2022 CAPITAL BUDGET

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- To be reviewed at Budget Committee on October 6, 2021
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- Remaining capital budget requests will be reviewed at Budget Committee between October 6, and October 22, 2021
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CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
CAPITAL BUDGET PRE-APPROVAL REQUESTS								
CAO, Legal, HR & Fire								
Fire & Emergency Services								
22054	Fire Boots Replacement	138,900		138,900				
	TOTAL Fire & Emergency Services	**138,900**	**-**	**138,900**	**-**	**-**	**-**	
Corporate Services								
Sustainability and Asset Management								
22063	Approaching Net-Zero Energy Emissions (NZEE) Studies	254,400					254,400	MECO, FCM grant
22064	Mount Joy CC's "Approaching NZEE" Pilot Project	457,920					457,920	$360k Grant, $98k Gas Tax; Note 1
22067	Kirkham Community Garden Program Expansion	152,600	152,600					
22087	Roofing Replacement Projects	20,000		20,000				Note 2
	TOTAL Sustainability and Asset Management	**884,920**	**152,600**	**20,000**	**-**	**-**	**712,320**	
Community Services								
Recreation Services								
22117	Cornell C.C. Parking Garage&Fitness Lighting Replacement	72,900		72,900				
	TOTAL Recreation Services	**72,900**	**-**	**72,900**	**-**	**-**	**-**	
Operations - Fleet								
22170	Corporate Fleet Replacement - Non-Fire	40,231		40,231				Note 3
22171	Corporate Fleet Replacement - Waterworks	392,500					392,500	Waterworks; Note 4
22172	New Fleet - Asset Management	39,700			39,700			
	TOTAL Operations - Fleet	**472,431**	**-**	**40,231**	**39,700**	**-**	**392,500**	
Environmental Services - Infrastructure								
22182	Huntington Park Pedestrian Bridge - Const. + CA	433,500					433,500	Gas Tax
	TOTAL Environmental Services - Infrastructure	**433,500**	**-**	**-**	**-**	**-**	**433,500**	
Environmental Services - Stormwater								
22193	Markham Village Flood Control Implementation Ph1-Design	1,831,700					1,831,700	Stormwater Reserve and Waterworks
	TOTAL Environmental Services - Stormwater	**1,831,700**	**-**	**-**	**-**	**-**	**1,831,700**	

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	*Project Description*	*Total*	*Tax*	*Life Cycle*	*DC - Reserve*	*DC - Developer*	*Other*	*Description of Other Funding*
Corporate Wide								
	Corporate Wide							
22214	Corporate Capital Contingency	251,200	15,300	9,300			226,600	Gas Tax, Stormwater and Waterworks Reserves; Note 5
	TOTAL Corporate Wide	**251,200**	**15,300**	**9,300**	**-**	**-**	**226,600**	
	TOTAL Capital Budget Pre-Approval Requests	**4,085,551**	**167,900**	**281,331**	**39,700**	**-**	**3,596,620**	

Notes:

1) The overall project budget is $3,052,800. The pre-approval request of $457,920 is for consulting work only.
2) The overall project budget is $301,500. The pre-approval request of $20,000 is for consulting work only.
3) The overall project budget is $2,679,000. The pre-approval request of $40,231 is for purchase of low roof vans for Animal Services.
4) The overall project budget is $664,500. The pre-approval request of $392,500 is to commence procurement of contracts earlier to potentially attain better pricing.
5) The overall project budget is $5,233,300. The pre-approval request of $251,200 represents the contingency amounts required for all project pre-approval requests.

CAPITAL BUDGET REQUESTS

#								
Development Services								
	Culture							
22001	Culture Public Art Master Plan Implementation Phase 3 of 5	248,000					248,000	Public Art Acq. Res. Fund
	TOTAL Culture	**248,000**	**-**	**-**	**-**	**-**	**248,000**	
	Museum							
22002	Museum Maintenance	86,500		86,500				
	TOTAL Museum	**86,500**	**-**	**86,500**	**-**	**-**	**-**	
	Theatre							
22003	Theatre Backstage & Reception Sound System Replacement	178,100		178,100				
22004	Theatre Program Video System Replacement	56,000		56,000				
22005	Theatre-Stage & Building Maintenance	62,800		62,800				
	TOTAL Theatre	**296,900**	**-**	**296,900**	**-**	**-**	**-**	
	Arts Centres							
22006	Gallery Courtyard Repairs	15,300		15,300				
22007	Gallery Exterior Art Installation	20,400					20,400	Public Art Acq. Res. Fund
	TOTAL Arts Centres	**35,700**	**-**	**15,300**	**-**	**-**	**20,400**	

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Planning								
22008	Consultant Studies	71,200			64,100		7,100	Development Fees
22009	Designated Heritage Prop. Grant Prog.-Residential	30,000					30,000	Designated Heritage Prop Grant
22010	Heritage Façade Improvements/Sign Replacement - 2022	25,000	25,000					
22011	Markham Village Heritage District Plan - Update	50,900					50,900	Heritage Preservation Reserve
22012	Markham Centre Civic Square Study	138,400			124,560		13,840	Parks Cash-in-Lieu
22013	MiX Innovation District Secondary Plan (Employment)	356,200			320,580		35,620	Development Fees
22014	Yonge Corridor Secondary Plan Ph 2 of 2	305,300			274,770		30,530	Development Fees
22015	Natural Assets Inventory	152,600	152,600					
22016	Natural Heritage System Study - Phase 2 of 2	101,800	101,800					
22017	York Region Employment Survey	40,000			36,000		4,000	Development Fees
	TOTAL Planning	**1,271,400**	**279,400**	**-**	**820,010**	**-**	**171,990**	
Design								
22018	Markham Centre-Rougeside Promenade Parks-Construction	3,919,800			3,527,820		391,980	Parks Cash-in-Lieu
22019	Paddock Park - Off Leash Area - Design & Ph1 Construction	369,900			332,910		36,990	Parks Cash-in-Lieu
22020	Victoria Square West Village - Design & Construction	841,800			757,620		84,180	Parks Cash-in-Lieu
22021	Villages of Fairtree East NP - Design	83,100			74,790		8,310	Parks Cash-in-Lieu
22022	Woodbine By-pass North Park - Design & Construction	988,500			889,650		98,850	Parks Cash-in-Lieu
22023	York Downs Park (Kennedy Rd. and Yorkton Blvd.) - D & C	1,291,500			1,162,350		129,150	Parks Cash-in-Lieu
22217	Franklin Carmichael Park Multi-Purpose Court - D & C	250,000					250,000	CHCI Grant
	TOTAL Design	**7,744,600**	**-**	**-**	**6,745,140**	**-**	**999,460**	
Engineering								
22024	Brownfield Policy Update	87,600			87,600			
22025	MESP for FUA Employmt. Block Secondary Plan	915,800			915,800			
22026	North Markham Employment SP (MIX+) - Transportation	576,300			576,300			
22027	Major Mackenzie & Denison GO Station Assessment	428,400			428,400			
22028	Downstream Improvements Program (Construction)	1,377,300		482,120	895,180			
22029	Cedar Avenue Reconstruction	2,592,100			2,592,100			
22030	Hwy 404 MBC, N of 16th Avenue (Utility Relocation)	2,079,200			2,079,200			
22215	Hwy 404 Ramp Ext. at Major Mack. (EA Amendment)	290,400			290,400			
22031	Victoria Square Boulevard - Culvert Construction	1,768,500			1,768,500			
22032	Markham Centre Trails - Phase 2 (Construction)	751,800			488,670		263,130	Non-DC Growth
22033	Markham Centre Trails - Phase 3 (Detailed Design)	576,300			374,595		201,705	Non-DC Growth
22034	Rouge Valley Trail - Phase 4B (Detailed Design)	405,400			263,510		141,890	Non-DC Growth
22035	Rouge Valley Trail (Kennedy Road North) – Construction	574,300			325,195		249,105	Non- DC Growth $175k; ROY $74k
22036	Markham Road MUP Cross-rides (Construction)	204,600			132,990		71,610	Non-DC Growth
22037	Markham Cycles & Active Transp. Awareness Program	15,300			9,945		5,355	Non-DC Growth

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
22038	Markham Cycling Day	10,200			6,630		3,570	Non-DC Growth
22039	Cycling & Pedestrian Advisory Committee (CPAC)	25,400			16,510		8,890	Non-DC Growth
22040	Smart Commute Markham-Richmond Hill	76,300			76,300			
22041	Various walking & cycling initiatives	118,000			76,700		41,300	Non-DC Growth
22042	Sidewalk Program (Construction)	1,539,100			1,539,100			
22043	Development of Road Safety Strategy	399,600			399,600			
22044	Apple Creek Blvd. Traffic Operations & Safety Corridor	220,000			220,000			
22045	Copper Creek Drive Pedestrian Cross-Overs (PXO)	227,200			227,200			
22046	PXO Implementation at Supervised School Crossings	118,000			118,000			
22047	New Traffic Signals (Construction)	646,700			646,700			
22048	Traffic Assets Replacement	1,138,200		100,000			1,038,200	Gas Tax
22049	Traffic Operational Improvements	51,800	16,184		35,616			
22050	Parking Lot for York University Campus	744,800			140,500		604,300	Non-DC Growth
22051	Parking Master Plan and Implementation Strategy	520,300			100,000		420,300	Non-DC Growth
	TOTAL Engineering	**18,478,900**	**16,184**	**582,120**	**14,831,241**	**-**	**3,049,355**	
	TOTAL Development Services	**28,162,000**	**295,584**	**980,820**	**22,396,391**	**-**	**4,489,205**	
	CAO, Legal, HR & Fire							
	Legal Services							
22052	OLT - Growth Related Hearings	508,800	178,080		178,080		152,640	Development Fees
	TOTAL Legal Services	**508,800**	**178,080**	**-**	**178,080**	**-**	**152,640**	
	Fire & Emergency Services							
22053	Bunker Gear Life Cycle Replacement	122,600		122,600				
22055	Firefighting Tools & Equipment Replacement	101,500		101,500				
22056	Hazardous Materials Replacement	11,200		11,200				
22057	Particulate Filtering Hoods Replacement	53,300		53,300				
22058	Replacement of Equipment due to Staff Retirements	99,800		99,800				
22059	Rescue Equip - Thermal Camera & Ice Commander Suits	12,500		12,500				
	TOTAL Fire & Emergency Services	**400,900**	**-**	**400,900**	**-**	**-**	**-**	
	TOTAL CAO, Legal, HR & Fire	**909,700**	**178,080**	**400,900**	**178,080**	**-**	**152,640**	
	Corporate Services							
	IT Services							
22060	IT Lifecycle Asset Replacement	1,336,800		1,049,900			286,900	WW, Dvlpmnt Fees, Bldg Fees
22061	ITS Cyber Security Program	239,100	239,100					
22062	Momentuum CRM (Civictrack)	47,300	47,300					
	TOTAL IT Services	**1,623,200**	**286,400**	**1,049,900**	**-**	**-**	**286,900**	

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Sustainability and Asset Management								
22064	Mount Joy CC's "Approaching NZEE" Pilot Project	2,594,880					2,594,880	$2.0M Grant, $0.6M Gas Tax
22065	Facility Energy Management Program	132,300					132,300	MECO
22066	EV Chargers Expansion	66,100		66,100				
22068	Green Recovery Program – Feasibility Study	223,900	45,800				178,100	Grant
22069	160 Dudley Life Cycle Repair/Replacements	669,100		669,100				
22070	8100 Warden Facility Repair and/or Replacement Projects	228,800		228,800				
22071	Accessibility Retrofit Program	137,700		137,700				
22072	Building Envelope/Structural Review	56,100		56,100				
22073	Civic Centre Repair and/or Replacement Projects	512,700		512,700				
22074	Corporate Accommodations	255,000		255,000				
22075	Designated Substances Management	56,100		56,100				
22076	Fire Facilities Repair and/or Replacement Projects	451,500		451,500				
22077	Fire Systems Maintenance at various City facilities.	61,200		61,200				
22078	Library Facilities Repair and/or Replacement Projects	90,900		90,900				
22079	Municipal Building Backflow Prevention - Annual Testing	20,400		20,400				
22080	Museum - Various Buildings	172,000		172,000				
22081	Operations Facilities Repair and/or Replacement Projects	678,300		678,300				
22082	Other Facilities Repair and/or Replacement Projects	50,600		50,600				
22083	Parking Lot Light Inspection	17,300		17,300				
22084	Parking Lot Light Replacement	53,000					53,000	Gas Tax
22085	Recycling Depots Repair and/or Replacement Projects	7,600		7,600				
22086	Roofing Maintenance and Repair	122,400		122,400				
22087	Roofing Replacement Projects	281,500		281,500				
22088	Satellite Community Centre Repair and/or Replacement	36,300		36,300				
22089	Tennis Clubhouse Repair and/or Replacement Projects	25,400		12,700			12,700	Tennis Club
22216	Pan AM Parking Equipment	478,300			48,000		430,300	Non-DC Growth
22090	Corporate Asset Management	249,400	249,400					
22091	Corporate Security Operations & System Upgrades	341,700		341,700				
	TOTAL Sustainability and Asset Management	**8,070,480**	**295,200**	**4,326,000**	**48,000**	**-**	**3,401,280**	
	TOTAL Corporate Services	**9,693,680**	**581,600**	**5,375,900**	**48,000**	**-**	**3,688,180**	
Community Services								
Recreation Services								
22092	Angus Glen C.C. Divider Wall Replacement	71,300		71,300				
22093	Milliken Mills C.C. Divider Wall Replacement	66,100		66,100				
22094	Armadale C.C. Changeroom Lockers Replacement	71,200		71,200				
22095	Armadale C.C. Washroom and Changeroom Refurbishment	49,800		49,800				
22096	Milliken Mills C.C. Washrooms and Changeroom Refurbishment	113,500		113,500				
22097	Rouge River C.C. Pool Changeroom Lockers Replacement	16,400		16,400				
22098	Rouge River C.C. Pool Changeroom Tile Replacement	21,000		21,000				

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
22099	Thornhill C.C. Arena Changeroom Door Replacement	53,000		53,000				
22100	Heintzman House Flooring Replacement	20,400		20,400				
22101	Milliken Mills C.C. Flooring Replacement	60,800		60,800				
22102	Old Unionville Library C.C. Ceiling Tile Replacement	6,800		6,800				
22103	Pan Am Centre Hardwood Floor Refinishing	25,400		25,400				
22104	Pingle House Flooring Replacement	9,200		9,200				
22105	Thornhill C.C. Fireside Lounge Flooring Replacement	10,600		10,600				
22106	Angus Glen C.C. Arena Boards Replacement	39,200		39,200				
22107	Armadale C.C. Basketball Net Replacement	39,000					39,000	Gas Tax
22108	Armadale C.C. Gymnasium Bleachers Seating Replacement	13,700		13,700				
22109	Centennial C.C. HVAC Upgrade	232,000					232,000	80% (NZEE) 20% (Gas Tax)
22110	Heintzman House Air Conditioning Unit Replacement	22,400		22,400				
22111	Cornell C.C. Pumps Replacement	28,900					28,900	Gas Tax
22112	Cornell C.C. Mixing Valves Replacement	31,700		31,700				
22113	Milliken Mills C.C. Mechanical Replacement	113,500					113,500	Gas Tax
22114	Milliken Mills C.C. Pool Pumps Replacement	21,400					21,400	Gas Tax
22115	Thornhill C.C. Fitness Boiler Replacement	44,800		9,100			35,700	80% (NZEE) 20% (Life Cycle)
22116	Milliken Mills C.C. Painting Project	134,200		134,200				
22118	Indoor Public Space Study - Areas of Intensification	152,600			152,600			
22119	Cornell C.C. Garbage Compactor	18,300	18,300					
22120	Milliken Mills C.C. Aerial Platform Replacement	20,900		20,900				
22121	Milliken Mills C.C. Emergency Equipment Replacement	8,000		8,000				
22122	Recreation AED Program Replacement	7,100		7,100				
22123	Recreation Aquatics Equipment Replacement	87,300		87,300				
22124	Recreation Facility Maintenance Equipment Replacement	91,100		91,100				
22125	Recreation Fitness Equipment Replacement	43,500		43,500				
22126	Recreation Pool Grouting Replacement	51,000		51,000				
22127	Recreation Program Equipment Replacement	97,900		97,900				
22128	Thornhill C.C. Communications Device Replacement	19,800		19,800				
22129	Thornhill C.C. Flagpole Replacement	9,200		9,200				
	TOTAL Recreation Services	**1,923,000**	**18,300**	**1,281,600**	**152,600**	**-**	**470,500**	
	Markham Public Library							
22130	Library Collections	2,801,500		2,801,500				
22131	Library Furniture, Equipment & Shelving Replacement	180,100		180,100				
	TOTAL Markham Public Library	**2,981,600**	**-**	**2,981,600**	**-**	**-**	**-**	
	Operations - Roads							
22132	Asphalt Resurfacing	6,749,200					6,749,200	Gas Tax
22133	Parking Lots- Rehabilitation	77,700		77,700				
22134	Localized Repairs - Parking Lots	121,600		121,600				
22135	Localized Repairs - Curb & Sidewalk	893,900		893,900				

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
22136	Boulevard Repairs	59,600		59,600				
22137	Bridge Structure Preventative Maintenance - Roads	26,300		26,300				
22138	City Owned Entrance Feature Rehabilitation/Replacement	188,800		188,800				
22139	City Owned Fence Replacement Program	50,900		50,900				
22140	Retaining Wall Repair Program	66,100		66,100				
22141	Guiderail- Install/Upgrade	156,800					156,800	Gas Tax
22142	Guiderail Repairs	22,400		22,400				
22143	Citywide Ditching Program	138,400		138,400				
22144	Don Mills Storm Channel	21,100		21,100				
22145	Storm Water Retention Pond Maintenance Program	209,700		209,700				
22146	Emergency Repairs	168,500		168,500				
22147	Incremental Growth Related Winter Maintenance Vehicles	468,000			468,000			
	TOTAL Operations - Roads	**9,419,000**	**-**	**2,045,000**	**468,000**	**-**	**6,906,000**	
	Operations - Parks							
22148	Backstop and Outfield Fence Replacement-John Button Park	73,400					73,400	Gas Tax
22149	Cemetery Fence Repair/Replacement	27,200		27,200				
22150	Cricket Backstop Practice Area Replacement	38,400					38,400	Gas Tax
22151	Cricket Pitch Wicket Artificial Turf Replacement	54,000					54,000	Gas Tax
22152	Millennium Park Waterplay Replacement	409,100					409,100	Gas Tax
22153	Playstructure & Rubberized Surface Replacement	854,000					854,000	Gas Tax
22154	Shade Structure Rehabilitation and/or Replacement	43,700		43,700				
22155	Pathways Resurfacing	145,500		145,500				
22156	Relamping & Fixtures Refurbishment	27,500		27,500				
22157	Bridge Structure Preventative Maintenance in Parks	26,300		26,300				
22158	Court Resurfacing/Reconstruction/Maintenance	54,900		54,900				
22159	Fence (Tennis Courts)	33,800					33,800	Gas Tax
22160	City Park Furniture / Amenities	178,500		178,500				
22161	Replace Recycling Containers	17,200		17,200				
22162	Block Pruning Initiative - Year 3 of 3	12,200					12,200	Trees for Tomorrow Reserve
22163	Boulevard/Park Trees Replacement	370,500		370,500				
22164	Markham Trees for Tomorrow	84,700					84,700	Trees for Tomorrow Reserve
22165	Sportsfield Maintenance & Reconstruction	143,100		143,100				
22166	Swan Lake Shoreline Restoration	127,200	127,200					
	TOTAL Operations - Parks	**2,721,200**	**127,200**	**1,034,400**	**-**	**-**	**1,559,600**	
	Operations - Fleet							
22167	Corporate Fleet Growth - Non-Fleet	10,200			10,200			
22168	Corporate Fleet Refurbishing	37,800		37,800				
22169	Corporate Fleet Replacement - Fire	1,980,700		1,980,700				
22170	Corporate Fleet Replacement - Non-Fire	2,638,769		2,638,769				
22171	Corporate Fleet Replacement - Waterworks	272,000					272,000	Waterworks

CITY OF MARKHAM
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by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
22173	New Fleet - Parks	40,500			40,500			
22174	New Fleet - Survey & Utility	41,700			41,700			
22175	New Fleet - Waterworks	34,500					34,500	Waterworks
	TOTAL Operations - Fleet	**5,056,169**	**-**	**4,657,269**	**92,400**	**-**	**306,500**	
	Operations - Utility Inspection & Survey							
22176	German Mills Meadow - Equipment Maintenance	114,600		114,600				
22177	Survey Monument Replacement	40,000		40,000				
	TOTAL Operations - Utility Inspection & Survey	**154,600**	**-**	**154,600**	**-**	**-**	**-**	
	Operations - Business & Technical Services							
22178	Installation of Traffic Control Cabinet Wraps	6,200	6,200					
22179	Public Realm - Gateway Masterplan Update	81,400	81,400					
22180	Public Realm - Message Boards	36,600	36,600					
	TOTAL Operations - Business & Technical Services	**124,200**	**124,200**	**-**	**-**	**-**	**-**	
	Environmental Services - Infrastructure							
22181	Bridges and Culverts - Condition Inspection	91,300		91,300				
22183	MNRF Monitoring for Capital Projects at Water Crossings	6,900		6,900				
22184	Structures Rehabilitation (3 Structures) - Design & Const.	288,100					288,100	Gas Tax
22185	Storm Culvert Rehabilitation (2 Structures) - Design	88,700					88,700	Gas Tax
22186	Storm and Sanitary Sewer CCTV Inspection	568,900		210,900			358,000	Waterworks Reserve
22187	Storm Pumping Stations - Equipment Inspection	42,200		42,200				
22188	Storm Sewer Pipes - Rehabilitation	364,600					364,600	Gas Tax
22189	Storm Sewer Pipes Emergency Repairs	57,200		57,200				
22190	West Thornhill Flood Control Implementation Ph 3C -Constr.	10,655,900					10,655,900	Stormwater Reserve & $2M Gas Tax
22191	Streetlights - Miscellaneous Requests	91,000	91,000					
22192	Streetlights - Poles Replacement Program	117,500					117,500	Gas Tax
	TOTAL Environmental Services - Infrastructure	**12,372,300**	**91,000**	**408,500**	**-**	**-**	**11,872,800**	
	Environmental Services - Stormwater							
22194	Oil Grit Separators (OGS) - Inspection and Cleaning	115,600		115,600				
22195	SWM Pond Cleaning ID#44 & #96 - Design & CA	144,000					144,000	Gas Tax
22196	SWM Pond Cleaning ID#47 & #119 - Construction	433,100					433,100	Gas Tax
22197	Water Quality Improvements	28,800		28,800				
22198	Water Quality Monitoring at Swan Lake	26,100		26,100				
	TOTAL Environmental Services - Stormwater	**747,600**	**-**	**170,500**	**-**	**-**	**577,100**	

CITY OF MARKHAM
2022 CAPITAL AND OTHER PROGRAMS BUDGET
by Department

#	Project Description	Total	Tax	Life Cycle	DC - Reserve	DC - Developer	Other	Description of Other Funding
Environmental Services - Waste								
22199	Incremental Growth Related Waste Management Vehicles	104,000			104,000			
22200	Replenishing the MESF Reserve - Annual Program	15,800	15,800					
	TOTAL Environmental Services - Waste	**119,800**	**15,800**	**-**	**104,000**	**-**	**-**	
Environmental Services - Waterworks								
22201	Cathodic Protection of Ductile Iron Watermains	444,000					444,000	Waterworks Reserve
22202	CI Watermain Replacement - Construction & CA	4,816,900					4,816,900	Waterworks Reserve
22203	CI Watermain Replacement - Design	270,200					270,200	Waterworks Reserve
22204	CI Watermain Replacement-W.Thornhill Ph 3C - Const +CA	3,102,500					3,102,500	Waterworks Reserve
22205	Curb Box Inspection and Replacement Program	639,700					639,700	Waterworks Reserve
22206	Suspended Watermain Insulation Replacement/ Rehab	639,900					639,900	Waterworks Reserve
22207	Watermain Leak Detection at Easement and River Crossings	70,700					70,700	Waterworks Reserve
22208	Watermain Leak Detection Program	31,200					31,200	Waterworks Reserve
22209	Water Meters - Replacement Program	936,400					936,400	Waterworks Reserve
22210	Sanitary Sewers - Rehabilitation	981,900					981,900	Waterworks Reserve
22211	Wastewater Flow Monitoring	113,400					113,400	Waterworks Reserve
22212	Critical Sanitary Sewers - CCTV Inspection	381,700					381,700	Waterworks Reserve
	TOTAL Environmental Services - Waterworks	**12,428,500**	**-**	**-**	**-**	**-**	**12,428,500**	
	TOTAL Community Services	**48,047,969**	**376,500**	**12,733,469**	**817,000**	**-**	**34,121,000**	
Corporate Wide								
22213	Citywide Staff Salary Recovery	5,583,700		1,505,600	2,658,300		1,419,800	Various Internal Sources
22214	Corporate Capital Contingency	4,982,100	74,300	174,100	1,815,950	-	2,917,750	Various Internal Sources
	TOTAL Corporate Wide	**10,565,800**	**74,300**	**1,679,700**	**4,474,250**	**-**	**4,337,550**	
	TOTAL Capital Budget Requests	**97,379,149**	**1,506,064**	**21,170,789**	**27,913,721**	**-**	**46,788,575**	
	TOTAL Capital Budget Requests Including Pre-Approval	**101,464,700**	**1,673,964**	**21,452,120**	**27,953,421**	**-**	**50,385,195**	

2022 PROJECT FUNDING REQUEST FORM

Number: 22054

Project Cost: $138,900

Project Name: **Fire Boots Replacement**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 10 Pre Approval: ☑

Department: Fire & Emergency Services

Project Mgr: Chris Nearing

Category: Minor

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Cost Validation:

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Legislative Life Cycle replacement of 260 pairs of Fire Boots purchased in 2012.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	136,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	136,500	0
HST Impact:	2,402	0
Total Project Cost:	**138,900**	**0**

NOTES

Mid-calf fire rated suppression boots must be replaced every 10 years according to Legislation. Current inventory is 260 x $534.23/unit. Amounts and units are consistent with the most recent invoice for recruit boots in June 2021. These units were last replaced in 2012.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	138,900	138,900	0	0	0	138,900	0
TOTAL FUNDING	**138,900**					**138,900**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	131,800
Amount Incl HST	138,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Budget request reflects June 2021 invoice received for recruit boot purchase which had a price increase of $30.53/pair. The updated pricing was received after the 2022 Life Cycle Reserve Study update.

2022 PROJECT FUNDING REQUEST FORM

Number: 22063

Project Cost: $254,400

Project Name: **Approaching Net-Zero Energy Emissions (NZEE) Studies**

Studies/Pilot Programs

Commission: Corporate Services

Useful Life: 10 Pre Approval: ☑

Department: Sustainability and Asset Management

Project Mgr: Amanda Martin

Category: Minor

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project seeks funding to study the feasibility of designing and retrofitting Clatworthy Arena, Thornhill CC, and Centennial CC to approach NZEE by 2050. Scope includes developing short, medium, and long-term GHG reduction roadmaps and retrofit solutions for each facility that will leverage the Lifecycle process and maximize external grants. The timeline to complete these studies and retrofit projects is accelerated due to recently launched federal funding that is offering grants covering up to 80% of study and eligible project costs. Project business cases and implementation plans will be determined upon completion of studies; preliminary estimates forecast greater than 25% energy & GHG savings, $7.2M project funding support through grants, very positive NPV, and an incremental simple payback of under 10 years. Council approved Markham's Municipal Energy Plan target of achieving NZEE by the year 2050. This project supports that target and the commitments made through the Corporate Energy Management Plan (requirement per O'Reg 507/18) and Municipal Energy Plan. The studies and retrofit projects are the first steps toward setting these facilities on a course to achieve NZEE by 2050.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	8,999,997
Internal Charges:	0	900,000
External Consulting:	250,000	0
Sub Total:	250,000	9,899,997
HST Impact:	4,400	158,400
Total Project Cost:	**254,400**	**10,058,400**

NOTES

Costs, utility savings, ROI and other benefits will be determined upon study completion and included in separate 2023 Capital Budget requests. The accelerated Project Future Phases will only move forward if grant funding is secured (tentatively scheduled to be completed by 2026); the balance of NZEE improvements will leverage Lifecycle using a zero-over-time approach. Studies should proceed if grant unsuccessful - they will allow for retrofit matched with facility Life Cycle renewal. Source: Markham Energy Conservation Office (MECO) if grant unsuccessful.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	NZEE Studies				TOTAL	Future Phases
Other Internal	254,400	254,400	0	0	0	254,400	2,731,680
TOTAL FUNDING	**254,400**					**254,400**	**10,058,400**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22064

Project Cost: $3,052,800

Project Name: **Mount Joy CC's "Approaching NZEE" Pilot Project**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Amanda Martin

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 30 Pre Approval: ☑

Category: Major

Cost Validation: External peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project seeks funding to pilot the City's first "Approaching Net-Zero Energy Emissions (NZEE)" retrofit project at Mount Joy CC. Infrastructure Canada (INFC)'s Green and Inclusive Community Building (GICB) program, launched in April 2021, provides a contribution of up to 80% of maximum $3M eligible project costs (up to $2.4M grant) per project to support the transition of retrofitting community buildings to net-zero by 2050. This project will leverage Lifecycle funds and maximize INFC's grant to accelerate the replacement of building components coming due for replacement with lower energy/carbon alternatives. Study is still underway, but preliminary estimates indicate greater than 25% energy savings, a very positive NPV, and incremental simple payback of less than 10 years. Completing this pilot project will set Mount Joy CC on a course to achieve NZEE by 2050.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,999,999	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,999,999	0
HST Impact:	52,800	0
Total Project Cost:	**3,052,800**	**0**

NOTES

Project is contingent on approval of new staff. The project and staff position will only proceed if grant funding is secured. Council approved Markham's Municipal Energy Plan target of achieving NZEE by the year 2050. Feasibility study is currently underway with anticipated completion date of August 2021. This project supports that target and the commitments made through the Corporate Energy Management Plan (requirement per O'Reg 507/18). A request for 2.5 year salary for a full-time contract Project Manager is included in the salary recoveries project.

SOURCE(S) OF FUNDING ($)		Components				
Funding Type	Budget	Mount Joy CC Retrofit			TOTAL	Future Phases
Gas Tax	652,801	652,801	0	0	652,801	0
Infrastructure Grant	2,399,999	2,399,999	0	0	2,399,999	0
Operating Funded Life Cycle	0	0	0	0	0	0
Tax	0	0	0	0	0	0
TOTAL FUNDING	**3,052,800**				**3,052,800**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

Net-Zero Energy Emissions (NZEE) Studies and Pilot Projects

Amanda Martin, Corporate Energy Manager
Sustainability & Asset Management
October 2021

Agenda

- **Part 1: NEW 2021 Green Building Retrofit Funding**
  - Overview of funding to support transition to NZEE by 2050

- **Part 2: The City's Proposed Studies & Pilot Projects**
  - Pilot Objectives
  - What does a Net-Zero Building Look like?
  - Mount Joy NZEE Study
  - Facilities selected for 2022 Capital Budget Studies and Pilot Projects

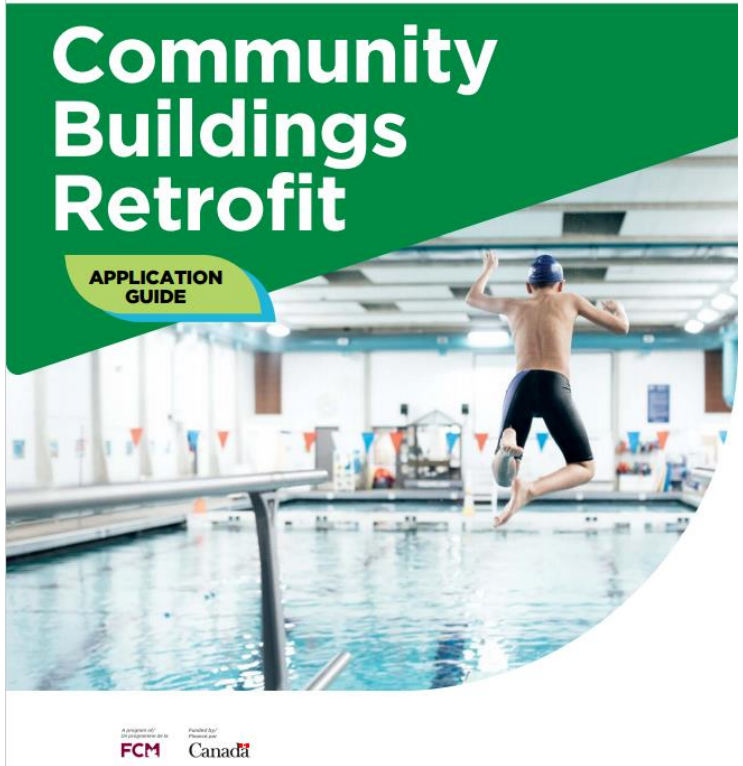
Part 1: 2021 Green Building Retrofit Funding

FCM's Community Building Retrofit (CBR) Initiative - $167M

Offering feasibility study grants up to 80% of maximum $250k eligible project costs (up to $200k grant)* for portfolio of buildings.

*Only one feasibility study of this type is eligible for funding per municipality.

GREEN MUNICIPAL FUND / FONDS MUNICIPAL VERT



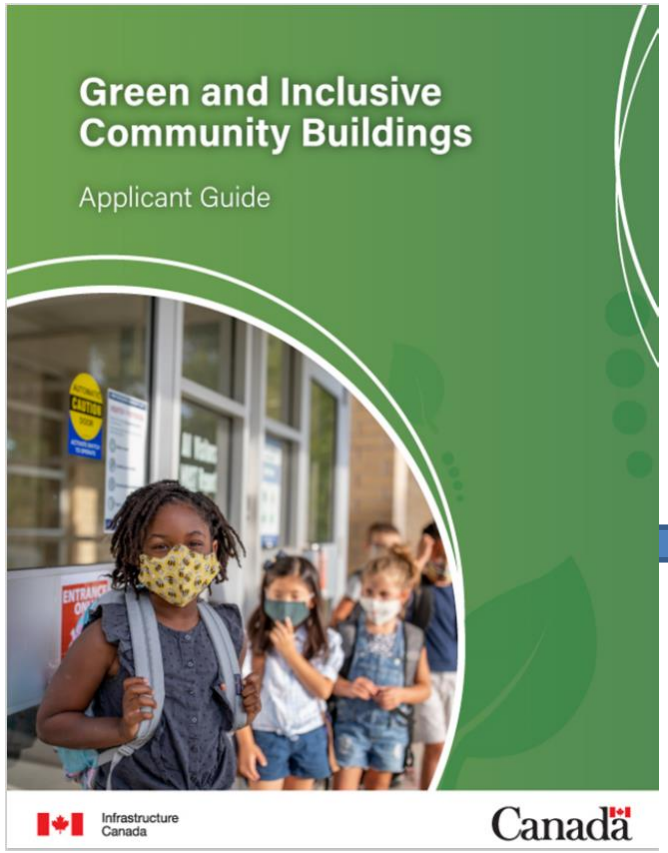
Key Criteria

- Integrate energy & GHG reduction solutions into Lifecycle planning
- 25% energy & GHG reduction within 2 years ← "Accelerated Path"
- 50% GHG reductions within 10 years
- 80% GHG reductions within 20 years
- Net-Zero Carbon by 2050

*The **Accelerated Path** lays the groundwork for us to apply for future grant funding from external sources as they become available.*

$250k study x 80% eligible costs = $200k grant

Infrastructure Canada's Green & Inclusive Community Building (GICB) Fund



- **Amount:** $860M available for Retrofit
- **Prerequisite:** Study and building energy simulations/modelling completed demonstrating >25% energy savings
- **Eligible Measures:** Green retrofits resulting in >25% energy savings
- **Timeline:** completed between April 1, 2021 and March 31, 2026
- **No limits to # of applications or ceiling amount!**

Continuous Intake Stream - Retrofit

- Small and medium retrofit projects between $100k to $3M
- Up to 80% contribution
- Accepted on a continuous basis
- **Funded on a first-come, first-served basis**

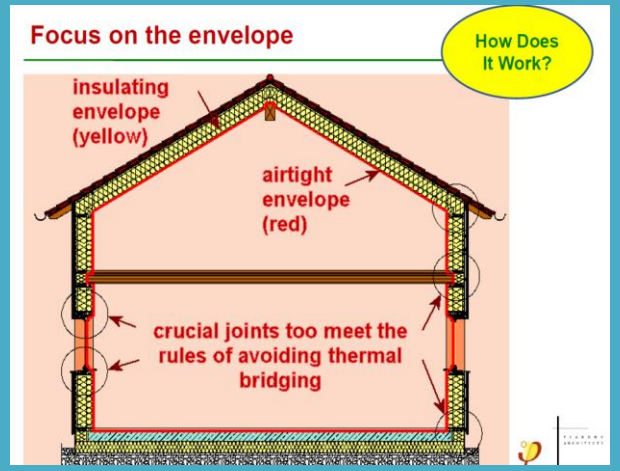
$3M Capital Project x 80% eligible costs = $2.4M contribution

Part 2: The City's Proposed Studies & Pilot Projects

Pilot Objectives

- **Retrofit (and construct) buildings to NZEE** through significant energy and GHG emission reductions (environmental)
- **Reduce utility bills, maintenance costs, and mitigate capital costs** by identifying and implementing cost-effective GHG reduction solutions and leveraging normal capital renewal timelines (economic)
- **Improve building quality, comfort, health and resilience** (social)
- **Increase internal communication, awareness, and capacity** that will enable the City to better plan, build, retrofit, operate and maintain NZEE buildings
- **Support sector transformation** by developing both accelerated and long-term, zero-over-time retrofit pathways to achieve net-zero energy emissions by no later than 2050

Guiding Design Principles for NZEE Buildings



Super-airtight and insulated building envelope

- Highly insulated building structure and components
- Air-tight and reduced thermal bridging

Operated efficiently with super energy efficiency equipment

- Ventilation with heat recovery
- Rightsized heating and cooling systems
- Water heating
- Electrical loads (appliances, lighting)

Renewable Energy

- Low-carbon energy sources

Present Mitigation Measures: Mount Joy Net-Zero Study

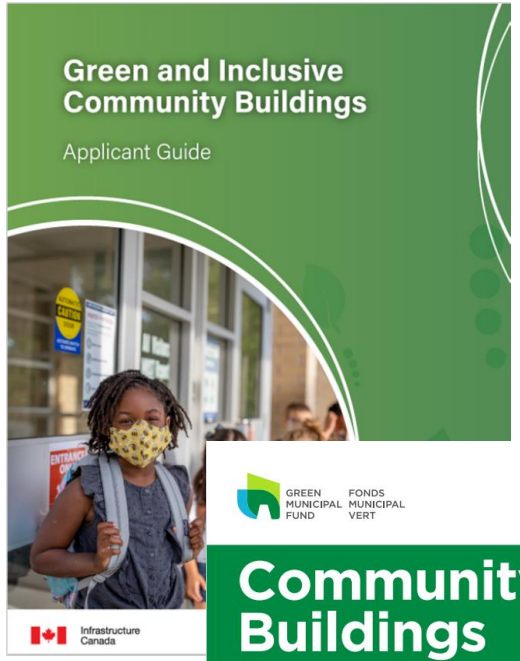
- Standalone Arenas
  - **Timeline:** Oct 2020 – Aug 2021
  - **Facilities:** Mount Joy CC & cohort study with 7 other municipalities

Playbooks for retrofitting various types of facilities to achieve NZEE is still relatively uncharted territory.

Pilot Process:

- **Study, develop and test innovative solutions** through pilot **"Proof of Concept"** retrofit projects,
- Complete **project retrospective** (what went well and what didn't),
- **Scale up** and **incorporate key findings** in other retrofit projects and planned corporate net-zero strategy.

Near-Term Mitigation Measures: Net-Zero Studies & Pilot Projects



Mount Joy CC's Approaching "NZEE" Pilot Project

- **Goal:** accelerate retrofitting Mount Joy CC to near net-zero
- **Prerequisite:** Study and complete energy simulations/modelling demonstrating >25% energy savings
- **External Funding Support:** 80% grant available through Infrastructure Canada's Green & Inclusive Community Buildings program

Approaching Net-Zero Energy Emissions (NZEE) Studies

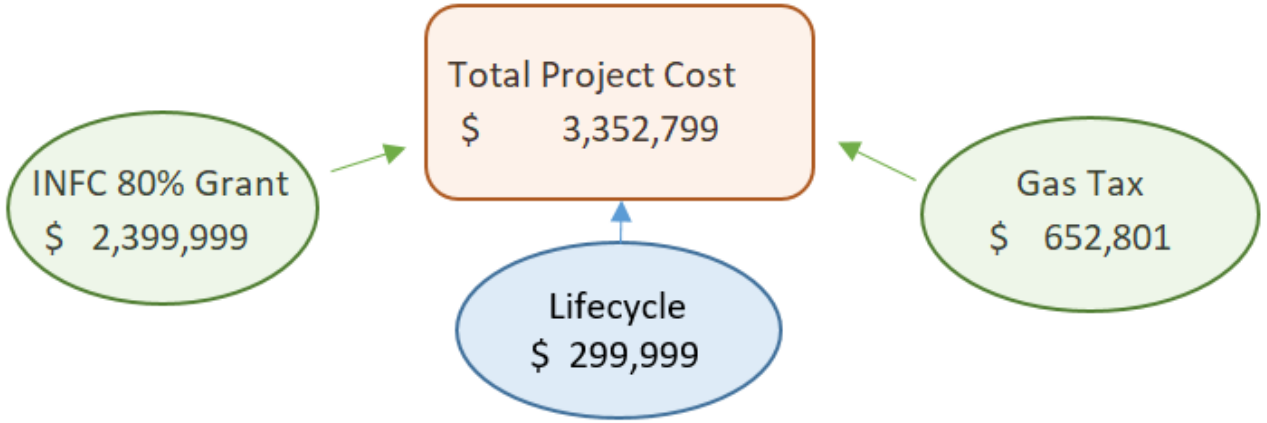
- **Goal:** Study and develop short, medium, and long-term customized roadmaps to retrofit the community centres to NZEE by 2050, on both an accelerated path and gradually over time
- **Locations:** Thornhill CC, Centennial CC, Clatworthy Arena
- **External Funding Support:** 80% grant available through FCM's Community Building Retrofit program

*The grant funding allows us to **accelerate** delivery of these net-zero studies and pilot projects at **reduced financial risk**.*

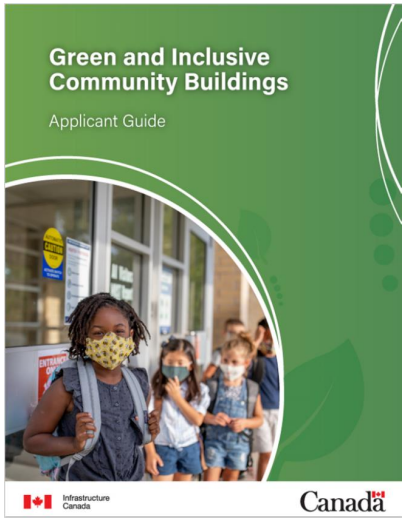
Mount Joy CC Approaching "NZEE" Pilot Project

❑ **Apply for Capital Project funding through INFC's Green & Inclusive Community Building (GICB) program (up to 80% grant).**

Facility Name	Year				
	2021	2022	2023	2024	2025
Mount Joy CC	Study Phase	Project Phase (Design & Construction)			
Centennial CC		Study Phase	Project Phase (Design & Construction)		
Thornhill CC		Study Phase	Project Phase (Design & Construction)		
Clatworthy Arena		Study Phase	Project Phase (Design & Construction)		



Total Project Cost	$ 3,352,799
INFC 80% Grant	$(2,399,999)
Gas Tax	$ (652,801)
Net-Cost to City (Lifecycle)	$ 299,999

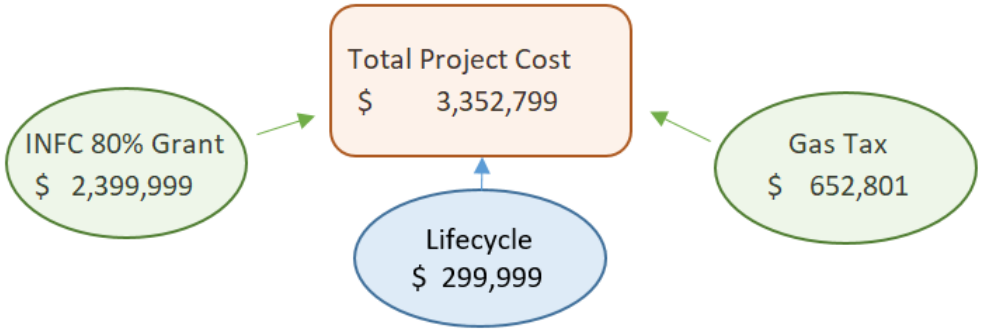


Mount Joy CC Approaching "NZEE" Pilot Project

❑ **Apply for Capital Project funding through INFC's Green & Inclusive Community Building (GICB) program (up to 80% grant).**

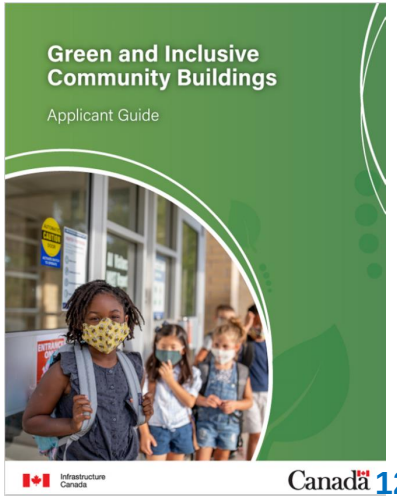
Approaching NZEE Pilot Project relative to Business-As-Usual
Forecasted Energy Savings = 65%-75%
Forecasted GHG Savings = 70%-80%
Net-Present-Value (NPV) = $2.6M - $4.7M

The study demonstrates that this pilot project will add tremendous **triple-bottom line benefits to the City**.



