Green Artificial Turf Replacement	350	-	-	-	-
Minoru Oval - Artificial Turf Replacement	-	750	-	-	-
Minoru Park Central Amenity Space Development and Advancement of Richmond Cultural Plaza Renewal	-	-	-	750	-
Minoru Park Lakes Renewal	1,750	-	-	-	-
Minoru Park Major Trail Upgrades	-	500	-	-	-
Park Characterization	-	-	-	-	200
Parks Advance Planning and Design	400	500	450	450	450
Parks Aging Infrastructure Replacement Program	550	350	350	350	350
Parks General Development	400	400	400	300	400
Parks Identity Signage Program	200	-	-	-	-
Paulik Park Development of New Lots	300	-	-	-	-
Playground Improvement Program	-	600	400	500	400
Steveston Community Park Playground Expansion	-	300	-	-	-
Terra Nova Rural Park Viewpoint Seating Area	200	-	-	-	-
Trails Network Enhancements	-	-	-	-	350
West Cambie Park – Phase 2	770	-	1,030	-	-
Total Parks	\$7,820	\$4,750	\$6,380	\$3,850	\$3,900
Total Parks Program	\$11,820	\$8,750	\$10,380	\$5,850	\$5,900
Public Art Program					
Public Art					
Public Art Program	563	150	150	150	150
Total Public Art Program	\$563	\$150	\$150	\$150	\$150
Land Program					
Land					
Strategic Land Acquisition	10,000	10,000	10,000	5,000	5,000
Total Land Program	\$10,000	\$10,000	\$10,000	\$5,000	\$5,000
Affordable Housing					
Affordable Housing 2019 Operating Initiatives	350	-	-	-	-
Affordable Housing Projects - City-wide	200	400	400	400	400
Affordable Housing Projects - West Cambie	225	225	225	225	225
Total Affordable Housing	\$775	\$625	\$625	\$625	\$625
Equipment Program					
Vehicle Replacement					
Fleet Electrical Charging Infrastructure Installations	521	-	-	-	-
Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet)	3,741	2,637	2,528	2,334	3,995
Total Vehicle Replacement	\$4,262	\$2,637	\$2,528	\$2,334	\$3,995

	2019	2020	2021	2022	2023
Fire Vehicle					
Fire Vehicle Addition to Fleet	-	550	-	-	-
Fire Vehicle Replacement Reserve Purchases	2,521	166	1,185	1,221	1,257
Total Fire Vehicle	\$2,521	\$716	\$1,185	\$1,221	\$1,257
Information Technology					
Annual Hardware Refresh	468	365	455	460	516
Budget Planning and Monitoring Solution	1,000	-	-	-	-
Contract Life Cycle Management	623	-	-	-	-
Digital Strategy Initiatives	900	-	-	-	-
IPS Mobility - Enterprise Deployment	507	-	-	-	-
Network Infrastructure Core Refresh	481	-	-	-	-
Office 2016 Licensing	495	495	-	-	-
Total Information Technology	\$4,474	\$860	\$455	\$460	\$516
Equipment					
City Centre Community Centre North - Furniture, Fixtures and Equipment (FF&E) and OBI	-	-	1,320	-	-
Digital Radio Hardware and Licensing	147	-	-	-	-
Energy Management Projects	-	550	550	550	550
Energy Management Projects - Gas Equipment Replacement and Upgrade Phase 1	675	-	-	-	-
Fire Equipment Replacement - Auto Extrication Equipment	170	-	-	-	-
Fire Equipment Replacement - Fire Hose	27	28	29	30	31
Fire Equipment Replacement from Reserve - Self Contained Breathing Apparatus Equipment	-	-	200	-	-
Total Equipment	\$1,019	\$578	\$2,099	\$580	\$581
Total Equipment Program	\$12,276	\$4,791	\$6,267	\$4,595	\$6,349
Child Care Program					
Child Care					
Child Care - Administration	100	-	-	-	-
Child Care Projects - City-wide (Capital Grants)	50	50	50	50	50
Child Care Projects - City-wide Non-Capital Grants	10	10	10	10	10
Total Child Care Program	\$160	\$60	\$60	\$60	\$60
Internal Transfers/Debt Payment					
Internal Transfers/Debt Payment					
12040 Horseshoe Way Repayment	525	525	525	525	525
7080 River Road Repayment	2,341	2,341	2,341	2,341	2,341
9540 Alexandra Road and 9560 Odlin Road	2,100	-	-	-	-
Nelson Road Interchange Repayment	385	385	386	-	-
River Road/North Loop (2005) Repayment	1,685	1,335	1,335	1,335	1,335
Shovel - Ready Grant (2009) Repayment Lansdowne Road Extension	78	-	-	-	-
City Centre Community Police Office	5,100	-	-	-	-
Total Internal Transfers/Debt Payment	\$12,214	\$4,586	\$4,587	\$4,201	\$4,201