Total Project Cost	$ 3,352,799
INFC 80% Grant	$ (2,399,999)
Gas Tax	$ (652,801)
Net-Cost to City (Lifecycle)	$ 299,999

Note:
- *Intent is to **spend up to the maximum INFC eligible funding amount** ($3M eligible project costs offset by a ~$2.4M grant)*
- ***Remainder of GHG reduction solutions** will subsequently **leverage Lifecycle** (Zero-Over-Time approach)*
- *Project **will only move forward if grant funding is secured***



Approaching Net-Zero Energy Emissions (NZEE) Studies

❑Apply for Feasibility Study funding through FCM's Community Building Retrofit (CBR) program (up to 80% grant).

Facility Name	Year				
	2021	2022	2023	2024	2025
Mount Joy CC	Study Phase	Project Phase (Design & Construction)			
Centennial CC		Study Phase	Project Phase (Design & Construction)		
Thornhill CC		Study Phase	Project Phase (Design & Construction)		
Clatworthy Arena		Study Phase	Project Phase (Design & Construction)		

Total Project Cost	$	254,400
Total FCM CBR Grant	$	(200,000)
Total Net-Cost to the City	$	54,400

Note:

- **INFC Prerequisite:** Study and facility energy simulations/modelling completed demonstrating **>25% energy savings**
- Staff recommends **studies should still move forward if grant funding is not secured**

Centennial, Thornhill, & Clatworthy Approaching "NZEE" Pilot Projects

❑ **Apply for Capital Project funding through INFC's Green & Inclusive Community Building (GICB) program (up to 80% grant).**

Facility Name	Year				
	2021	2022	2023	2024	2025
Mount Joy CC	Study Phase	Project Phase (Design & Construction)			
Centennial CC		Study Phase	Project Phase (Design & Construction)		
Thornhill CC		Study Phase	Project Phase (Design & Construction)		
Clatworthy Arena		Study Phase	Project Phase (Design & Construction)		

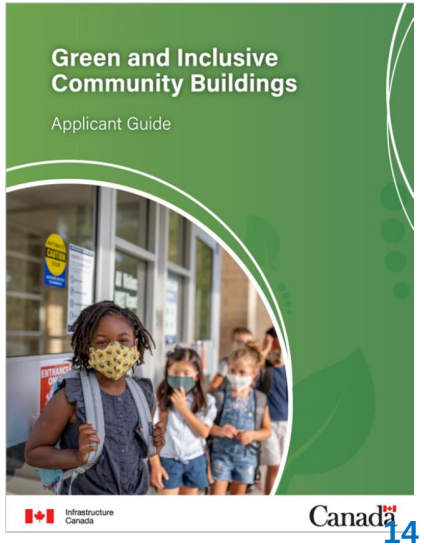
Total Project Cost	**$**	**10,058,398**
Total Grant/Contributions	**$**	**(7,199,998)**
Total Net-Cost to the City	**$**	**2,858,399**

Business Case at a Glance

Estimated Net-Cost to City: $2,858,399
Estimated Energy Savings: >25%
Financial Indicator: Anticipating very positive NPV

Note:

- **INFC Prerequisite:** Study and facility energy simulations/modelling completed demonstrating **>25% energy savings**
- Forecasted Lifecycle replacements within the window exceed the City contribution level expected
- *Project **will only move forward if grant funding is secured***



Thank you for your time!

Any Questions?

2022 PROJECT FUNDING REQUEST FORM

Number: 22067

Project Cost: $152,600

Project Name: **Kirkham Community Garden Program Expansion**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Jennifer Wong

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 5 Pre Approval: ☑

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Kirkham Garden Master Plan, including concept, functional design and grading to guide the build out of the total 1.15 Ha (2.45 acre) property over time. This project builds upon a pilot garden (2013) that occupies 15% of the site and is no longer adequate to meet residents' needs. An immediate expansion for the 2022 season will double the growing space, provide a new communal garden area, and reduce or eliminate the 44+ family waitlist.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	0	0
External Consulting:	50,000	0
Sub Total:	150,000	0
HST Impact:	2,640	0
Total Project Cost:	**152,600**	**0**

NOTES

Essential Service in 2020 providing access to high quality, affordable & culturally appropriate food. Pre-COVID, 1 in 8 Canadians were food insecure. Today local agencies have seen 200-700% increase in demand for food resources.
This project will engage the expertise of Planning & Urban Design and Operations. Consulting fees - comparable projects. Capital estimates - single quote. Projects are contingent on approval of new Sustainability Food Coordinator ($70K/year) to support program expansion beyond pilot.

SOURCE(S) OF FUNDING ($)		Components						
Funding Type	Budget						TOTAL	Future Phases
Other External	0	0	0	0	0	0	0	0
Other Internal	0	0	0	0	0	0	0	0
Tax	152,600	0	0	0	0	0	0	0
TOTAL FUNDING	**152,600**						**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$71,201	$5,000	$1,725	$74,476

2022 PROJECT FUNDING REQUEST FORM

Number: 22087

Project Cost: $301,500

Project Name: **Roofing Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 20 Pre Approval: ☑

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Michael Ryan

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project includes roofing and accessories replacement works at various locations throughout the City in a state of good repair and in alignment to the Asset Management Plan/Policy. Roofs for replacement in the budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	296,330	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	296,330	0
HST Impact:	5,215	0
Total Project Cost:	**301,500**	**0**

NOTES

$140,181 - Crosby CC, Milliken Mills Park Washroom
$161,364 - Rouge River CC

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Crosby CC, Milliken Mills Park	Components: Rouge River CC			TOTAL	Future Phases
Operating Funded Life Cycle	301,500	140,181	161,364	0	0	301,545	0
TOTAL FUNDING	**301,500**					**301,545**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 1,502,100
Amount Incl HST 301,500
Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22117

Project Cost: $72,900

Project Name: **Cornell C.C. Parking Garage&Fitness Lighting Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☑

Department: Recreation Services

Project Mgr: Alex Giammarco

Category: Minor

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace and upgrade the lighting system with more energy efficient lighting (LEDs) in the parking garage and fitness area within Cornell C.C.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	71,600	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	71,600	0
HST Impact:	1,260	0
Total Project Cost:	**72,900**	**0**

NOTES

A condition assessment of the flourescent lighting at the parking lot and fitness area indicates replacement is warranted. The lights are original to the facility and were installed in 2012. The replacement will consist of replacing the 400 T8 fixtures (120W) within the parking garage, 45 T5 fixtures (70W) and 83 pot lights (70W) within the fitness area with LEDs (28W). E3: This replacement will result in an annual cost savings of $23,337 beginning in 2023. Payback for this replacement is approximately 3 years. The cost is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Light Replacement				TOTAL	Future Phases
Operating Funded Life Cycle	72,900	72,900	0	0	0	72,900	0
TOTAL FUNDING	**72,900**					**72,900**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	-$23,337	$0	-$23,337

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	313,800
Amount Incl HST	72,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22170

Project Cost: $2,679,000

Project Name: **Corporate Fleet Replacement - Non-Fire**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☑

Department: Operations - Fleet

Category: Major

Project Mgr: Raymond Law/Peter Englezakos

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments were consulted with respect to the units in this program. Total units - 44 units

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,632,669	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,632,669	0
HST Impact:	46,335	0
Total Project Cost:	**2,679,000**	**0**

NOTES

Useful life varies - 4 to 12 years based on units types. Operations-Non Fleet ($54k) includes cord trimmers, chainsaws, blowers, etc. Cost Validation- Most recent purchase of similar unit type; Requirement validation - Condition assessment, vehicle reliability & down time, & operating costs. Units specified in this program will be purchased with the most recent technology available at time of purchase providing maximized fuel economy with minimal emissions. Unit 5121 will be switched with a High Roof Cargo van already purchased for Bylaws - Animal Services (project #21185).

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Licensed	Non Licensed	Non Fleet		TOTAL	Phases
Operating Funded Life Cycle	2,679,000	1,851,600	773,400	54,000	0	2,679,000	0
TOTAL FUNDING	**2,679,000**					**2,679,000**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	-$9,500	$0	-$9,500

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	3,321,200
Amount Incl HST	2,679,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Corporate Fleet Replacement – Non Fire
2022 Capital Request	$2,679,000
Funding Source	Life Cycle Reserve
Description of Program	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments are consulted with respect to the units in this program. Total units - 44 units
Project Rationale	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. To maintain current service levels for all users department
Legislative Requirement	n/a
History	
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	n/a
Alignment to the Strategic Plan	Providing reliable fleet units allowing effective municipal services to local residents and businesses. Promoting the continued use of new technology along with alternate energy solutions that reduce fuel consumption and improved fleet efficiencies with reductions in overall fleet emissions.

2022 Corporate Fleet Replacement - Non-Fire

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2022 Cost	Comments
1240	COMPACT SUV FWD	91,310		OPERATIONS-Licensed	Licensed	2012	39,981	Deferred from 2020 to 2022; Originally approved Project 21140, vehicle to be transferred to Engineering; replacement to be deferred to 2022; based on 224-T-16; conversion to hybrid
1246	FULL SIZE CREW CAB PICK UP 4X4	167,840		OPERATIONS-Licensed	Licensed	2014	39,575	
1247	FULL SIZE REG CAB PICK UP 4X4	276,689		OPERATIONS-Licensed	Licensed	2014	43,478	
1250	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	88,162		OPERATIONS-Licensed	Licensed	2014	96,540	
1275	5M TONNE CRANE TRUCK 39,000 GVW	77,394		OPERATIONS-Licensed	Licensed	2004	275,910	Life cycle for this unit was set longer than other 5-ton trucks because it was anticipated that because it is specialized, it would have less use. Changes in service delivery model has seen increased usage of this vehicle
1435	COMPACT TRACTOR 4X4		3,041	SIDEWALK-Non Licensed	Non Licensed	2014	54,382	
1437	COMPACT WHEEL LOADER		5,750	OPERATIONS-Non Licensed	Non Licensed	2010	134,028	
1968	RINGOMATIC-VACUUM EXCAVATOR TRAILER MOUNTED		511	OPERATIONS-Licensed	Licensed	2012	96,900	
3319	COMPACT EXTENDED CAB PICK UP	79,346		OPERATIONS-Licensed	Licensed	2014	37,902	Conversion to crew cab; cost based on MSRP
3329	FULL SIZE PICK UP 4X4 WITH 8' ARCTIC PLOW	116,961		OPERATIONS-Licensed	Licensed	2013	53,557	Deferred from 2021 to 2022
3336	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	70,635		OPERATIONS / PARKS-Licensed	Licensed	2014	96,540	
3338	COMPACT EXTENDED CAB PICK UP	96,225		OPERATIONS-Licensed	Licensed	2014	37,902	Conversion to crew cab; cost based on MSRP
3339	COMPACT EXTENDED CAB PICK UP	91,916		OPERATIONS-Licensed	Licensed	2013	37,902	Deferred from 2021 to 2022; conversion to crew cab; cost based on MSRP
3352	FULL SIZE PICK UP 4X4 C/W PLOW	74,501		OPERATIONS-Licensed	Licensed	2014	53,557	
3353	FULL SIZE PICK UP 4X4 C/W PLOW	107,880		OPERATIONS-Licensed	Licensed	2014	53,557	
3357	FULL SIZE PICK UP 4X4 C/W PLOW	81,673		OPERATIONS-Licensed	Licensed	2014	53,557	
3374	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	95,057		OPERATIONS-Licensed	Licensed	2014	96,540	
3375	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	77,167		OPERATIONS-Licensed	Licensed	2014	96,540	
3431	COMPACT WHEEL LOADER		3,353	OPERATIONS / PARKS-Non Licensed	Non Licensed	2014	134,028	
3447	TRACTOR 4X4 62 PTO HP C/W CAB		5,090	OPERATIONS / PARKS-Non Licensed	Non Licensed	2010	56,421	

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2022 Cost	Comments
3448	TRACTOR 4X4 62 PTO HP C/W CAB		3,877	OPERATIONS / PARKS-Non Licensed	Non Licensed	2010	56,421	
3461	TRACTOR 2WD 56 HP C/W CAB		3,142	OPERATIONS-Non Licensed	Non Licensed	2007	44,483	Deferred from 2019 to 2022
3464	TRACTOR 2WD 56 HP C/W CAB		4,148	OPERATIONS-Non Licensed	Non Licensed	2007	44,483	Deferred from 2019 to 2022
3479	FRONT MOUNT 61" MOWER	N/A		OPERATIONS / PARKS-Non Licensed	Non Licensed	2014	10,538	Deferred from 2019 to 2022
3484	ZERO TURN 60" REAR DISCHARGE DIESEL		731	OPERATIONS-Non Licensed	Non Licensed	2012	19,654	Deferred from 2020 to 2022
3486	STUMP CUTTER		605	OPERATIONS / PARKS-Non Licensed	Non Licensed	2001	52,311	Deferred from 2019 to 2022
3931	FORKLIFT		3,620	OPERATIONS-Non Licensed	Non Licensed	1988	34,889	
4037	ROTARY MOWER 72" 4WD	N/A		OPERATIONS-Non Licensed	Non Licensed	2014	24,948	
4038	ZERO TURN 60" SIDE DISCHARGE DIESEL		1,734	OPERATIONS-Non Licensed	Non Licensed	2014	19,196	
4129	20' TANDEM LANDSCAPE TRAILER	N/A		OPERATIONS-Licensed	Licensed	2010	8,877	Deferred from 2020 to 2022
4328	ROTARY MOWER 11' CUT 4WD	N/A		OPERATIONS / PARKS-Non Licensed	Non Licensed	2014	74,231	
4494	20' TANDEM LANDSCAPE TRAILER	N/A		OPERATIONS-Licensed	Licensed	2011	8,877	Deferred from 2021 to 2022
5121	FULL SIZE CARGO VAN	56,434		OPERATIONS-Licensed	Licensed	2013	39,535	Deferred from 2021 to 2022
5130	TOYOTA PRIUS HYBRID	94,549		OPERATIONS-Licensed	Licensed	2008	49,263	Project 18247 closed, return to source; Re-submit in 2022 as a replacement of BEV; cost of $46,800 based on 192-Q-20
5132	TOYOTA PRIUS HYBRID	134,097		OPERATIONS-Licensed	Licensed	2008	49,263	Project 18247 closed, return to source; Resubmit in 2022 as a replacement of BEV; cost of $46,800 based on 192-Q-20
5134	TOYOTA PRIUS HYBRID	81,206		CLERK-1-Licensed	Licensed	2008	49,263	Project 18247 closed, return to source; Resubmit in 2022 as a replacement of BEV; cost of $46,800 based on 192-Q-20
5350	FULL SIZE PICK UP-GMC SIERRA 1500	295,625		MUSEM-1-Licensed	Licensed	2008	37,266	Previously approved Project 21140; re-submit in 2022 cost based on 102-T-21A; specification change to full battery electric vehicle
5350	FULL SIZE PICK UP-GMC SIERRA 1500 - Specification change to full battery electric vehicle				Licensed		44,784	Specification change to full battery electric vehicle
6133	COMPACT SUV FWD HYBRID	99,072		ENFOR LIC-Licensed	Licensed	2011	55,661	Deferred from 2019 to 2022; conversion to PHEV hybrid - Bylaw vehicle

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2022 Cost	Comments
6134	COMPACT VAN	79,578		ENFOR LIC-Licensed	Licensed	2013	55,661	Deferred from 2021 to 2022; conversion to PHEV hybrid - Bylaw vehicle
6140	COMPACT SUV FWD HYBRID	91,613		ENFOR LIC-Licensed	Licensed	2011	55,661	Deferred from 2019 to 2022; conversion to PHEV hybrid - Bylaw vehicle
7036	FULL SIZE QUAD CAB PICK UP 4X2	90,653		WASTE-1 / OPERATIONS-Licensed	Licensed	2008	42,022	Deferred from 2017 to 2022; conversion to crew cab
8054	COMPACT SUV FWD	83,770		ENGIN-1-Licensed	Licensed	2011	37,841	Deferred from 2019 to 2022; based on 224-T-16; conversion to hybrid
8055	COMPACT SUV FWD	62,711		ENGIN-1-Licensed	Licensed	2011	37,841	Deferred from 2019 to 2022; based on 224-T-16; conversion to hybrid
8058	COMPACT SUV FWD HYBRID	70,297		ENGIN-1-Licensed	Licensed	2009	37,841	Deferred from 2019 to 2022; Cost PD18245; Based on 224-T-16; conversion to hybrid
All	Operation Non Fleet < $5,000 or Misc			OPERATIONS- Operation Non Fleet < $5,000 or Misc	Operation Non Fleet < $5,000 or Misc	2021	53,060	
						Total Pre-Tax	**2,632,669**	
						HST impact	**46,335**	
						Total Project Cost	**2,679,004**	
						Rounded Off Project Cost	**2,679,000**	

PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
30	Licensed	1,819,595	32,025	**1,851,620**
14	Non Licensed	760,014	13,376	**773,390**
	Operations Non-Fleet <$5,000 or Misc	53,060	934	**53,994**
		2,632,669	**46,335**	**2,679,004**
44			**Rounded Off - Project Cost**	**2,679,000**

2022 PROJECT FUNDING REQUEST FORM

Number: 22171

Project Cost: $664,500

Project Name: **Corporate Fleet Replacement - Waterworks**

Repair/Replace

Commission: Community Services

Useful Life: 8 Pre Approval: ☑

Department: Operations - Fleet

Category: Major

Project Mgr: Raymond Law/Pete Englezakos/Eddy Wu

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Part of the Annual Fleet Replacement Program based on the Council adopted Corporate Fleet policy guidelines. Life Cycle costing targets Optimal Replacement Intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment (10 units) contained in this program have reached or surpassed the ORI. This is funded by Waterworks reserve.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	653,019	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	653,019	0
HST Impact:	11,493	0
Total Project Cost:	**664,500**	**0**

NOTES

10 units - Requirement Validation - meeting the approved replacement criteria, pending condition assessment. All units in this request will be purchased with the most recent technology available at time of purchase providing maximum fuel economy with minimal emissions.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Licensed (8)	Components: Non Licensed (2)	Components: Non Fleet		TOTAL	Future Phases
Waterworks	664,500	625,900	36,500	2,100	0	664,500	0
TOTAL FUNDING	**664,500**					**664,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	880,900
Amount Incl HST	664,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Corporate Fleet Replacement - Waterworks
2022 Capital Request	$664,500
Funding Source	Life Cycle Reserve
Description of Program	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments are consulted with respect to the units in this program. Total units for replacement - 10 units
Project Rationale	2022 Annual Fleet Replacement Program is based on the Council adopted Corporate Fleet Policy Guidelines and condition assessment. To maintain current service levels for all user departments.
Legislative Requirement	n/a
History	
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	
Alignment to the Strategic Plan	Providing reliable fleet units allowing effective municipal services to local residents and businesses. Promoting the continued use of new technology along with alternate energy solutions that reduce fuel consumption and improved fleet efficiencies with reductions in overall fleet emissions.

2022 Waterworks Fleet Replacement

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Category	Model Year	2022 Cost	Project Notes
2165	FULL SIZE PICK UP 4X2	98,166		WATER- Licensed	2013	30,031	Deferred from 2021 to 2022
2175	FULL SIZE CARGO VAN	92,191		WATER- Licensed	2014	38,079	
2184	FULL SIZE CARGO VAN	119,201		WATER- Licensed	2014	38,079	
2189	FULL SIZE CARGO VAN	95,678		WATER- Licensed	2012	38,079	Deferred from 2020 to 2022
2191	SEWER CAMERA TRUCK	70,880		WATER- Licensed	2010	385,713	Previously approved Project 20224; Resubmitting in 2022 due to budget shortfall;Cost based on 010-T-21
2192	FULL SIZE CARGO VAN	108,031		WATER- Licensed	2014	38,079	
2193	FULL SIZE CARGO VAN	94,049		WATER- Licensed	2014	38,079	
2203	STEAMER		N/A	WATER- Non Licensed (Tools & Equip)	2009	17,962	Deferred from 2021 to 2022;
2204	STEAMER		N/A	WATER- Non Licensed (Tools & Equip)	2011	17,962	Previously approved Project 21141; Re-submit in 2022 due to budget shortfall. Cost based on 2021 Clark-Kavanagh Homes Inc Quote
2252	18' TANDEM LANDSCAPE TRAILER	N/A		WATER- Licensed	2011	8,877	Deferred from 2021 to 2022
	Waterworks Non Fleet < $5,000 or Misc			WATER - Waterworks Non Fleet < $5,000 or Misc		2,081	
					Total Pre-Tax	**653,019**	
					HST impact	**11,493**	
					Total Project Cost	**664,512**	
					Rounded Off Project Cost	**664,500**	

PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
8	Licensed	615,014	10,824	**625,838**
2	Non Licensed (Tools & Equipment)	35,924	632	**36,556**
	Waterworks Non Fleet < $5,000 or Misc	2,081	37	**2,118**
		653,019	**11,493**	**664,512**
10			**Rounded Off - Project Cost**	**664,500**

2022 PROJECT FUNDING REQUEST FORM

Number: 22172

Project Cost: $39,700

Project Name: **New Fleet - Asset Management**

New Asset/Expansion

Commission: Community Services

Department: Operations - Fleet

Project Mgr: Raymond Law/Peter Englezakos

Useful Life: 8 Pre Approval: ☑

Category: Minor

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The SAM department requires a small van or pickup truck for team members to perform maintenance tasks throughout the facilities managed by SAM. SAM facility portfolio has significantly increased over the past few years by the addition of a number of facilities

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	39,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	39,000	0
HST Impact:	686	0
Total Project Cost:	**39,700**	**0**

NOTES

The goal is to maintain our current service level and avoid contracting out services by utilizing the skills of in house staff to maintain additional buildings and perform maintenance and repair tasks. Currently staff are using their personal vehicles to carry necessary tools/equipment required to carry out the repairs/maintenance on site. The requirement for a new vehicle is all year round. Following purchase and delivery, this vehicle will beswitched with a High Roof Cargo van already purchased for Bylaws - Animal Services (as part of project #21185).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	39,700	0	0	0	0	0	0
TOTAL FUNDING	**39,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$7,380	$0	$7,380

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Public Works - Fleet	2022	39,700	385,300
TOTAL FUNDING		39,700	385,300

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22182

Project Cost: $433,500

Project Name: **Huntington Park Pedestrian Bridge - Const. + CA**

Repair/Replace

Commission: Community Services

Useful Life: 50 Pre Approval: ☑

Department: ES - Infrastructure

Category: Major

Project Mgr: Hossein Sharif

Cost Validation: External peer review

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Installation of new pedestrian bridge at Huntington Pathway 380m/ E Bayview Ave &100m S/ Hwy 407, replacing the existing twin culverts C247. See attached map for location.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	356,050	0
Internal Charges:	0	0
External Consulting:	70,000	0
Sub Total:	426,050	0
HST Impact:	7,498	0
Total Project Cost:	**433,500**	**0**

NOTES

Infrastructure Ontario (IO) will be removing and replacing the existing twin culverts and restoring the creek. This work is expected to be completed by Q4, 2021 and the pedestrian bridge tender will be released to market immediately thereafter. Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Contract Admin	Components: Construction			TOTAL	Future Phases
Gas Tax	433,500	71,200	362,300	0	0	433,500	0
TOTAL FUNDING	**433,500**					**433,500**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

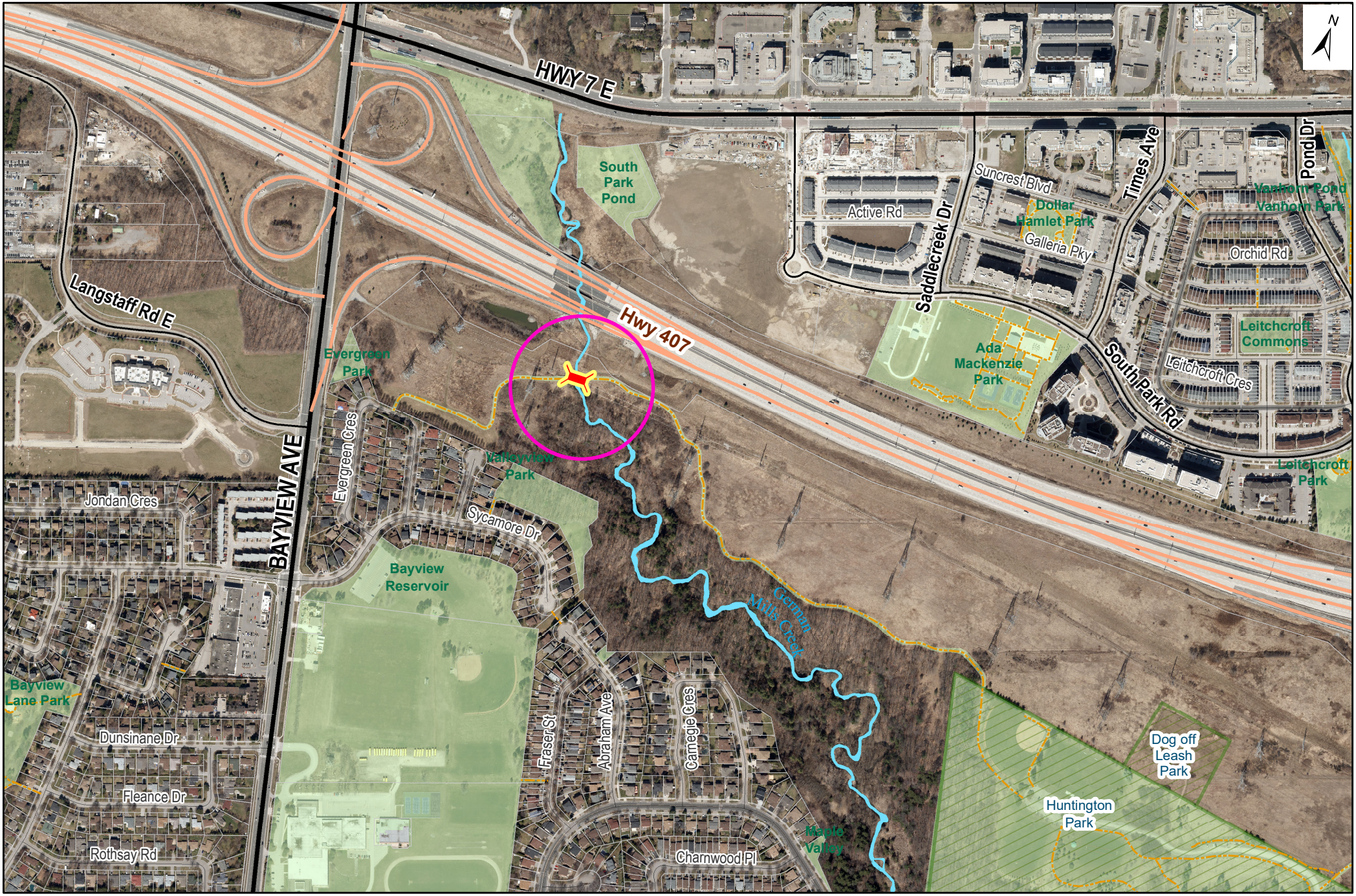
Amount Incl HST

Year in the study: 2023

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

LOCATION MAP
Huntington Park Pedestrian Bridge - Construction

ES - Infrastructure (2022)



Path: Q:\Environmental Services\CAPITAL RIGHT OF WAY\Department Share\00_GIS_Capital Planning\02_Capital Projects\2022_Capital Projects\MXD\2022_Huntington Park Pedestrian Bridge.mxd

Date: 2021-05-25

2022 PROJECT FUNDING REQUEST FORM

Number: 22193

Project Cost: $1,831,700

Project Name: **Markham Village Flood Control Implementation Ph. 1-Design**

Commission: Community Services

Department: ES - Stormwater

Project Mgr: Rob Grech

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☑

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To continue with the flood remediation program in the Markham Village area based on the feasibility study recommendations. This budget request is to hire a consultant to carryout detail design of storm sewers and cast iron watermain upgrades within the Phase 1 area. Refer to location map.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	102,574,900
Internal Charges:	0	0
External Consulting:	1,800,000	0
Sub Total:	1,800,000	102,574,900
HST Impact:	31,680	1,805,318
Total Project Cost:	**1,831,700**	**104,380,200**

NOTES

Requirement Validation: Council direction to upgrade the storm sewer system in the Markham Village area to 100 year level of protection.
Program cost for Markham Village/ Unionville Area is $107M (as of June 2021)
Funding Source: Stormwater Fee

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
Reserve Fund	1,226,700	0	0	0	0	0	104,380,200
Waterworks	605,000	0	0	0	0	0	0
TOTAL FUNDING	**1,831,700**					**0**	**104,380,200**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

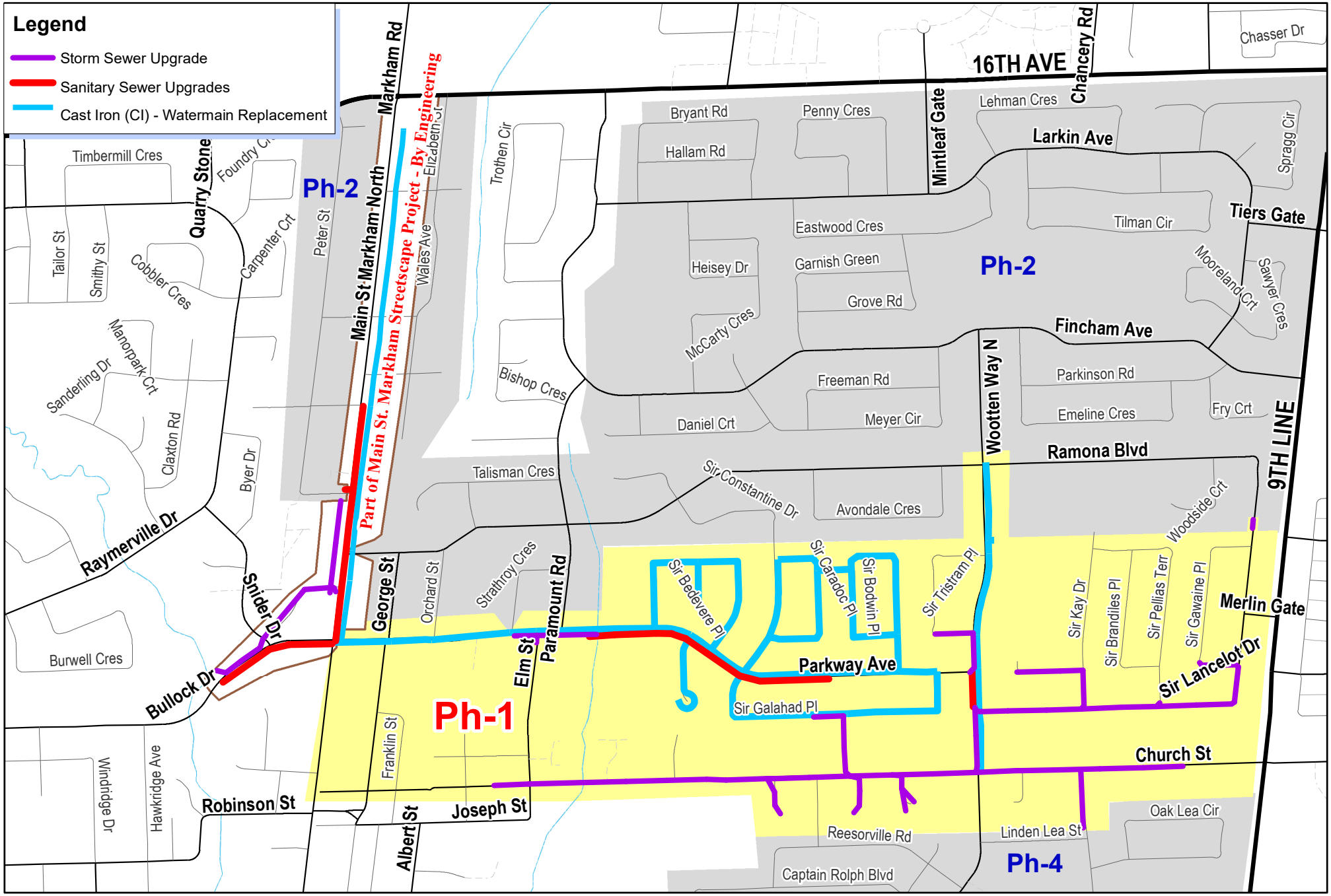
Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Watermain upgrades was included as a placeholder for 2027/ 2028 in 2021 LC. The program has been accelerated through this request and 2022 LC will be adjusted accordingly.

Location Map:
Markham Village Flood Control Implementation - Phase 1 Design



Date: 2021-06-11

2022 PROJECT FUNDING REQUEST FORM

Number: 22214

Project Cost: **$5,233,300**

Project Name: **Corporate Capital Contingency**

New Asset/Expansion

Commission: Corporate-Wide

Useful Life: 0 Pre Approval: ☐

Department: Corporate-Wide

Category: Major

Project Mgr:

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Total contingency amounts for applicable 2022 capital projects.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS ($)	**2022**	**Future Phases**
Cost/Quote:	5,233,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	5,233,300	0
HST Impact:	0	0
Total Project Cost:	**5,233,300**	**0**

NOTES

SOURCE(S) OF FUNDING ($)	**Components**		
Funding Type	**Budget**	**TOTAL**	**Future Phases**
DCA	1,815,950		
Development Fees	3,600		
Gas Tax	378,000		
Infrastructure Grant	17,800		
Non-DC Growth	177,950		
Operating Funded Life Cycle	183,400		
Other Internal	1,190,300		
Parks Cash-in-Lieu	46,400		
Tax	89,600		
Waterworks	1,330,300		
TOTAL FUNDING	**5,233,300**		

OPERATING BUDGET IMPACT	**Personnel**	**Non Personnel**	**Revenues**	**Expenditures/(Revenues)**
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22001

Project Cost: $248,000

Project Name: **Culture Public Art Master Plan Implementation Phase 3 of 5**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Culture

Category: Minor

Project Mgr: Niamh O'Laoghaire

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation:

DETAILED DESCRIPTION (SCOPE OF PROJECT):

With Council's approval of the Public Art Master Plan and Implementation Plan, funding is now required to implement the plan. This will be a recurring expense for 5-years to meet the objectives of the Master Plan, funded by reserves, and the goals of BMFT. In 2022 it will fund annually recurring expenses and 2 new projects: a Rouge trails project and a community based park project in an underserviced area.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	243,700	500,000
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	243,700	500,000
HST Impact:	4,289	8,800
Total Project Cost:	**248,000**	**508,800**

NOTES

2022 projects: Annually recurring expenses: indoor collection Will Kwan commission $18,000, annual maintenance and repair of outdoor collection $12,500, education, outreach and co-production with with York U, $17,500, administration, $2,000. 2022 New projects: Our Park – a community grant for underserviced areas $30,000; a seasonal trail art project to celebrate the Rouge trails $170,000. Combined total: $250,000. Funding to be provided from the Public Art Acquisition Fund.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	248,000				TOTAL	Future Phases
Reserve Fund	248,000	0	0	0	0	0	508,800
TOTAL FUNDING	**248,000**					**0**	**508,800**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

City of Markham Council-approved Public Art Master Plan and Public Art Implementation Plan, which assumes $250,000 per year for 5 years. Funds not spent in 2020 and 2021 will be returned.

2022 PROJECT FUNDING REQUEST FORM

Number: 22002

Project Cost: $86,500

Project Name: **Museum Maintenance**

Repair/Replace

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Museum

Category: Minor

Project Mgr: Cathy Molloy

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Building Maintenance for selected buildings on the Museum site in order to keep them in a good state of repair.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	85,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	85,000	0
HST Impact:	1,496	0
Total Project Cost:	**86,500**	**0**

NOTES

$5,000-Bandstand, replace electrical panel for lights & recepticals
$16,000-Church, furnace, humidifier, A/C.
$9,000-Harness Shop, electrical, refinish counters, paint interior.
$27,000-Honey House. Repair ceiling, paint porch, repair walls, paint walls and ceiling, repair floor, replace exterior steps and ramp.
$23,000-Print Shop, restain exterior walls, restore door and windows, detail exterior painting.
$5,000-Transportation Hall, washroom hall heater

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Radios	Components: Building Repairs	Components: HST	TOTAL	Future Phases
Operating Funded Life Cycle	86,500	0	85,000	1,500	86,500	0
TOTAL FUNDING	**86,500**				**86,500**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	86,700
Amount Incl HST	86,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22003

Project Cost: $178,100

Project Name: **Theatre Backstage & Reception Sound System Replacement**

Repair/Replace

Commission: Development Services

Useful Life: 20 Pre Approval: ☐

Department: Theatre

Category: Major

Project Mgr: Andrew Rosenfarb

Cost Validation: Third party estimate

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of sound system which delivers stage audio feeds and announcement paging capabilities throughout the entire building. This project replaces all remaining program sound speakers which are mostly original to the building (1985) to a version which delivers superior sound clarity. This system is also responsible for background music for receptions and events. Replacement of all amplifiers, switches, volume control, power processing, software, programming, additional control panels in the lobby and backstage, cabling and installation labour. Program sound exists in the lobby, washrooms, backstage, reahearsal hall, dressing rooms, hallways and more.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	175,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	175,000	0
HST Impact:	3,080	0
Total Project Cost:	**178,100**	**0**

NOTES

Based on condition assessment, replacement is warranted. Improving our internal program sound infrastructure will allow performers to hear the stage feed and paging announcements clearly so they can remain in an assigned designated area as opposed to coming side stage to congregate. Additionally, the age of the existing equipment makes it prone to failures and technical issues. Amount requested is consistent with life cycle. There is no expected incremental operating budget impact.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	178,100	178,100	0	0	0	178,100	0
TOTAL FUNDING	**178,100**					**178,100**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	935,900
Amount Incl HST	178,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22004

Project Cost: $56,000

Project Name: **Theatre Program Video System Replacement**

Repair/Replace

Commission: Development Services

Useful Life: 10 Pre Approval: ☐

Department: Theatre

Category: Minor

Project Mgr: Andrew Rosenfarb

Cost Validation: Third party estimate

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of program video camera system last replaced in 2010 which distributes the stage video feed to televisions througout the venue including onstage, backstage, lobby, rehearsal hall, hallways, greenroom and more. Replacement equipment includes high definition stage camera, 15 high definition televisions, transmitters, amplifiers, converters, cabling and installation labour. Current program video system is low resolution and displays at 720P on televisions. This system replacement brings stage video feed camera & TV's to 1080P high definition.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	55,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	55,000	0
HST Impact:	968	0
Total Project Cost:	**56,000**	**0**

NOTES

Based on condition assessment, replacement of the video system is warranted. Improving our internal program video infrastructure will improve image quality on venue televisions that will allow performers to see the stage feed clearly in HD so they can remain in an assigned designated area as opposed to coming side stage to congregate. The age of the existing equipment does not keep up with current industry standards and is thus not compatible with certain equipment and software being brought in by clients and performers. Amount requested is consistent with life cycle.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
Operating Funded Life Cycle	56,000	56,000	0	0	0	56,000	0
TOTAL FUNDING	**56,000**					**56,000**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	3,675,000
Amount Incl HST	56,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22005

Project Cost: $62,800

Project Name: **Theatre - Stage & Building Maintenance**

Repair/Replace

Commission: Development Services

Useful Life: 5 Pre Approval: ☐

Department: Theatre

Project Mgr: Andrew Rosenfarb

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project consists of stage rigging safety inspections, music stand lights, audio active direct input boxes, infrared scans on venues electrical panels, replacement of two café & bar ice machines, lobby stair tread replacement, external storage shed for the upper courtyard and the relocation of 2 concrete storage bunkers and pouring of concrete pads for these sheds to allow transport trucks to properly back into loading dock based on the YRDSB/City shared usage agreement.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	61,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	61,700	0
HST Impact:	1,086	0
Total Project Cost:	**62,800**	**0**

NOTES

Amount requested is consistent with life cycle. Useful life varies depending on item 5-20 years. Stage rigging safety inspections (2020) ($4,000), Music stand lights (2012) ($3,000), Audio active direct input boxes (2011) ($4,000), Infrared electrical scans (2017) ($2,500), Two replacement café & bar ice machines (2010) ($15,300), Lobby stair tread replacement (2000) ($3,000), Storage shed for upper courtyard ($7,000), Pouring of two concrete pads and crane relocation of concrete storage bunkers-Managed by Asset Management ($22,900)

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	62,800	62,800	0	0	0	62,800	0
TOTAL FUNDING	**62,800**					**62,800**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	935,900
Amount Incl HST	62,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22006

Project Cost: $15,300

Project Name: **Gallery Courtyard Repairs**

Repair/Replace

Commission: Development Services

Useful Life: 20 Pre Approval: ☐

Department: Arts Centres

Project Mgr: Niamh O'Laoghaire

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Third party estimate

Requirement Validation: Documentation of life cycle years

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repairs required for safety and to maintain City assets in an appropriate fashion. Exterior: repair a damaged pillar and replace damaged benches.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	15,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	15,000	0
HST Impact:	264	0
Total Project Cost:	**15,300**	**0**

NOTES

The Varley needs to complete several repair projects:
•A brick pillar in the Varley courtyard was damaged in an accident and the bricks on the whole pillar need to be replaced ($5,000)
•Two courtyard benches damaged in the same incident also need to be replaced: Skyline curved benches Model number SLCB-11 in recycled plastic lumber, colour "Redwood" ($10,000). Asset management staff have assessed the damaged pillar and confirmed that the current state does not present a safety hazard but recommend replacement in 2022.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components 15,300				TOTAL	Future Phases
Operating Funded Life Cycle	15,300	0	0	0	0	0	0
TOTAL FUNDING	**15,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	238,100
Amount Incl HST	15,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22007

Project Cost: $20,400

Project Name: **Gallery Exterior Art Installation**

Commission: Development Services

Department: Arts Centres

Project Mgr: Niamh O'Laoghaire

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 2 Pre Approval: ☐

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To celebrate its 25th anniversary in 2022 the Gallery plans a temporary exterior art installation at the front of the building. Accompanied by a series of appropriate, celebratory events, it will create a destination, drawing the community to the Gallery and Main Street Unionville.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	20,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,000	0
HST Impact:	352	0
Total Project Cost:	**20,400**	**0**

NOTES

To celebrate its 25th anniversary in 2022 the Gallery plans a temporary exterior art installation at the front of the building. The Varley Curator will commission an artist to create it. The exterior artwork will be accompanied by a series of appropriate, celebratory events (in-person or online, depending on Health and Safety guidelines). The art work will draw the community to the building to interact with our exhibitions and programs creating an added destination for Main Street Unionville and surrounding areas. Project funding is from the Public Art Acquisition Reserve.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	20,400				TOTAL	Future Phases
Reserve Fund	20,400	0	0	0	0	0	0
TOTAL FUNDING	**20,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22008

Project Cost: $71,200

Project Name: **Consultant Studies**

Studies/Pilot Programs

Commission: Development Services

Department: Planning

Project Mgr: Biju Karumanchery

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation:

Requirement Validation:

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This recurring account allows staff to respond to strategic opportunities and unplanned needs that arise throughout the year where specialized consultant services are needed.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	70,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	70,000	0
HST Impact:	1,232	0
Total Project Cost:	**71,200**	**0**

NOTES

This account is intended to allow staff to respond to unanticipated needs and strategic opportunities. The projected 3-year average spend (2018-2020) is $69K.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	64,100	0	0	0	0	0	0
Development Fees	7,100	0	0	0	0	0	0
TOTAL FUNDING	**71,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
General Government - Various Studies	2022	64,100	1,593,063
TOTAL FUNDING		64,100	1,593,063

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Funds are included in the studies section of the D.C. Background Study.

2022 PROJECT FUNDING REQUEST FORM

Number: 22009

Project Cost: $30,000

Project Name: **Designated Heritage Property Grant Program - Residential**

Studies/Pilot Programs

Commission: Development Services

Department: Planning

Project Mgr: Regan Hutcheson

Useful Life: Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Grant assistance (50/50) to a maximum of $5,000/property for restoration work on designated residential properties. Program was extended by Council for three years (2020-2022)

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	30,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	30,000	0
HST Impact:	0	0
Total Project Cost:	**30,000**	**0**

NOTES

Program was initiated in 2010 for four years (2010-2013) at $30,000 per year. It was renewed for another three years (2014-2016) and for an additional three years (2017-2019 and 2020-2022) all at $30,000 per year. Project classified as major due to 2 year timeline granted to property owners.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Heritage Reserve	30,000	0	0	0	0	0	0
TOTAL FUNDING	**30,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22010

Project Cost: $25,000

Project Name: **Heritage Façade Improvements/Sign Replacement - 2022**

Studies/Pilot Programs

Commission: Development Services

Department: Planning

Project Mgr: Regan Hutcheson

Useful Life: Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual grants to commercial property owners in heritage areas to make improvements to facades. Matching grant of up to $10,000 for non-heritage and up to $15,000 for heritage buildings. Approval will allow City to continue with the program, as approved by Council.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	25,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,000	0
HST Impact:	0	0
Total Project Cost:	**25,000**	**0**

NOTES

It is recommended that for 2022, the amount be $25,000 based on actual grant requirements from 2019-2021 (3 year average). Category is Major as projects can take up to two years to complete and provide grant.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	25,000	0	0	0	0	0	0
TOTAL FUNDING	**25,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22011

Project Cost: $50,900

Project Name: **Markham Village Heritage District Plan - Update**

Commission: Development Services

Department: Planning

Project Mgr: Regan Hutcheson

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To update the 1989 Markham Village Heritage District Plan to reflect current practice, new heritage policies, guidelines and property classifications. The updated plan will align with the proposed Secondary Plan for the same area.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	50,000	0
Sub Total:	50,000	0
HST Impact:	880	0
Total Project Cost:	**50,900**	**0**

NOTES

Th existing heritage district plan is outdated and does not reflect current City practices and policies. This update will guide development and alterations according to current City standards and the revised Ontario Heritage Act legislation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Heritage Reserve	50,900	0	0	0	0	0	0
TOTAL FUNDING	**50,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22012

Project Cost: $138,400

Project Name: **Markham Centre Civic Square Study**

Commission: Development Services

Department: Planning

Project Mgr: Stephen Lue and Parvathi Nampoothiri

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This study will explore the most effective means to plan a Civic Square to introduce public presence to Markham Centre, with a phased approach that would build on cumulative city-building successes to increase civic role and associated activities over time. The vision for the Civic Square consists of the main square for large events and celebratory capacity, while keeping a forecourt role for associated activities, such as a performing arts centre, a central library, and community facilities. This study would consider various locations for the Civic Square based on criteria, such as proximity to the Mobility Hub, active presence along Enterprise Drive, potential visibility from Hwy 407, and the ability to incorporate public underground parking to serve these facilities and potentially surrounding uses. In its new location, the Civic Square would become a hub for weekday activity that energizes this area of the downtown while allowing residents, workers, shoppers, visitors, and users of public facilities a place to enjoy through program and service offerings that recognize the energy and diversity of Markham's residents.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	11,250	0
External Consulting:	125,000	0
Sub Total:	136,250	0
HST Impact:	2,200	0
Total Project Cost:	**138,400**	**0**

NOTES

The requirements of the Markham Centre Civic Square Study will focus on phasing and implementation, and is supplemental to the Secondary Plan Update Study where the comprehensive review of the civic square as a major contributor to civic presence in the context of land use planning would significantly enhance activity in the City's emerging downtown. The budget was determined based on informal discussions with external consultants.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	124,560	0	0	0	0	0	0
Parks Cash-in-Lieu	13,840	0	0	0	0	0	0
TOTAL FUNDING	**138,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22013

Project Cost: $356,200

Project Name: **MiX Innovation District Secondary Plan (Employment)**

Commission: Development Services

Department: Planning

Project Mgr: Marg Wouters

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The 2014 Official Plan requires a new secondary plan to be prepared for the Future Urban Area Employment block and an updated secondary plan to be prepared for the Highway 404 North Secondary Plan Area. Both of these areas are in the MiX Innovation District in north Markham. A secondary plan is required prior to development approvals in the FUA employment lands.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	350,000	0
Sub Total:	350,000	0
HST Impact:	6,160	0
Total Project Cost:	**356,200**	**0**

NOTES

Consultants will be retained to undertake the studies. This request is for planning and urban design services only and assumes the background analysis for both secondary plans is undertaken as one study. Additional funding may be required if the secondary plan studies are undertaken separately. Cost estimate is based on other similar secondary plan studies. Note, approx. $20,000 is identified for work to confirm the Ecological Corridor in the FUA Employment Block Secondary Plan area.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	320,580	0	0	0	0	0	0
Development Fees	35,620	0	0	0	0	0	0
TOTAL FUNDING	**356,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
General Government - Various Studies	2022	320,580	1,593,063
TOTAL FUNDING		320,580	1,593,063

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Funds are included in the studies section of the DC Background Study.

2022 PROJECT FUNDING REQUEST FORM

Number: 22014

Project Cost: $305,300

Project Name: **Yonge Corridor Secondary Plan Phase 2 of 2**

Commission: Development Services

Department: Planning

Project Mgr: Darryl Lyons

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The 2014 Official Plan requires a secondary plan to be prepared for the Yonge Steeles Key Development Area. However, in anticipation of the Yonge North Subway Extension, there is a need to plan comprehensively for the entire Yonge Corridor from Steeles Avenue to the Langstaff Gateway.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	300,000	0
Sub Total:	300,000	0
HST Impact:	5,280	0
Total Project Cost:	**305,300**	**0**

NOTES

Request to increase budget for Yonge Corridor Secondary Plan (SP) project to address a change in scope to complete a Council directed initial land use built form study in 2021 for Royal Orchard, Clark and Steeles subway station areas (approx. $100k). Funding also increased to have Consultants retained to undertake the SP studies and SP, similar to Langstaff and Markham Centre SP projects. This work will be done in consultation with senior levels of Government, adjoining Municipalities, external agencies,stakeholders such as landowners and the public.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	274,770	0	0	0	0	0	0
Development Fees	30,530	0	0	0	0	0	0
TOTAL FUNDING	**305,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
General Government - Various Studies	2022	274,770	1,593,063
TOTAL FUNDING		274,770	1,593,063

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22015

Project Cost: **$152,600**

Project Name: **Natural Assets Inventory**

Studies/Pilot Programs

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Planning

Category: Annual

Project Mgr: Patrick Wong

Cost Validation:

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation:

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The study will create a natural assets inventory (including but not limited to woodlands, wetlands and valleylands) to be integrated into the City's Corporate Asset Management Framework. Natural assets are required to be included into municipal asset management plans by July 01, 2024 as per O. Reg. 588/17 (Asset Management Planning for Municipal Infrastructure). This will include establishing criteria and parameters to assess the state of the infrastructure (inventory, valuation, age, condition) and the level of service (current and desired) including necessary life-cycle activities to maintain the asset's service level and to mitigate risk/liability to the Corporation. The Study will identify any necessary life cycle funding to maintain natural assets' level of service and will also seek to quantify the economic value of natural assets and their services for performance monitoring, reporting and benchmarking purposes.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

PROJECT COSTS ($)	**2022**	**Future Phases**
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	150,000	0
Sub Total:	150,000	0
HST Impact:	2,640	0
Total Project Cost:	**152,600**	**0**

NOTES

This study is being managed by Policy & Research on behalf of Asset Management and Operations. It is noted that any economic values arrived at for the natural assets will not be included in financial statements.

SOURCE(S) OF FUNDING ($)		**Components**					
Funding Type	**Budget**					**TOTAL**	**Future Phases**
Tax	152,600	0	0	0	0	0	0
TOTAL FUNDING	**152,600**					**0**	**0**

OPERATING BUDGET IMPACT	**Personnel**	**Non Personnel**	**Revenues**	**Expenditures/(Revenues)**
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22016

Project Cost: $101,800

Project Name: **Natural Heritage System Study - Phase 2 of 2**

Commission: Development Services

Department: Planning

Project Mgr: Marg Wouters

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The purpose of this study is to update the City's Natural Heritage System inventory and develop a management strategy for the portion of the system that is in City ownership. Phase 1 consisted of an update of the natural heritage inventory and was completed in mid 2021. Phase 2 of the study will provide a Management Strategy for the natural heritage inventory identified in Phase 1 to ensure the long-term health and sustainability of the City's Greenway System, including city-owned natural areas. The Management Strategy will identify and prioritize natural areas in need of intervention and provide an implementation framework to address the decline in ecological health. The Strategy will also provide guidance for the assumption of natural areas into public ownership to ensure long term health of natural areas and provide additional recommendations to assist the City in the management of these natural assets.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	100,000	0
Sub Total:	100,000	0
HST Impact:	1,760	0
Total Project Cost:	**101,800**	**0**

NOTES

This is Phase 2 of 2 phases. Phase 1, updating the natural heritage inventory, was approved at $81,400 (project 19017) and is complete. Recommendations were presented to Council May 2021.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Tax	101,800	0	0	0	0	0	0
TOTAL FUNDING	**101,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22017

Project Cost: $40,000

Project Name: **York Region Employment Survey**

Commission: Development Services

Department: Planning

Project Mgr: Senior Manager, Policy & Research

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To fund Markham's funding obligation for the York Region Employment Survey. The Survey results are used to assist in planning for and monitoring growth and trends in employment in Markham and York Region. The employment data is shared with Economic Development.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	40,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	40,000	0
HST Impact:	0	0
Total Project Cost:	**40,000**	**0**

NOTES

The York Region Employment Survey is a biennial program. Markham will be entering into an agreement with York Region to share the costs of conducting the survey. The total Regional cost in 2019 was $322,819 and Markham's commitment to the survey was $38,000 or 11.7%. As a cost estimate for 2021 has not yet been provided, staff are assuming the 2019 cost plus 5% for 2021.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	36,000	0	0	0	0	0	0
Development Fees	4,000	0	0	0	0	0	0
TOTAL FUNDING	**40,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
General Government - Various Studies	2022	36,000	1,593,063
TOTAL FUNDING		36,000	1,593,063

Life Cycle

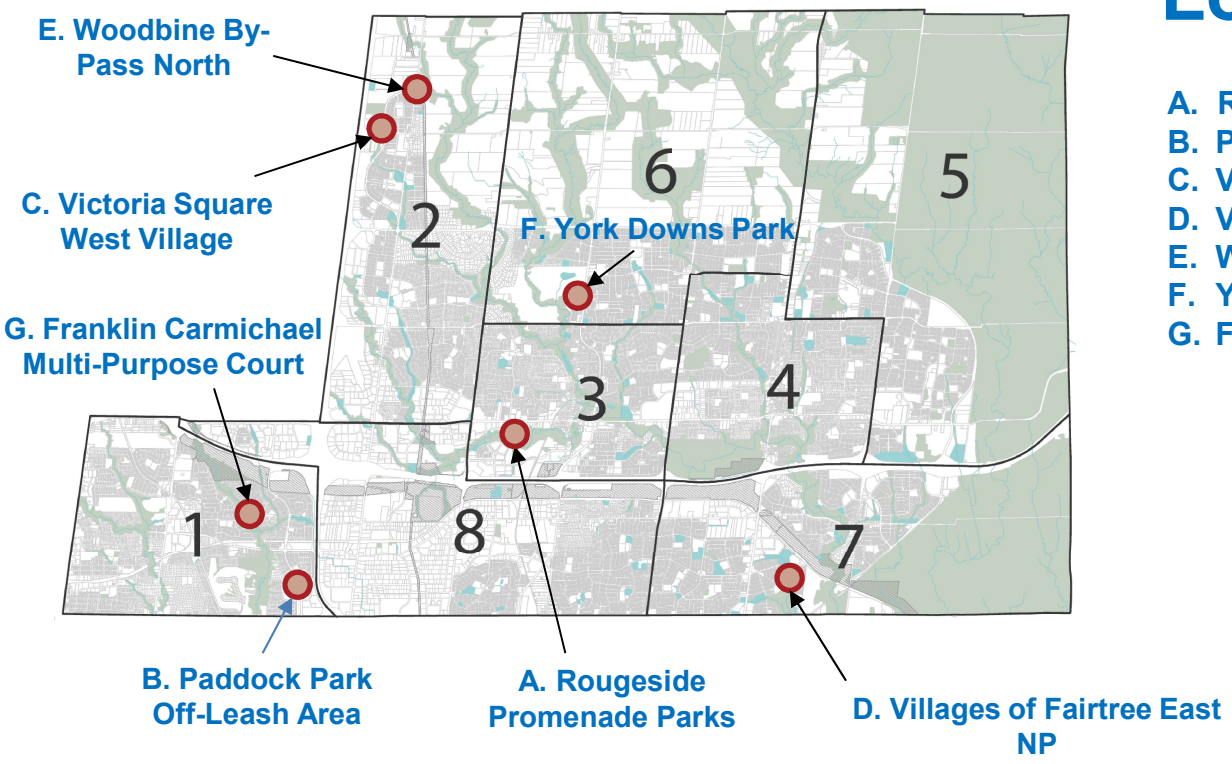
Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Funds are included in the studies section of the DC Background Study.



Location Map

A. Rougeside Promenade Parks
B. Paddock Park Off-Leash Area
C. Victoria Square West Village
D. Village of Fairtree East NP
E. Woodbine By-Pass North
F. York Downs Park
G. Franklin Carmichael Multi-Purpose Court

2022 PROJECT FUNDING REQUEST FORM

Number: 22018

Project Cost: $3,919,800

Project Name: **Markham Centre-Rougeside Promenade Parks-Construction**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to construct the 6.60 ac (2.67 ha) parks located on North edge of the Rouge River Valley, south of Rougeside Promenade, east of Verdale Crossing and west of the Sheridan SWM Pond. Anticipated amenities include a major shade structure, minor shade structures, jr/sr playgrounds, full court basketball, exercise stations, waterplay, site furnishings, pathways and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	3,518,967	0
Internal Charges:	318,507	0
External Consulting:	20,000	0
Sub Total:	3,857,474	0
HST Impact:	62,286	0
Total Project Cost:	**3,919,800**	**0**

NOTES

Cost per ha is $1,468,075 ($3,919,759/2.67ha) or $593,903.01 per acre. Annualized operating cost is $24,483.90 (2.67ha x $9170). Estimated in service date Q3 2024. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
DCA	3,527,820	0	0	0	0	0	0
Parks Cash-in-Lieu	391,980	0	0	0	0	0	0
TOTAL FUNDING	**3,919,800**					**0**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Parks - Markham Centre Times Valley Edge Park	2019	1,959,007	2,150,081
Parks - Markham Centre North East Valley Edge Parkette	2024	1,568,813	1,568,813
TOTAL FUNDING		3,527,820	3,718,894

Life Cycle

Amount in Study:

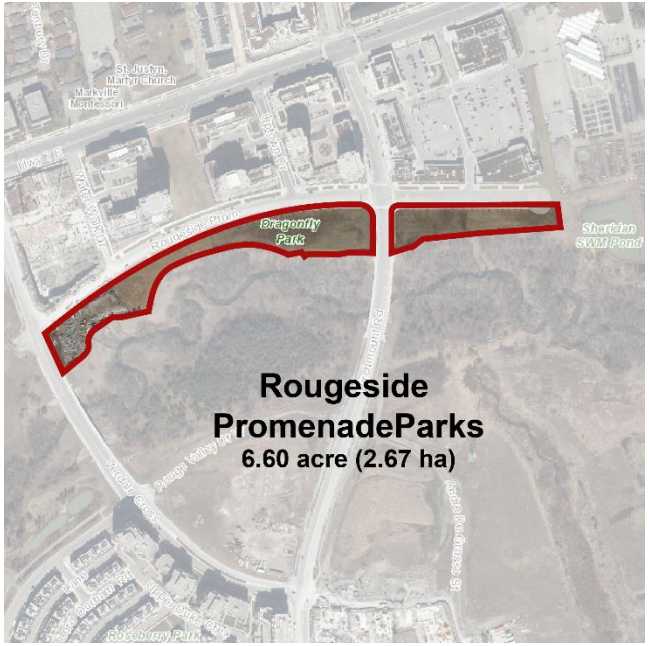
Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Markham Centre – Rougeside Promenade Parks

Construction



Ward 3

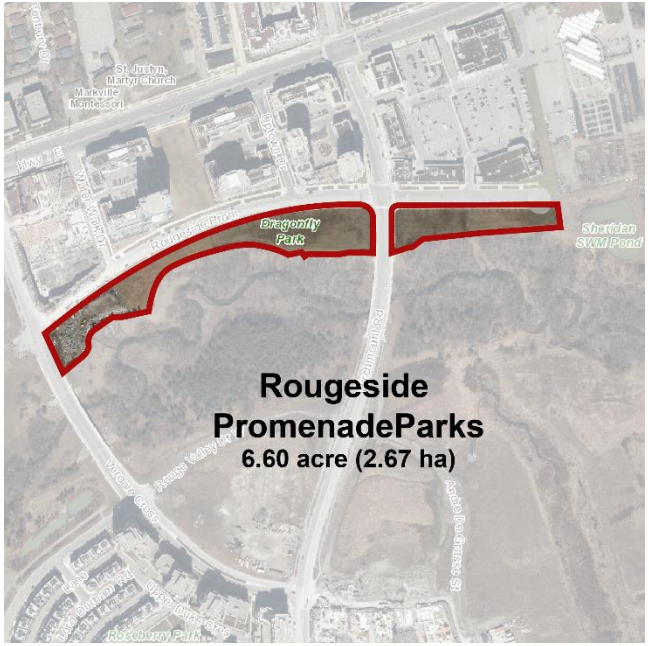
2022 Budget Request: $3,919,800

Features:

- Major Shade Structure;
- Minor Shade Structures;
- Jr./Sr. Playgrounds;
- Full Court Basketball;
- Exercise Stations;
- Waterplay;
- Site furnishings;
- Pathways; and,
- Associated landscape works.

Markham Centre – Rougeside Promenade Parks

Construction



Project Cost ($)

Cost/Quote:	3,518,967
Internal Charges:	318,507
External Consulting:	20,000
Sub Total:	3,857,474
HST Impact:	62,286
Total Project Cost:	**3,919,800**

Cost per ha is $1,468,075 ($3,919,759/2.67ha) or $593,903.01 per acre. Annualized operating cost is $24,483.90 (2.67ha x $9170). Estimated in service date Q3 2024. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

2022 PROJECT FUNDING REQUEST FORM

Number: 22019

Project Cost: $369,900

Project Name: **Paddock Park - Off Leash Area - Design & Phase 1 Construction**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 25 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct a first phase off-leash dog area in the existing Paddock Park located at 105 Simonston Blvd. Anticipated amenities of Phase 1 include enclosed off leash area with mulch surfacing, water service, storm service pathway and associated landscape works. Anticipated Phase 2 amenities include parking lot, shade structure and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	294,000	195,000
Internal Charges:	30,060	19,350
External Consulting:	40,000	20,000
Sub Total:	364,060	234,350
HST Impact:	5,878	3,784
Total Project Cost:	**369,900**	**238,100**

NOTES

Annualized operating cost will remain as-is, this work is within an existing park. Estimated in service date for Phase 1 is: Q4 2022. Costs will be included in the Life Cycle Reserve Study at time of completion based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
DCA	332,910	0	0	0	0	0	238,100
Parks Cash-in-Lieu	36,990	0	0	0	0	0	0
TOTAL FUNDING	**369,900**					**0**	**238,100**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

This site was not identified at time of last DC background study. No DC line items remaining from this area. This site will be captured in the upcoming DC background study update.

BUILDING MARKHAM'S FUTURE TOGETHER 2015-2019 Strategic Plan

MARKHAM

Paddock Park – Off Leash Area

Design & Phase 1 Construction

Ward 1

2022 Budget Request: $369,900

Phase 1 Features:

- Off Leash Area with Mulch Surfacing;
- Water Service;
- Storm Service Pathway; and,
- Associated landscape works.

Anticipated Phase 2 Features:

- Parking Lot;
- Shade Structure; and,
- Associated landscape works

BUILDING MARKHAM'S FUTURE TOGETHER 2015-2019 Strategic Plan

MARKHAM

Paddock Park – Off Leash Area

Design & Phase 1 Construction

Project Cost ($)

Cost/Quote:	294,000
Internal Charges:	30,060
External Consulting:	40,000
Sub Total:	364,060
HST Impact:	5,878
Total Project Cost:	**369,900**

Annualized operating cost will remain as-is, this work is within an existing park. Estimated in service date for Phase 1 is: Q4 2022. Cost will be included in the Life Cycle Reserve Study at time of completion based on updated replacement cost for each amenity.

2022 PROJECT FUNDING REQUEST FORM

Number: 22020

Project Cost: $841,800

Project Name: **Victoria Square West Village - Design & Construction**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation:

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 1.14 acre (0.46 ha) park located at 11 Fred Wolstenholme Dr. Program amenities include shade structure, Junior/senior playground, and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	700,000	0
Internal Charges:	68,400	0
External Consulting:	60,000	0
Sub Total:	828,400	0
HST Impact:	13,376	0
Total Project Cost:	**841,800**	**0**

NOTES

Cost per ha is $1,829,947 ($841,776/0.46 ha) or $738,400 per acre. Annualized operating cost is $4218 (0.46ha x $9170/ha) starting in 2023. Estimated in-service date: Q3 2023. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	757,620	0	0	0	0	0	0
Parks Cash-in-Lieu	84,180	0	0	0	0	0	0
TOTAL FUNDING	**841,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Parks - Victoria Square West Village	2021	757,620	991,254
TOTAL FUNDING		757,620	991,254

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Victoria Square West Village

Design & Construction

Ward 2

2022 Budget Request: $841,800

Features:

- Shade Structure;
- Jr./Sr. Playground; and,
- Associated landscape works.

Victoria Square West Village

Design & Construction

Project Cost ($)

Cost/Quote:	700,000
Internal Charges:	68,400
External Consulting:	60,000
Sub Total:	828,400
HST Impact:	13,376
Total Project Cost:	**841,800**

Cost per ha is $1,829,947 ($841,776/0.46 ha) or $738,400 per acre. Annualized operating cost is $4218 (0.46ha x $9170/ha) starting in 2023. Estimated in-service date: Q3 2023. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

2022 PROJECT FUNDING REQUEST FORM

Number: 22021

Project Cost: $83,100

Project Name: **Villages of Fairtree East Neighbourhood Park - Design**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 25 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to hire the landscape architect to design the 7.48 acre (3.0 ha) neighbourhood park in the Villages of Fairtree East on westside of Kirkham Drive, north of Steeles Ave. 1.5 ha of the site area is woodlot. Anticipated program amenities include jr/sr playground,recreational court, shade structure, exercise equipment, pathways and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	6,750	0
External Consulting:	75,000	0
Sub Total:	81,750	0
HST Impact:	1,320	0
Total Project Cost:	**83,100**	**0**

NOTES

Construction funding for this park to be requested in 2023.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	74,790	0	0	0	0	0	0
Parks Cash-in-Lieu	8,310	0	0	0	0	0	0
TOTAL FUNDING	**83,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

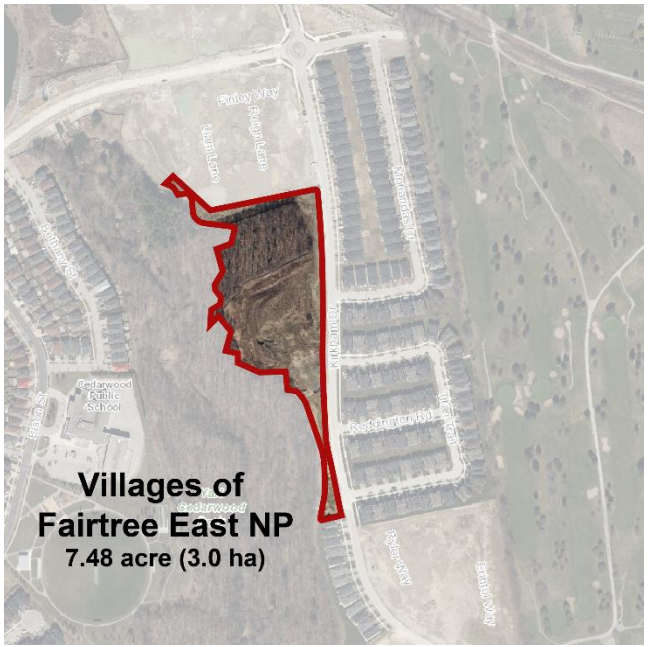
Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

This site was not identified at time of last DC background study. No DC line items remaining from this area. This site will be captured in the upcoming DC background study update.

Villages of Fairtree East NP

Design



Ward 7

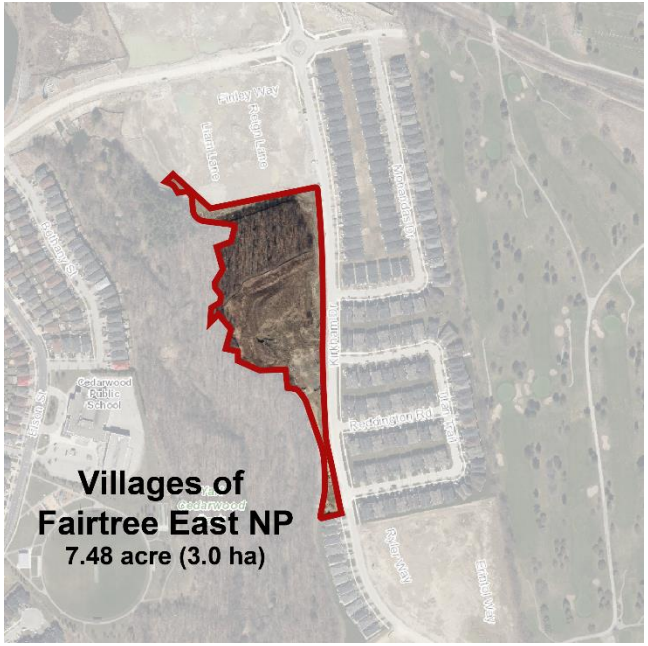
2022 Budget Request: $83,100

Features:

- Jr./Sr. Playground;
- Recreational Court;
- Shade Structure;
- Exercise Equipment;
- Pathways; and,
- Associated landscape works.

Villages of Fairtree East NP

Design



Project Cost ($)

Cost/Quote:	-
Internal Charges:	6,750
External Consulting:	75,000
Sub Total:	81,750
HST Impact:	1,320
Total Project Cost:	**83,100**

Construction funding for this park to be requested for 2023

2022 PROJECT FUNDING REQUEST FORM

Number: 22022

Project Cost: $988,500

Project Name: **Woodbine By-pass North Park - Design & Construction**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct the 1.24 acre (0.50 ha) park located at 10977 Victoria Square Boulevard. Anticipated park amenities include Junior/ Senior playground, plaza area, shade structure, pathways and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	822,500	0
Internal Charges:	80,325	0
External Consulting:	70,000	0
Sub Total:	972,825	0
HST Impact:	15,708	0
Total Project Cost:	**988,500**	**0**

NOTES

Cost per ha is $1,977,066 ($988,533/0.50 ha) or $797,204 per acre. Annualized operating cost is $4585 (0.50 ha x $9170/ha) starting in 2023. Estimated in service date Q3 2023. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	889,650	0	0	0	0	0	0
Parks Cash-in-Lieu	98,850	0	0	0	0	0	0
TOTAL FUNDING	**988,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Parks - Woodbine Bypass North Park - Hard Surfaces (Plaza)	2022	889,650	975,293
TOTAL FUNDING		889,650	975,293

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Woodbine By-Pass North

Design & Construction

Ward 2

2022 Budget Request: $988,500

Features:

- Jr./Sr. Playground;
- Plaza Area;
- Shade Structure;
- Pathways; and,
- Associated landscape works.

Woodbine By-Pass North

Design & Construction

Project Cost ($)

Cost/Quote:	822,500
Internal Charges:	80,325
External Consulting:	70,000
Sub Total:	972,825
HST Impact:	15,708
Total Project Cost:	**988,500**

Cost per ha is $1,977,066 ($988,533/0.50 ha) or $797,204 per acre. Annualized operating cost is $4585 (0.50 ha x $9170/ha) starting in 2023. Estimated in service date Q3 2023. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

2022 PROJECT FUNDING REQUEST FORM

Number: 22023

Project Cost: $1,291,500

Project Name: **York Downs Park (Kennedy Rd. and Yorkton Blvd.) - D & C**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation:

Requirement Validation:

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This Project is to design and construct the 2.52 acre (1.02 ha) park located between Kennedy Rd. and Yorkton Boulevard. Anticipated Park Amenities include a junior/senior playground, shade structures, site furnishings, pathways and associated landscape works.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,100,000	0
Internal Charges:	104,940	0
External Consulting:	66,000	0
Sub Total:	1,270,940	0
HST Impact:	20,522	0
Total Project Cost:	**1,291,500**	**0**

NOTES

Cost per ha is $1,266,138 ($1,266,138/1.02ha) or $512,399 per acre. Annualized operating cost is $9353 (1.02ha x $9170). Estimated in service date: Q3 2023. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity. This is a developer upfronted design and build project.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	1,162,350	0	0	0	0	0	0
Parks Cash-in-Lieu	129,150	0	0	0	0	0	0
TOTAL FUNDING	**1,291,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Parks - York Downs Parkette Block 5	2024	1,162,350	1,277,646
TOTAL FUNDING		1,162,350	1,277,646

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

York Downs Park (Block 158)

Design & Construction

Ward 6

2022 Budget Request: $1,291,500

Features:

- Jr./Sr. Playground;
- Shade Structures;
- Site Furnishings;
- Pathways; and,
- Associated landscape works.

York Downs Park (Block 158)

Design & Construction

Project Cost ($)

Cost/Quote:	1,100,000
Internal Charges:	104,940
External Consulting:	66,000
Sub Total:	1,270,940
HST Impact:	20,560
Total Project Cost:	**1,291,500**

Cost per ha is $1,266,138 ($1,266,138/1.02ha) or $512,399 per acre. Annualized operating cost is $9,353 (1.02ha x $9,170). Estimated in service date: Q3 2023. Costs will be included in the Life Cycle Reserve Study at time of park assumption based on updated replacement cost for each amenity.

2022 PROJECT FUNDING REQUEST FORM

Number: 22217

Project Cost: $250,000

Project Name: **Franklin Carmichael Park Multi-Purpose Court - D & C**

New Asset/Expansion

Commission: Development Services

Department: Design

Project Mgr: Richard Fournier

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to design and construct a multi-purpose court for basketball and ball hockey use that can be transformed in the winter months into a natural ice rink. The multi-purpose court is to be installed at the existing Franklin Carmichael Park located at 277 Green Lane.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	225,700	0
Internal Charges:	0	0
External Consulting:	20,000	0
Sub Total:	245,700	0
HST Impact:	4,324	0
Total Project Cost:	**250,000**	**0**

NOTES

This project has been submitted for the Canada Healthy Community Initiative (CHCI) Grant for the full value of the project. If the CHCI grant funding is not approved, project will be funded from the Parks Renaissance Program (Growth Related Parks Improvement Project) or DC funding. Costs will be included in the Life Cycle Reserve Study at time of completion based on the updated replacement cost for each amenity.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Other External	250,000	0	0	0	0	0	0
TOTAL FUNDING	**250,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

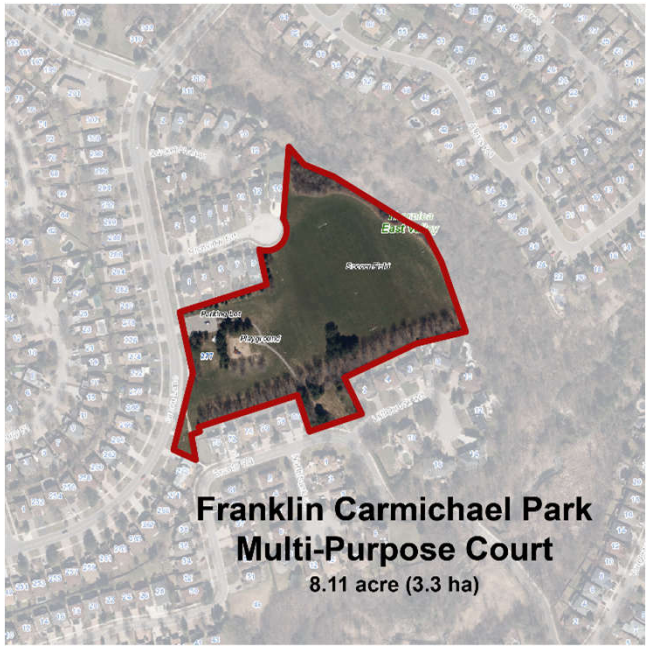
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

BUILDING MARKHAM'S FUTURE TOGETHER 2015-2019 Strategic Plan

MARKHAM

Franklin Carmichael Park Multi-Purpose Court

Design & Construction



Ward 2

2022 Budget Request: $250,000

Features:

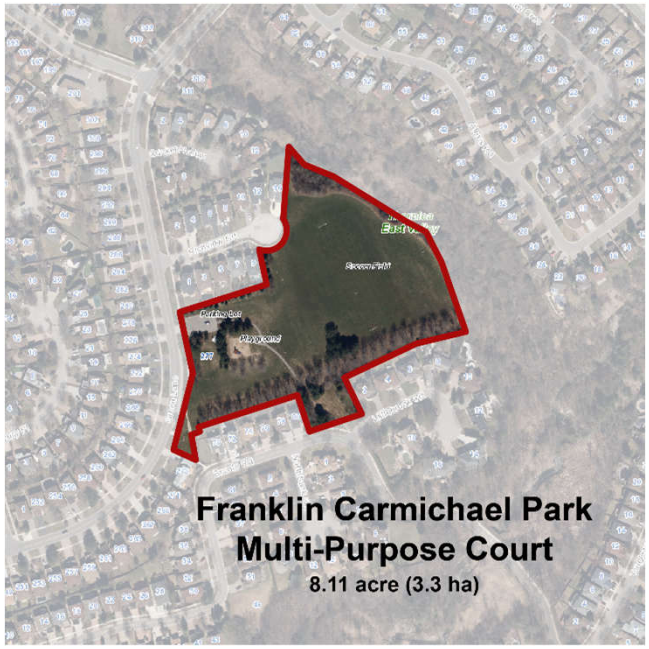
- Multi-purpose court for basketball and ball hockey use that can be transformed in the winter months into a natural ice rink

BUILDING MARKHAM'S FUTURE TOGETHER 2015-2019 Strategic Plan

MARKHAM

Franklin Carmichael Park Multi-Purpose Court

Design & Construction



Project Cost ($)

Cost/Quote:	225,700
Internal Charges:	-
External Consulting:	20,000
Sub Total:	245,700
HST Impact:	4,324
Total Project Cost:	**250,000**

This project has been submitted for the Canada Healthy Community Initiative (CHCI) Grant for the full value of the project. If the CHCI grant funding is not approved, staff will prepare a report to council to discuss next steps. Costs will be included in the Life Cycle Reserve Study at time of completion based on the updated replacement cost for each amenity.

2022 PROJECT FUNDING REQUEST FORM

Number: 22024

Project Cost: $87,600

Project Name: **Brownfield Policy Update**

Commission: Development Services

Department: Engineering

Project Mgr: Denisa Necula

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Published guidelines

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The City's Environmental Policy and Procedures for Conveyance of Land to the City Pursuant to the Planning Act was adopted by Council in November 2017. This policy provides a process and clear direction to staff and the development industry with respect to environmental requirements relating to the conveyance of lands for road, parks and open space purposes in support of development and growth. Since the adoption of this policy and procedure, the Ministry of the Environment, Conservation and Parks (MECP) has introduced new legislation to address soil remediation, exportation and importation. The policy and procedure needs to be updated to stay current and comply with MECP requirements.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	11,250	0
External Consulting:	75,000	0
Sub Total:	86,250	0
HST Impact:	1,320	0
Total Project Cost:	**87,600**	**0**

NOTES

Cost based on two estimates received from brownfield peer review consultants.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	87,600	0	0	0	0	0	0
TOTAL FUNDING	**87,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		87,600	10,602,000
TOTAL FUNDING		87,600	10,602,000

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22025

Project Cost: $915,800

Project Name: **MESP for FUA Employment Block Secondary Plan**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Category: Major

Project Mgr: Farshed Kawasia

Cost Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Retain a consultant to prepare a Master Environmental Servicing Plan (MESP) for the FUA Employment Block to identify municipal servicing options and environmental issues including surface and sub-surface water, fluvial geomorphology, terrestrial and aquatic habitat, and provide a framework for the protection of the natural environment. Study is needed to support Secondary Plan for FUA that Planning will be initiating.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	900,000	0
Sub Total:	900,000	0
HST Impact:	15,840	0
Total Project Cost:	**915,800**	**0**

NOTES

Secondary Plan for Future Urban Area (FUA) Employment Block. This project is contingent upon approval of new staff resource (Senior Environmental Engineer).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	915,800	0	0	0	0	0	0
TOTAL FUNDING	**915,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		915,800	10,602,000
TOTAL FUNDING		915,800	10,602,000

Life Cycle

Amount in Study:

Amount Incl HST

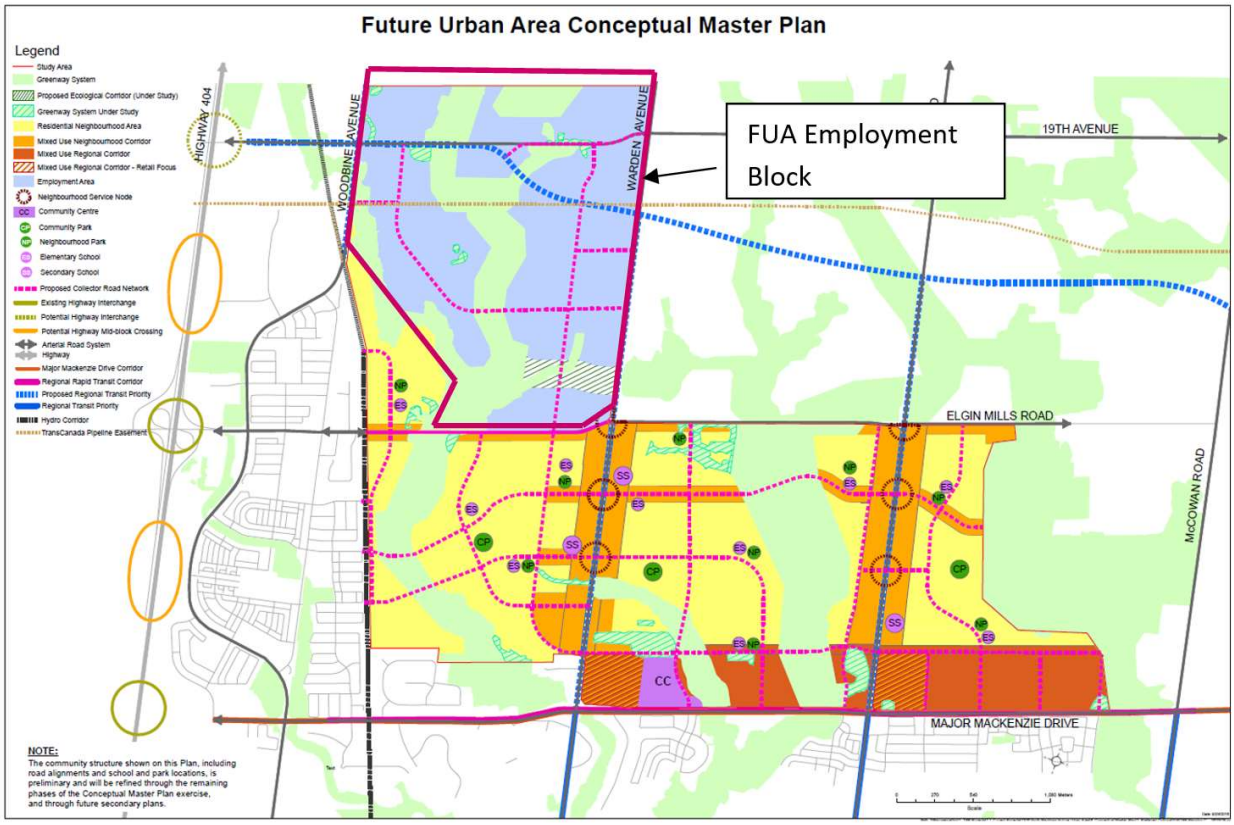
Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

MESP for FUA Employment Block Secondary Plan

The FUA Employment block contains many sensitive environmental features that require the completion of a MESP, in support of a Secondary Plan, to properly assess, characterize and evaluate factors that influence their sustainability. This involves site-specific data collection and monitoring as well as hydrologic modelling. The MESP will also include an assessment of potential impacts of development on the environment, natural heritage and hydrologic features, and a management strategy to manage and/or mitigate potential impacts on those sensitive environmental features. The MESP will build on the high-level work of the Subwatershed Study that was completed in support of the development of the recommended Community Structure Plan for the FUA, and be sufficiently detailed to obtain acceptance from external agencies such as the TRCA, MNRF and MECP.

Furthermore, the MESP will further refine the municipal servicing and stormwater management requirements for the Secondary Plan for the Employment Block.