	2019	2020	2021	2022	2023
Contingent External Contribution					
Contingent External Contribution					
Contingent External Contribution	10,000	10,000	10,000	10,000	10,000
Total Contingent External Contribution	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Grand Total	\$116,524	\$194,636	\$101,368	\$97,238	\$98,763

The following is an overview of the major Capital programs proposed for the years 2020 to 2023.

INFRASTRUCTURE PROGRAM

- **Ewen Road Pump Station Upgrade (2023: \$8,520,000)**

This project includes demolishing the existing pump station at Ewen Road and rebuilding it to a modern standard. The project will increase pumping capacity, increase station resilience, make local dike upgrades and landscape the construction area. This project is part of a larger strategy to increase the City’s drainage capacity, increase pump station reliability and reduce flooding in order to accommodate climate change and growth as outlined in the City’s Official Community Plan.

The project is estimated to take 12-16 months. Construction will be scheduled for spring 2023.

Major Cost Components:

Civil (65%)	\$5,538,000
Mechanical (19%)	\$1,618,800
Electrical (16%)	<u>\$1,363,200</u>
Total	<u><u>\$8,520,000</u></u>

- **McCallan Road North Pump Station Upgrade (2023: \$8,860,000)**

This project includes demolishing the existing pump station at McCallan Road and rebuilding it to a modern standard. The project will increase pumping capacity, increase station resilience, make local dike upgrades and landscape the construction area. This project is part of a larger strategy to increase the City’s drainage capacity, increase pump station reliability and reduce flooding in order to accommodate climate change and growth as outlined in the City’s Official Community Plan.

The project is estimated to take 12-16 months. Construction will be scheduled for spring 2023.

Major Cost Components:

Civil (65%)	\$5,759,000
Mechanical (19%)	\$1,683,400
Electrical (16%)	<u>\$1,417,600</u>
Total	<u><u>\$8,860,000</u></u>

- **No. 6 Road South Pump Station Upgrade (2022: \$8,580,000)**

This project includes demolishing the existing pump station at No. 6 Road South and rebuilding it to a modern standard. The project will increase pumping capacity, increase station resilience, make local dike upgrades and landscape the construction area. This project is part of a larger strategy to increase the City’s drainage capacity, increase pump station reliability and reduce flooding in order to accommodate climate change and growth as outlined in the City’s Official Community Plan.

The project is estimated to take 12-16 months. Construction will be scheduled for spring 2022.

Major Cost Components:

Civil (65%)	\$5,577,000
Mechanical (19%)	\$1,630,200
Electrical (16%)	<u>\$1,372,800</u>
Total	<u><u>\$8,580,000</u></u>

BUILDING PROGRAM

- **City Hall – Electrical and Interior Renovations (2020: \$11,100,000)**

Multiple systems in this facility have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

Flooring replacement throughout the building; electrical load break switch and service distribution renewal

- **Richmond Ice Centre – Refrigeration and Envelope Renewals (2022: \$13,700,000)**

Multiple systems in this facility have reached the end of their life expectancy and will be replaced with modern energy efficient systems (where possible). These system renewals will also include associated miscellaneous items that will serve to prolong the life of the building and ensure the health and safety of its users / inhabitants.

Envelope, interior finishes, HVAC, refrigeration, electrical, rink equipment, life safety

- **Steveston Community Centre and Branch Library (2020: \$90,000,000)**

Estimated cost of new Steveston Community Centre and Branch Library as presented to Council on Nov 26, 2018. This report was referred back to staff and will be brought forward for further review. This submission will be revised accordingly in the 2020 - 2024 5 Year Financial Plan.

PARKS PROGRAM

- **Garden City Lands Phase 4 to 7 (2020 - 2023: \$2,750,000)**

The continuation of the development of the Garden City Lands will increase public access to the site and add a greater diversity of activities and experiences. Boardwalks and interpretive signage are planned to provide greater access and opportunities for interaction with the bog ecosystem while a network of trails, community gardens and gathering areas are planned to allow more people to access the western side of the site along with expansion of farm related uses and programs. All planned works will be subject to Council and Agricultural Land Commission approval and are consistent with the Council approved Legacy Landscape Plan.