2022 PROJECT FUNDING REQUEST FORM

Number: 22026

Project Cost: $576,300

Project Name: **North Markham Employment SP (MIX+) - Transportation**

Commission: Development Services

Department: Engineering

Project Mgr: TBD

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

A secondary plan study is required to confirm the transportation needs for the employment lands in the northern part of Markham that collectively form the Markham Innovation Exchange (MIX) lands (see Figure below). This study will be undertaken in conjunction with the Planning studies for this area.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	67,500	0
External Consulting:	500,000	0
Sub Total:	567,500	0
HST Impact:	8,800	0
Total Project Cost:	**576,300**	**0**

NOTES

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	576,300	0	0	0	0	0	0
TOTAL FUNDING	**576,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Travel Demand Management		576,300	3,331,694
TOTAL FUNDING		576,300	3,331,694

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22027

Project Cost: $428,400

Project Name: **Major Mackenzie & Denison GO Station Assessment**

Commission: Development Services

Department: Engineering

Project Mgr: TBD

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☑

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

A potential new GO station at Major Mackenzie Drive on the Stouffville Line has been identified by the 2016 York Region Transportation Master Plan. The station will connect GO transit riders with the planned Major Mackenzie Drive rapid transit corridor, as well as local transit routes. A preliminary assessment undertaken as part of the ongoing Markham Road-Mount Joy Secondary Plan, indicates sufficient projected ridership potential and that a Major Mackenzie Drive GO station continue to be protected for.
A potential new GO station at Denison Street on the Stouffville Line (in place of one proposed at 14th Ave) has been identified in the on-going Milliken Centre Secondary Plan development work. The station will support the development of the Milliken Centre as a growth intensification node. Support for this station was received from the landowner where this station could located.
Markham Council, previously endorsed both the Denison GO Station and a Major Mackenzie GO Station on the Stouffville Line, on May 3, 2016.
This budget request is for further studies that are required to advance the evaluation of both new GO stations. These will include the preparation of detailed Ridership Modelling and an Initial Business Case (to be completed by Metrolinx and partly funded by other parties). This new GO station will improve rapid transit service and reduce and manage travel demand in these growth areas.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	51,840	0
External Consulting:	370,000	0
Sub Total:	421,840	0
HST Impact:	6,512	0
Total Project Cost:	**428,400**	**0**

NOTES

City of Markham staff are in discussion with adjacent landowners to recover a portion of the costs associated with this assessment.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	428,400	0	0	0	0	0	0
TOTAL FUNDING	**428,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Travel Demand Management		428,400	3,331,694
TOTAL FUNDING		428,400	3,331,694

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22028

Project Cost: $1,377,300

Project Name: **Downstream Improvements Program (Construction)**

Commission: Development Services

Department: Engineering

Project Mgr: Nehal Azmy

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project is required to mitigate watercourse erosion and sedimentation resulting from upstream development, and to protect fish habitat. This project will reduce risk of flooding and provide various erosion protection and sediment removal to various streams in the City. Locations include Rouge River (R-ES-45), Rouge River (ROU.-22) & Berczy (BER-25).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,155,655	0
Internal Charges:	133,815	0
External Consulting:	66,340	0
Sub Total:	1,355,810	0
HST Impact:	21,507	0
Total Project Cost:	**1,377,300**	**0**

NOTES

This request is for construction of above mentioned erosion site.This site was part of 30 erosion sities identified in 2014 City Wide Erosion Master Study Implementation. Project is required to mitigate watercourse erosion and sedimentation resulting from upstream development, and to protect fish habitat. Coordination and permits from Environmental Agencies (i.e. TRCA, MNRF,etc.) will be required. Final location is subject to change uponDirector's approval based on design and pending property availability and other site conditions. This budget request includes construction, Contract Admin and internal fees.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	895,180	0	0	0	0	0	0
Operating Funded Life Cycle	482,120	0	0	0	0	0	0
TOTAL FUNDING	**1,377,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Sidewalks - City's Watercourses - Erosion Control -		895,180	12,050,647
TOTAL FUNDING		895,180	12,050,647

Life Cycle

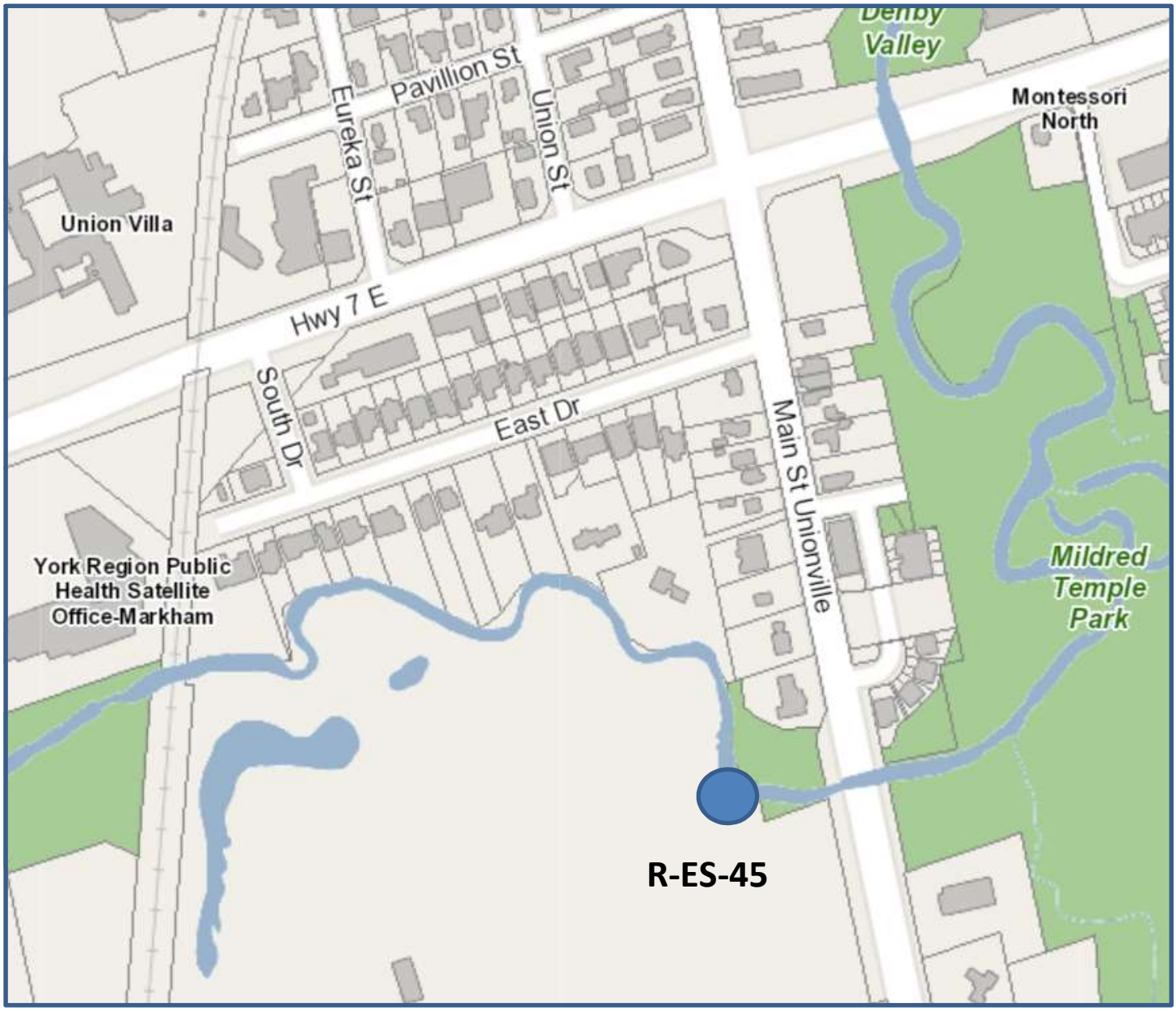
Amount in Study:

Amount Incl HST

Year in the study

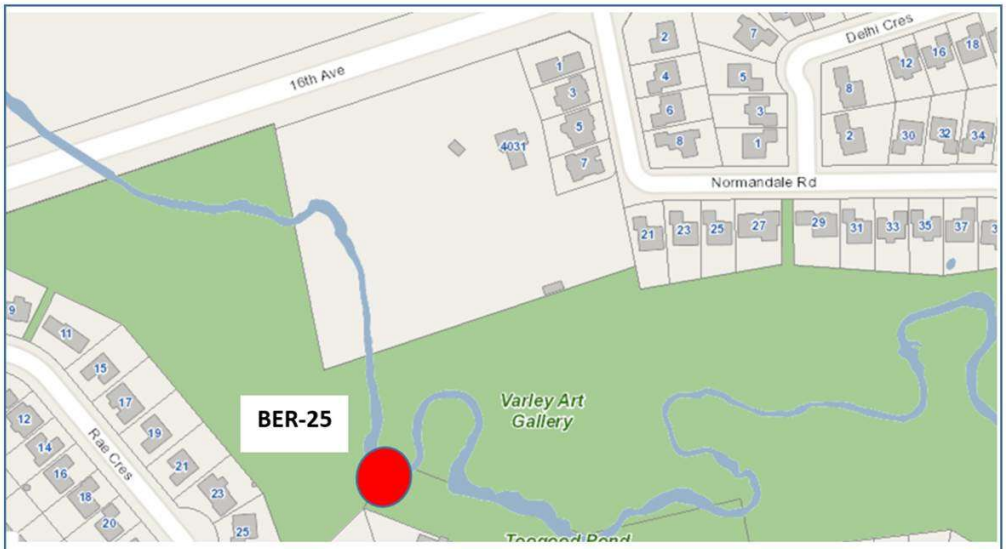
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Downstream Improvements – Construction



EROSION RESTORATION (SITE 1 – R-ES-45)

EROSION SITE # 1: ROUGE RIVER (ROU-122) - **FIGURE 1**



EROSION SITE # 2: BERCZY CREEK (BER.25) - **FIGURE 2**

2022 PROJECT FUNDING REQUEST FORM

Number: 22029

Project Cost: $2,592,100

Project Name: **Cedar Avenue Reconstruction**

Commission: Development Services

Department: Engineering

Project Mgr: Julie Sharma

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Reconstruction of Cedar Avenue from Langstaff road (Markham) to Hightech Rd (Richmond Hill). The project is being managed by ROY and City of Markham will be funding 1/3 of the project. The budget request reflects the Markham share of the project cost. City of Markham to enter into cost sharing agreement with Region.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,493,400	0
Internal Charges:	54,854	0
External Consulting:	0	0
Sub Total:	2,548,254	0
HST Impact:	43,884	0
Total Project Cost:	**2,592,100**	**0**

NOTES

The budget includes the EA, design, contract admin & inspection, utility relocation, property acquisition, construction and admin fees.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	2,592,100	0	0	0	0	0	0
TOTAL FUNDING	**2,592,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Roads - Cedar Avenue Extension - Langstaff North to Richmond Hill	2025	2,370,632	2,370,632
Hard - Properties Acquisition - Roads - Cedar Avenue Extension - Langstaff North to Richmond Hill	2025	221,468	1,160,212
TOTAL FUNDING		2,592,100	3,530,844

Life Cycle

Amount in Study:

Amount Incl HST

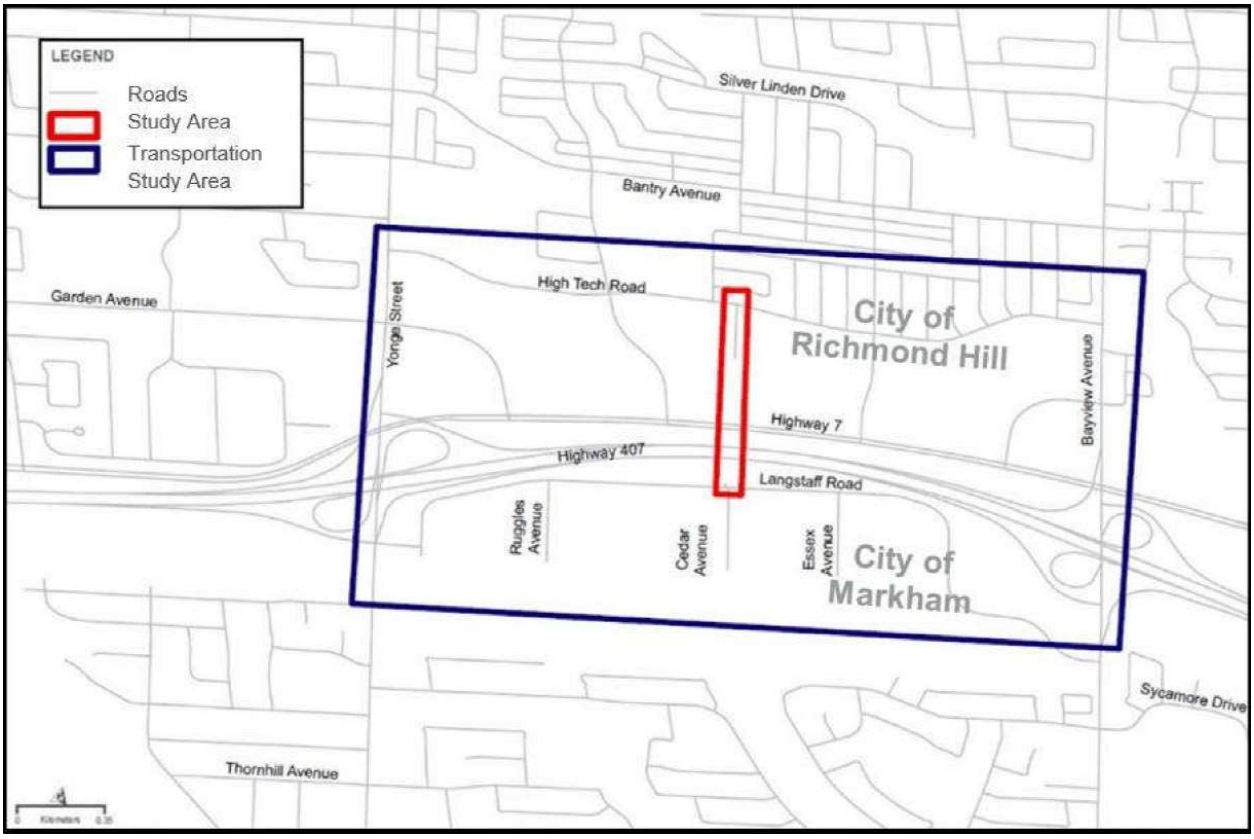
Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project Name: Cedar Avenue Reconstruction
Department: Engineering

Description	Total Cost	Markham Share
EA and Detailed Design	$ 940,000	$ 313,400
Construction, Utilities and Property	$ 6,240,000	$ 2,080,000
Contract Admin and Inspection	$ 300,000	$ 100,000
Sub-Total	**$ 7,480,000**	**$ 2,493,400**
Admin Fees	$ -	$ 54,854.8
HST Impact	$ -	$ 43,883.8
Total	**$ 7,480,000**	**$ 2,592,139**

Cedar Ave – Reconstruction



2022 PROJECT FUNDING REQUEST FORM

Number: 22030

Project Cost: $2,079,200

Project Name: **Hwy 404 MBC, N of 16th Avenue (Utility Relocation)**

New Asset/Expansion

Commission: Development Services

Department: Engineering

Project Mgr: Andrew Crickmay

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This budget request is for the utility relocation work and first part of the Mid-Block Crossing (MBC) construction. The requested budget is for Markham's share of the works (1/3). Staff to request the remaining construction budget in 2023. York Region is scheduled to start the utility relocation work and some construction work in 2022. The construction for the Mid-Block crossing, Cachet Woods Extension, Markland Bridge crossing and Markland reconstruction is tentatively scheduled for 2023. .

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,000,000	33,544,670
Internal Charges:	44,000	752,415
External Consulting:	0	0
Sub Total:	2,044,000	34,297,085
HST Impact:	35,200	590,386
Total Project Cost:	**2,079,200**	**34,887,500**

NOTES

Markham to enter into a tri-party agreement with York Region and City of Richmond Hill.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	2,079,200	0	0	0	0	0	34,887,500
TOTAL FUNDING	**2,079,200**					**0**	**34,887,500**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Structures - Hwy 404 Mid-block Crossing North of 16th Avenue -	2022	2,079,200	16,193,330
TOTAL FUNDING		2,079,200	16,193,330

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

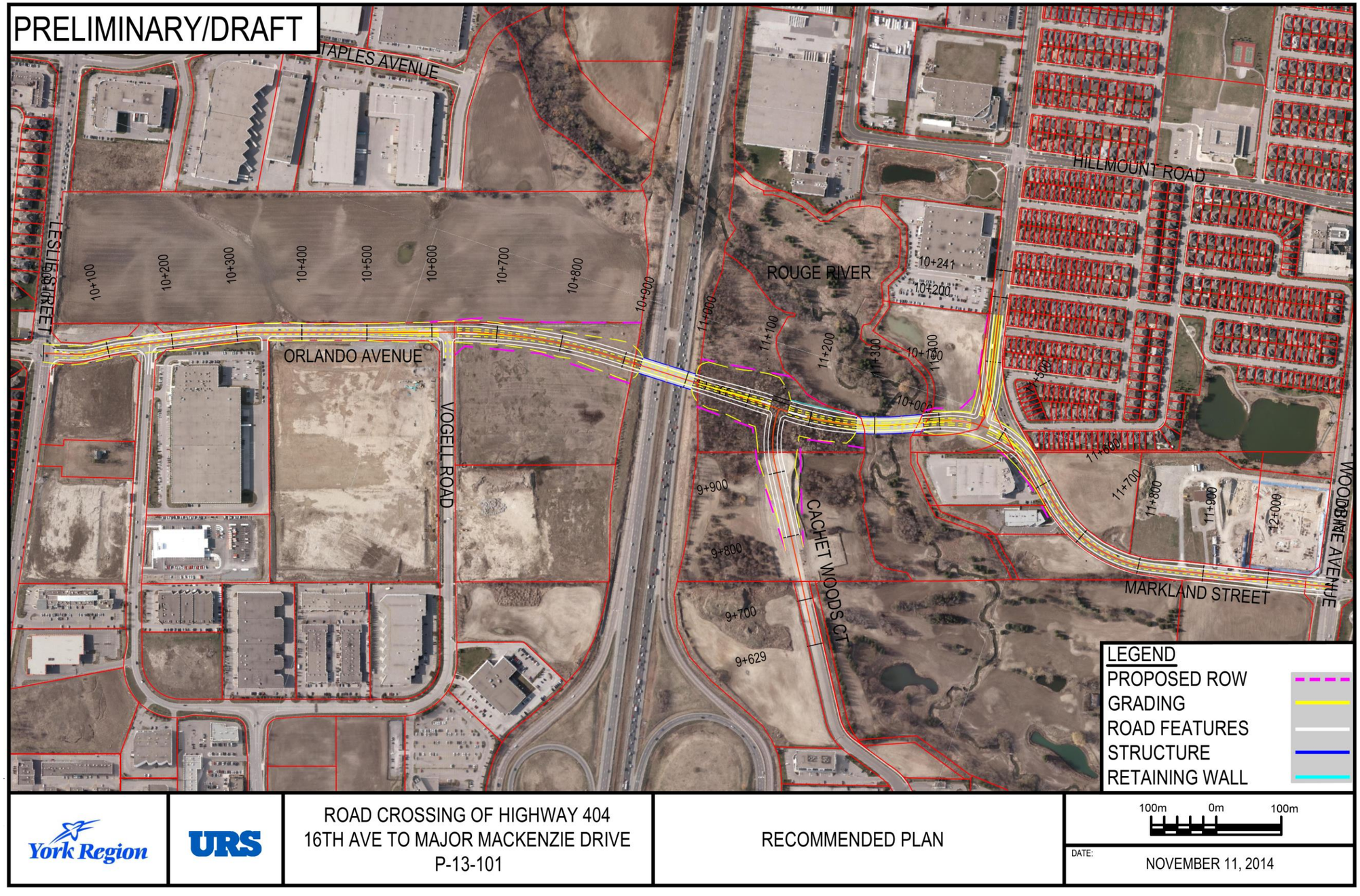
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Description	Total Cost	Richmond Hill Responsibility	Region of York Responsibility	Markham Responsibility	
Construction/Property & Utility	$ 69,867,659.25	$ 16,386,119.05	$ 9,736,172.18	$ 43,745,368.02	
Detailed Design	$ 1,825,211.40	$ 608,403.80	$ 608,403.80	$ 608,403.80	
Contract Admin, Inspection & Material Testing	$ 3,415,945.08	$ 788,282.42	$ 386,881.36	$ 2,240,781.29	
Region Admin Fee (6%)	$ 4,506,528.95	$ 1,066,968.32	$ 643,887.44	$ 2,795,673.19	
Sub-Total	**$ 79,615,344.68**	**$ 18,849,773.59**	**$ 11,375,344.78**	**$ 49,390,226.30**	
Markham Admin Fee (2%)	$ 987,804.53	$ -	$ -	$ 987,804.53	
Total Cost	**$ 80,603,149.21**	**$ 18,849,773.59**	**$ 11,375,344.78**	**$ 50,378,030.83**	(A + B + C)

Previously approved Markham Budget

EA & Design (Account # 18048) - Others (N of Major Mackenzie. & Elgin Mills)	$ 615,136.42	
EA & Design (Account # 18048) - N of 16th Avenue	$ 608,403.80	
Property Acquisition (Account# 19035)	$ 11,984,300.00	
	$ 13,207,840.22	A
2022 Budget Request	$ 2,079,200.00	B
2023	$ 26,318,242.96	
2024	$ 8,772,747.65	
Future Budget Request	$ 35,090,990.61	C

Figure 7-9: Preferred Alternative Design



2022 PROJECT FUNDING REQUEST FORM

Number: 22215

Project Cost: $290,400

Project Name: **Hwy 404 Ramp Extension at Major Mackenzie (EA Amendment)**

New Asset/Expansion

Commission: Development Services

Department: Engineering

Project Mgr: TBD

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The proposed work is to update the previously approved EA for the Hwy 404 Ramp extension at Major Mackenzie. The original EA was filed in 2009 and has since expired. The project scope includes coordination with Ministry of Transportation and York Region on their proposed infrastructures.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	17,620,000
Internal Charges:	36,000	933,000
External Consulting:	250,000	1,117,116
Sub Total:	286,000	19,670,116
HST Impact:	4,400	329,773
Total Project Cost:	**290,400**	**19,999,900**

NOTES

This project is contingent upon approval of new Capital Works Engineer (included in Citywide Staffing project).

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
DCA	290,400	0	0	0	0	0	19,999,900
TOTAL FUNDING	**290,400**					**0**	**19,999,900**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Structures - Hwy 404 Mid-Block Crossing North of Major Mackenzie -	2030	290,400	12,302,968
TOTAL FUNDING		290,400	12,302,968

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Additional funds will be requested through the new DCBS based on latest estimates.

2022 PROJECT FUNDING REQUEST FORM

Number: 22031

Project Cost: $1,768,500

Project Name: **Victoria Square Boulevard - Culvert Construction**

Commission: Development Services

Department: Engineering

Project Mgr: Alberto Lim

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is for the reconstruction of the culvert on Victoria Square Boulevard. The culvert is located between Vine Cliff Blvd and Stony Hill Avenue.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,488,280	25,982,380
Internal Charges:	163,150	2,873,319
External Consulting:	89,296	1,558,943
Sub Total:	1,740,726	30,414,642
HST Impact:	27,765	484,727
Total Project Cost:	**1,768,500**	**30,899,400**

NOTES

The City will administer the contract administration. The futures phases is for road construction.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
DCA	1,768,500	0	0	0	0	0	30,899,400
TOTAL FUNDING	**1,768,500**					**0**	**30,899,400**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Sidewalks - Victoria Square Blvd. - Woodbine By Pass South to Woodbine By Pass North		1,145,496	1,145,496
Hard - Roads - Woodbine Urbanize - Hamlet (N end) to by-pass	2020	623,004	3,624,773
TOTAL FUNDING		1,768,500	4,770,269

Life Cycle

Amount in Study:

Amount Incl HST

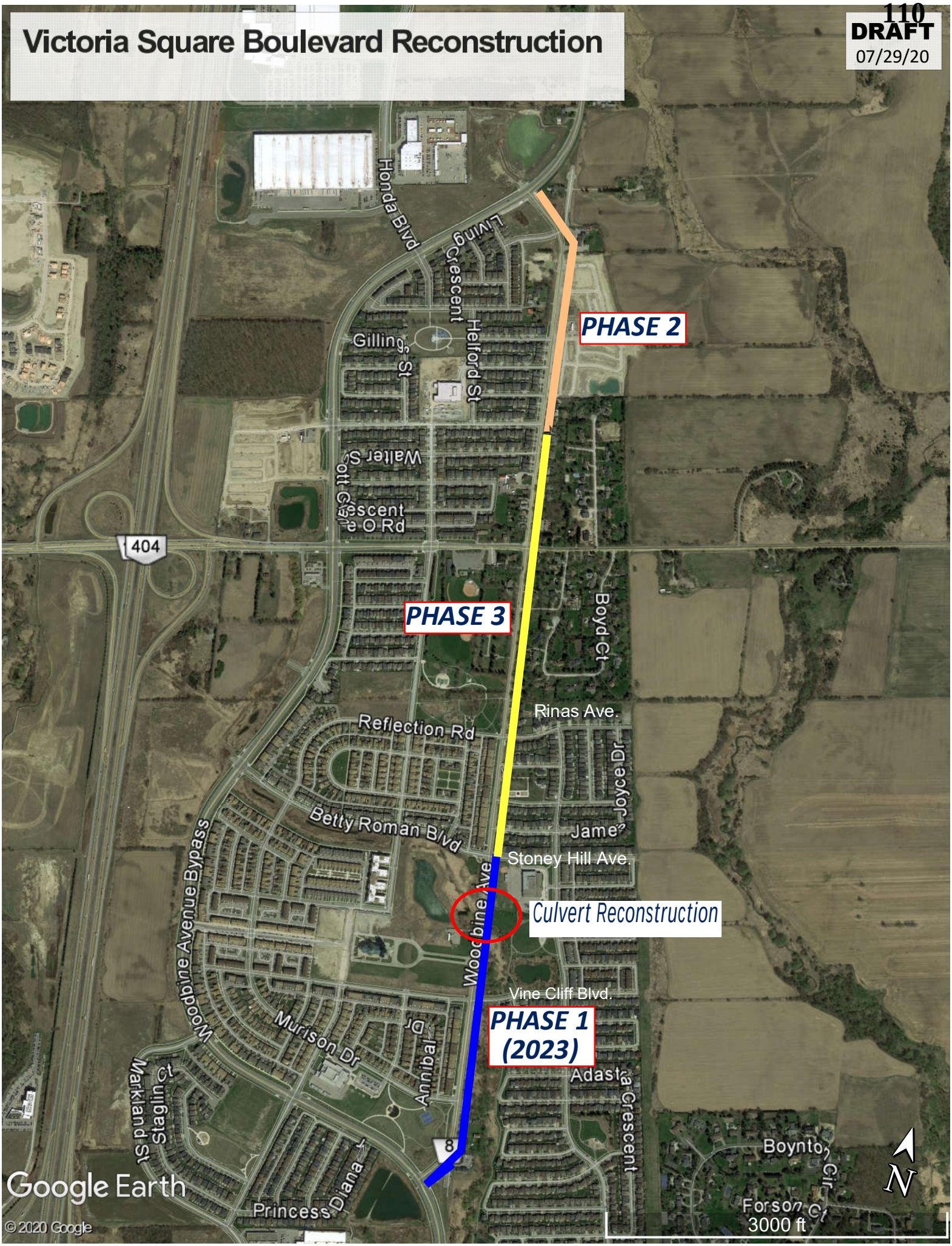
Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Additional funds will be requested through the new DCBS based on latest estimates.

Victoria Square Boulevard Reconstruction

DRAFT
07/29/20



2022 PROJECT FUNDING REQUEST FORM

Number: 22032

Project Cost: $751,800

Project Name: **Markham Centre Trails - Phase 2 (Construction)**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Project Mgr: Alberto Lim

Category: Major

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Markham Centre trails phase 2 design will be completed by Q4 2021. This budget request is for the construction of the second phase of the trails on Markham Centre. This location is on the north side of the Rouge River from Birchmount Rd to Sheridan Pond.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	600,000	0
Internal Charges:	83,062	0
External Consulting:	57,200	0
Sub Total:	740,262	0
HST Impact:	11,567	0
Total Project Cost:	**751,800**	**0**

NOTES

Total length to be constructed is 250m. Final location is subject to change upon Director's approval based on design and pending property availability, utility relocations and other site conditions.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	488,670	0	0	0	0	0	0
Non-DC Growth	263,130	0	0	0	0	0	0
TOTAL FUNDING	**751,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		488,670	11,325,356
TOTAL FUNDING		488,670	11,325,356

Life Cycle

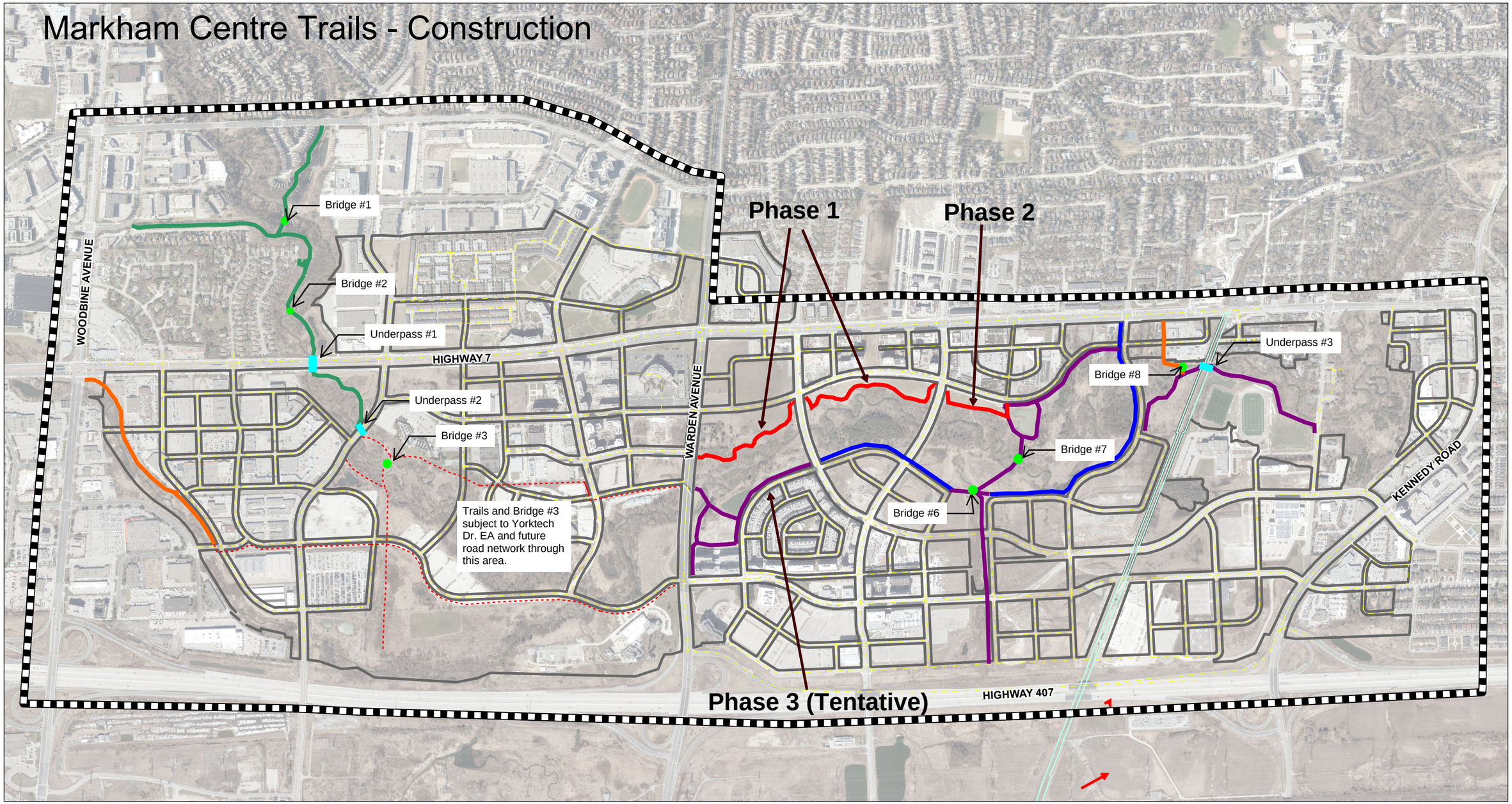
Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Markham Centre Trails - Construction



Datum: North American 1983 CSRS	
Coord. System: NAD 1983 CSRS UTM Zone 17N	
Projection: Transverse Mercator	
Central Meridian: 81°0'0.00"W	
False Easting: 500,000m	False Northing: 0m
Page Orientation: -16.5°	Scale Factor: 0.99960

True North

0 100 200 300 400 500 600 700 800

Metres

Railway

Centre Line

Newly Proposed Roads

Study Area

Type V Trail (worn trail, dirt, mulch, grass)

Type IV Trail (1m, granular, mulch or dirt)

Type III Trail (2m, variable surface type possible)

Type II Trail (3m, asphalt, may be gravel)

Type I Trail (3m, asphalt)

MUT in Road Boulevard

MARKHAM

Figure Title

MARKHAM CENTRE TRAILS EA

Alternative 2- Trail Design Types

Drawn	Checked	Date	Figure No.
MD	TR	2021/07/14	X
Scale		Project No.	
H 1:12,500		300050254	

File Path: \\elmo\shared work areas\050254 (Markham Trail)\13. GIS\Map\Markham Trails\050254_EA_Fig4-1_Existing_and_Future_Road_Network_Apr20.mxd Print Date: 2021/07/14 Time: 09:23 AM

2022 PROJECT FUNDING REQUEST FORM

Number: 22033

Project Cost: $576,300

Project Name: **Markham Centre Trails - Phase 3 (Detailed Design)**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Category: Major

Project Mgr: Alberto Lim

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Markham Centre Trails project EA work is scheduled to be completed by end of 2021. This budget request is for the design of the third phase of the trails on Markham Centre. The location will be finalized upon completion of EA.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	67,500	0
External Consulting:	500,000	0
Sub Total:	567,500	0
HST Impact:	8,800	0
Total Project Cost:	**576,300**	**0**

NOTES

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	374,595	0	0	0	0	0	0
Non-DC Growth	201,705	0	0	0	0	0	0
TOTAL FUNDING	**576,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		374,595	11,325,356
TOTAL FUNDING		374,595	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22034

Project Cost: $405,400

Project Name: **Rouge Valley Trail - Phase 4B (Detailed Design)**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Category: Major

Project Mgr: Dereje Tafesse

Cost Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This budget request is for the detailed design of the rouge valley trail from 14th Ave to Donald Cousens Parkway (DCP).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	5,100,000
Internal Charges:	49,200	464,796
External Consulting:	350,000	306,000
Sub Total:	399,200	5,870,796
HST Impact:	6,160	95,146
Total Project Cost:	**405,400**	**5,965,900**

NOTES

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	263,510	0	0	0	0	0	3,877,835
Non-DC Growth	141,890	0	0	0	0	0	2,088,065
TOTAL FUNDING	**405,400**					**0**	**5,965,900**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		263,510	11,325,356
TOTAL FUNDING		263,510	11,325,356

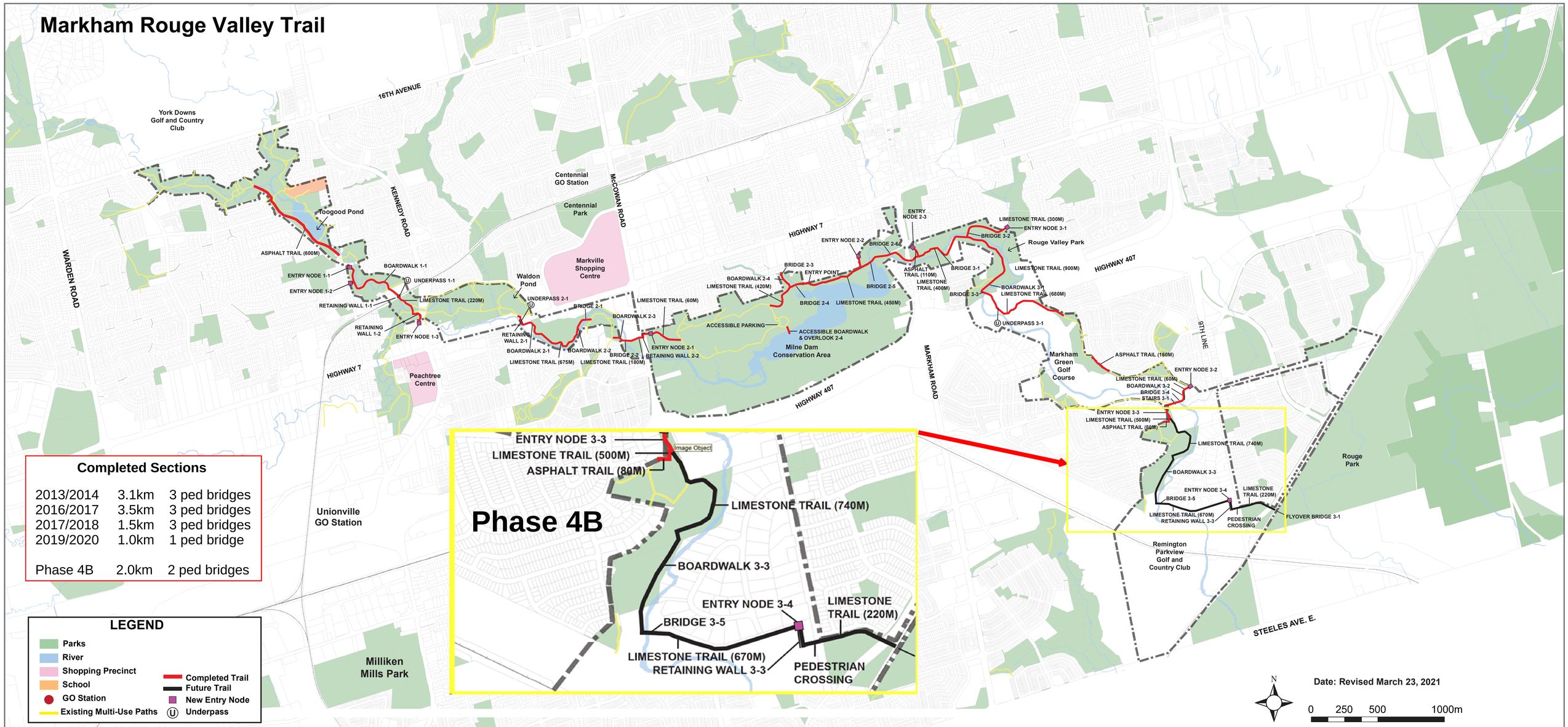
Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:


Markham Rouge Valley Trail
16TH AVENUE
York Downs Golf and Country Club
KENNEDY ROAD
WARDEN ROAD
Toogood Pond
ASPHALT TRAIL (600M)
ENTRY NODE 1-1
ENTRY NODE 1-2
BOARDWALK 1-1
UNDERPASS 1-1
RETAINING WALL 1-1
LIMESTONE TRAIL (220M)
RETAINING WALL 1-2
ENTRY NODE 1-3
HIGHWAY 7
Peachtree Centre
Unionville GO Station
Milliken Mills Park
Centennial GO Station
Centennial Park
McCOWAN ROAD
Markville Shopping Centre
Waldon Pond
UNDERPASS 2-1
RETAINING WALL 2-1
BOARDWALK 2-1
LIMESTONE TRAIL (675M)
BRIDGE 2-1
BOARDWALK 2-2
LIMESTONE TRAIL (180M)
BRIDGE 2-2
BOARDWALK 2-3
LIMESTONE TRAIL (60M)
ENTRY NODE 2-1
RETAINING WALL 2-2
ACCESSIBLE PARKING
ACCESSIBLE BOARDWALK & OVERLOOK 2-4
Milne Dam Conservation Area
HIGHWAY 7
BOARDWALK 2-4
LIMESTONE TRAIL (420M)
BRIDGE 2-3
ENTRY POINT
BRIDGE 2-4
LIMESTONE TRAIL (450M)
BRIDGE 2-5
ENTRY NODE 2-2
BRIDGE 2-6
ENTRY NODE 2-3
ASPHALT TRAIL (110M)
LIMESTONE TRAIL (400M)
BRIDGE 3-1
BRIDGE 3-3
LIMESTONE TRAIL (300M)
ENTRY NODE 3-1
BRIDGE 3-2
Rouge Valley Park
LIMESTONE TRAIL (900M)
HIGHWAY 407
BOARDWALK 3-1
LIMESTONE TRAIL (680M)
UNDERPASS 3-1
HIGHWAY 407
MARKHAM ROAD
Markham Green Golf Course
9TH LINE
ASPHALT TRAIL (160M)
ENTRY NODE 3-2
LIMESTONE TRAIL (60M)
BOARDWALK 3-2
BRIDGE 3-4
STAIRS 3-1
ENTRY NODE 3-3
LIMESTONE TRAIL (500M)
ASPHALT TRAIL (80M)
LIMESTONE TRAIL (740M)
BOARDWALK 3-3
ENTRY NODE 3-4
BRIDGE 3-5
LIMESTONE TRAIL (220M)
LIMESTONE TRAIL (670M)
RETAINING WALL 3-3
PEDESTRIAN CROSSING
FLYOVER BRIDGE 3-1
Rouge Park
Remington Parkview Golf and Country Club
STEELES AVE. E.
Phase 4B
ENTRY NODE 3-3
LIMESTONE TRAIL (500M)
ASPHALT TRAIL (80M)
LIMESTONE TRAIL (740M)
BOARDWALK 3-3
ENTRY NODE 3-4
BRIDGE 3-5
LIMESTONE TRAIL (220M)
LIMESTONE TRAIL (670M)
RETAINING WALL 3-3
PEDESTRIAN CROSSING
Completed Sections
2013/2014 3.1km 3 ped bridges
2016/2017 3.5km 3 ped bridges
2017/2018 1.5km 3 ped bridges
2019/2020 1.0km 1 ped bridge
Phase 4B 2.0km 2 ped bridges
LEGEND
Parks
River
Shopping Precinct
School
GO Station
Existing Multi-Use Paths
Completed Trail
Future Trail
New Entry Node
Underpass
N
Date: Revised March 23, 2021
0 250 500 1000m

2022 PROJECT FUNDING REQUEST FORM

Number: 22035

Project Cost: $574,300

Project Name: **Rouge Valley Trail (Kennedy Road North) – Construction**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Category: Major

Project Mgr: Dereje Tafesse

Cost Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to construct a new trail connection from the Rouge Valley Trail to Kennedy Road and Austin Drive intersection. During the spring season, sections of the Rouge Valley Trail is expected to be under water. This proposed trail connection will allow trail users to access the trail by providing an alternate route that will connect to the other sections of the Rouge Valley Trail over Kennedy Road.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	470,000	0
Internal Charges:	67,322	0
External Consulting:	28,200	0
Sub Total:	565,522	0
HST Impact:	8,768	0
Total Project Cost:	**574,300**	**0**

NOTES

Design will be completed by end of 2021.
Other external: York Region has approved the funding of $74K.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
DCA	325,195	0	0	0	0	0	0
Non-DC Growth	175,105	0	0	0	0	0	0
Other External	74,000	0	0	0	0	0	0
TOTAL FUNDING	**574,300**					**0**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		325,195	11,325,356
TOTAL FUNDING		325,195	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

ROUGE VALLEY TRAIL CONNECTION PLAN

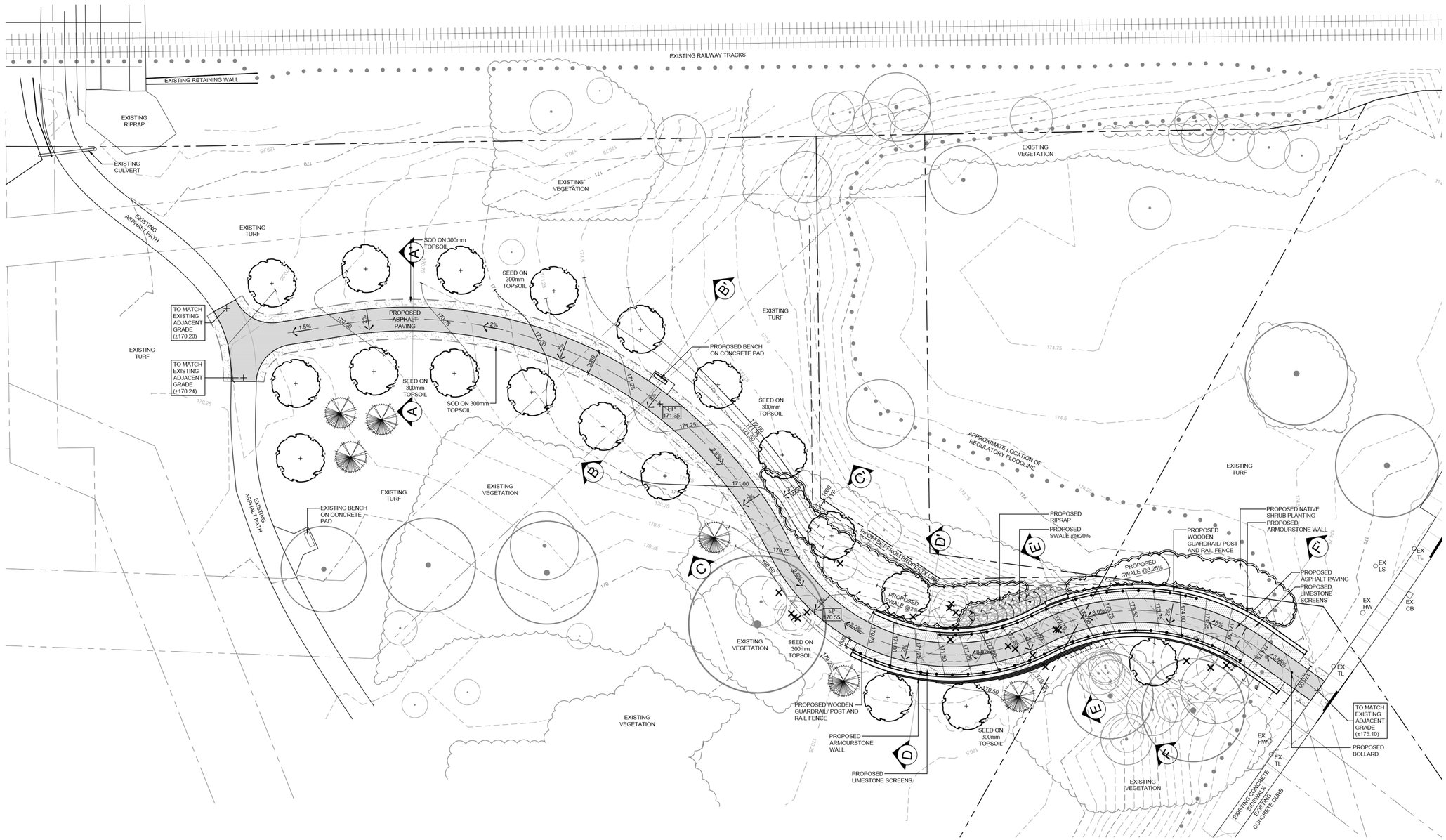
Date JUNE 2021

Scale 1:250 0 1 2 3 4 5 10m

North

Legend

- EXISTING DECIDUOUS TREE
- EXISTING VEGETATION
- EXISTING TREE TO BE REMOVED
- EXISTING VEGETATION TO BE REMOVED
- PROPOSED NATIVE PLANTING
- PROPERTY LINE
- REGULATORY FLOODLINE (APPROXIMATE)
- PROPOSED POST AND RAIL FENCE
- EXISTING MAJOR CONTOUR (172.00)
- EXISTING MINOR CONTOUR (171.75)
- PROPOSED MAJOR CONTOUR (172.00)
- PROPOSED MINOR CONTOUR (171.75)
- PROPOSED SPOT ELEVATION (171.75)
- PROPOSED DIRECTION OF SURFACE DRAINAGE
- EX HW EXISTING HANDWELL
- EX TL EXISTING TRAFFIC LIGHT
- EX LS EXISTING LIGHT STANDARD
- EX CB EXISTING CATCH BASIN



Harrington McAvan Ltd
41 Main Street, Unit 102
Unionville, Ontario L3R 2E5
Tel: 905-294-8282 Fax: 905-294-7623
www.harringtonmcavan.com

PRELIMINARY (REVISED)

2022 PROJECT FUNDING REQUEST FORM

Number: 22036

Project Cost: $204,600

Project Name: **Markham Road MUP Cross-rides (Construction)**

New Asset/Expansion

Commission: Development Services

Department: Engineering

Project Mgr: Justin Chin

Useful Life: 15 Pre Approval: ☐

Category: Minor

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ 6 ☑ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Following completion of the 2019 detailed design, this project request is for the construction and contract administration for the "Cross-ride" facilities on the existing MUP, where it intersects at multiple public streets and private accesses, from north of 16th Avenue to south of Major Mackenzie Drive. Improvements include civil/concrete works, improved pavement marking treatments and signage. Project aligns with Ontario Traffic Manual Book 18 and the Accessibility for Ontarians with Disabilities Act (AODA).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	175,000	0
Internal Charges:	26,507	0
External Consulting:	0	0
Sub Total:	201,507	0
HST Impact:	3,080	0
Total Project Cost:	**204,600**	**0**

NOTES

Cross-ride treatments will be located at multiple private accesses and the following signalized intersections: Edward Jeffreys, Batitsta Perri, Bur Oak and Castlemore. Project cost derived by design consultant estimate.
Intersection cross-rides are absent throughout the City's MUP network. Main Street Markham MUP has been prioritized based on risks associated with higher exposure of pedestrians and cyclists to traffic movements at intersections and commercial accesses. Cross-rides on the rest of the MUP network will be implemented incrementally as resource permits

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	132,990	0	0	0	0	0	0
Non-DC Growth	71,610	0	0	0	0	0	0
TOTAL FUNDING	**204,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		132,990	11,325,356
TOTAL FUNDING		132,990	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22037

Project Cost: $15,300

Project Name: **Markham Cycles & Active Transportation Awareness Program**

Commission: Development Services

Department: Engineering

Project Mgr: Fion Ho

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Active Transportation Awareness program is to support, promote and encourage active transportation in Markham through community outreach and education. This project directly supports the construction and use of bike lanes, MUPs, and cycle tracks across the City.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	15,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	15,000	0
HST Impact:	264	0
Total Project Cost:	**15,300**	**0**

NOTES

Markham's contribution to joint project with TCAT (The Centre for Active Transportation) for Markham Cycles $15K. (Region is contributing $30K).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	9,945	0	0	0	0	0	0
Non-DC Growth	5,355	0	0	0	0	0	0
TOTAL FUNDING	**15,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		9,945	11,325,356
TOTAL FUNDING		9,945	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Markham Cycles

Project Objective

Markham Cycles is a community program with the goal of increasing cycling in Markham by removing barriers and building a cycling community.

Background

Launched in July 2019, the Markham Cycles program is led by The Centre for Active Transportation (TCAT) at Clean Air Partnership, a registered charity. With the first bike hub placed at the Milliken Mills Community Centre, the program included a number of activities such as bike loan, DIY bike repair, refurbishment of donated bikes, group rides and workshop for all ages. These activities are offered to residents at no charge.

Markham Cycles also supports numerous community programs and events with the City of Markham, the Cycling & Pedestrian Advisory Committee, the Centre for Immigrant and Community Services, Markham Public Library, York Region District School Board and York Region.

Program Benefits

1. **ACTIVE MARKHAM**: Increased physical activity facilitated through guided group rides
2. **GREENER MARKHAM**: Reduced driving and participants learned more about climate action
3. **EMPOWERED YOUTH**: 500 youth engaged in the program, and 9 were trained as mechanic assistants and 12 were trained as cycling educators (based on 2019/2020 statistics).
4. **BIKES FOR ALL**: residents have more access to bikes
5. **SUPPORT FOR CHANGE**: participants were supported to adopt cycling, more people feel confident and comfortable riding bikes.
6. **SKILLED MARKHAM**: residents were trained as mechanic assistants and cycling educators.

Programs & Metrics

It is important to highlight that since the Covid-19 pandemic in early 2020, it has prompted an increase in cycling interest. It also presented some challenges for community programming. Due to public health restrictions and closure of Milliken Mills Community Centre and Library, the 2020 and 2021 program were formats (e.g. virtual sessions) to continue to provide.

The table below provide a summary of the programs offered by Markham Cycles since 2019.

Program	2019	2020	2021
Drop-In Bike Repair Session	Milliken Mills C.C.	Enterprise Blvd. & Saturdays in Park	Open Street & Saturdays in Park
Workshops/ Webinar	In-Person	Online	Online
Guided Community Rides	✓	X	✓
Learn to Ride Sessions	✓	X	X
Bike Loan (partnership with Markham Public Library)	✓	X	✓
Community Outreach	✓	✓	✓
Bike Rescue & Donation	✓	✓	✓

The table below indicates key metrics of each Markham Cycles Program for 2019 and 2020.

Program	Metrics	2019	2020
Drop-In Bike Repair Session	Number of sessions	32	17
	Number of visitors	321	627
	Number of bicycle repairs	193	340
Workshops/Webinars	Number of workshops	10	9
	Number of workshop attendees	84	780
Guided Community Rides	Number of community rides held	12	X
	Number of ride participants	164	X
Learn to Ride Sessions	Number of sessions	5	X
	Number of participants	41	X
Bike Loan	Number of bikes loaned	135	X
Markham Cycles More	Number of participants	X	182
	Number of Submissions	X	544
Community Outreach (i.e. School programs, City events, Farmers Market, York Region Repair Café)	Number of sessions	24	x
	Number of participants	707	x
Bike Rescue	Number of bikes refurbished	5	82
Overall Program Participation	Number of participants	1336	1407
	Number of volunteers hours	400.5	452

Programming for 2022

As we continue to navigate through the COVID-19 pandemic, Markham Cycles will continue to provide its core service to Markham residents following Public Health guidelines and Provincial restrictions. With that in mind, it is anticipated that the program will grow to provide additional community services in 2022, including:

- Expansion of a second bike hub at Centennial Community Centre
- Bike booths will be offered at participating schools of the Active Travel School initiatives
- Opportunities to conduct a bike parking audit in Markham
- Opportunities to expand the bike loan program

2022 PROJECT FUNDING REQUEST FORM

Number: 22038

Project Cost: $10,200

Project Name: **Markham Cycling Day**

Commission: Development Services

Department: Engineering

Project Mgr: Fion Ho

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The request is for the Annual Markham Cycling day, which has grown from a children cycling event started in 2008 with less than 100 participants into a community and major GTA event that attracted over 1800 registrants in 2019.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	10,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,000	0
HST Impact:	176	0
Total Project Cost:	**10,200**	**0**

NOTES

The project has a bigger budget but Markham will contribute $10K only and the rest will be fundraised.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
DCA	6,630	0	0	0	0	0	0
Non-DC Growth	3,570	0	0	0	0	0	0
TOTAL FUNDING	**10,200**					**0**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		6,630	11,325,356
TOTAL FUNDING		6,630	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22039

Project Cost: $25,400

Project Name: **Cycling & Pedestrian Advisory Committee (CPAC)**

Commission: Development Services

Department: Engineering

Project Mgr: Fion Ho

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: External peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

CPAC was established in September 2003, as per the direction of the Transportation Committee. In the Terms of Reference, the specific duties of CPAC is to include, but not limited, the following: (i) Advising staff of various departments and Council on the design, development and delivery of cycling and pedestrian policies, programs and facilities to promote and enhance cycling and walking in walking; (ii) Compiling research and statistics on cycling and pedestrian issues; (iii) Working with local neighborhoods by collecting distributing information related to cycling and walking; (iv) Promoting an increased public awareness of cycling and walking as environmentally forms of transportation; (v) Assisting in fundraising opportunities; (vi) Discussing and resolving and issues between cyclist and pedestrians; (Vii) Assisting in the integration of bicycle and pedestrian facilities into significant development proposals as they rise.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	25,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,000	0
HST Impact:	440	0
Total Project Cost:	**25,400**	**0**

NOTES

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	16,510	0	0	0	0	0	0
Non-DC Growth	8,890	0	0	0	0	0	0
TOTAL FUNDING	**25,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		16,510	11,325,356
TOTAL FUNDING		16,510	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22040

Project Cost: $76,300

Project Name: **Smart Commute Markham-Richmond Hill**

Commission: Development Services

Department: Engineering

Project Mgr: Fion Ho

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Markham is a founding member and funding partner of Smart Commute Markham-Richmond Hill. Other funding partners are York Region and City of Richmond Hill. Smart Commute Markham-Richmond Hill offers services and programs to local employers and their employees to reduce use of private cars in commuting to and from work. Alternative modes includes carpooling, transit incentives, cycling, telework, emergency ride home program and more.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	75,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	75,000	0
HST Impact:	1,320	0
Total Project Cost:	**76,300**	**0**

NOTES

This is an annual program and relies on all three funding partners contributing our mutually agreed-upon share of the operation of Smart Commute.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	76,300	0	0	0	0	0	0
TOTAL FUNDING	**76,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		76,300	11,325,356
TOTAL FUNDING		76,300	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22041

Project Cost: $118,000

Project Name: **Various Walking & Cycling Initiatives**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Project Mgr: Fion Ho

Category: Annual

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project includes completing gaps in the cycling network, branding and signage of the City urban hiking and cycling loops, and implementing the Open Streets Markham program. It can include hard infrastructure costs related to pedestrian crossings and connections, related design costs, and traffic control devices.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	16,200	0
External Consulting:	0	0
Sub Total:	116,200	0
HST Impact:	1,760	0
Total Project Cost:	**118,000**	**0**

NOTES

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	76,700	0	0	0	0	0	0
Non-DC Growth	41,300	0	0	0	0	0	0
TOTAL FUNDING	**118,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Bike Lanes on City and Regional Land		76,700	11,325,356
TOTAL FUNDING		76,700	11,325,356

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22042

Project Cost: $1,539,100

Project Name: **Sidewalk Program (Construction)**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Category: Major

Project Mgr: Mark Siu

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To complete the construction of new sidewalk in various areas within the City to provide pedestrian access and link to the City sidewalk network. The design of these sidewalk sections will be completed by Q3 2021. Location include: 1) Commerce Valley Dr E – Minthorn Blvd to Leslie Ave, 2) Lee Ave – Kennedy Rd to Brimley Rd, 3) Minthorn Blvd – Commerce Valley Dr to 358, 4) Woodbine Ave – Steeles to 68m north of Steeles Ave, 5) Willowdale Blvd – Steeles Ave to Grandview, 6) Frontenac Dr – Highway 7 to Centuriam Dr, & 7) Lanark RD – Cochrane Dr to Woodbine Ave.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,295,000	3,630,000
Internal Charges:	157,222	440,554
External Consulting:	63,000	1,065,800
Sub Total:	1,515,222	5,136,354
HST Impact:	23,901	82,646
Total Project Cost:	**1,539,100**	**5,219,000**

NOTES

Estimated length of sidewalk is approximately 3.0 kms. Final sidewalk locations are subject to change upon Director's approval based on design and pending property availability, utility relocations and other site conditions.
This request includes $200k for Utility relocations and $45k for consultant to prepare and recommend sidewalk program for next 7 years.
The operating budget impact will be determined during project award time.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	1,539,100	0	0	0	0	0	5,219,000
TOTAL FUNDING	**1,539,100**					**0**	**5,219,000**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Miscellaneous new sidewalks		1,539,100	2,019,500
TOTAL FUNDING		1,539,100	2,019,500

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

The future phases are conditional on additional funding included new DC update.

Project Name: Sidewalk Program (Construction)
Department: Engineering

2017 DC Budget	$	2,140,000.00
2017 DC Misc. Sidewalk Budget	$	2,680,000.00
Total Funding	**$**	**4,820,000.00**
Capital Projects	Approved Budget	
19039	$	489,665.00
20044	$	1,637,200.00
20045	$	485,500.00
21038	$	554,200.00
Total	**$**	**3,166,565.00**
Available Funding for 2022		**1,653,435.00**
2022 Capital Budget request	$	1,539,100.00
Remaining		**114,335.00**

Sidewalk Completion Program Construction Status (July 2021)

Status

- Completed Sidewalk **(±4.87km)**
- Sidewalk Under Construction **(±2.78km)**
- 2022 Sidewalk Construction **(±3.84km)**
- Remaining Sidewalks to be Constructed **(±52.19km)**

Document Path: Q:\Geomatics\Departments\Engineering\Mark Siu\Sidewalk Completion Program Status\Sidewalk Completion Program Construction Status.mxd

2022 PROJECT FUNDING REQUEST FORM

Number: 22043

Project Cost: $399,600

Project Name: **Development of Road Safety Strategy**

Commission: Development Services

Department: Engineering

Project Mgr: David Porretta

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: External peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Retain a consultant to develop a comprehensive multi-year road safety strategy that aligns with the City's objectives and is informed by the results and recommendations of the 2019-2020 Traffic Safety Audit. The four main elements of the strategy will be (1) data-driven; (2) recognize the availability of internal and external resources; (3) be collaborative and include a wide range of stakeholders; and (4) Develop a culture of road safety for many or all roads/transporation decisions and activities. Once completed, the strategy will play a critical role in programming road safety and capital projects for the next 10 years.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	48,540	0
External Consulting:	345,000	0
Sub Total:	393,540	0
HST Impact:	6,072	0
Total Project Cost:	**399,600**	**0**

NOTES

Safety Audit was finalized in Q4 2020 and reported to DSC in Fall 2020. Council endorsed development of a road safety strategy, subject to budget availability. The estimated cost of the Road Safety Strategy was based on similar studies in other municipalities and from the Safety Audit consultant.
Feasibility studies identifying the appropriate solution to addressing speed mitigation on Carlton Road (Kennedy - McCowan) and Main Street Markham (16th Ave - Bullock), including community/public consultation, are included in this project.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	399,600	0	0	0	0	0	0
TOTAL FUNDING	**399,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		399,600	10,602,000
TOTAL FUNDING		399,600	10,602,000

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22044

Project Cost: $220,000

Project Name: **Apple Creek Blvd. Traffic Operations & Safety Corridor**

Commission: Development Services

Department: Engineering

Project Mgr: David Porretta

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The objective of this project is to retain a consultant to conduct a comprehensive corridor review of Apple Creek Blvd between Woodbine Avenue and Warden Avenue. Using the City's aggregate traffic and collision data, the Consultant shall conduct a comprehensive assessment of the corridor, identifying existing traffic operational and safety issues and opportunities for an off-road cycling facility. Consultant shall also review the road profile to identify geometric deficiencies at intersections, as well as vertical and horizontal alignments. Throughout the course of the study the consultant needs to consider both existing and future travel demands for all travel modes through the corridor. Following the assessment, the consultant will provide recommended measures to address aforementioned issues, which may include geometric improvements, retrofits, or new active transportation infrastructure. The outcome of this project will result in future capital infrastructure project(s).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	16,432	0
External Consulting:	200,000	0
Sub Total:	216,432	0
HST Impact:	3,520	0
Total Project Cost:	**220,000**	**0**

NOTES

The completion of Norman Bethune Drive (Hwy 404 fly-over) has resulted in significant increase in traffic volume on the Apple Creek corridor, exacerbating existing traffic operational issues.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	220,000	0	0	0	0	0	0
TOTAL FUNDING	**220,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - City Wide - Trans., Servicing, Enviro., Cycling, Traffic Calming, Noise, Subwatershed, Erosion Study Update etc.		220,000	10,602,000
TOTAL FUNDING		220,000	10,602,000

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22045

Project Cost: $227,200

Project Name: **Copper Creek Drive Pedestrian Cross-Overs (PXO)**

Commission: Development Services

Department: Engineering

Project Mgr: Justin Chin

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

New Asset/Expansion

Useful Life: 15 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

As per Council resolution from Development Services Committee held on July 8, 2021, the objective of this project is to design and construct a formal pedestrian crossover (PXO) on Copper Creek Drive @ Boswell Road and also on Copper Creek Drive @ Rizal Avenue. Project includes detailed design (photometric review of streetlights, electrical design for streetlights and PXO equipment, arborist review of impacted trees) and construction (installation of poles, fixtures and streetlights, civil work for sidewalk ramps, new pavement markings and signage).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	120,000	0
Internal Charges:	28,740	0
External Consulting:	75,000	0
Sub Total:	223,740	0
HST Impact:	3,432	0
Total Project Cost:	**227,200**	**0**

NOTES

Project costs include detailed design ($50k), construction ($120k) and associated contract administration ($25k).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	227,200	0	0	0	0	0	0
TOTAL FUNDING	**227,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Travel Demand Management		227,200	3,331,694
TOTAL FUNDING		227,200	3,331,694

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22046

Project Cost: $118,000

Project Name: **PXO Implementation at Supervised School Crossings**

New Asset/Expansion

Commission: Development Services

Department: Engineering

Project Mgr: Justin Chin

Useful Life: 15 Pre Approval: ☐

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The objective of this project is to upgrade all 25 supervised school crossings that are located at mid-block locations. These crossings are not traffic controlled when a guard is not present. The scope of this project involves upgrading these crossings to Pedestrian Cross-overs (PXOs). This will effectively provide traffic control when a guard is not present, thereby improving pedestrian safety at all times of the day. PXO's require vehicles to stop for a pedestrian waiting to cross the street. Crossings are clearly marked through signage. Functional designs are complete; scope includes construction costs only, consisting of signs, pavement markings & minor civil work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	100,000	0
Internal Charges:	16,200	0
External Consulting:	0	0
Sub Total:	116,200	0
HST Impact:	1,760	0
Total Project Cost:	**118,000**	**0**

NOTES

Crossing guards will continue to provide service during peak school periods. However, these crossings are utilized throughout the day and provide desirable pedestrian connections to neighbour amenities. A powerpoint presentation has been attached, for further details.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	118,000	0	0	0	0	0	0
TOTAL FUNDING	**118,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - Travel Demand Management		118,000	3,331,694
TOTAL FUNDING		118,000	3,331,694

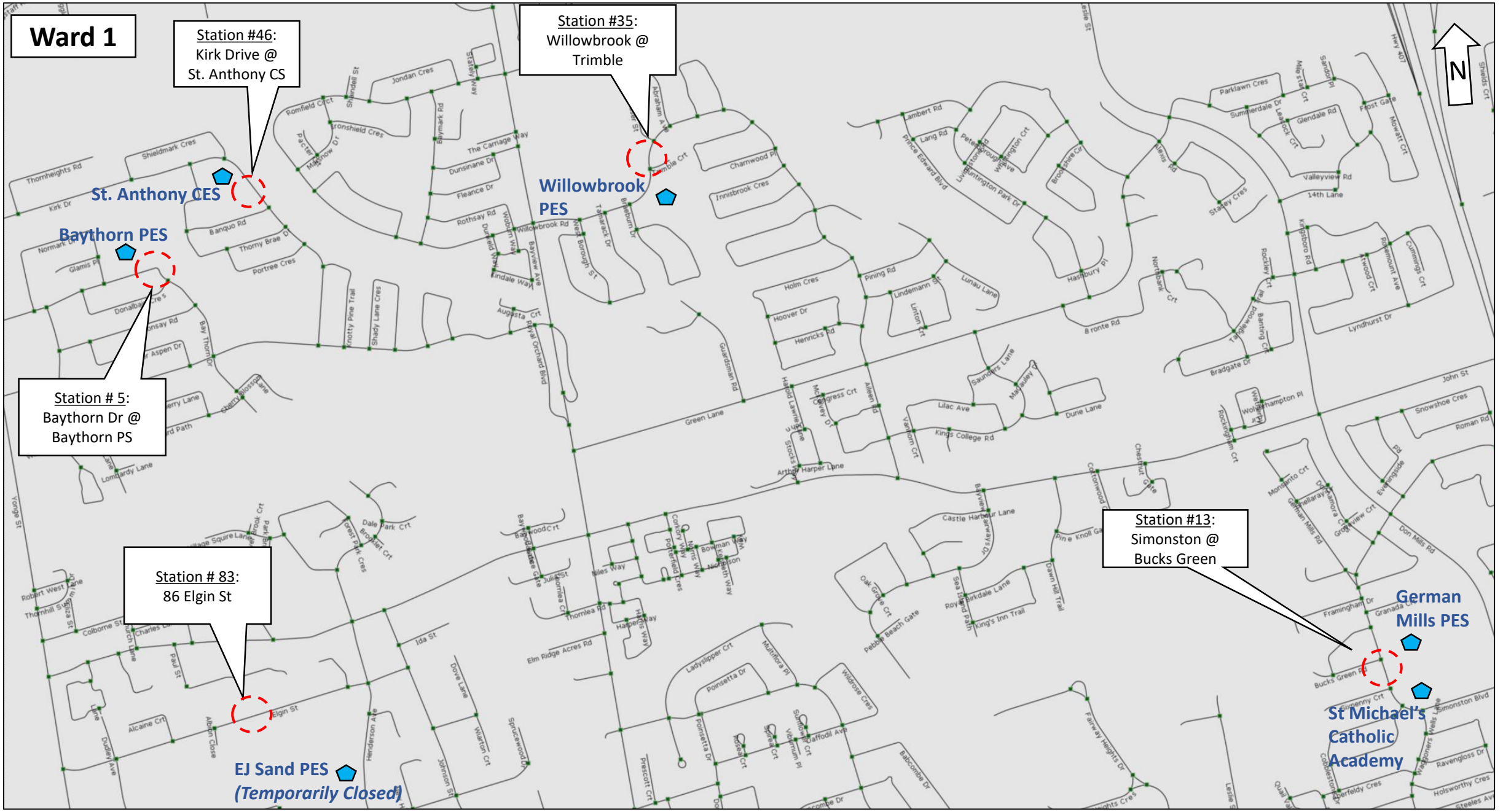
Life Cycle

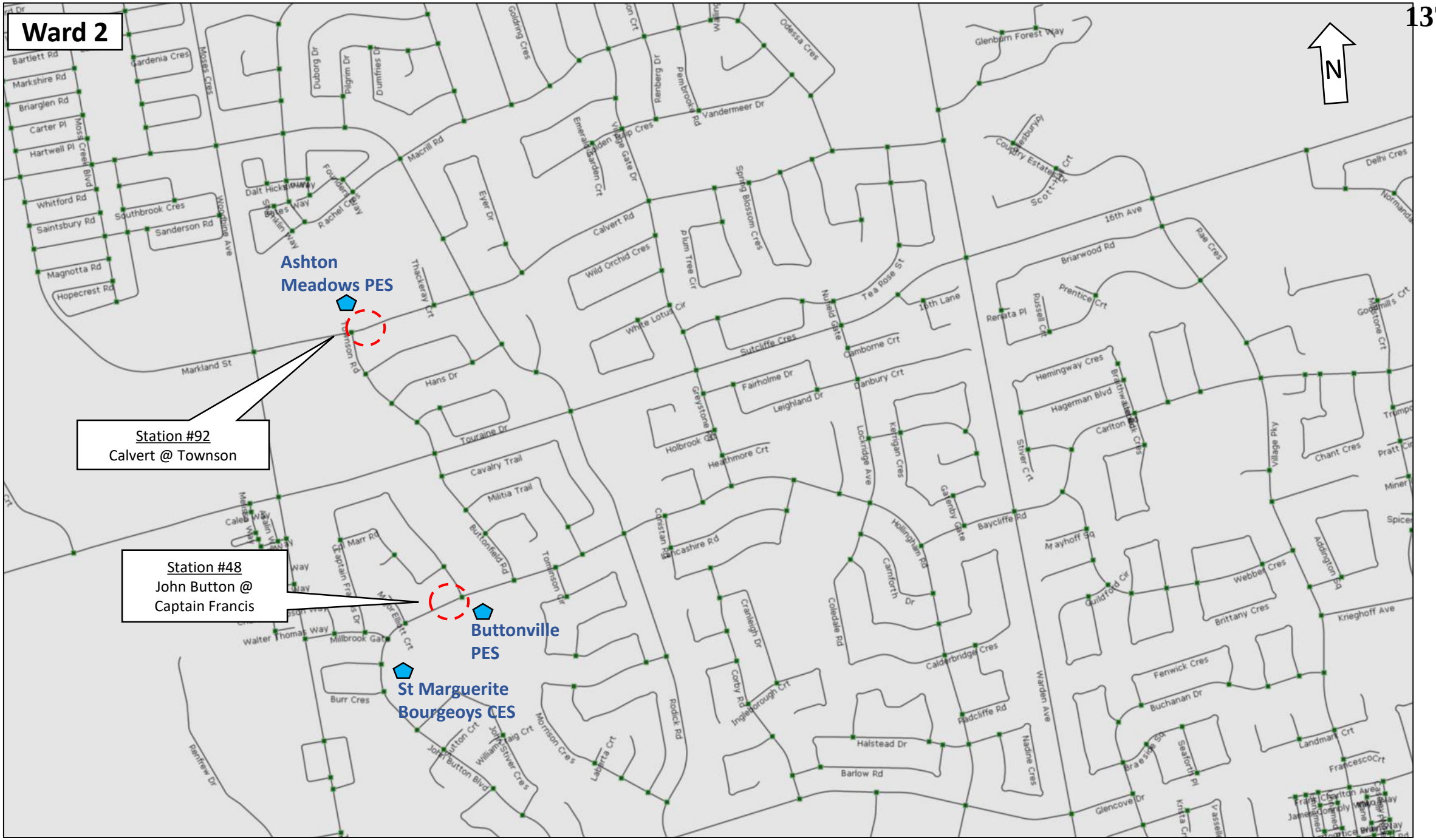
Amount in Study:

Amount Incl HST

Year in the study

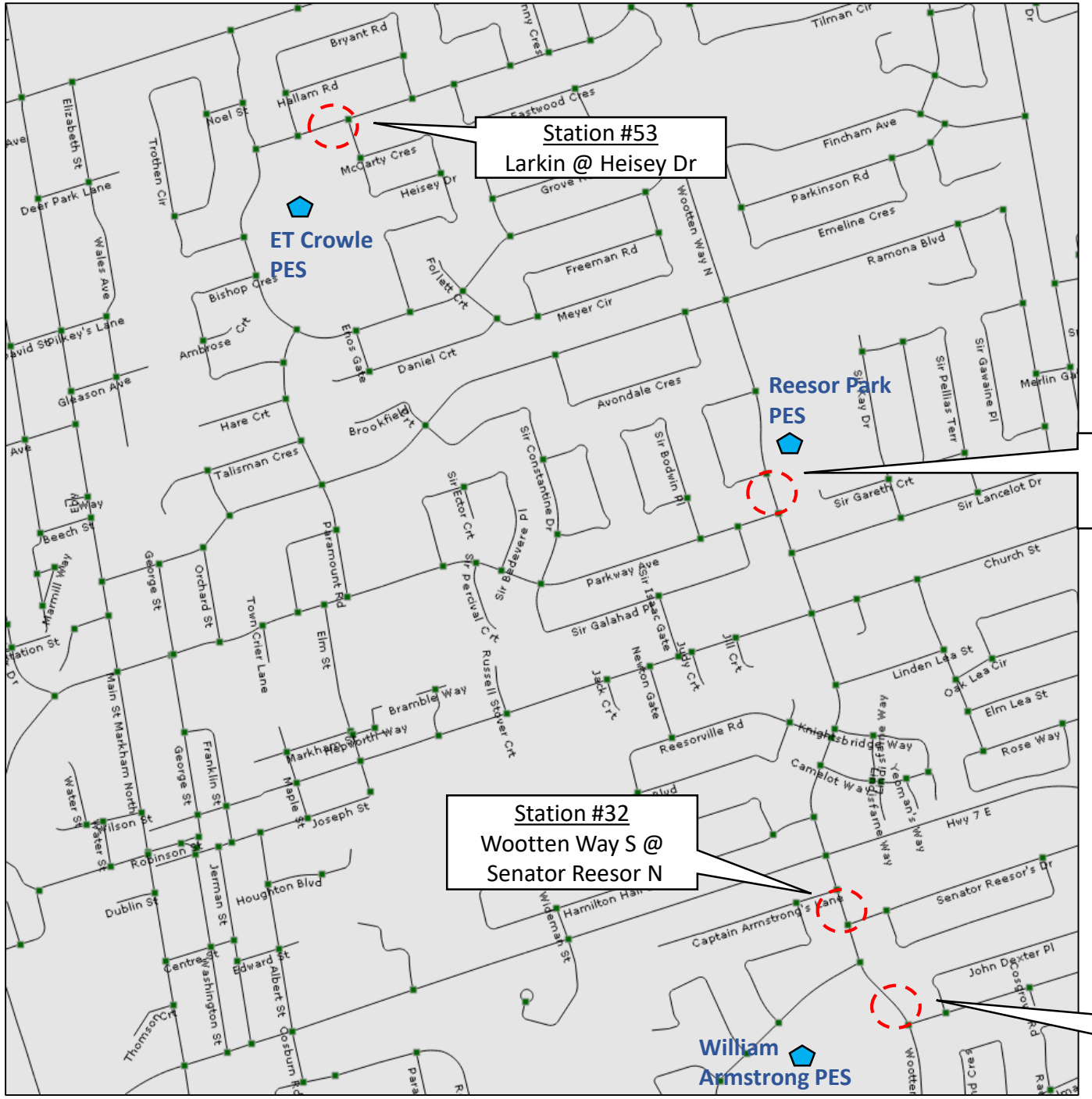
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

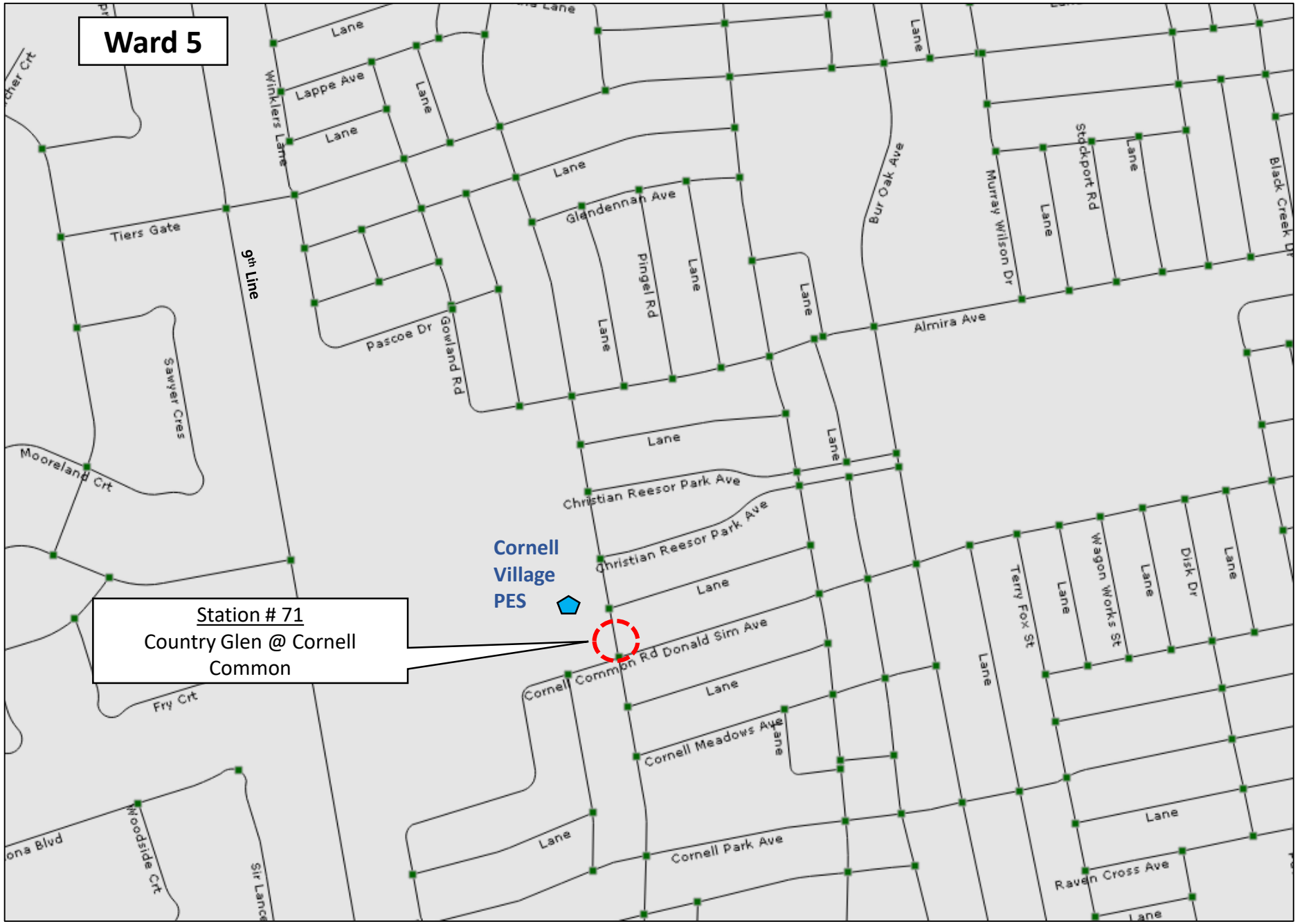

Ward 1
Station #46: Kirk Drive @ St. Anthony CS
Station #35: Willowbrook @ Trimble
St. Anthony CES
Willowbrook PES
Baythorn PES
Station # 5: Baythorn Dr @ Baythorn PS
Station # 83: 86 Elgin St
Station #13: Simonston @ Bucks Green
German Mills PES
St Michael's Catholic Academy
EJ Sand PES
(Temporarily Closed)
N


Ward 2
N
Ashton Meadows PES
Station #92
Calvert @ Townson
Station #48
John Button @ Captain Francis
Buttonville PES
St Marguerite Bourgeoys CES
Markland St
Townson Rd
Calvert Rd
Macnill Rd
Hans Dr
Touraine Dr
Cavalry Trail
Militia Trail
Buttonfield Rd
Tomlinson Cir
Lancashire Rd
Millbrook Gate
Walter Thomas Way
Burr Cres
John Button Blvd
Rodick Rd
Morrison Cres
Barlow Rd
Halstead Dr
Caldercrest Cres
Padcliffe Rd
Warden Ave
Nadine Cres
Bayliffe Rd
Sutcliffe Cres
Leighland Dr
Fairholme Dr
Danbury Crt
Clamborne Crt
Tea Rose St
Nufield Gate
Lockridge Ave
Kerrigan Cres
Galenby Gate
Hollingham Rd
Carnforth Dr
Coledale Rd
Cranleigh Dr
Corby Rd
Ingleborough Crt
Holbrook Cir
Greystone Dr
Heathmore Crt
Constan Rd
Mayhoff Sq
Guildford Cir
Webber Cres
Brittany Cres
Knieghoff Ave
Addington Rd
Fenwick Cres
Buchanan Dr
Braeside St
Seaforth Pl
Landmark Crt
Francesco Crt
Glencove Dr
Hemingway Cres
Hagerman Blvd
Bradwater Creek Cres
Carlton Rd
Stiver Crt
Village Pky
Chant Cres
Briarwood Rd
16th Ave
16th Lane
Prentice Crt
Russell Crt
Renata Pl
Rae Cres
Delhi Cres
Normandale Rd
Goldmill's Crt
Westone Crt
Pratt Cir
Miner
Spice
Trumpo
Country Estates Dr
Scott-Elsbury Pl
Scott-Elsbury Crt
Glenborn Forest Way
Odessa Cres
Pembrooke Rd
Renberg Dr
Vandermeer Dr
Emerald Garden Crt
Village Gate Dr
Village Gate Cres
Spring Blossom Cres
Plum Tree Cir
Wild Orchid Cres
White Lotus Cir
Eyer Dr
Thackeray Crt
Goldring Cres
Dumfries Dr
Pilgrim Dr
Duborg Dr
Gardenia Cres
Moses Cres
Bartlett Rd
Markshire Rd
Briarglen Rd
Carter Pl
Hartwell Pl
Moss Creek Blvd
Whitford Rd
Saintsbury Rd
Magnotta Rd
Hopecrest Rd
Southbrook Cres
Sanderson Rd
Woodbine Ave
Dalt Hickman Way
Stiles Way
Four Oaks Cres
Rachel Cres
Caleb Way
Melissa Way
Captain Francis Dr
Marr Rd
Major Elliott Crt
Renfrew Dr
Laberta Crt
William Craig Crt
John Stiver Cres

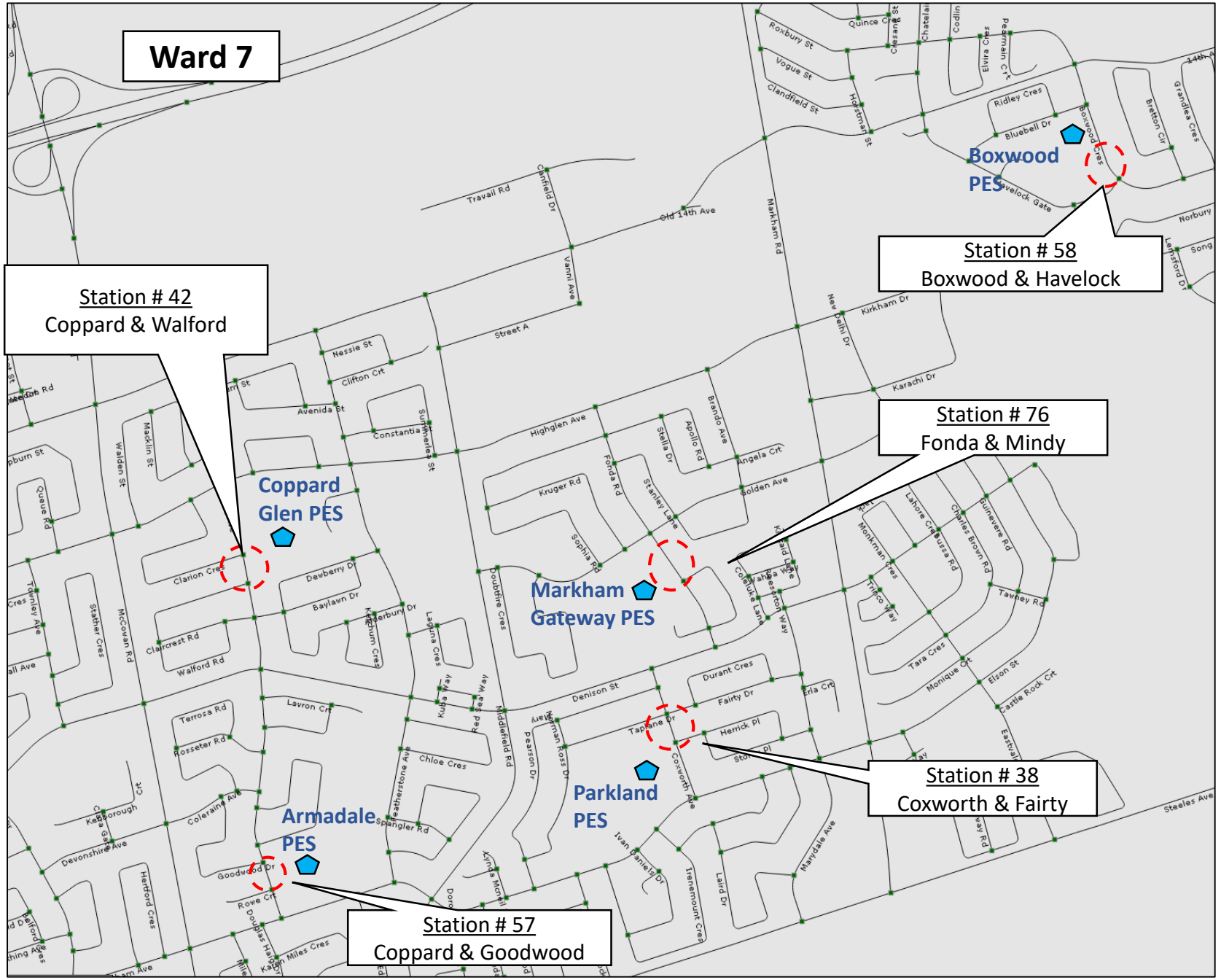
Ward 3
Station # 52
Central Park @ Havagal Cres (N)
Central Park PES
Station # 34
Carlton Rd @ Chant Cres (E)
William Berczy PES
N
Henry Bauer Lane
Foshan Ave
Castlegrain Blvd
Briar Path
Soho Cres
Adrian Cres
Manhattan Dr
Harbour St
Beckett Ave
Busch Ave
Block Ave
Cherna Ave
Christian Ritter Dr
Wagner Dr
James Glover Dr
Percy Stover Dr
Charles Vogel Dr
Ivanhoe Dr
Prequille Lane
London Plate Dr
Nipigon Dr
Longridge Way
York Blvd
Ferndell Cir
Roverdale Crt
Ritter Cres
Delhi Cres
Caledonia Crt
Normandale Rd
Birchview Lane
Redwood Lane
Longwater Chase
Greenwood Gate
Lexington Dr
Shortfill Dr
Greenwich Ave
Forty Second St
Bushberry Crt
Bridleford Crt
Dell Wood Crt
Bellside Dr
Atlantic Ave
Emerson Hill Dr
Central Park Dr
Havagal Cres
Paddock Lane
Canterfield Close
Arborfield Lane
Roundsbrook Cres
Mansfield Lane
Basswood Hollow
Thorndale Trail
Rosemead Close
Marshfield Hollow
Hedgewood Dr
Woodman's Chart
Kennedy Rd
Waterbridge Lane
Library Lane
Carlton Rd
Living Cres
Cassin Pl
Old Ivy Lane
Stanford Rd
Berkeley Cres
Victoria Ave E
Victoria Ave Lane
Main St Unionville
Lane
Austin Dr
Snowville Rd
Malvern Rd
Van Essa Rd
Madsen Cres
Marlow Cres
Miley Dr
Raleigh Cres
Karma Rd
Eugenia Crt
Torch Rd
Hwy 7 E
Rae Cres
Goodmill's Crt
Victorine Crt
Mallock Cres
Mckay Cres
Wembley Ave
Trumpour Crt
Emily Carr St
Pratt Cir
Jeremy Dr
Miner Cir
Spicer Cir
Chant Cres
Village Pky
Pomander Rd
Gainsville Ave
Callahan Rd
Shadbolt Crt
Torrone Crt
Merchant Rd
Fonthill Blvd
Addington Rd
Webber Cres