- **Hollybridge Pier Phase 2 (2021: \$2,000,000)**

In 2013, Council approved the "River Green Village Parks and Open Space Plan" that included the development of a new pier within the Oval Village. The first phase of the Hollybridge Pier was to construct a new pier along the newly constructed River Green Waterfront Park (next to the Richmond Oval). Phase 2 proposes to construct approximately 80 meters of floating walkway, two floating docks, two 30 meter long pedestrian gangways and associated structural steel piles to secure the docks.

This investment would represent the second and final phase of the waterfront development adjacent to River Green Village, and would provide public access to the river's edge and opportunities for Richmond residents to launch kayaks, canoes and stand-up paddleboards. It is expected that the combination of Hollybridge Pier and floating walkway will become a landmark along the Middle Arm, and an integral part of the Oval Village's parks and open space system.

- **Playground Improvement Program (2020 - 2023: \$1,900,000)**

This Capital program addresses older playgrounds that do not meet the current safety guidelines (according to the industry standard, the Canadian Standards Association's "Children's Playspaces and Equipment"), or can no longer be maintained to meet the guidelines due to age, obsolescence or vandalism. The program is directed toward replacing all or part of a playground and includes replacement of playground equipment, playground infrastructure (e.g., resilient surfacing, borders, drainage) and landscape features.

- **Minoru Oval – Artificial Turf Replacement (2020: \$750,000)**

The purpose of this project is to replace the artificial turf field surface at Minoru Park which was installed in 2008. The projected lifespan of synthetic sports fields is between eight to twelve years depending on the usage and the maintenance of the fields. Minoru Oval field, one of the busiest artificial turf fields, is booked for up to 38 hours per week during the peak fall/winter season. The field is tested annually for its shock attenuation performance, known as the G-Max rating, and is currently reaching the limits of what is acceptable for safe operation of an artificial turf field. The operating and replacement costs of the field are partially offset by the user fees collected through the Sports User Fee program and there is no increase in operating costs generated by this request.

- **Minoru Park Major Trail Upgrades (2020: \$500,000)**

Concerns were received from the local community in 2017 during the Minoru Park Vision Plan process about the poor condition and inadequate width of the trails in Minoru Park. These concerns in combination with anticipated increased park use after the opening of the Minoru Centre for Active Living in early 2019 and an increase in residents living nearby make trail upgrades a high priority. Trail upgrade works to include replacement of primary east-west and north-south pathways and on the perimeter of the park. All pathways will be designed and constructed to be safe, accessible and will accommodate those with mobility challenges.

LAND PROGRAM

- **Strategic Land Acquisition (2020 - 2023: \$30,000,000)**

Funds for land acquisition to meet the Council Approved Strategic Real Estate Investment Plan. Availability of funds in the capital budget provides the ability to act quickly when necessary and avoid costs incurred to repay the Revolving Fund.

EQUIPMENT PROGRAM

- **Vehicle and Equipment Reserve Purchases (Public Works and Corporate Fleet) (2020-2023: \$11,494,000)**

Annual replacement of vehicles eligible due to age and condition in accordance with Sustainable Green Fleet Policy 2020.

Process for replacement of aging fleet is to establish needs and develop specifications for vehicle/equipment replacements. Send bid information out to the marketplace, evaluate submissions and award accordingly.

5YFP	5 Year Financial Plan
AC	Air Conditioning
APS	Accessible Pedestrian Signal
CLCM	Contract Life-Cycle Management
CPI	Consumer Price Index
DCC	Development Cost Charges
EV	Electrical Vehicle
GCL	Garden City Lands
GHG	Greenhouse Gas
GPS	Global Positioning System
HPS	High Pressure Sodium
HVAC	Heating, Ventilation, and Air Conditioning
ICBC	Insurance Corporation of British Columbia
IPS	Infor Public Sector
KPI	Key Performance Indicator
LED	Light-Emitting Diodes
MCAL	Minoru Centre for Active Living
MPI	Municipal Price Index
MRN	Major Road Network
NIC	Neighbourhood Improvement Charges
OBI	Operating Budget Impact
OCP	Official Community Plan
RCMP	Royal Canadian Mounted Police
RFP	Request for Proposal
RSA	Rate Stabilization Account
RWIS	Road Weather Information System
SCADA	Supervisory Control and Data Acquisition
TMC	Traffic Management Centre
UPS	Uninterruptable Power Supply