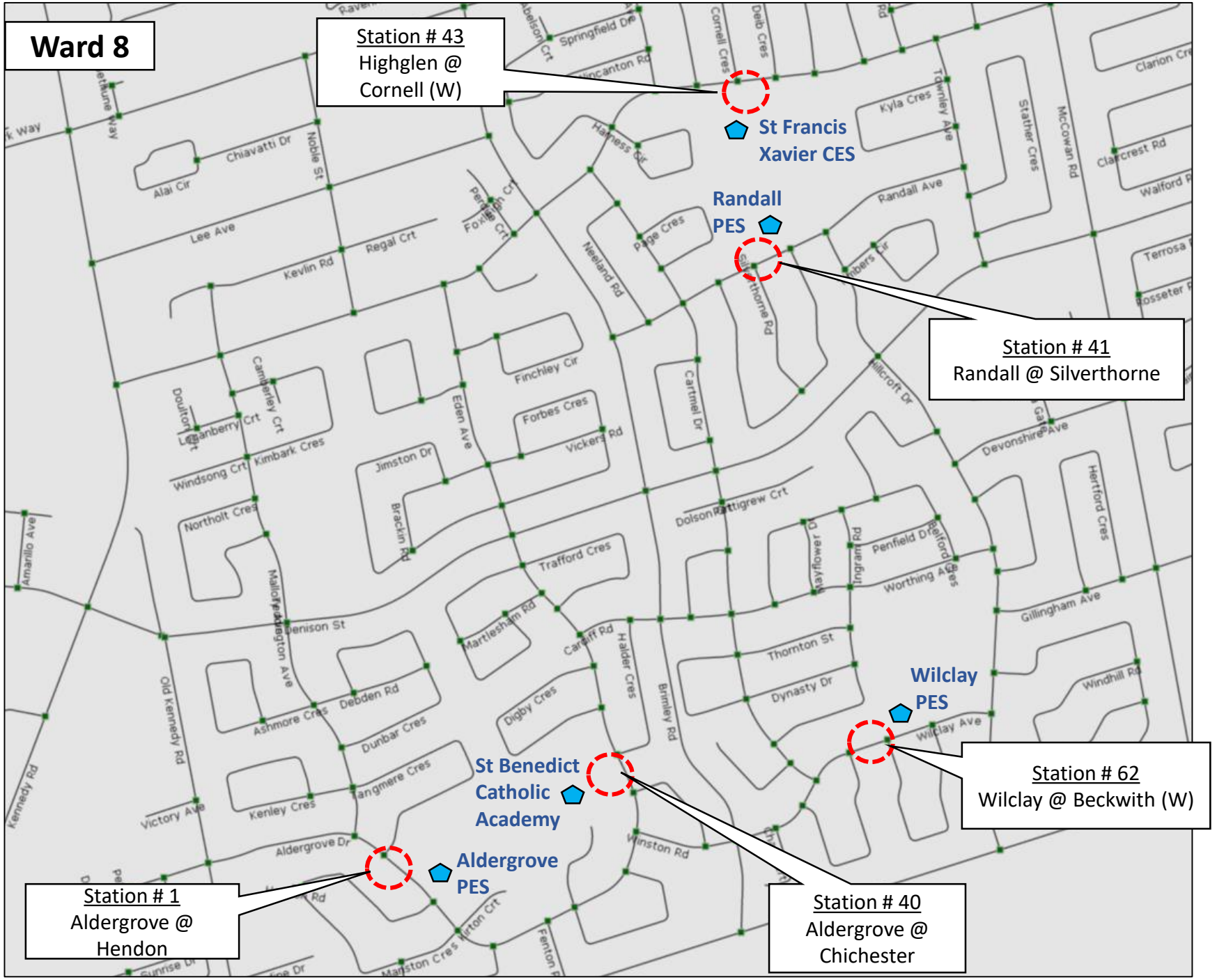
Ward 4


Station #53
Larkin @ Heisey Dr
ET Crowle PES
Reesor Park PES
Station #23
Wootten Way N @
Sir Tristram Place S
Station #32
Wootten Way S @
Senator Reesor N
William Armstrong PES
Station #31
Wootten Way S @
Senator Reesor S
N
Bryant Rd
Hallam Rd
McCarty Cres
Heisey Dr
Eastwood Cres
Tilman Cir
Fincham Ave
Parkinson Rd
Emeline Cres
Ramona Blvd
Wootten Way N
Freeman Rd
Meyer Cir
Follett Crt
Bishop Cres
Ambrose Crt
Enos Gate
Daniel Crt
Avondale Cres
Brookfield Crt
Hare Crt
Talisman Cres
Sir Constantine Dr
Sir Bodwin Pl
Sir Gareth Crt
Sir Lancelot Dr
Church St
Parkway Ave
Sir Galahad Pl
Sir Percival Crt
Sir Bedevere Pl
Sir Ector Crt
Paramount Rd
Elm St
Town Crier Lane
Orchard St
George St
Beech St
Thermill Way
Station St
Main St Markham North
Bramble Way
Markham Heppenheim Way
Russell Stover Crt
Reesorville Rd
Newton Gate
Jack Crt
Judy Crt
Jill Crt
Linden Lea St
Oak Lea Cir
Elm Lea St
Rose Way
Knightsbridge Way
Camelot Way
Yeoman's Way
Hwy 7 E
Senator Reesor's Dr
Captain Armstrong's Lane
Hamilton Hall
Wilgenall St
John Dexter Pl
Joseph St
Maple St
Franklin St
Jerman St
Houghton Blvd
Robinson St
Wilson St
Water St
Dublin St
Centre St
Washington St
Edward St
Albert St
Closburn Rd
Thomson Crt
Elizabeth St
Deer Park Lane
Wales Ave
Gleason Ave
Dilkey's Lane
Noel St
Trothen Cir
Sir Gawaine Pl
Sir Pellias Terr
Sir Kay Dr
Merlin Gate


Ward 5
N
Station # 71
Country Glen @ Cornell Common
Cornell Village PES
Tiers Gate
9th Line
Sawyer Cres
Mooreland Crt
Fry Crt
Pascoe Dr
Gowland Rd
Glendennan Ave
Pingel Rd
Lappe Ave
Winklers Lane
Bur Oak Ave
Murray Wilson Dr
Stackport Rd
Black Creek Dr
Almira Ave
Christian Reesor Park Ave
Cornell Common Rd
Donald Sim Ave
Cornell Meadows Ave
Cornell Park Ave
Terry Fox St
Wagon Works St
Disk Dr
Raven Cross Ave
Woodside Crt
Lane

Ward 6
All Saints CES
Castlemore PES
Station # 86
Castlemore @ Glenbrook
N
Major Mackenzie Dr E
Staffordshire Lane
King Henry
Bertram Earnshaw Dr
Fulhamgate
Stonebridge Dr
Castlemore Ave
Prince Charles Way
Thoroughbred Way
Staynor Cres
Lane
Lampton Cres
Davidoff St
Comeau St
Vecchia St
Timberlea St
Fitzroy Ave
McCowan Rd
Thimbleweed St
Alexander Lawrie Ave
James
Joseph Glover
Sharon Lee Dr
Hollylane Dr
Kentley St
Oxfordshire St
Stonebridge Dr
Campden Pl
Barkwood Hollow
West Bay Dr
Castleglen Blvd
Holst Ave
Russell Hill Rd
Glenbrook Dr
Cottingham St
Emery Hill Blvd
Emery Hill Bldwood Dr
Hartwood Pl
Cliveden Pl
Warren Bradley St
Warrington
Briarcrest Dr
Charles Sturdy Rd
Devonwood Dr
Glenhaven
Brookhaven Cres
Hillwood St
Westchester Cres
Elmrill Rd
Weatherill Rd
Drawbridge Dr
Majestic Dr
Saxony Dr
Winston Castle Dr
Lancelot Lane
Aries Cres
Lionheart Lane
William Bercey Blvd
Trojan Cres
Tower Hill Rd
Beaurawiew Gate
Aylesbrook Gate
Olivia Dr
Catherina St
Hennetta St
Brock Ave
Fairlawn Ave
Brunswick Ave
McCaul St
Heights Blvd
Old Meadow
Angus Glen Blvd
Lorna Glen St
Tennis St
The Fairways
Dancer's Dr
Plate Dr
Creek Dr
Elmhouse Rd


Ward 7
Station # 42
Coppard & Walford
Station # 58
Boxwood & Havelock
Station # 76
Fonda & Mindy
Station # 38
Coxworth & Fairty
Station # 57
Coppard & Goodwood
Coppard Glen PES
Boxwood PES
Markham Gateway PES
Parkland PES
Armadale PES
N


Ward 8
Station # 43
Highglen @
Cornell (W)
St Francis
Xavier CES
Randall
PES
Station # 41
Randall @ Silverthorne
Wilclay
PES
Station # 62
Wilclay @ Beckwith (W)
St Benedict
Catholic
Academy
Aldergrove
PES
Station # 1
Aldergrove @
Hendon
Station # 40
Aldergrove @
Chichester
N
Springfield Dr
Cornell Cres
Deib Cres
Kyla Cres
Tournley Ave
Stather Cres
McCowan Rd
Clarion Cres
Clarecrest Rd
Walford Rd
Rosseter Rd
Terrosa Pl
Chiavatti Dr
Noble St
Alai Cir
Lee Ave
Kevlin Rd
Regal Crt
Foxley Crt
Harness Cir
Neeland Rd
Page Cres
Randall Ave
Silverthorne Rd
Webers Cir
Hillcroft Dr
Devonshire Ave
Hertford Cres
Finchley Cir
Cartmel Dr
Doulton Crt
Lingonberry Crt
Canterbury Crt
Windsong Crt
Kimbark Cres
Eden Ave
Jimston Dr
Forbes Cres
Vickers Rd
Brackin Rd
Northolt Cres
Amarillo Ave
Trafford Cres
Dolson Rattigrew Crt
Penfield Dr
Bradford Cres
Worthing Ave
Gillingham Ave
Windhill Rd
Denison St
Martlesham Rd
Cardiff Rd
Halder Cres
Brimley Rd
Thornton St
Dynasty Dr
Wilclay Ave
Old Kennedy Rd
Kennedy Rd
Ashmore Cres
Debden Rd
Dunbar Cres
Digby Cres
Kenley Cres
Victory Ave
Aldergrove Dr
Winston Rd
Marston Cres
Hirton Crt
Fenton Pl
Sunrise Dr

2022 PROJECT FUNDING REQUEST FORM

Number: 22047

Project Cost: $646,700

Project Name: **New Traffic Signals (Construction)**

New Asset/Expansion

Commission: Development Services

Department: Engineering

Project Mgr: Justin Chin

Useful Life: 30 Pre Approval: ☐

Category: Major

Cost Validation: External peer review

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☑ 6 ☑ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Construction and Contract Admin for new traffic signals at the following two intersections: (1) Bur Oak @ Alfred Paterson; (2) Bur Oak @ Hammersley. The intersection will also include civil works to incorporate design elements as per the Accessibility for Ontarians with Disabilities Act (AODA). Traffic signals are recommended by staff in order improve intersection safety, operations and accommodate future growth needs. Detailed design was completed in 2021.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	530,340	0
Internal Charges:	74,633	0
External Consulting:	31,820	0
Sub Total:	636,793	0
HST Impact:	9,894	0
Total Project Cost:	**646,700**	**0**

NOTES

These intersections meet the Provincial criteria to warrant traffic signals. Total costs specified in the DCA Study is identified as follows for each intersection, listed under "Intersection Improvements": Bur Oak/Hammersley (Future Signalized Intersections (7) at Wismer); Bur Oak/Alfred Paterson (Future Signalized Intersections (4) @ Greensborough).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	646,700	0	0	0	0	0	0
TOTAL FUNDING	**646,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$7,200	$0	$7,200

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Hard - Intersection - Future Signalized Intersections (7) - Wismer		323,350	2,869,534
Hard - Intersection - Future Signalized Intersections (4) - Greensborough		323,350	1,038,589
TOTAL FUNDING		646,700	3,908,123

Life Cycle

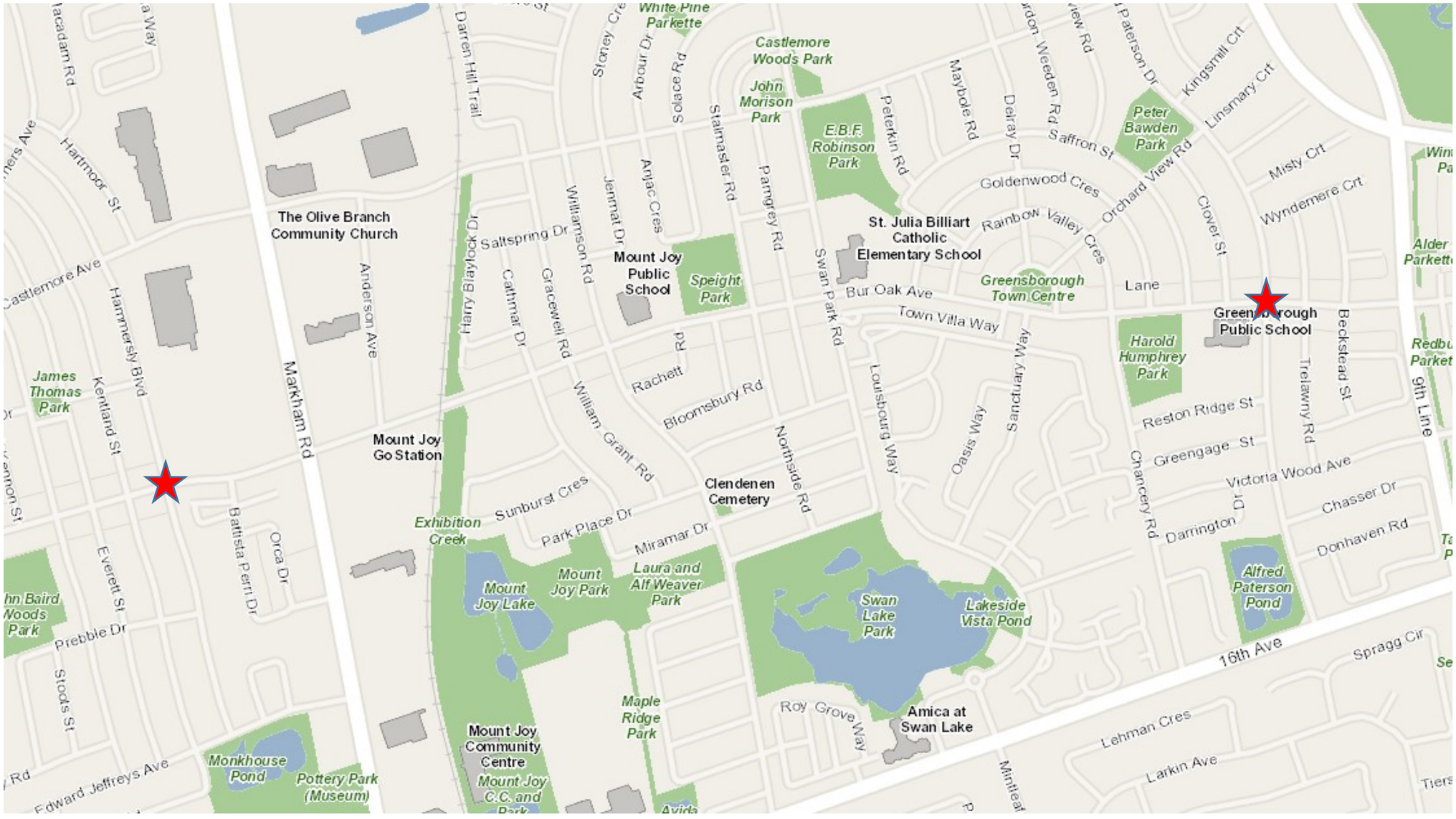
Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Planned Traffic Signal Construction
Bur Oak & Hammersly and Bur Oak & Alfred Paterson



2022 PROJECT FUNDING REQUEST FORM

Number: 22048

Project Cost: $1,138,200

Project Name: **Traffic Assets Replacement**

Repair/Replace

Commission: Development Services

Useful Life: 5 Pre Approval: ☐

Department: Engineering

Project Mgr: Justin Chin

Category: Annual

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of existing Traffic Assets, as identified in the Traffic Life Cycle Reserve Study and in-field conditions assessment. Project includes replacement of various traffic signal system components and speed monitoring equipment. This request includes replacments for both the 2021 ($339.5k) and 2022 ($900.8k) life-cycle years.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,118,508	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,118,508	0
HST Impact:	19,686	0
Total Project Cost:	**1,138,200**	**0**

NOTES

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	1,038,200	0	0	0	0	0	0
Operating Funded Life Cycle	100,000	0	0	0	0	0	0
TOTAL FUNDING	**1,138,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 229,800

Amount Incl HST 101,800

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Traffic Assets Replacement

Assets are replaced based on Traffic Life Cycle (varies between 5- 30 years) and condition assessment. Work includes: audible pedestrian push buttons and central control units at 29 intersections ($332k); LED indication replacements at 44 intersections ($229k); traffic signal heads at 1 intersection ($9.6k); emergency vehicle pre-emption detectors & detector cards at 13 intersections ($81.8k); traffic controller at 9 intersection ($144k); traffic controller cabinet wraps at 12 intersections ($10.5k); vehicular pole assemblies at 12 intersections ($197.4k); pedestrian pole assemblies at 8 intersections ($32.8k)16 speed radar display boards ($64k); 16 speed radar solar panels ($16.8k); Amount is consistent with the 2021 Life Cycle Reserve Study update. Wraps for traffic controller cabinets to be funded and completed by Operations.

2022 PROJECT FUNDING REQUEST FORM

Number: 22049

Project Cost: $51,800

Project Name: **Traffic Operational Improvements**

New Asset/Expansion

Commission: Development Services

Useful Life: 0 Pre Approval: ☐

Department: Engineering

Category: Annual

Project Mgr: David Porretta

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project accomodates initiatives and requests that arise throughout the year from staff, residents or Council to improve traffic operations and safety for all users of the City's transportation network. Improvements include sign and traffic control devices, pavement markings for roadways and cycling facilities, and minor concrete and asphalt civil works to address and/or enhance pedestrian and cyclist safety

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	50,904	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	50,904	0
HST Impact:	896	0
Total Project Cost:	**51,800**	**0**

NOTES

Budget request includes traffic control signs/devices/equipment ($20k); road/cycling pavement markings ($15k), minor concrete/asphalt civil works ($15k).

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Traffic Control Equipment	Concrete/Asphalt Civil Works	Road/cycling pavement markings		TOTAL	Phases
DCA	35,616	20,352	15,264	0	0	35,616	0
Tax	16,184	0	0	16,184	0	16,184	0
TOTAL FUNDING	**51,800**					**51,800**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$15,000	$0	$15,000

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Hard - Special Projects - City Wide - City-wide Street Safety and Traffic Calming, various locations		20,000	3,844,804
TOTAL FUNDING		20,000	3,844,804

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22050

Project Cost: $744,800

Project Name: **Parking Lot for York University Campus**

New Asset/Expansion

Commission: Development Services

Department: Engineering

Project Mgr: Cheah Loy

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

City share of capital cost towards parking lot to be constructed on Remington land west of Stouffvile GO line and north of Enterprise Blvd. Details subject to agreement between City and Remington Group which may include a ten-year term. Construction phasing also subject to discussions with Remington and their arrangement with other parties.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	650,000	0
Internal Charges:	83,350	0
External Consulting:	0	0
Sub Total:	733,350	0
HST Impact:	11,440	0
Total Project Cost:	**744,800**	**0**

NOTES

Ongoing discussions with Remington Group, the landowner of the subject lands, to determine the City's share towards the construction of the parking lot.
Markham is paying 50% of the total cost of $1.3M to get to $650,000. Parking control equipment included in SAM project #22216.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	140,500	0	0	0	0	0	0
Non-DC Growth	604,300	0	0	0	0	0	0
TOTAL FUNDING	**744,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

DC portion $140,500 funded from parking DC reserve in the soft services.

2022 PROJECT FUNDING REQUEST FORM

Number: 22051

Project Cost: $520,300

Project Name: **Parking Master Plan and Implementation Strategy**

Commission: Development Services

Department: Engineering

Project Mgr: TBD

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Parking Master Plan and Implementation Strategy aim to develop an overarching citywide policy, planning, and implementation framework for parking in the City of Markham. It will include a comprehensive citywide parking policy framework that aligns with existing policies and strategic plan goals and the impact of new and emerging transportation technologies. The Strategy will make recommendations on the organizational, governance, and business/financial model to improve the alignment of City policies, operation, and objectives across multiple departments to increase efficiency and customer service regarding on-street and any City-owned off-street parking. The Strategy will also include an implementation strategy that outlines programs, goals, timing, key performance indicators, and data and resource requirements.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	62,400	0
External Consulting:	450,000	0
Sub Total:	512,400	0
HST Impact:	7,920	0
Total Project Cost:	**520,300**	**0**

NOTES

Cost Validation: Based on similar parking master plan studies prepared by other municipalities such as Mississauga.
Requirement Validation: Establish a city-wide parking strategy was identified as part of the City's 2021-2023 Strategic Plan to achieve a safe, sustainable and complete community. Official Plan policy 7.1.5.1 also seeks to develop a city-wide parking strategy, implemented by individual business plan for various area and a governance structure that will direct and over parking issues within the City

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	100,000	0	0	0	0	0	0
Non-DC Growth	420,300	0	0	0	0	0	0
TOTAL FUNDING	**520,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22052

Project Cost: $508,800

Project Name: **OLT - Growth Related Hearings**

Commission: CAO, Legal, HR & Fire

Department: Legal Services

Project Mgr: Claudia Storto

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The purpose of this capital project request is to obtain funding necessary to defend Council decisions on development applications and other planning instruments and resolve outstanding site-specific appeals of the 2014 Official Plan at the Ontario Land Tribunal (OLT).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	500,000	0
Sub Total:	500,000	0
HST Impact:	8,800	0
Total Project Cost:	**508,800**	**0**

NOTES

The City continues to see an increase in complex development applications and is moving forward on a number of secondary plans, which are likely to lead to a corresponding increase in OLT appeals.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	178,080	0	0	0	0	0	0
Development Fees	152,640	0	0	0	0	0	0
Tax	178,080	0	0	0	0	0	0
TOTAL FUNDING	**508,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
General Government - Various Studies	2022	178,080	1,593,063
TOTAL FUNDING		178,080	1,593,063

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Funds are included in the studies section of the DC Background Study.

2022 PROJECT FUNDING REQUEST FORM

Number: 22053

Project Cost: $122,600

Project Name: **Bunker Gear Life Cycle Replacement**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 7 Pre Approval: ☐

Department: Fire & Emergency Services

Category: Minor

Project Mgr: Chris Nearing

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of 50 sets of bunker gear purchased in 2015. Request based on condition assessment in 2021 and legislative requirement to provide firefighters with structural firefighting protective equipment (bunker suit). Legislation: Health and Safety Act; Employer to maintain equipment and Section 21 Guidance Notes, Section 4 outlines standards for personal protective equipment. NFPA 1971 Standard on protection Ensembles for Structural Firefighting, minimum level of protection from thermal, physical, environmental and blood-borne pathogens. MFES has a contract for the supply and delivery of bunker gear 2018-2022.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	120,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	120,500	0
HST Impact:	2,121	0
Total Project Cost:	**122,600**	**0**

NOTES

Project cost is based on unit price of $2,452 x 50 suits. Total inventory including spare bunker suits approx. 410 sets (suits ordered at 7 year mark to maintain adequate spare equipment, eliminates purchasing 2 full sets of bunker gear for each firefighter).

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget					TOTAL	Phases
Operating Funded Life Cycle	122,600	122,600	0	0	0	122,600	0
TOTAL FUNDING	**122,600**					**122,600**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	122,600
Amount Incl HST	122,600
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22055

Project Cost: $101,500

Project Name: **Firefighting Tools & Equipment Replacement**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 1 Pre Approval: ☐

Department: Fire & Emergency Services

Category: Annual

Project Mgr: Chris Nearing

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual replacement and purchase of firefighting tools & equipment. Examples include but are not limited to the following: hose, ladders, nozzles, hand tools, water rescue equipment, ropes, fire extinguishers, hydraulic rescue tools, oxygen equipment, air cylinders, SCBA masks & breathing valves, portable pumps, electric & gas operated saws, cribbing, hose appliances, portable radios, medical bags, fans, thermal camera & related equipment, laser temperature probes, travel restraint and lock out kits.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	99,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	99,700	0
HST Impact:	1,755	0
Total Project Cost:	**101,500**	**0**

NOTES

Purchases occur due to condition assessment/legislative requirements/circumstances. Because of the nature of the department activities, equipment may require purchase/replacement due to damage and condition, beyond economical repair or technological change. Amount is consistent with the 2022 Life Cycle Reserve Study update. This project funding meets the current needs of the Fire Department and keeps all tools and equipment in a good state of operational order.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	101,500	101,500	0	0	0	101,500	0
TOTAL FUNDING	**101,500**					**101,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	101,500
Amount Incl HST	101,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22056

Project Cost: $11,200

Project Name: **Hazardous Materials Replacement**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 5 Pre Approval: ☐

Department: Fire & Emergency Services

Category: Minor

Project Mgr: Chris Nearing

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Life Cycle Replacement of 8 Level A & 8 Level B Suits and 1 Hydrogen Cyanide (HCN) Detector based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	11,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	11,000	0
HST Impact:	194	0
Total Project Cost:	**11,200**	**0**

NOTES

Project cost is based on unit price of $1,075 x 8 Level A suits, $228 x 8 Level B suits and 1 HCN detector x $770, all last replaced in 2017. Total inventory of Level A & B suits is 8 suits for each type, and total inventory of HCN detectors is 3. Amounts are consistent with the 2022 Life Cycle Reserve Study.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Level A & B Suits	HCN Detector			TOTAL	Future Phases
Operating Funded Life Cycle	11,200	10,430	770	0	0	11,200	0
TOTAL FUNDING	**11,200**					**11,200**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	11,200
Amount Incl HST	11,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22057

Project Cost: $53,300

Project Name: **Particulate Filtering Hoods Replacement**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 5 Pre Approval: ☐

Department: Fire & Emergency Services

Project Mgr: Chris Nearing

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation:

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Legislative Life Cycle replacement of 500 particulate filtering flash hoods.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	52,363	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	52,363	0
HST Impact:	922	0
Total Project Cost:	**53,300**	**0**

NOTES

Particulate filtering hoods are flash hoods which protect firefighters necks and ears, and must be replaced every 5 years according to Legislation. Current inventory is 500 x $106.60/unit. Amounts and units are consistent with the 2022 Life Cycle Reserve Study update. These units were last replaced in 2017.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	53,300	53,300	0	0	0	53,300	0
TOTAL FUNDING	**53,300**					**53,300**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	53,300
Amount Incl HST	53,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22058

Project Cost: $99,800

Project Name: **Replacement of Equipment due to Staff Retirements**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 1 Pre Approval: ☐

Department: Fire & Emergency Services

Category: Annual

Project Mgr: Chris Nearing

Cost Validation: Third party estimate

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Purchase of personal protective clothing, uniforms and equipment for each recruit following the retirement of a firefighter. Legislation: OH&S 25.(2)(h) An employer shall take every precaution reasonable in the circumstances for the protection of a worker. Section 21 Guidance Notes, Section 4 in its entirety outlines standards for personal protective equipment and practices to protect firefighters. NFPA 1971 Standard on Protective Ensembles for Structural Firefighting, establishes minimal levels of protection from thermal, physical, environmental and blood-borne pathogens.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	98,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	98,100	0
HST Impact:	1,727	0
Total Project Cost:	**99,800**	**0**

NOTES

The cost of personal protective clothing, uniforms and equipment is approximately $8,175 per firefighter based on 2021 quotations. Forecasted estimate of 12 retirements for 2022. Some retiree equipment is repurposed as spare.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	99,800	0	0	0	0	0	0
TOTAL FUNDING	**99,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	99,800
Amount Incl HST	99,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22059

Project Cost: $12,500

Project Name: **Rescue Equipment - Thermal Camera & Ice Commander Suits**

Repair/Replace

Commission: CAO, Legal, HR & Fire

Useful Life: 10 Pre Approval: ☐

Department: Fire & Emergency Services

Category: Minor

Project Mgr: Chris Nearing

Cost Validation: Third party estimate

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Life Cycle replacement of one thermal image camera last replaced in 2012 and four ice commander suits last replaced in 2017. Thermal Image Cameras (TIC's) give firefighters the ability to view an infrared image through smoke and other low visibility atmospheres encountered in firefighting. Ice commander suits are used for immersion entry for water rescue operations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	12,311	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	12,311	0
HST Impact:	217	0
Total Project Cost:	**12,500**	**0**

NOTES

Thermal Image Cameras are utilized to search for victims, detect the seat of a fire, smouldering fires inside a wall, and overheating electrical wiring. Total inventory is 16 cameras, with a useful life of 10 years. Total inventory of ice commander suits is 6, replaced every 5 years or based on condition assessment. Project cost is based on unit price of $9,300 x 1 camera and $800 x 4 suits as per quote received.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Thermal Image Camera	Ice Commander Suits			TOTAL	Future Phases
Operating Funded Life Cycle	12,500	9,300	3,200	0	0	12,500	0
TOTAL FUNDING	**12,500**					**12,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	12,500
Amount Incl HST	12,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22060

Project Cost: $1,336,800

Project Name: **IT Lifecycle Asset Replacement**

Repair/Replace

Commission: Corporate Services

Useful Life: 6 Pre Approval: ☐

Department: ITS

Category: Major

Project Mgr: Sugun Rao

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Documentation of life cycle years

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace IT hardware and software assets that are due for replacement based on condition assessment. Some of the assets have been discontinued by Manufacturer and replacement is required in order to avoid any service interruptions.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,313,655	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,313,655	0
HST Impact:	23,120	0
Total Project Cost:	**1,336,800**	**0**

NOTES

The request includes replacement of the following aging hardware: 1. Libray Biblotheca (3M), 2. Large Format Printer/plotter, 3. ITS Strategic Plan Implementation, 4. Smartphones Replacement. Internal Recovery for 2 staffs have been included in the Citywide Staff Salary Reovery project.
For details, see supporting document.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Building Fees	78,700	0	0	0	0	0	0
Development Fees	105,000	0	0	0	0	0	0
Operating Funded Life Cycle	1,049,900	0	0	0	0	0	0
Waterworks	103,200	0	0	0	0	0	0
TOTAL FUNDING	**1,336,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,422,100
Amount Incl HST	1,049,900
Year in the study	

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

DETAILS FOR CAPITAL PROJECT IT LIFECYCLE ASSET REPLACEMENT

	Item	Quantity	Total Costs	Source of Funding: Life Cycle	Water Works	Building	Engineering	Planning
	2022 IT Lifecycle Asset replacement							
1	**Library Bibilotheca (3M)** *Replacement of 8+ year old Library Bibilotheca equipment - (4 Selfcheck, 4 RFID Workstation, 1 book sorter equipment at Cornell, 4 RFID Workstation at Milliken Mill, 4 RFID Wokstation and 2 Self Check unit at Unionville*		$457,655	$366,124	$27,459	$27,459	$18,306	$18,306
2	**Large Format Plotter** *Replacement of 9+ year old Large Format Plotter at 8100 Warden for Enviornment services*	1	$24,000	$0	$24,000	$0	$0	$0
3	**ITS Strategic Plan Implementation** *To fund the initiatives as part of the Digital Markham priority to be a Living Lab for innovation and the outcome of Smart City Workshops and related plans. Preliminary project feasibility assessment work is related to Autonomous Shuttle Pilot, Digital Trails, E-Scooter/E-Bike Pilot and Digital Counter Service Queuing. Other opportunities under consideration are Smart Parking, Sensor Technology with focus on stormwater and underground infrastructure, Digital Checklist for development, Free Wi-Fi in new development areas, pilot projects in partnership with VentureLab start-up companies and incubator initiatives to support Markham Centre secondary plan.*		$800,000	$640,000	$48,000	$48,000	$32,000	$32,000
4	**City Wide Smartphone Replacement** *Lifecycle replacement of 20% of corporate smartphones. Mainly due to wear and tear related issues such as degrading battery life.*	150	$32,000	$25,600	$1,920	$1,920	$1,280	$1,280
	Total		**$1,313,655**	**$1,031,724**	**$101,379**	**$77,379**	**$51,586**	**$51,586**
	HST Impact	1.76%	$23,120	$18,158	$1,784	$1,362	$908	$908
	Total with HST Impact		**$1,336,775**	**$1,049,882**	**$103,164**	**$78,741**	**$52,494**	**$52,494**

2022 PROJECT FUNDING REQUEST FORM

Number: 22061

Project Cost: $239,100

Project Name: **ITS Cyber Security Program**

Commission: Corporate Services

Department: ITS

Project Mgr: Robert Cole

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Repair/Replace

Useful Life: 5 Pre Approval: ☐

Category: Annual

Cost Validation: Third party estimate

Requirement Validation:

DETAILED DESCRIPTION (SCOPE OF PROJECT):

In order to continue to stay ahead of current Cyber Security threats, the City must continue to invest in tools and services to protect our data, educate our staff, and ensure we can identify and minimize threats to our organization. The ITS Cyber Security team has identified upgrades and enhanced tools that will be required to ensure our existing tools to stay current and allow us to continue to appropriately detect and respond to threats. This will ensure the risk associated with Cyber Security continue to be mitigated and identified incidents are quickly isolated and resolved.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	235,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	235,000	0
HST Impact:	4,136	0
Total Project Cost:	**239,100**	**0**

NOTES

Cyber Security Program funding.
The estimated annual maintenance cost is $215,000.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Tax	239,100	0	0	0	0	0	0
TOTAL FUNDING	**239,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$215,000	$0	$215,000

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22062

Project Cost: $47,300

Project Name: **Momentuum CRM (Civictrack)**

Commission: Corporate Services

Department: ITS

Project Mgr: Rob Cole

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 5 Pre Approval: ☐

Category: Annual

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

In the past, MicroSoft Dynamics CRM Solution had been available for Mayor and Council to manage their professional contacts. The system was implemented in 2011, and the software is long past its end of life. Recently, many councilors have requested tools to manage their contacts and communications to their constituents, including features such as business card scanning, creating emails lists, and categorizing contacts based on their associate or business with the City, so that targeted emails can be sent to constituents that fall into specific categories.

In 2018, ITS began looking for software to replace the existing software that would meet the new requirements. ITS reviewed various options, including upgrading the existing CRM to a newer version of MS Dynamics; reviewing COTS tools such as HubSpot, ZenDesk, Momentuum, and others.

Based on the costs of customizations, ITS recommends the Momentuum CivicTrack Solution as the System that will provide the desired functionality with the most reasonable cost.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	46,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	46,500	0
HST Impact:	818	0
Total Project Cost:	**47,300**	**0**

NOTES

The cost validation for this project is based on a business proposal and quote received from the required vendors for replacement costs.

Initial implementation costs are $20,000 pre-tax with ongoing annual subscription costs of $26,966 annually (1x$4,900 + 12x$1,800 + Tax) for both Mayor's and Councilors' usage.

There is currently no existing expense for this software, as current software used is beyond end of life.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	47,300	0	0	0	0	0	0
TOTAL FUNDING	**47,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$26,966	$0	$26,966

2022 PROJECT FUNDING REQUEST FORM

Number: 22064

Project Cost: $3,052,800

Project Name: **Mount Joy CC's "Approaching NZEE" Pilot Project**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Amanda Martin

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 30 Pre Approval: ☑

Category: Major

Cost Validation: External peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project seeks funding to pilot the City's first "Approaching Net-Zero Energy Emissions (NZEE)" retrofit project at Mount Joy CC. Infrastructure Canada (INFC)'s Green and Inclusive Community Building (GICB) program, launched in April 2021, provides a contribution of up to 80% of maximum $3M eligible project costs (up to $2.4M grant) per project to support the transition of retrofitting community buildings to net-zero by 2050. This project will leverage Lifecycle funds and maximize INFC's grant to accelerate the replacement of building components coming due for replacement with lower energy/carbon alternatives. Study is still underway, but preliminary estimates indicate greater than 25% energy savings, a very positive NPV, and incremental simple payback of less than 10 years. Completing this pilot project will set Mount Joy CC on a course to achieve NZEE by 2050.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,999,999	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,999,999	0
HST Impact:	52,800	0
Total Project Cost:	**3,052,800**	**0**

NOTES

Project is contingent on approval of new staff. The project and staff position will only proceed if grant funding is secured. Council approved Markham's Municipal Energy Plan target of achieving NZEE by the year 2050. Feasibility study is currently underway with anticipated completion date of August 2021. This project supports that target and the commitments made through the Corporate Energy Management Plan (requirement per O'Reg 507/18). A request for 2.5 year salary for a full-time contract Project Manager is included in the salary recoveries project.

SOURCE(S) OF FUNDING ($)		Components				
Funding Type	Budget	Mount Joy CC Retrofit			TOTAL	Future Phases
Gas Tax	652,801	652,801	0	0	652,801	0
Infrastructure Grant	2,399,999	2,399,999	0	0	2,399,999	0
Operating Funded Life Cycle	0	0	0	0	0	0
Tax	0	0	0	0	0	0
TOTAL FUNDING	**3,052,800**				**3,052,800**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

Net-Zero Energy Emissions (NZEE) Studies and Pilot Projects

Amanda Martin, Corporate Energy Manager
Sustainability & Asset Management
October 2021

Agenda

- **Part 1: NEW 2021 Green Building Retrofit Funding**
  - Overview of funding to support transition to NZEE by 2050

- **Part 2: The City's Proposed Studies & Pilot Projects**
  - Pilot Objectives
  - What does a Net-Zero Building Look like?
  - Mount Joy NZEE Study
  - Facilities selected for 2022 Capital Budget Studies and Pilot Projects

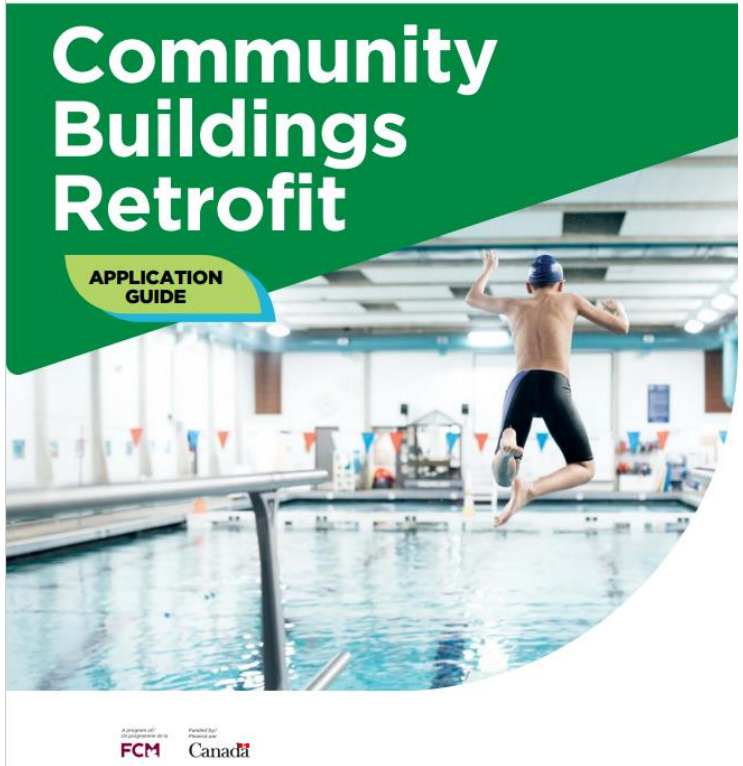
Part 1: 2021 Green Building Retrofit Funding

FCM's Community Building Retrofit (CBR) Initiative - $167M

Offering feasibility study grants up to 80% of maximum $250k eligible project costs (up to $200k grant)* for portfolio of buildings.

*Only one feasibility study of this type is eligible for funding per municipality.

GREEN MUNICIPAL FUND / FONDS MUNICIPAL VERT



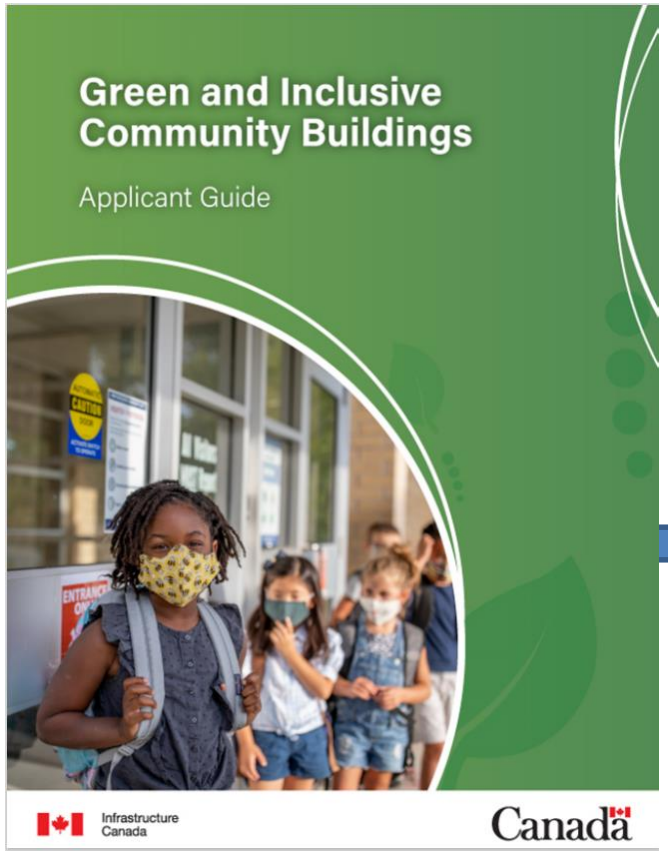
Key Criteria

- Integrate energy & GHG reduction solutions into Lifecycle planning
- 25% energy & GHG reduction within 2 years ← "Accelerated Path"
- 50% GHG reductions within 10 years
- 80% GHG reductions within 20 years
- Net-Zero Carbon by 2050

*The **Accelerated Path** lays the groundwork for us to apply for future grant funding from external sources as they become available.*

$250k study x 80% eligible costs = $200k grant

Infrastructure Canada's Green & Inclusive Community Building (GICB) Fund



- **Amount:** $860M available for Retrofit
- **Prerequisite:** Study and building energy simulations/modelling completed demonstrating >25% energy savings
- **Eligible Measures:** Green retrofits resulting in >25% energy savings
- **Timeline:** completed between April 1, 2021 and March 31, 2026
- **No limits to # of applications or ceiling amount!**

Continuous Intake Stream - Retrofit

- Small and medium retrofit projects between $100k to $3M
- Up to 80% contribution
- Accepted on a continuous basis
- **Funded on a first-come, first-served basis**

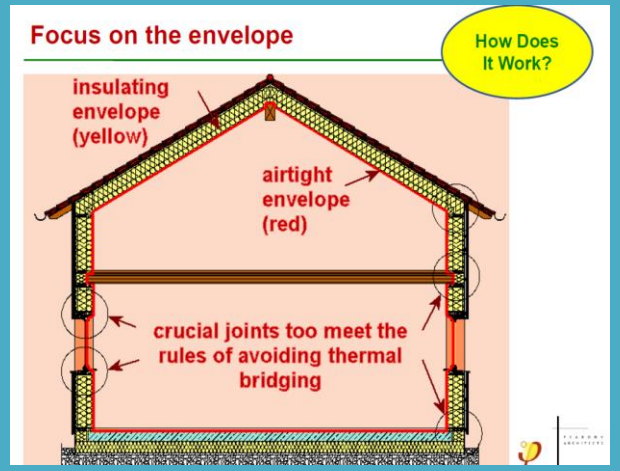
$3M Capital Project x 80% eligible costs = $2.4M contribution

Part 2: The City's Proposed Studies & Pilot Projects

Pilot Objectives

- **Retrofit (and construct) buildings to NZEE** through significant energy and GHG emission reductions (environmental)
- **Reduce utility bills, maintenance costs, and mitigate capital costs** by identifying and implementing cost-effective GHG reduction solutions and leveraging normal capital renewal timelines (economic)
- **Improve building quality, comfort, health and resilience** (social)
- **Increase internal communication, awareness, and capacity** that will enable the City to better plan, build, retrofit, operate and maintain NZEE buildings
- **Support sector transformation** by developing both accelerated and long-term, zero-over-time retrofit pathways to achieve net-zero energy emissions by no later than 2050

Guiding Design Principles for NZEE Buildings



Super-airtight and insulated building envelope

- Highly insulated building structure and components
- Air-tight and reduced thermal bridging

Operated efficiently with super energy efficiency equipment

- Ventilation with heat recovery
- Rightsized heating and cooling systems
- Water heating
- Electrical loads (appliances, lighting)

Renewable Energy

- Low-carbon energy sources

Present Mitigation Measures: Mount Joy Net-Zero Study

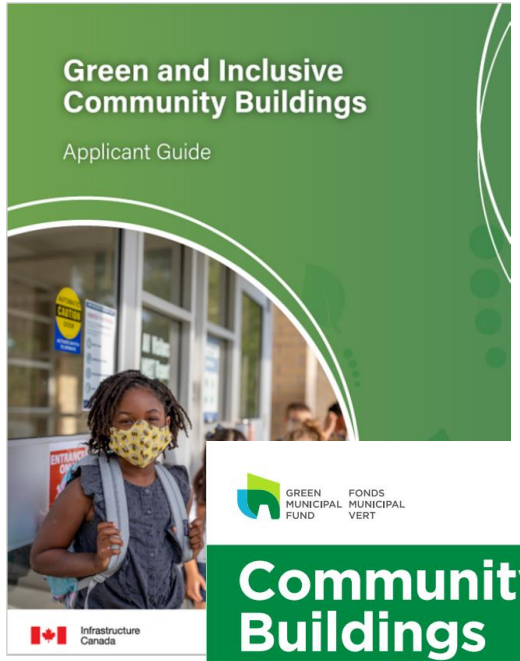
- Standalone Arenas
  - **Timeline:** Oct 2020 – Aug 2021
  - **Facilities:** Mount Joy CC & cohort study with 7 other municipalities

Playbooks for retrofitting various types of facilities to achieve NZEE is still relatively uncharted territory.

Pilot Process:

- **Study, develop and test innovative solutions** through pilot **"Proof of Concept"** retrofit projects,
- Complete **project retrospective** (what went well and what didn't),
- **Scale up** and **incorporate key findings** in other retrofit projects and planned corporate net-zero strategy.

Near-Term Mitigation Measures: Net-Zero Studies & Pilot Projects



Mount Joy CC's Approaching "NZEE" Pilot Project

- **Goal:** accelerate retrofitting Mount Joy CC to near net-zero
- **Prerequisite:** Study and complete energy simulations/modelling demonstrating >25% energy savings
- **External Funding Support:** 80% grant available through Infrastructure Canada's Green & Inclusive Community Buildings program

Approaching Net-Zero Energy Emissions (NZEE) Studies

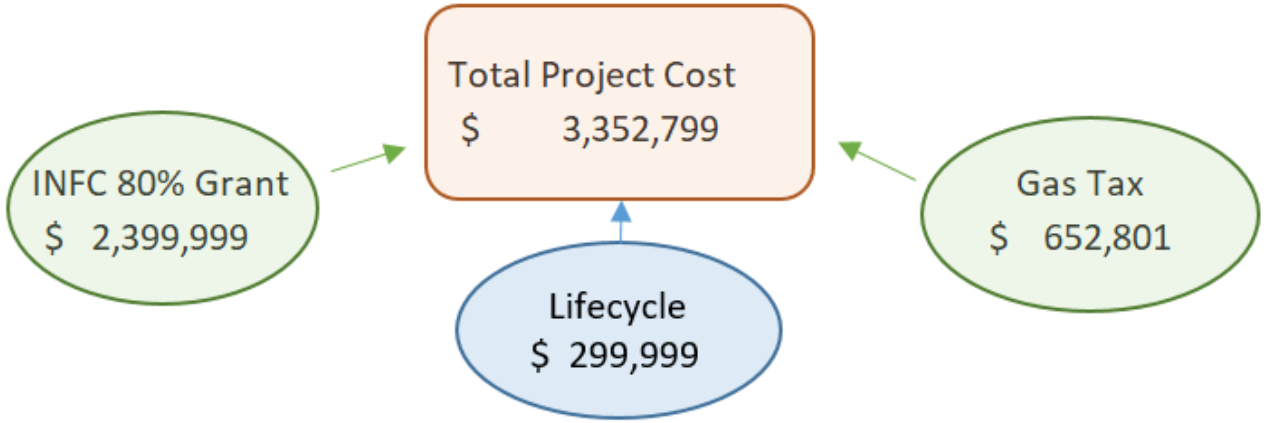
- **Goal:** Study and develop short, medium, and long-term customized roadmaps to retrofit the community centres to NZEE by 2050, on both an accelerated path and gradually over time
- **Locations:** Thornhill CC, Centennial CC, Clatworthy Arena
- **External Funding Support:** 80% grant available through FCM's Community Building Retrofit program

*The grant funding allows us to **accelerate** delivery of these net-zero studies and pilot projects at **reduced financial risk**.*

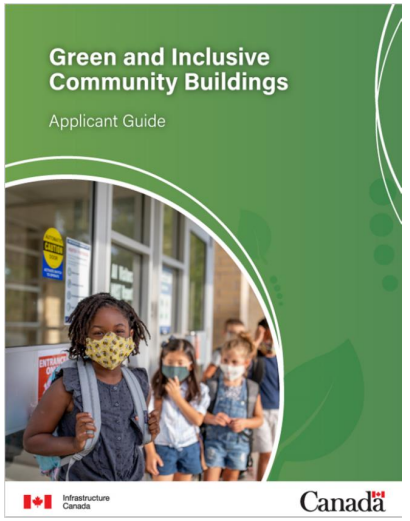
Mount Joy CC Approaching "NZEE" Pilot Project

❑ **Apply for Capital Project funding through INFC's Green & Inclusive Community Building (GICB) program (up to 80% grant).**

Facility Name	Year				
	2021	2022	2023	2024	2025
Mount Joy CC	Study Phase	Project Phase (Design & Construction)			
Centennial CC		Study Phase	Project Phase (Design & Construction)		
Thornhill CC		Study Phase	Project Phase (Design & Construction)		
Clatworthy Arena		Study Phase	Project Phase (Design & Construction)		



Total Project Cost	$ 3,352,799
INFC 80% Grant	$(2,399,999)
Gas Tax	$ (652,801)
Net-Cost to City (Lifecycle)	$ 299,999

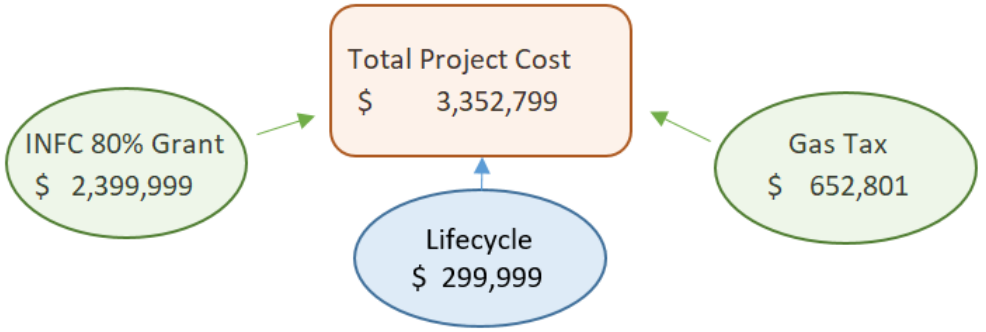


Mount Joy CC Approaching "NZEE" Pilot Project

❑ **Apply for Capital Project funding through INFC's Green & Inclusive Community Building (GICB) program (up to 80% grant).**

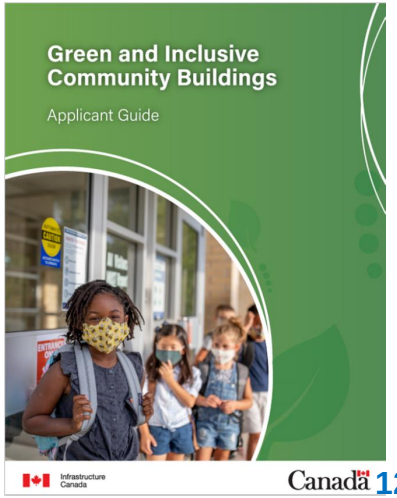
Approaching NZEE Pilot Project relative to Business-As-Usual
Forecasted Energy Savings = 65%-75%
Forecasted GHG Savings = 70%-80%
Net-Present-Value (NPV) = $2.6M - $4.7M

The study demonstrates that this pilot project will add tremendous **triple-bottom line benefits to the City**.



Total Project Cost	$ 3,352,799
INFC 80% Grant	$ (2,399,999)
Gas Tax	$ (652,801)
Net-Cost to City (Lifecycle)	$ 299,999

Note:
- *Intent is to **spend up to the maximum INFC eligible funding amount** ($3M eligible project costs offset by a ~$2.4M grant)*
- ***Remainder of GHG reduction solutions** will subsequently **leverage Lifecycle** (Zero-Over-Time approach)*
- *Project **will only move forward if grant funding is secured***



Approaching Net-Zero Energy Emissions (NZEE) Studies

❑Apply for Feasibility Study funding through FCM's Community Building Retrofit (CBR) program (up to 80% grant).

Facility Name	Year				
	2021	2022	2023	2024	2025
Mount Joy CC	Study Phase	Project Phase (Design & Construction)			
Centennial CC		Study Phase	Project Phase (Design & Construction)		
Thornhill CC		Study Phase	Project Phase (Design & Construction)		
Clatworthy Arena		Study Phase	Project Phase (Design & Construction)		

Total Project Cost	$	254,400
Total FCM CBR Grant	$	(200,000)
Total Net-Cost to the City	$	54,400

Note:

- **INFC Prerequisite:** Study and facility energy simulations/modelling completed demonstrating **>25% energy savings**
- Staff recommends **studies should still move forward if grant funding is not secured**

Centennial, Thornhill, & Clatworthy Approaching "NZEE" Pilot Projects

❑ **Apply for Capital Project funding through INFC's Green & Inclusive Community Building (GICB) program (up to 80% grant).**

Facility Name	Year				
	2021	2022	2023	2024	2025
Mount Joy CC	Study Phase	Project Phase (Design & Construction)			
Centennial CC		Study Phase	Project Phase (Design & Construction)		
Thornhill CC		Study Phase	Project Phase (Design & Construction)		
Clatworthy Arena		Study Phase	Project Phase (Design & Construction)		

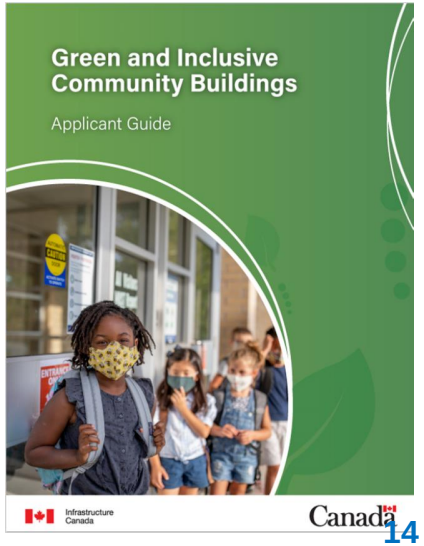
Total Project Cost	**$**	**10,058,398**
Total Grant/Contributions	**$**	**(7,199,998)**
Total Net-Cost to the City	**$**	**2,858,399**

Business Case at a Glance

Estimated Net-Cost to City: $2,858,399
Estimated Energy Savings: >25%
Financial Indicator: Anticipating very positive NPV

Note:

- **INFC Prerequisite:** Study and facility energy simulations/modelling completed demonstrating **>25% energy savings**
- Forecasted Lifecycle replacements within the window exceed the City contribution level expected
- *Project **will only move forward if grant funding is secured***



Thank you for your time!

Any Questions?

2022 PROJECT FUNDING REQUEST FORM

Number: 22065

Project Cost: $132,300

Project Name: **Facility Energy Management Program**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Amanda Martin/Aaron Cheung

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 15 Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Funding to support citywide energy conservation & net-zero initiatives as well as operational service & improvements to building systems. Project investment of $132,300 yields a 3 year simple payback and savings continue thereafter. Support includes facility retrofits, awareness & training programs, feasibility studies, technical & operational support, and building systems planning, standardization, and optimization, all adhering to the award-winning Corporate Energy Management Plan and Corporate Building Automation System Design Standards. Project also supports grant applications and measurement & verification of energy/GHG/cost-savings including those identified in other projects ($11M grants at risk without this funding).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	130,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	130,000	0
HST Impact:	2,288	0
Total Project Cost:	**132,300**	**0**

NOTES

E3: Estimated additional annual savings of $65k starting 2023 + $105k starting 2024 through utility analysis, awareness programs, operational and controls improvements, Life Cycle upgrades and special projects (lighting, HVAC, Smart Building Tech). Funding for 2 internal staff for 2 years is in the Citywide Staff Salary Recovery project. The staff provide additional intangible benefits through consistently yielding better service quality relative to outsourcing, improving operational excellence, and developing best practices. Source: Markham Energy Conservation Office (MECO).

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	**Budget**	Energy Conservation Projects				**TOTAL**	**Future Phases**
Other Internal	132,300	132,300	0	0	0	132,300	0
TOTAL FUNDING	**132,300**					**132,300**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	-$170,000	$0	-$170,000

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22066

Project Cost: $66,100

Project Name: **Electric Vehicle Chargers Expansion**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Colby Brygidyr

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Provide three (total) new Level 2 EV Charging Stations with Monitoring Software.
Civic Centre (1 station w/ 2 chargers) and 555 Miller Avenue Yard (2 Station w/ 4 Chargers) to meet demands of Fleet's new EV vehicles. Relative to gas vehicle alternatives, the forecasted fuel and maintenance cost-savings range from 65% to 75% and GHG reductions range from 80% to 90%. This project supports the City's target of achieving net-zero emissions by 2050.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	65,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	65,000	0
HST Impact:	1,144	0
Total Project Cost:	**66,100**	**0**

NOTES

Fleet is adding 7 new electric vehicles to the Civic Centre. Each vehicle requires 1 charger. This increase of EV vehicles will require one additional charging station at the Civic Centre. Fleet is also purchasing three new EV vehicles for the 555 Miller Yard. This will require 2 new charging stations. Monitoring software will be purchased at the same time. New electrical infrastructure will be incorporated with existing electrical as part of the construction. The purchases of EV is included in Fleet project #22170, Corporate Fleet Replacement - Non-Fire.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	66,100	66,100	0	0	0	66,100	0
TOTAL FUNDING	**66,100**					**66,100**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22068

Project Cost: $223,900

Project Name: **Green Recovery Program – Feasibility Study**

Studies/Pilot Programs

Commission: Corporate Services

Useful Life: 0 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Jennifer Wong

Cost Validation: External peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Feasibility study will examine existing strategies and recommend new ones to reduce barriers to local participation in retrofits including awareness and education, financial, technical and administrative issues. Evaluate partnerships and third-party alternatives to existing financing models, providing residents with options for deep-retrofits and encourage uptake. Consultant to develop feasibility study and develop communications plan.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	220,000	0
Sub Total:	220,000	0
HST Impact:	3,872	0
Total Project Cost:	**223,900**	**0**

NOTES

Retain consultant to engage local stakeholders to develop, and scale up innovative financing models for residential energy projects with a focus on educating and communication.
Application to FCM for CEF Funding to explore innovative ways to finance energy savings and deep home retrofits in residential homes. If Markham is successful in obtaining FCM funding, $45,800 will be required for our portion and remaining capital will be returned to original source.
Study contingent on external consultant support.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Infrastructure Grant	178,100	0	0	0	0	0	0
Tax	45,800	0	0	0	0	0	0
TOTAL FUNDING	**223,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22069

Project Cost: $669,100

Project Name: **160 Dudley Life Cycle Repair/Replacements**

Repair/Replace

Commission: Corporate Services

Useful Life: Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Adriano Trabucco

Category: Major

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the 160 Dudley Avenue Facility in a state of good repair and in alignment to the Asset Management Plan/ Policy. Items for repair and/or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Budget request is subject to change, based on condition assessment in previous year.
The project to be coordinated with 160 Dudley FS Consulting to ensure efficiency and mitigate any waste.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	657,528	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	657,528	0
HST Impact:	11,572	0
Total Project Cost:	**669,100**	**0**

NOTES

$108,100 - Partitions, ductwork, door, lighting - various areas
$561,000 - Roofing Replacement and associated Building envelope, HVAC, Structural works
Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Roofing Replacement	Partions, ducts, door, lighting			TOTAL	Future Phases
Operating Funded Life Cycle	669,100	561,000	108,100	0	0	669,100	
TOTAL FUNDING	**669,100**					**669,100**	

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

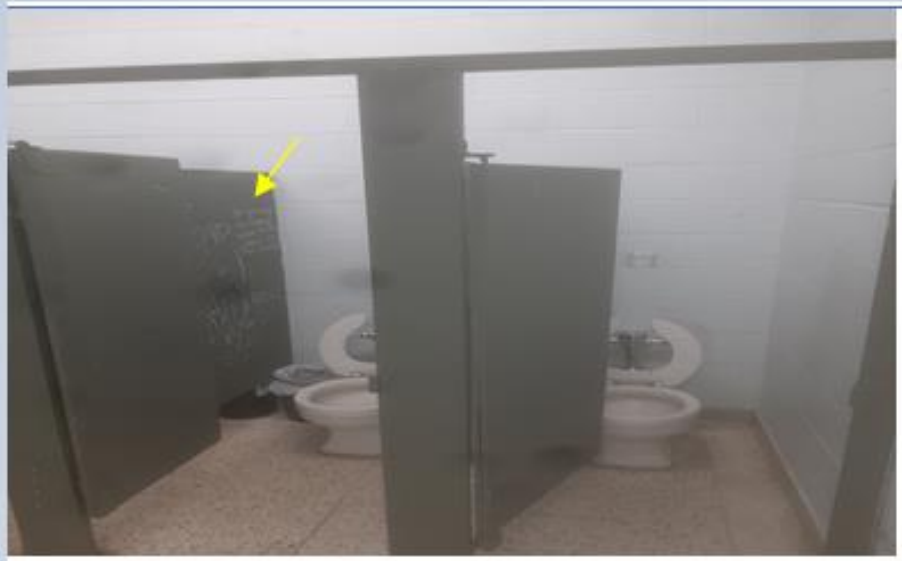
Amount in Study:	1,763,200
Amount Incl HST	669,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

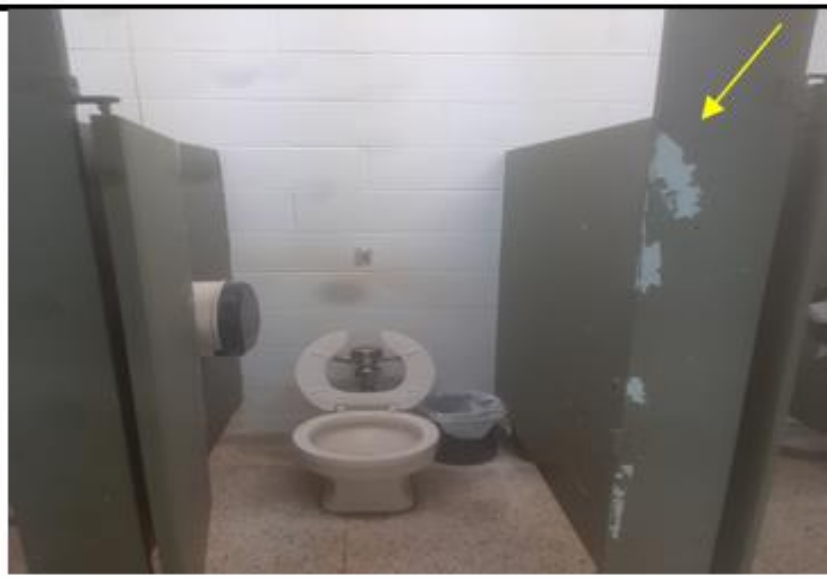
2022 Budget Backup Pictures: 160 Dudley

Picture: Gym lighting needs replacement

Photograph No. 9A – Accessible washroom door improper locking device.	**Photograph No. 9B –** Accessible washroom has no partition.



Photograph No. 10B – Women's washroom partitions paint flaking off and graffiti written on walls.



Photograph No. 10C – Men's washroom painted partitions flaking off.

Photograph No. 8A – Special needs school washrooms no proper partitions	**Photograph No. 8B –** Special needs school washrooms no proper partitions

Picture: Roof

Picture: Roof

Picture: Roof

2022 PROJECT FUNDING REQUEST FORM

Number: 22070

Project Cost: $228,800

Project Name: **8100 Warden Facility Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Jason Ramsaran

Category: Major

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the 8100 Warden Facility in a state of good repair and in alignment to the Asset Management Plan/ Policy. Items for repair and/or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets and life cycle. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	224,843	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	224,843	0
HST Impact:	3,957	0
Total Project Cost:	**228,800**	**0**

NOTES

$37,000 - Painting & Flooring in various areas
$102,000 - Building Envelope (bird film 2009)
$38,300 - Interlocking and exterior works
$51,500 - Electrical, life safety & HVAC

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Painting & Flooring	Building Envelope	Site Features	Electrical & Mechanical	TOTAL	Future Phases
Operating Funded Life Cycle	228,800	37,000	102,000	38,300	51,500	228,800	0
TOTAL FUNDING	**228,800**					**228,800**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 228,800

Amount Incl HST 228,800

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22071

Project Cost: $137,700

Project Name: **Accessibility Retrofit Program**

Repair/Replace

Commission: Corporate Services

Useful Life: 10 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Annual

Project Mgr: Dana Honsberger

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Ongoing program to comply with the City's accessibility and AODA guidelines. Coordination with MNP audits where necessary. Items for repair or/and replacement in the budget year were determined in 2021, as part of the annual condition assessment in preparation for 2022 budget.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	135,318	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	135,318	0
HST Impact:	2,382	0
Total Project Cost:	**137,700**	**0**

NOTES

$137,700 - Misc. upgrades & Accessibility Program Support, compliance with the March 2020 Markham Civic Centre Accessibility Audit Report remaining priority level 1 and 2 items, and on-demand items.
Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Accessibility				TOTAL	Future Phases
Operating Funded Life Cycle	137,700	137,700	0	0	0	137,700	0
TOTAL FUNDING	**137,700**					**137,700**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,438,000
Amount Incl HST	137,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22072

Project Cost: $56,100

Project Name: **Building Envelope/Structural Review**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Michael Ryan

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 10 Pre Approval: ☐

Category: Annual

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project budget is requested once every two years to review the overall building envelope (roofs, exterior cladding) and structure to ensure the safe condition of the buildings. The review will be performed by a Building Science group/company for an estimated 10 to 20 buildings every two years. This program is a comprehensive review of the building envelope and exterior components, to minimize City's risk associated with structural failure in buildings.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	55,130	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	55,130	0
HST Impact:	970	0
Total Project Cost:	**56,100**	**0**

NOTES

$56,100 Building Envelope/Structural Review of buildings including but not limited to Thornhill CC, Markham Civic Centre, Markham Village Library, FS 98, Old Unionville Library, FS 93, Museum Locust Hill Station, 7100 Birchmount, FS 99, Milliken Mills CC, Markham Village Community Centre. List of buildings may change to meet on demand needs.
Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Review				TOTAL	Future Phases
Operating Funded Life Cycle	56,100	56,100	0	0	0	56,100	0
TOTAL FUNDING	**56,100**					**56,100**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,438,000
Amount Incl HST	56,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22073

Project Cost: $512,700

Project Name: **Civic Centre Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 5 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Jason Ramsaran

Cost Validation: Published guidelines

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the Civic Centre Facility in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	503,832	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	503,832	0
HST Impact:	8,867	0
Total Project Cost:	**512,700**	**0**

NOTES

$34,200 - Flooring and painting of various areas
$38,200 - Furniture
$115,100 - Overhead door (shop area), metal siding and Ramp (sliding door near cafeteria)
$325,200 - Lighting, pumps, platform lift, plumbing, AC, Air Handling Unit, Exhaust fans

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Flooring and Painting	Furniture and Equipment	Exterior Site Features	Mechanical/Electrical	TOTAL	Future Phases
Operating Funded Life Cycle	512,700	34,200	38,200	115,100	325,200	512,700	0
TOTAL FUNDING	**512,700**					**512,700**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 512,700
Amount Incl HST 512,700
Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 Budget Backup Pictures: Civic Centre

Washroom floor sealant

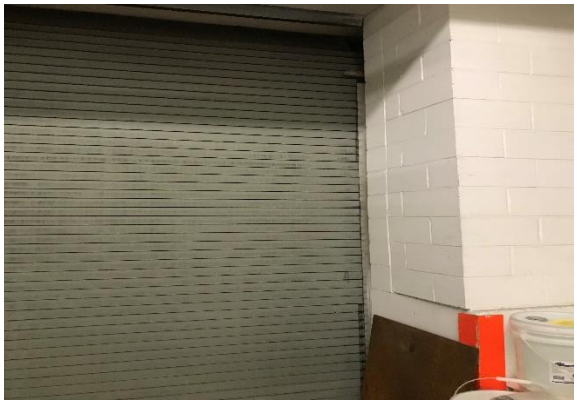
Loading Dock Floor

Tables and Chairs

Entrance Chairs

Chapel Chairs

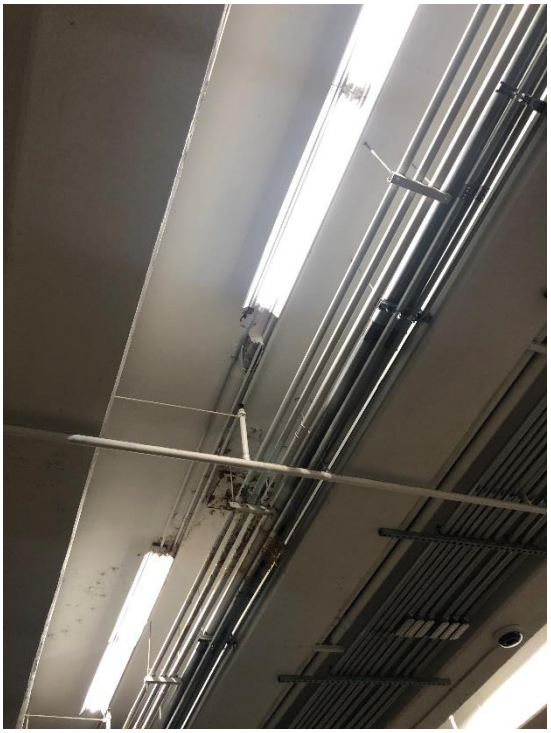
Maintenance shop overhead door



Metal siding

Ramp exiting sliding door near cafeteria.

Garage Interior Lighting

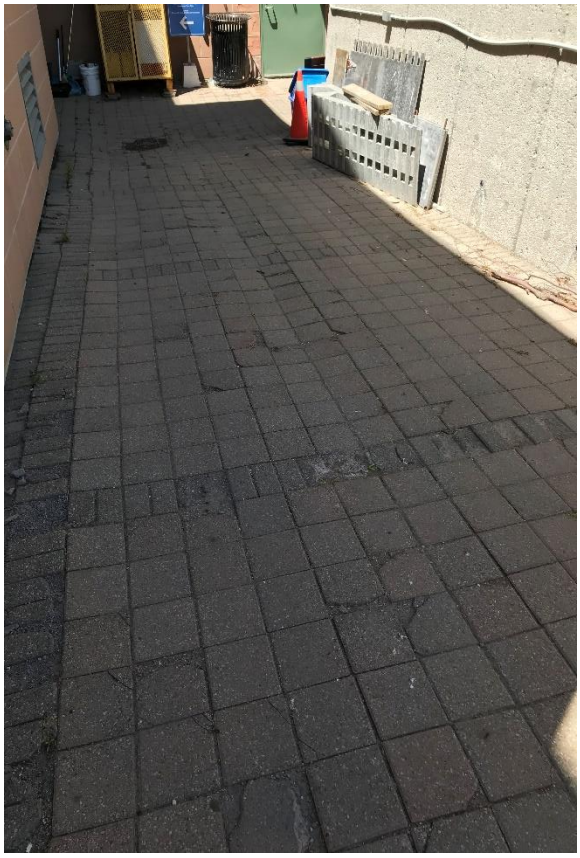


Various Pumps

Bell Room AC unit

Chapel Paint

Exterior Curb stop for lake with removal of interlock.



Chapel HVAC (internal unit)

2022 PROJECT FUNDING REQUEST FORM

Number: 22074

Project Cost: $255,000

Project Name: **Corporate Accommodations**

Repair/Replace

Commission: Corporate Services

Useful Life: 15 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Renee England /Imran Hyat

Category: Major

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Citywide space planning program optimizes workspaces to enhance productivity and health and wellness for City Departments.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	250,590	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	250,590	0
HST Impact:	4,410	0
Total Project Cost:	**255,000**	**0**

NOTES

$255,000 - Citywide space planning and office changes. Adaptation to office spaces as a result of CoVid.

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Space Planning				TOTAL	Future Phases
Operating Funded Life Cycle	255,000	255,000	0	0	0	255,000	0
TOTAL FUNDING	**255,000**					**255,000**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,438,000
Amount Incl HST	255,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22075

Project Cost: $56,100

Project Name: **Designated Substances Management**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Vicky Chan

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Repair/Replace

Useful Life: 2 Pre Approval: ☐

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project includes review of identified Asbestos Containing Materials (ACMs) at 18 City owned facilities and update existing Asbestos Management Plans. This program will also include management (including testing, analysis, planning and abatement) of any other designated substances at City facilities and training for facility staff on Asbestos management. Ontario Regulation 278/05 requires all building owners to have ongoing Asbestos Management programs at facilities where Asbestos Containing Materials (ACMs) are identified.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	55,130	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	55,130	0
HST Impact:	970	0
Total Project Cost:	**56,100**	**0**

NOTES

$56,100 - Designated Substance Management to maintain a healthy and safe environment within City owned facilities.

Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Designated Substances Management				TOTAL	Future Phases
Operating Funded Life Cycle	56,100	56,100	0	0	0	56,100	0
TOTAL FUNDING	**56,100**					**56,100**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 1,438,000

Amount Incl HST 56,100

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22076

Project Cost: $451,500

Project Name: **Fire Facilities Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 15 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Jason Vasilaki

Cost Validation: Published guidelines

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the fire facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repairs or/and replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	443,691	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	443,691	0
HST Impact:	7,809	0
Total Project Cost:	**451,500**	**0**

NOTES

$233,700 FS 91, 92, 93, 94: Electrical, mechanical equipment, generator, retaining wall, painting, ceiling tile, millwork, door/overhead, floor, clock-tower, bench, furnace
$197,400 FS 96, 97, 98, 99, Training Centre: Electrical, mechanical, painting, tile, floor, ceiling, wall, HVAC, brick/concrete, Door/overhead, furniture, kitchen equipment
$20,400 Furniture & equipment replacements where needed
Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	FS91, 91, 93, 94, 95	FS96, 97, 98, 99, Training Centre	Furniture, Equipments		TOTAL	Future Phases
Operating Funded Life Cycle	451,500	233,700	197,400	20,400	0	451,500	0
TOTAL FUNDING	**451,500**					**451,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	482,100
Amount Incl HST	451,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22077

Project Cost: $61,200

Project Name: **Fire Systems Maintenance at various City facilities.**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Dana Honsberger

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Repair/Replace

Useful Life: 1 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Maintenance of Fire & Sprinkler systems at various City facilities that is outside of the annual maintenance program. This maintenance is legislated under Ontario Fire Code (OFC). Annual maintenance through operating budget includes items like fire/smoke sensor testing, extinguisher inspection, fire pump inspection, etc. Items under this program includes non-annual tasks (tasks that are required to happen every 3 years, or 5 years or 15 years) like dry/wet systems piping obstruction inspection, standpipe hydrostatic test, etc. Items for repair and/or replacement in the Budget year are determined in the previous year, upon completion of annual condition assessment. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	60,142	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	60,142	0
HST Impact:	1,058	0
Total Project Cost:	**61,200**	**0**

NOTES

$61,200 - Fire System Maintenance
Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Fire System Maintenance				TOTAL	Future Phases
Operating Funded Life Cycle	61,200	61,200	0	0	0	61,200	0
TOTAL FUNDING	**61,200**					**61,200**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,438,000
Amount Incl HST	61,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22078

Project Cost: $90,900

Project Name: **Library Facilities Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 10 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Jason Vasilaki

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the library facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	89,328	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	89,328	0
HST Impact:	1,572	0
Total Project Cost:	**90,900**	**0**

NOTES

$72,000 - Markham Library - flooring, painting, sound system, millwork, furniture, office equipement, shelving
$18,900 - Unionville Library - interior/exterior painting

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Markham Library	Components: Unionville Library			TOTAL	Future Phases
Operating Funded Life Cycle	90,900	72,000	18,900	0	0	90,900	0
TOTAL FUNDING	**90,900**					**90,900**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	101,100
Amount Incl HST	90,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22079

Project Cost: $20,400

Project Name: **Municipal Building Backflow Prevention - Annual Testing**

Repair/Replace

Commission: Corporate Services

Useful Life: 1 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Jason Vasilaki

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Testing of all backflow devices within Markham facilities must be completed, annually as outlined in By-law 2007-142. Budget request is subject to change based on requirements identified in the previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	20,047	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,047	0
HST Impact:	353	0
Total Project Cost:	**20,400**	**0**

NOTES

$20,400 Testing all backflow devices installed within Markham facilities

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Testing				TOTAL	Future Phases
Operating Funded Life Cycle	20,400	20,400	0	0	0	20,400	0
TOTAL FUNDING	**20,400**					**20,400**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 1,438,000

Amount Incl HST 20,400

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22080

Project Cost: $172,000

Project Name: **Museum - Various Buildings**

Repair/Replace

Commission: Corporate Services

Useful Life: Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Vicky Chan/Cathy Molloy

Category:

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Internal peer review

Requirement Validation: Documentation of life cycle years

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Building maintenance for selected buildings on the museum site in order to keep them in a state of good repair.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	169,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	169,000	0
HST Impact:	2,974	0
Total Project Cost:	**172,000**	**0**

NOTES

$117,000 - Collections Building/Mt. Joy School House (Replace interlock walkways with concrete in areas of concern that present highest tripping hazard risk)
$35,000 - Tractor Shed (repair/replace tractor shed)
$17,000 - Pest control for entire site
Amount is consistent with 2021 Life Cycle reserve study update.

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Interlock	Tractor Shed	Pest Control	HST	TOTAL	Phases
Operating Funded Life Cycle	172,000	117,000	35,000	17,000	3,000	172,000	0
TOTAL FUNDING	**172,000**					**172,000**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 216,200

Amount Incl HST 172,000

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22081

Project Cost: $678,300

Project Name: **Operations Facilities Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 15 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Dana Honsberger

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the Operations Facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	666,568	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	666,568	0
HST Impact:	11,732	0
Total Project Cost:	**678,300**	**0**

NOTES

$207,000 - Berczy Park Pavilion, Central Park Shop & Storage Shed – various items including washroom accessories, painting, ceiling, exterior sealant, blinds, flooring, storage shed, electrical, mechanical, plumbing, AC, shop equipment, millworks, door, wall
$194,900 – Greenhouses, Milliken Mills park, Washrooms, Milne Park buildings, Riseborough Park Shelter, Toogood Pond Pavilion, Vic. Sq. Park Washroom, West Parks Shop –various items
$276,400 - Works Yard, Princess St/Milne/Central Parks bldgs.

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Group-1 buildings	Group-2 buildings	Group-3 buildings		TOTAL	Phases
Operating Funded Life Cycle	678,300	207,000	194,900	276,400	0	678,300	0
TOTAL FUNDING	**678,300**					**678,300**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	749,700
Amount Incl HST	678,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Operations Facilities Life Cycle Repair/Replacement 2022 Budget Backup Pictures

Milne Park Shop & Park Washroom

Shop - Metal Siding Repairs

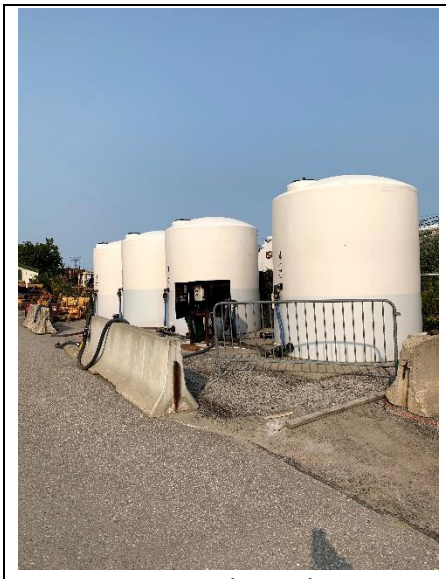
Washroom Building - Brick Exterior Repairs

Central Park Shop & Greenhouses

Storage Building - Rebuild

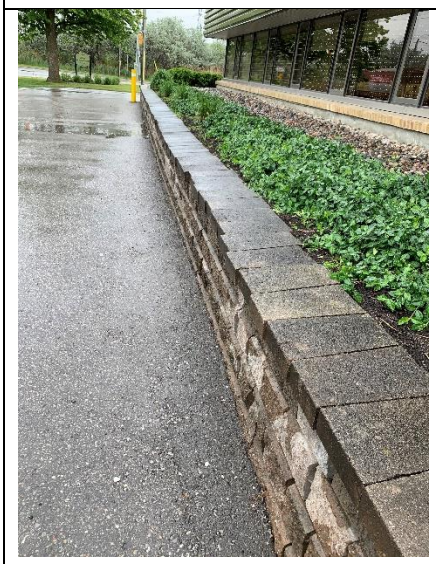
Central Greenhouse - Interlocking

Works Yard- Main Building



Brine Storage Tanks Replacement

Parts Dept. Overhead Door Replacement



Planter Retaining Wall Repairs

Fire bay Switchboard Repairs

2022 PROJECT FUNDING REQUEST FORM

Number: 22082

Project Cost: $50,600

Project Name: **Other Facilities Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 10 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Khwaja Waker

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Other(specify in Notes)

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain various other facilities in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	49,725	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	49,725	0
HST Impact:	875	0
Total Project Cost:	**50,600**	**0**

NOTES

$5,100 - Craft Guild Windows/Walls
$8,700 - Elson Miles Farmhouse Millworks
$36,800 - 7107 & 7181 Reesor Road - storage shed, millwork, door, painting, ceiling drywall

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Craft Guild	Elson Miles	7107 & 7181 Reesor Road		TOTAL	Future Phases
Operating Funded Life Cycle	50,600	5,100	8,700	36,800	0	50,600	0
TOTAL FUNDING	**50,600**					**50,600**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	54,300
Amount Incl HST	50,600
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22083

Project Cost: $17,300

Project Name: **Parking Lot Light Inspection**

Repair/Replace

Commission: Corporate Services

Useful Life: 5 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Minor

Project Mgr: Khwaja Waker

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This work allows for the inventory and condition assessment of the parking lot lights at all City owned facilities. This information will allow us to develop a program to replace, maintain and repair this infrastructure.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	17,040	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	17,040	0
HST Impact:	300	0
Total Project Cost:	**17,300**	**0**

NOTES

$17,340 Citywide Parking Lot Light Poles and fixture audit - Inspection of parking lot light poles and fixtures. Poles and fixtures are audited to determine where they are located, how many, when installed, what condition, when to replace and at what cost. This program occurs once every 5 years.
Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Parking lot light Inspection				TOTAL	Future Phases
Operating Funded Life Cycle	17,300	17,340	0	0	0	17,340	0
TOTAL FUNDING	**17,300**					**17,340**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,438,000
Amount Incl HST	17,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22084

Project Cost: $53,000

Project Name: **Parking Lot Light Replacement**

Repair/Replace

Commission: Corporate Services

Useful Life: 25 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Minor

Project Mgr: Khwaja Waker

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This work allows for replacement of the parking lot light poles including underground wiring and fixture at City owned properties. Poles for replacement are identified through another program (Parking Lot light poles/fixtures Inspection) that occurs every 5 years to meet illumination standards for safety and liability. Poles and fixtures are audited once every 5 years to identify the poles/fixtures to be replaced through this program. Replacement fixtures will be LED and dark sky compliant.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	52,123	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	52,123	0
HST Impact:	917	0
Total Project Cost:	**53,000**	**0**

NOTES

$53,000 Citywide parking lot light replacement including Markham Village Community Centre parking lot
Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Markham Village CC parking lot light replacement				TOTAL	Future Phases
Gas Tax	53,000	53,000	0	0	0	53,000	0
TOTAL FUNDING	**53,000**					**53,000**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 1,438,000

Amount Incl HST 0

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22085

Project Cost: $7,600

Project Name: **Recycling Depots Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 7 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Khwaja Waker

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Other(specify in Notes)

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the recycling depots in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and /or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	7,469	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	7,469	0
HST Impact:	131	0
Total Project Cost:	**7,600**	**0**

NOTES

$7,600 - Markham Recycling Depot - electrical panel & disconnect switch

Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Markham Recycling Depot				TOTAL	Future Phases
Operating Funded Life Cycle	7,600	7,600	0	0	0	7,600	0
TOTAL FUNDING	**7,600**					**7,600**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	7,600
Amount Incl HST	7,600
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22086

Project Cost: $122,400

Project Name: **Roofing Maintenance and Repair**

Repair/Replace

Commission: Corporate Services

Useful Life: 1 Pre Approval: ☐

Department: Sustainability and Asset Management

Category: Annual

Project Mgr: Michael Ryan

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Project scope includes annual routine maintenance and on demand roof repairs at all City of Markham facilities. Maintenance and repair helps ensure maximum utility or life of our roof systems.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	120,283	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	120,283	0
HST Impact:	2,117	0
Total Project Cost:	**122,400**	**0**

NOTES

$122,400 - Roofing Maintenance and Repair
3 yr average is $85k. However, 2020 spent was $112k, The 2022 request amount is more reflective of demand.
Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Roofing Repair and Maintenance				TOTAL	Phases
Operating Funded Life Cycle	122,400	122,400	0	0	0	122,400	0
TOTAL FUNDING	**122,400**					**122,400**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	122,400
Amount Incl HST	122,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22087

Project Cost: $301,500

Project Name: **Roofing Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 20 Pre Approval: ☑

Department: Sustainability and Asset Management

Category: Major

Project Mgr: Michael Ryan

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project includes roofing and accessories replacement works at various locations throughout the City in a state of good repair and in alignment to the Asset Management Plan/Policy. Roofs for replacement in the budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	296,330	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	296,330	0
HST Impact:	5,215	0
Total Project Cost:	**301,500**	**0**

NOTES

$140,181 - Crosby CC, Milliken Mills Park Washroom
$161,364 - Rouge Rive CC

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Crosby CC, Milliken Mills Park	Components: Rouge Rive CC			TOTAL	Future Phases
Operating Funded Life Cycle	301,500	140,181	161,364	0	0	301,545	0
TOTAL FUNDING	**301,500**					**301,545**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 1,502,100
Amount Incl HST 301,500
Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22088

Project Cost: $36,300

Project Name: **Satellite Community Centre Repair and/or Replacement**

Repair/Replace

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Khwaja Waker

Useful Life: 15 Pre Approval: ☐

Category: Minor

Cost Validation: Other(specify in Notes)

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the satellite community centres in a state of good repair and in alignment to the Asset Management Plan/Policy. Items for repair and/or replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	35,643	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	35,643	0
HST Impact:	627	0
Total Project Cost:	**36,300**	**0**

NOTES

$15,560 - Box Grove CC - flooring & painting
$15,100 - Cedar Grove CC - flooring, wood siding/painting, south basement entrance steps restoration
$5,610 - German Mills CC - exterior painting

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Box Grove CC	Cedar Grove CC	German Mills CC		TOTAL	Phases
Operating Funded Life Cycle	36,300	15,590	15,100	5,610	0	36,300	0
TOTAL FUNDING	**36,300**					**36,300**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	40,300
Amount Incl HST	36,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22089

Project Cost: $25,400

Project Name: **Tennis Clubhouse Repair and/or Replacement Projects**

Repair/Replace

Commission: Corporate Services

Useful Life: 10 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Khwaja Waker

Category: Minor

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Other(specify in Notes)

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program includes various life cycle works to maintain the Tennis Clubhouses in a state of good repair and in alignment to the Asset Management Plan/ Policy. Items for repair or/and replacement in the Budget year will be determined in the previous year, upon completion of annual condition assessment. Funding request is based on historical budgets, life cycle database and trending. Budget request is subject to change, based on condition assessment in previous year. Amount requested is consistent with 2021 Life Cycle Reserve Study update.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	24,961	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	24,961	0
HST Impact:	439	0
Total Project Cost:	**25,400**	**0**

NOTES

$5,000 Armadale Tennis Clubhouse - windows
$20,400 Pomona Valley Tennis Clubhouse - exterior sealant and windows
As per Tennis Clubhouse Policy, 50% of the costs to be funded by respective club. Tennis clubhouse repair and/or replacement will proceed subject to satisfactory club finance review.

Amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Armadale	Components: Pomona Valley			TOTAL	Future Phases
Operating Funded Life Cycle	12,700	2,500	10,200	0	0	12,700	0
Other External	12,700	2,500	10,200	0	0	12,700	0
TOTAL FUNDING	**25,400**					**25,400**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	12,700
Amount Incl HST	12,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22216

Project Cost: $478,300

Project Name: **Pan AM Parking Equipment**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Renee England

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Installation of parking control equipment at the Pan Am Centre to prevent mis-use of the parking lot by non Pan Am Centre visitors.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	350,000	0
Internal Charges:	0	0
External Consulting:	120,000	0
Sub Total:	470,000	0
HST Impact:	8,272	0
Total Project Cost:	**478,300**	**0**

NOTES

Cost Breakdown:
1. Pan AM Parking Control - $356,200 (Power Gate Entry, Power Gate Exit, Barrier Gate AC, Vivotek IP Camera, Pay Station and Validations, Supporting equipment, Software and IT etc.)
2. External Consultant - $122,100
The $70,000 operatimg impact is for the annual operation and equipment maintenance.
This project is related to Engineering's parking lot construction project #22050.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	48,000	0	0	0	0	0	0
Non-DC Growth	430,300	0	0	0	0	0	0
TOTAL FUNDING	**478,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$70,000	$0	$70,000

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22090

Project Cost: $249,400

Project Name: **Corporate Asset Management**

Commission: Corporate Services

Department: Sustainability and Asset Management

Project Mgr: Sameem Shah

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Third party estimate

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Consulting services for development of:
Outcome Based Levels of Service
Performance & Risk Management Framework
Performance Monitoring & Reporting Tool
This will form the foundation for a DSS (Decision Support System) acquisition/creation. Performance Monitoring & Reporting will enable the leadership to make evidence based decisions. Future Phase will include development of AM Process Manual, which will enable staff to efficiently pinpoint and focus on the underperforming areas. Furthermore this will help in achieving financial optimization by finding the right balance of necessary resource allocation to business units for a sustainable delivery of levels of service.

BUILDING MARKHAM'S FUTURE TOGETHER: Stewardship of Money & Resources

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	245,051	275,000
Sub Total:	245,051	275,000
HST Impact:	4,313	4,840
Total Project Cost:	**249,400**	**279,800**

NOTES

In 2019, as part of the four year audit plan, MNP LLP audited City's 2016 AM Plan and staff work to date in implementing the plan. The Audit Report was presented to Council with a number of observations, recommendations and management responses. Delivery of the given scope will ensure; compliance with AG Report; addressing gaps identified in current AM practices and fulfilling commitments made by management and in 2016 AMP. New permanent full-time staff postion is requested to satisfy the human resource needs of Corporate AM Program

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Performance & Risk Management Modelling				TOTAL	Future Phases
Tax	249,400	249,400	0	0	0	249,400	279,800
TOTAL FUNDING	**249,400**					**249,400**	**279,800**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$107,908	$0	$0	$107,908

2022 PROJECT FUNDING REQUEST FORM

Number: 22091

Project Cost: $341,700

Project Name: **Corporate Security Operations & System Upgrades**

Repair/Replace

Commission: Corporate Services

Useful Life: 7 Pre Approval: ☐

Department: Sustainability and Asset Management

Project Mgr: Eric Lizotte

Category: Major

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Internal peer review

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Funding required to complete various corporate security upgrades at various City Facilities, in order to meet requirements under Bill 168. This program typically includes security audits, access control, CCTV, gates, policy protocol and procedure development and training. Funding request includes a contracted staff (security expert) to lead security initiatives.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	335,790	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	335,790	0
HST Impact:	5,910	0
Total Project Cost:	**341,700**	**0**

NOTES

$137,700 Cemetery fence at 8100 Warden, cameras at various Fire Stations, Citywide signage, access card, card reader upgrade, software fee
$102,000 Recreation facilities upgrade
$102,000 Consultant and on-demand
Project scope may be adjusted to meet/comply with the overall corporate security policy, standards, guidelines and goals. Staff are expecting an increasing trend in security expenditures based on findings from security consultant.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	8100 Warden, Fire Stations, Citywide	Consulting & On-Demand Items	Recreation Facilities upgrade		TOTAL	Future Phases
Operating Funded Life Cycle	341,700	137,700	102,000	102,000	0	341,700	0
TOTAL FUNDING	**341,700**					**341,700**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,438,000
Amount Incl HST	341,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22092

Project Cost: $71,300

Project Name: **Angus Glen C.C. Divider Wall Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Scott Hill

Category: Minor

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the divider wall between the Activity Room 2 & Activity Room 3 and Library Room G & Library Room H in Angus Glen C.C. The purpose of a divider wall is to divide the room space in halves, which allows for multiple programs, camps and rentals to be conducted at the same time. Divider walls maximize and enhance usage of facility space within Angus Glen C.C.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	70,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	70,100	0
HST Impact:	1,234	0
Total Project Cost:	**71,300**	**0**

NOTES

The existing divider walls were installed 2006 at Angus Glen C.C. and have been maintained past their useful life for several years. Based on condition assessment replacement is warranted. Excessive use and regular wear and tear have resulted in the inability for the panels to effectively move, so that it can divide large multipurpose rooms for community use. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	71,300	0	0	0	0	0	0
TOTAL FUNDING	**71,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	410,500
Amount Incl HST	71,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22093

Project Cost: $66,100

Project Name: **Milliken Mills C.C. Divider Wall Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the divider wall between the North & South Hall and Meeting Room A & B in Milliken Mills C.C. The purpose of a divider wall is to divide the room spaces in halves, so that it allows for multiple programs, camps and rentals to be conducted at the same time. Divider walls maximize and enhance usage of facility space within Milliken Mills C.C.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	65,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	65,000	0
HST Impact:	1,144	0
Total Project Cost:	**66,100**	**0**

NOTES

The existing divider walls were installed in 2007 at Milliken C.C. Based on condition assessment replacement is warranted. Excessive use and regular wear and tear have resulted in the inability for the panels to effectively move, so that it can divide large multipurpose rooms for community use. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	66,100	0	0	0	0	0	0
TOTAL FUNDING	**66,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 939,800

Amount Incl HST 66,100

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22094

Project Cost: $71,200

Project Name: **Armadale C.C. Changeroom Lockers Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace 104 lockers in the male and female change rooms at Armadale C.C. Change room lockers are used to provide security to valuables belonging to participants and community sport groups that rent the gymnasium space. The work includes material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	70,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	70,000	0
HST Impact:	1,232	0
Total Project Cost:	**71,200**	**0**

NOTES

The lockers are original to the facility and were installed in 1996. A condition assessment of the lockers indicate replacement is warranted. There are 52 lockers within the Men's Change Room and 52 lockers located within the Women's Change Room. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	71,200	0	0	0	0	0	0
TOTAL FUNDING	**71,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	233,200
Amount Incl HST	71,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22095

Project Cost: $49,800

Project Name: **Armadale C.C. Washroom and Changeroom Refurbishment**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing partitions, counters wall and floor tile and lockers in the Denison Room, Multipurpose Room, male and female Changerooms. The work includes material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	48,900	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	48,900	0
HST Impact:	861	0
Total Project Cost:	**49,800**	**0**

NOTES

The existing washroom amenities were installed in 1996. Based on condition assessment replacement is warranted. The amount requested is consistent with recent award plus inflation.

Floor Tile (2,175 sqft x $7.89 per sqft) = $17,161
Wall Tile (2,060 sqft x $7.89 per sqft) = $16,253
Partitions x 6 @ $1,175 per unit = $7,050
Counter x 2 = $8,400

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	49,800	0	0	0	0	0	0
TOTAL FUNDING	**49,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	233,200
Amount Incl HST	49,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22096

Project Cost: $113,500

Project Name: **Milliken Mills C.C. Washrooms and Changeroom Refurbish**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace various washroom amenities within the washrooms and change rooms in the arena at Milliken Mills C.C. This project has three components. 1) To replace existing wall tiles and partitions in the arena lobby washrooms 2) To replace the counters and mirrors in the main lobby washrooms and 3) To replace the partitions in the arena dressing room washrooms. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	97,100	0
Internal Charges:	0	0
External Consulting:	14,480	0
Sub Total:	111,580	0
HST Impact:	1,964	0
Total Project Cost:	**113,500**	**0**

NOTES

The existing washroom and change room amenities were installed in 1989. Based on condition assessment replacement is warranted. The amount requested is consistent with recent quote.

Ceramic Tile - 6,337 sqft (800 cubic feet) x $7.89 per sqft = $50,000 plus tax
Partitions Cubicles - 8 x $3,625 per cubicle = $29,000 plus tax
Counters - 2 x 20 ft counters = $12,000 plus tax
Mirrors - 2 x 20 ft mirrors = $6,000 plus tax

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Ceramic wall tile	Partitions	Counters + Mirrors	Consulting	TOTAL	Future Phases
Operating Funded Life Cycle	113,500	50,888	29,560	18,317	14,735	113,500	0
TOTAL FUNDING	**113,500**					**113,500**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	939,800
Amount Incl HST	113,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22097

Project Cost: $16,400

Project Name: **Rouge River C.C. Pool Changeroom Lockers Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace 40 lockers in the pool change rooms at Rouge River C.C. Change room lockers are used to provide security to valuables and user belongings. The work includes; material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	16,120	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	16,120	0
HST Impact:	284	0
Total Project Cost:	**16,400**	**0**

NOTES

The lockers were installed in 2001. A condition assessment of the lockers indicate replacement is warranted. There are 40 lockers within the Pool Changeroom. The amount requested is consistent with recent quote.
$403 per locker x 40 lockers = $16,120

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	16,400	0	0	0	0	0	0
TOTAL FUNDING	**16,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	91,700
Amount Incl HST	16,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22098

Project Cost: $21,000

Project Name: **Rouge River C.C. Pool Changeroom Tile Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 12 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the floor tiles in the male and female change rooms within the pool area at Rouge River C.C. The changerooms are used by the community users to access summer aquatics programming.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	20,593	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,593	0
HST Impact:	362	0
Total Project Cost:	**21,000**	**0**

NOTES

The existing ceramic tile flooring system was installed in 2009. A condition assessment of the existing flooring indicate that replacement is warranted. The amount requested is consistent with recent staff award plus inflation.

Ceramic Floor Tile (2,175 sqft x $7.89 per sqft = $17,161)
Subfloor Compaction and additional drainage work = $3432

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	21,000	0	0	0	0	0	0
TOTAL FUNDING	**21,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	91,700
Amount Incl HST	21,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22099

Project Cost: $53,000

Project Name: **Thornhill C.C. Arena Changeroom Door Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Martin Barrow

Category: Minor

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace 11 arena changeroom and 12 washroom doors at Thornhill C.C. Arena doors are used to provide privacy for users and teams visiting Thornhill C.C. The doors being replaced are fire-rated and the work consists of material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	52,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	52,100	0
HST Impact:	917	0
Total Project Cost:	**53,000**	**0**

NOTES

The existing arena doors and washroom doors were installed in 1998. A condition assessment of the doors indicate replacement is warranted. The project consists of replacing the changeroom entrance doors and the doors that lead into the washrooms within each changeroom. Cost is based on recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	53,000	0	0	0	0	0	0
TOTAL FUNDING	**53,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	570,800
Amount Incl HST	53,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22100

Project Cost: $20,400

Project Name: **Heintzman House Flooring Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 30 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Martin Barrow

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the floor tiles in the back entrance and kitchen of the Heintzman House. The replacement consists of approximately 480 sqft of new subfloor and tiles. Work will be done respecting the era of the house.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	20,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,000	0
HST Impact:	352	0
Total Project Cost:	**20,400**	**0**

NOTES

Existing flooring was installed in 1930 at Heintzman House. A condition assessment of the flooring indicates replacement is warranted. Amount required is consistent with recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	20,400	0	0	0	0	0	0
TOTAL FUNDING	**20,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	42,800
Amount Incl HST	20,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22101

Project Cost: $60,800

Project Name: **Milliken Mills C.C. Flooring Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the existing vinyl flooring in the Activity Room D, North and South Hall at Milliken Mills C.C. The floor is to be upgraded with sports flooring in lieu of vinyl sheet flooring. The sports flooring will provide an opportunity to activate different types of programming in the space. Activity Room D along with the spaces within North and South Hall provides a space for community centre users from all age groups to participate in various program and activities.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	59,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	59,700	0
HST Impact:	1,051	0
Total Project Cost:	**60,800**	**0**

NOTES

The existing vinyl floor system was installed in 2006. Based on condition assessment replacement is warranted. The amount requested is consistent with recent staff award plus inflation.

Sports flooring: $10.54 per sq. ft. plus labour x 5,660 sq ft = $59,656.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	60,800	0	0	0	0	0	0
TOTAL FUNDING	**60,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	939,800
Amount Incl HST	60,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22102

Project Cost: $6,800

Project Name: **Old Unionville Library C.C. Ceiling Tile Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Scott Hill

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace 2,121 sq ft of ceiling tiles in the main entrance and both program rooms at the Old Unionville Library C.C.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	6,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	6,700	0
HST Impact:	118	0
Total Project Cost:	**6,800**	**0**

NOTES

The ceiling tiles are located in the main entrance and the two program rooms were last installed in 2000. The ceiling tiles need to be replaced in order to maintain acoustic and fire rating requirements for the centre. A condition assessment of the ceiling tiles indicate replacement is warranted. Quote is consistent with recent award.

$3.15 per tile x 2,121 sqft = $6681.15

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	6,800	0	0	0	0	0	0
TOTAL FUNDING	**6,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	12,700
Amount Incl HST	6,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22103

Project Cost: $25,400

Project Name: **Pan Am Centre Hardwood Floor Refinishing**

Repair/Replace

Commission: Community Services

Useful Life: 4 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to refinish the flooring for three (3) gymnasiums and restore to original condition at the Pan Am Centre.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	25,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,000	0
HST Impact:	440	0
Total Project Cost:	**25,400**	**0**

NOTES

The gymnasium floors were last refinished in 2018. Its current condition reveals areas that are worn down. This is a result of excessive usage during sporting and special events since 2018. The dulling of the floors can reduce the quality of play, which is a mandatory requirement for National and Provincial Sport Organizations whom are evaluating Markham's Pan Am Centre as a potential venue to host games and events. The high level of competition results in a shorter lifespan than traditional courts. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	25,400	0	0	0	0	0	0
TOTAL FUNDING	**25,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	113,300
Amount Incl HST	25,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22104

Project Cost: $9,200

Project Name: **Pingle House Flooring Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Scott Hill

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to upgrade the existing linoleum flooring to rubber flooring on the main floor at Pingle house. The replacement consists of approximately 650 sqft of flooring.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	9,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	9,000	0
HST Impact:	158	0
Total Project Cost:	**9,200**	**0**

NOTES

Existing linoleum flooring was installed in 2005 at Pingle House. A condition assessment of flooring indicates replacement is warranted. The existing linoleum flooring is being upgraded to rubber flooring to prevent tiles from warping as flooring ages. There is 650 sq. ft. of flooring being replaced. Cost of rubber flooring is approximately $13.88 per sq. ft. including labour x 640 sq. ft. = $9,022. Cost per unit is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	9,200	0	0	0	0	0	0
TOTAL FUNDING	**9,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	30,900
Amount Incl HST	9,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22105

Project Cost: $10,600

Project Name: **Thornhill C.C. Fireside Lounge Flooring Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 12 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Martin Barrow

Category: Minor

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Recent awards

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the existing carpet flooring to vinyl plank flooring in the Fireside Lounge at Thornhill C.C. The Fireside Lounge is a space used by multiple user groups for a variety of activities and rentals. The work includes material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	10,450	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,450	0
HST Impact:	184	0
Total Project Cost:	**10,600**	**0**

NOTES

Existing carpet flooring was installed in 2013. The flooring replacement is being completed ahead of the flooring lifecycle as recent condition assessment of the flooring indicates replacement is warranted due to heavy usage. There is a total of 1,100 sq. ft. of flooring being replaced. Cost of vinyl plank flooring is approximately $9.50 per sq. ft. Including labour X 1,100 sq ft = $10,450. Cost per unit is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	10,600	0	0	0	0	0	0
TOTAL FUNDING	**10,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	570,800
Amount Incl HST	10,600
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22106

Project Cost: $39,200

Project Name: **Angus Glen C.C. Arena Boards Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 7 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Scott Hill

Category: Minor

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the arena dasher boards on the East Rink at Angus Glen C.C. The replacement will be comprised of: handrail cap, kickplate, dasher boards and lexan boards used to protect advertising. Approximately 200 ft of arena dasher boards need to be replaced. Arena boards provide a safe environment for arena users.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	38,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	38,500	0
HST Impact:	678	0
Total Project Cost:	**39,200**	**0**

NOTES

Existing arena boards in the East Rink were last installed in 2015 at Angus Glen C.C. A condition assessment of the arena boards indicate replacement is warranted. The amount requested is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	39,200	0	0	0	0	0	0
TOTAL FUNDING	**39,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	410,500
Amount Incl HST	39,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22107

Project Cost: $39,000

Project Name: **Armadale C.C. Basketball Net Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 12 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace all six (6) retractable basketball nets systems located in the gymnasium at Armadale C.C. This project helps support community programming and sports leagues by providing the necessary equipment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	38,310	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	38,310	0
HST Impact:	674	0
Total Project Cost:	**39,000**	**0**

NOTES

The existing retractable basketball nets system were installed in 2007 and have been maintained for several years past their useful life. Based on condition assessment replacement is warranted. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	39,000	0	0	0	0	0	0
TOTAL FUNDING	**39,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22108

Project Cost: $13,700

Project Name: **Armadale C.C. Gymnasium Bleachers Seating Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace the existing gymnasium bleachers. The current bleachers are a "non retractable" style which does not provide sufficient space for basketball league play around the sideline. The replacement bleachers will be "telescopic" which allows them to be folded, creating a safer environment. The bleachers provide a space for patrons and participants to sit, rest and a place for them to viewgames, activities and programs being played in the gymnasium.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	13,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	13,500	0
HST Impact:	238	0
Total Project Cost:	**13,700**	**0**

NOTES

The existing bleachers were installed in 2006. Based on condition assessment replacement is warranted. The amount requested is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	13,700	0	0	0	0	0	0
TOTAL FUNDING	**13,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	233,200
Amount Incl HST	13,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22109

Project Cost: $232,000

Project Name: **Centennial C.C. HVAC Upgrade**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Alex Giammarco

Category: Minor

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace and upgrade two (2) air handling units (AHU). Both units are critical in providing heat and air circulation to all the arena dressing rooms, arena storage rooms and office spaces. Centennial C.C. has been identified as a Net Zero facility and is undergoing a study that will determine key equipment to replace over the next 5 years. More specifically, to help achieve the City's Net Zero targets, the proposed AHUs will be upgraded with high efficiency energy recovery heating, ventilation and air condition (HVAC) units that aim to reduce greenhouse gas (GHG) emissions as well as provide air conditioning that did not previously exist in the dressing rooms.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	228,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	228,000	0
HST Impact:	4,013	0
Total Project Cost:	**232,000**	**0**

NOTES

The two AHUs were last replaced in 1996. A condition assessment on the AHUs indicate replacement is warranted. The amount requested is consistent with recent quote. Conditional on the Net Zero study, the AHU will be upgraded with HVAC units. These units based on the study could be eligible under INFC's Green & Inclusive Community building fund where 80% of the total cost of the replacement would be funded. The reminder of project cost is to be funded through Gas Tax.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	46,400	0	0	0	0	0	0
Other External	185,600	0	0	0	0	0	0
TOTAL FUNDING	**232,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

2022 PROJECT FUNDING REQUEST FORM

Number: 22110

Project Cost: $22,400

Project Name: **Heintzman House Air Conditioning Unit Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Martin Barrow

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two (2) air conditioning units in the dining room at Heintzman House. Air conditioning units within the main dining room provide a comfortable space for large rentals and weddings.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	22,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	22,000	0
HST Impact:	387	0
Total Project Cost:	**22,400**	**0**

NOTES

The existing air conditioning unit were installed in 2002. Based on condition assessment on the air condition unit replacement is warranted. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	22,400	0	0	0	0	0	0
TOTAL FUNDING	**22,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	42,800
Amount Incl HST	22,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22111

Project Cost: $28,900

Project Name: **Cornell C.C. Pumps Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Adriano Trabucco

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace four (4) jet pumps and one (1) glycol perimeter heating pump used in the therapy pool at Cornell C.C. The pumps are necessary to meet the safety requirement of the Ontario Health Regulation for the therapy pool.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	28,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	28,400	0
HST Impact:	500	0
Total Project Cost:	**28,900**	**0**

NOTES

A condition assessment of the therapy pool pumps indicate replacement is warranted. The therapy pool pumps are original and were installed in 2012. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	28,900	0	0	0	0	0	0
TOTAL FUNDING	**28,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22112

Project Cost: $31,700

Project Name: **Cornell C.C. Mixing Valves Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Recreation Services

Project Mgr: Alex Giammarco

Category: Minor

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace 39 faucet mixing valves located in all washrooms and change rooms within Cornell C.C. Mixing valves receive hot and cold water and this water is blended inside of the valve to deliver water to faucets at a desired temperature. The work consists of the supply, installation and labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	31,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	31,200	0
HST Impact:	549	0
Total Project Cost:	**31,700**	**0**

NOTES

A condition assessment on the existing mixing valves indicate replacement is warranted. The mixing valves are original to the facility and were installed in 2012. The amount requested in consistent with recent award. Project costs include labour and material.

Cost per valve $812.82 x 39 values = $31,700

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	31,700	0	0	0	0	0	0
TOTAL FUNDING	**31,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	313,800
Amount Incl HST	31,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22113

Project Cost: $113,500

Project Name: **Milliken Mills C.C. Mechanical Replacement**

Repair/Replace

Commission: Community Services

Useful Life: Pre Approval: ☐

Department: Recreation Services

Project Mgr: Ryan Hanna

Category: Minor

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace existing mechanical equipment at Milliken Mills C.C. The items being replaced are: three (3) Air Conditioning Units which serve the library program room, the arena lobby and the McDonalds restaurant, one (1) water heater, which serves the pool deck shower and two (2) sump pumps for sanitary and storm water circulation. The work includes material, labour and all other trades required for the work.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	102,000	0
Internal Charges:	0	0
External Consulting:	9,500	0
Sub Total:	111,500	0
HST Impact:	1,962	0
Total Project Cost:	**113,500**	**0**

NOTES

The existing York AC Unit was installed in 1995, the existing Carrier AC Unit was installed in 2000, the existing Lennox ACUnit was installed in 2004, the existing water heater was installed in2006 and the existing sump pumps were installed in 1989. Based on condition assessment of the existing mechanical equipment, replacement is warranted. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: AC Units + BAS Integration	Water Heater	Sump Pump	Consultant	TOTAL	Future Phases
Gas Tax	113,500	80,937	2,544	20,352	9,667	113,500	0
TOTAL FUNDING	**113,500**					**113,500**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22114

Project Cost: $21,400

Project Name: **Milliken Mills C.C. Pool Pumps Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 12 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two (2) filter pumps for the wading pool and one (1) jet pump for the whirlpool at Milliken Mills C.C. The pumps are required to ensure for the effective use of the wadding and whirlpool and to ensure the City meets Ontario Heath Regulation for pools.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	21,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	21,000	0
HST Impact:	370	0
Total Project Cost:	**21,400**	**0**

NOTES

The filter pumps and jet pumps were last replaced in 2006. A condition assessment on the pumps indicate replacement is warranted. The cost per unit is consistent with recent quote plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	21,400	0	0	0	0	0	0
TOTAL FUNDING	**21,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22115

Project Cost: $44,800

Project Name: **Thornhill C.C. Fitness Boiler Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Martin Barrow

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace two (2) boilers used within the fitness area at Thornhill C.C. The boiler tank holds and maintains heated water for the fitness area's showers and washrooms. The replacement of the boiler will support maintaining a clean efficient delivery of hot water to the fitness area in the facility. To achieve the City's Net Zero targets, the boilers will be upgraded with high efficiency units that aim to reduce greenhouse gas (GHG) emissions.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	44,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	44,000	0
HST Impact:	774	0
Total Project Cost:	**44,800**	**0**

NOTES

Existing boilers were installed in 2006 and a condition assessment indicates replacement is warranted. The amount requested is consistent with recent staff award plus inflation. Thornhill CC has been identified as a Net Zero (NZEE) facility and a study is underway to determine equipment to replace over the next 5 years. The replacement of the HVAC units is eligible under the NZEE grant where 80% of the total replacement cost would be funded. The estimated cost of the project is $44,800. E3: This replacement will result in an annual cost savings of $5,376 for a payback of approx. 8 yrs.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	9,100	0	0	0	0	0	0
Other External	35,700	0	0	0	0	0	0
TOTAL FUNDING	**44,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	-$1,792	$0	-$1,792

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,168,700
Amount Incl HST	9,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22116

Project Cost: $134,200

Project Name: **Milliken Mills C.C. Painting Project**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to paint the full lobby, mall and library at Milliken Mills C.C. and to paint the clubhouse, common area and dressing rooms at the Milliken Mills Soccer Dome.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	131,920	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	131,920	0
HST Impact:	2,322	0
Total Project Cost:	**134,200**	**0**

NOTES

Based on condition assessment of the spaces, the paint has deteriorated in each space and requires repainting in year 2022. Cost per sq. Ft. of paint including labour is $1.91 and there is 69,068 sq. Ft. of space that has been identified to be repainted. Cost is consistent with recent staff award plus inflation. Cost of paint plus labour per square foot is $1.91 x 69,068 sq. Ft. = $131,920

SOURCE(S) OF FUNDING ($)		Components				
Funding Type	Budget	Milliken Mills C.C.	Milliken Mills Soccer Dome		TOTAL	Future Phases
Operating Funded Life Cycle	134,200	102,800	31,400	0	134,200	0
TOTAL FUNDING	**134,200**				**134,200**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 971,300

Amount Incl HST 134,200

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22118

Project Cost: $152,600

Project Name: **Indoor Public Space Study - Areas of Intensification**

Commission: Community Services

Department: Recreation Services

Project Mgr: Jason Tsien

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Third party estimate

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Community Services is requesting funding for a consultant to conduct a study that will define community indoor spaces in areas of intensification. Furthermore, the study will also provide recommendations on operating models and outline opportunities for indoor spaces where co-location is desired. Co-location is defined as the shared use of facility space with local partners to maximize usage of indoor spaces for community access. The study would allow the City of Markham to improve local planning in areas of intensification.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	150,000	0
Sub Total:	150,000	0
HST Impact:	2,640	0
Total Project Cost:	**152,600**	**0**

NOTES

The objectives for this study are: 1) Determine type and size of indoor spaces needed to effectively and efficiently deliver public programs and services in areas of intensification 2) identify potential opportunities at future co-location facilities; 3) Propose operating models that aims to deliver an acceptable levels of service to residents within a wide socio economic range.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	152,600	0	0	0	0	0	0
TOTAL FUNDING	**152,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22119

Project Cost: $18,300

Project Name: **Cornell C.C. Garbage Compactor**

New Asset/Expansion

Commission: Community Services

Department: Recreation Services

Project Mgr: Alex Giammarco

Useful Life: 20 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This new capital project requests for the purchase and installation of one (1) six-yard vertical garbage compactor at Cornell C.C. A compactor is a machine used to reduce the size of waste material through compaction. The garbage compactor will reduce the volume of trash to make disposal quicker and easier.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	18,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	18,000	0
HST Impact:	317	0
Total Project Cost:	**18,300**	**0**

NOTES

Currently, recycling and garbage is being picked up twice a week. With the installation of a garbage compactor, this will reduce garbage collection to once a week. E3: Savings on the annual garbage contract at Cornell C.C. is $2,150. Payback for this new capital request is approximately 8 years. The lifecycle for the proposed garbage compactor is 20 years. The cost is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	18,300	0	0	0	0	0	0
TOTAL FUNDING	**18,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	-$2,149	$0	-$2,149

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22120

Project Cost: $20,900

Project Name: **Milliken Mills C.C. Aerial Platform Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 12 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Ryan Hanna

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace one (1) skyjack (Aerial Platform) for completing high work tasks at Milliken Mills C.C. Aerial work platforms are designed to enhance productivity and safety protection for staff working in heights.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	20,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,500	0
HST Impact:	361	0
Total Project Cost:	**20,900**	**0**

NOTES

The existing aerial platform was last purchased in 2006. A condition assessment of the unit indicates replacement is warranted. The lightweight construction of an aerial platform allows them to be easily maneuvered, used and transported. The aerial platform is to service various high ceilings at Milliken Mills C.C. The amount requested is consistent with recent staff award plus inflation

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	20,900	0	0	0	0	0	0
TOTAL FUNDING	**20,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	939,800
Amount Incl HST	20,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22121

Project Cost: $8,000

Project Name: **Milliken Mills C.C. Emergency Equipment Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Recreation Services

Category: Major

Project Mgr: Ryan Hanna

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This multiyear project is to seek a consultant that will complete an audit to review and replace the existing fire alarm system, sprinkler system and emergency light system at Milliken Mills C.C. Fire safety systems are an integral safety facility feature used to alert patrons and suppress fires during an emergency. Phase 1 includes an audit and evaluation of the existing fire emergency systems, which will result in a report outlining deficiencies and recommendations for upgrading the existing system. Based on recommendations from the audit, Phase 2 will address identified deficiencies and update fire emergency systems where needed.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	25,600
Internal Charges:	0	0
External Consulting:	7,900	0
Sub Total:	7,900	25,600
HST Impact:	139	451
Total Project Cost:	**8,000**	**26,100**

NOTES

The fire alarm system, sprinkler system and emergency light systems were last replaced in 2001. Based on condition assessment, upgrading and replacing the existing fire safety systems is warranted. Phase 1 of the project is seeking a consultant to complete a fire system audit and Phase 2 of the project includes upgrading and/or replacing the existing fire bells, pull stations, wet fire valves. Emergency lighting and sprinkler pipes. Phase 1 (Audit) will be completed in 2022. Cost estimate for future phase is preliminary and may change. Phase 2 will take place in 2023.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	8,000	0	0	0	0	0	0
TOTAL FUNDING	**8,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	939,800
Amount Incl HST	8,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22122

Project Cost: $7,100

Project Name: **Recreation AED Program Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Recreation Services

Category: Annual

Project Mgr: Eric Ho

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The 2022 AED annual program will include the replacement of 8 AED trainer kits and 8 AED trainer pads. This project is a city wide annual program.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	7,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	7,000	0
HST Impact:	123	0
Total Project Cost:	**7,100**	**0**

NOTES

There are currently 54 AED units in the City of Markham. The AED units have been used 6 times since 2018. 2008 and 2016 in Centennial C.C., 2010 and 2019 at the Milliken Mills C.C., 2016 and 2018 at Angus Glen C.C. Cost per AED trainer kits are $600 per unit ($600 x 8 units = $4,800) and trainer pads are $266 per unit ($266 x 8 = $2,128). Price is consistent with recent staff award plus inflation. The Life Cycle Reserve Study will be adjusted accordingly in the next update. *This is an annual program and funding will be requested each year.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	7,100	0	0	0	0	0	0
TOTAL FUNDING	**7,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	7,100
Amount Incl HST	7,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22123

Project Cost: $87,300

Project Name: **Recreation Aquatics Equipment Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Recreation Services

Category: Annual

Project Mgr: Eric Ho

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This annual replacement program for aquatics equipment is for eight (8) aquatics facilities (indoor and outdoor).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	85,756	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	85,756	0
HST Impact:	1,509	0
Total Project Cost:	**87,300**	**0**

NOTES

The 3 year average spend is $85,756. Aquatics equipment is used to support programs that are revenue generating. The Life Cycle Reserve Study will be adjusted accordingly in the next update.
*This is an annual program and funding will be requested each year.
*Equipment will be purchased based on pool opening needs

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	87,300	0	0	0	0	0	0
TOTAL FUNDING	**87,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	87,500
Amount Incl HST	87,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22124

Project Cost: $91,100

Project Name: **Recreation Facility Maintenance Equipment Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Alex Giammarco / Martin Barrow

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☑ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace facility maintenance equipment at three (3) community centres. Facility maintenance equipment to be replaced at Centennial C.C. includes one (1) E5 Electric carpet extraction machine, one (1) T-7 ride-on floor scrubbing machine and one (1) 20" inch swing cleaning machine; replacement at Cornell C.C. includes two (2) T-7 ride-on floor scrubbing machines; and replacement at Thornhill C.C. includes one (1) T-300 walk-behind scrubbing machine. The cleaning machines are used to clean different surfaces in hallways, program rooms and gymnasium floors.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	89,550	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	89,550	0
HST Impact:	1,576	0
Total Project Cost:	**91,100**	**0**

NOTES

The existing facility maintenance machines were purchased in 2016for Centennial C.C., 2012 for Cornell C.C. and 2010 for Thornhill.A condition assessment of the facility maintenance machinesindicate replacement is warranted. Centennial C.C. floor scrubberis being replaced ahead of its lifecycle as the floor scrubber isextensively used and support cleaning for four different locations(Markham Village Arena, Mount Joy Arena, 22 Water St andCentennial C.C.). The cost of the replacement is consistent withrecent quote.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: T7 Floor Scrubber	E5 Carpet Machine	Tennant 2 - Swing Machine	T300 Floor Scrubber	TOTAL	Future Phases
Operating Funded Life Cycle	91,100	75,280	3,560	2,060	10,200	91,100	0
TOTAL FUNDING	**91,100**					**91,100**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	2,833,000
Amount Incl HST	91,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22125

Project Cost: $43,500

Project Name: **Recreation Fitness Equipment Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Recreation Services

Category: Annual

Project Mgr: Eric Ho

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual replacement program for the fitness equipment at City owned facilities. The items being replaced are strength, cardio, and flooring equipment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	42,748	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	42,748	0
HST Impact:	752	0
Total Project Cost:	**43,500**	**0**

NOTES

The formula for replacement of equipment is based on an industry standard that states 8% of gross revenue will represent the replacement value of equipment to service membership. Fitness Revenue in 2020 was $534,350 when multiplied by the industry standard of 8%, it equates to $42,748. The formula used is consistent with previous years' budgets.
*This is an annual program and funding will be requested each year.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	43,500	0	0	0	0	0	0
TOTAL FUNDING	**43,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	43,600
Amount Incl HST	43,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22126

Project Cost: $51,000

Project Name: **Recreation Pool Grouting Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Recreation Services

Category: Annual

Project Mgr: Eric Ho

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual program for the repair of pool grout during pool shut down process.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	50,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	50,100	0
HST Impact:	882	0
Total Project Cost:	**51,000**	**0**

NOTES

The 3 year average spend from the annual pool grouting project is $51,000. Staff will regrout what is necessary to get community pools re-opened for community use. Due to COVID19 and the closure of community pools, pool grouting is expected to be at minimal levels in 2022. The amount of work required is determined during pool shutdown when water is drained from the pool. These funds will support the cost of repairing and replacing grout. *This is an annual program and funding will be requested each year.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	51,000	0	0	0	0	0	0
TOTAL FUNDING	**51,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	51,000
Amount Incl HST	51,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22127

Project Cost: $97,900

Project Name: **Recreation Program Equipment Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Recreation Services

Category: Annual

Project Mgr: Eric Ho

Cost Validation: Internal peer review

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual program to replace City wide program/camp equipment. Items to be replaced under this program include: preschool equipment, mats, badminton and volleyball nets, learn to skate equipment, storage carts for equipment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	96,235	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	96,235	0
HST Impact:	1,694	0
Total Project Cost:	**97,900**	**0**

NOTES

The 3 year average spend from the Annual Programs Equipment is $109,571. Programs equipment will be purchased based on requirements to reopen community centres post COVID-19. The equipment being replaced supports programs that are revenue generating.

*This is an annual program and funding is requested each year. The Life Cycle Reserve Study will be adjusted accordingly in the next update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	97,900	0	0	0	0	0	0
TOTAL FUNDING	**97,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	98,200
Amount Incl HST	97,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22128

Project Cost: $19,800

Project Name: **Thornhill C.C. Communications Device Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Martin Barrow

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace 20 communication radios, one (1) main base communication platform and six (6) exterior wall communication devices at Thornhill C.C. The radios and the base communication platform are used by staff throughout the facility and is the primary communication tool for staff located across the community centre. The exterior wall communication devices allow patrons to directly connect with staff within the building.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	19,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	19,500	0
HST Impact:	343	0
Total Project Cost:	**19,800**	**0**

NOTES

All communication devices in both the interior and exterior of the building were last replaced in 2000. A condition assessment on the communication devices indicates replacement is warranted. The useful life of the communication devices has been extended as a result of a good maintenance program but now require replacement to maintain service levels. The amount requested is consistent with recent quote.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	19,800	0	0	0	0	0	0
TOTAL FUNDING	**19,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	570,800
Amount Incl HST	19,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22129

Project Cost: $9,200

Project Name: **Thornhill C.C. Flagpole Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: Recreation Services

Category: Minor

Project Mgr: Martin Barrow

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to replace three (3) flagpoles by the main entrance at Thornhill C.C. The three existing flagpoles raises one (1) Canadian flag, one (1) Province of Ontario flag and one (1) City of Markham flag.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	9,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	9,000	0
HST Impact:	158	0
Total Project Cost:	**9,200**	**0**

NOTES

The existing flagpole were installed in 1997. A condition assessment on the flagpoles indicates replacement is warranted. Cost is based on $3,000 per flag pole x 3 flagpoles = $9,000. The amount requested is consistent with recent staff award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	9,200	0	0	0	0	0	0
TOTAL FUNDING	**9,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	570,800
Amount Incl HST	9,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22130

Project Cost: $2,801,500

Project Name: **Library Collections**

Repair/Replace

Commission: Community Services

Useful Life: 7 Pre Approval: ☐

Department: Markham Public Library

Category: Annual

Project Mgr: Catherine Biss

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Collections are the Library's main product and are used heavily by the public, which expects currency. This requires ongoing acquisition of new materials, including those in print and non-print formats and non-English language materials, which are in high demand in Markham. In a 2020 survey of 2,521 residents, 94% indicated that it was important that MPL provides books and valued borrowing materials as the #1 Library service. A constant stream of new material is required to keep up with customer interest and demand.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,753,027	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,753,027	0
HST Impact:	48,453	0
Total Project Cost:	**2,801,500**	**0**

NOTES

Preliminary allocations (incl. processing): Books & Subscriptions $960K/ Audio-visual $315K/ French $25K/ Multilingual $300K/ Microfilms $3.5K/ Periodicals $100K/ Digital Materials $918K/ Processing Supplies $180K. Figures subject to revision based on material availability, customer needs & final Library review. 25% funding (excl. processing costs) devoted to non-English materials (Multilingual, French). Cost for replacement of existing E-Resources (when invoiced in USD) based on exchange rate of 1.27 ($537K USD).

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Collections				TOTAL	Phases
Operating Funded Life Cycle	2,801,500	2,801,500	0	0	0	2,801,500	0
TOTAL FUNDING	**2,801,500**					**2,801,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 2,833,700

Amount Incl HST 2,801,500

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

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2022 LIBRARY COLLECTIONS BUDGET SUPPORTING INFORMATION

The Library's Business Model for Material Selection:

MPL's business model for material selection is designed to achieve the following outcomes:

- Strong ROI on funding dollars, respecting the tax-payer's investment in library services;
- Strong library collections as a fundamental element in library service;
- Anticipating and meeting customer needs as determined by analysis of data regarding usage, trends and consumption of content, and broader trends in the publishing, retail, and public sectors;
- Alignment with the diversity of Markham's socio-demographic structure including age cohorts, language needs and preferences, and learning and leisure pursuits;
- Sector leading performance in Key Performance Indicators, including circulation per capita, collection turnover, materials as percentage of total expenditures, and visits per capita;
- Efficient use of funding dollars through a system wide approach to selection, eliminating overlap and duplication amongst the branches;
- Leveraging of alternative sources of content (i.e. online content and interlibrary loan) to satisfy long tail (non-mainstream) needs;
- High levels of use through aggressive targets for percentage of materials checked out at any given time. We want library materials to be in the hands of customers, enriching lives and supporting education.

Depth and Breadth of Library Materials:

Like all public library systems in Canada, MPL's collection policy defines the library mandate to meet the diverse information and knowledge needs of Markham residents through a collection that provides an appropriate balance of depth and breadth; meeting anticipated and expressed individual and community needs.

- **Bestsellers vs. Backlist**: Like bookstores, library "stock" includes both current bestsellers and backlist (older books still in print) items that are in demand by library customers
    - Backlist would include materials such as classics of children's literature
        - Classic board books and picture books for babies and pre-schoolers (*Goodnight Moon, Brown Bear, Brown Bear, What Do You See*?)
        - Series fiction for school aged children (*Diary of a Wimpy Kid, Dork Diaries, Geronimo Stilton*, etc.)
        - Classic children's fiction for school aged children (*Harry Potter*, *Anne of Green Gables, Treasure Island*)
        - Curriculum related materials (children's non-fiction books on Lands & People, Science, Technology and Math, Social Studies, etc.)
    - Backlist materials for teens such as popular teen fiction series and classics
        - Popular teen fiction (*Twilight, Divergent, The Hunger Games, The Giver*, etc.)
        - Curriculum related non-fiction (materials to support Independent Study Units)
        - Classic literature (Margaret Atwood, William Shakespeare, Harper Lee, William Golding, F. Scott Fitzgerald, etc.)
    - Backlist materials for adults such as classic literature, series fiction and non-fiction
        - Backlist of popular authors (James Patterson, Sue Grafton, Stephen King)
        - Backlist non-fiction (Health & Wellness, Travel, Food & Drink, Business and Financial Investments, Computers, Home & Garden, etc.)
        - Genre fiction (Romance, Mysteries, Horror, Fantasy, etc.)
    - Backlist materials for senior adults
        - Large print (popular fiction and non-fiction titles)
        - Audiobooks

- **Linguistic Diversity:** An additional challenge for Markham, in the context of the City's high level of linguistic diversity, is to allocate adequate funding to the demand for multilingual materials in each service area.
- **Customer Purchase Suggestions:** Appropriate response to purchase suggestions by Markham residents where they meet the Library's selection criteria including ensuring that the item would be of interest of other Markham residents.
- **Fiscal Responsibility**: Our collection policy excludes purchasing niche or scholarly materials, ensuring that MPL"s collection appeals to the general public and not for niche interests (we try to meet these needs through Interlibrary Loans or online databases).

Estimated budget breakdown for 2021:

Books & Subscriptions	$960,000
Audiovisual	$315,000
French Books	$ 25,000
Multilingual	$300,000
Microfilms	$ 3,500
Periodicals	$100,000
eResources	$918,000
Processing & Supplies	$180,000

Circulation in 2019 VS 2018:

Circulation	**2019**	**2018**	**%+/-**
Physical Circulation	**4,845,118**	**4,905,024**	***(1.2)***
Digital Circulation (eCirc)	**731,177**	**555,728**	***31.6***
Total Circ (incl. eCirc)	**5,576,295**	**5,460,752**	***2.1***

Electronic circulation over the past 10 years:

Years	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
eCirculation	67,500	93,651	148,235	164,791	246,864	310,208	370,779	555,728	731,177
%Increase		38.7%	58.3%	11.2%	49.8%	25.66%	19.53%	49.88%	31.57%

As of May 2021, the Library has seen an **increase of over 66% in digital circulation** over the same period in 2019, a huge increase due in part to COVID 19.

CUSTOMER SATISFACTION WITH COLLECTIONS:

The number one reason for Markham residents using the library is for its collection as they continuously state in all surveys. As you can see from the chart below, our customer expectations of the content MPL provides exceeds their actual satisfaction with the collection.

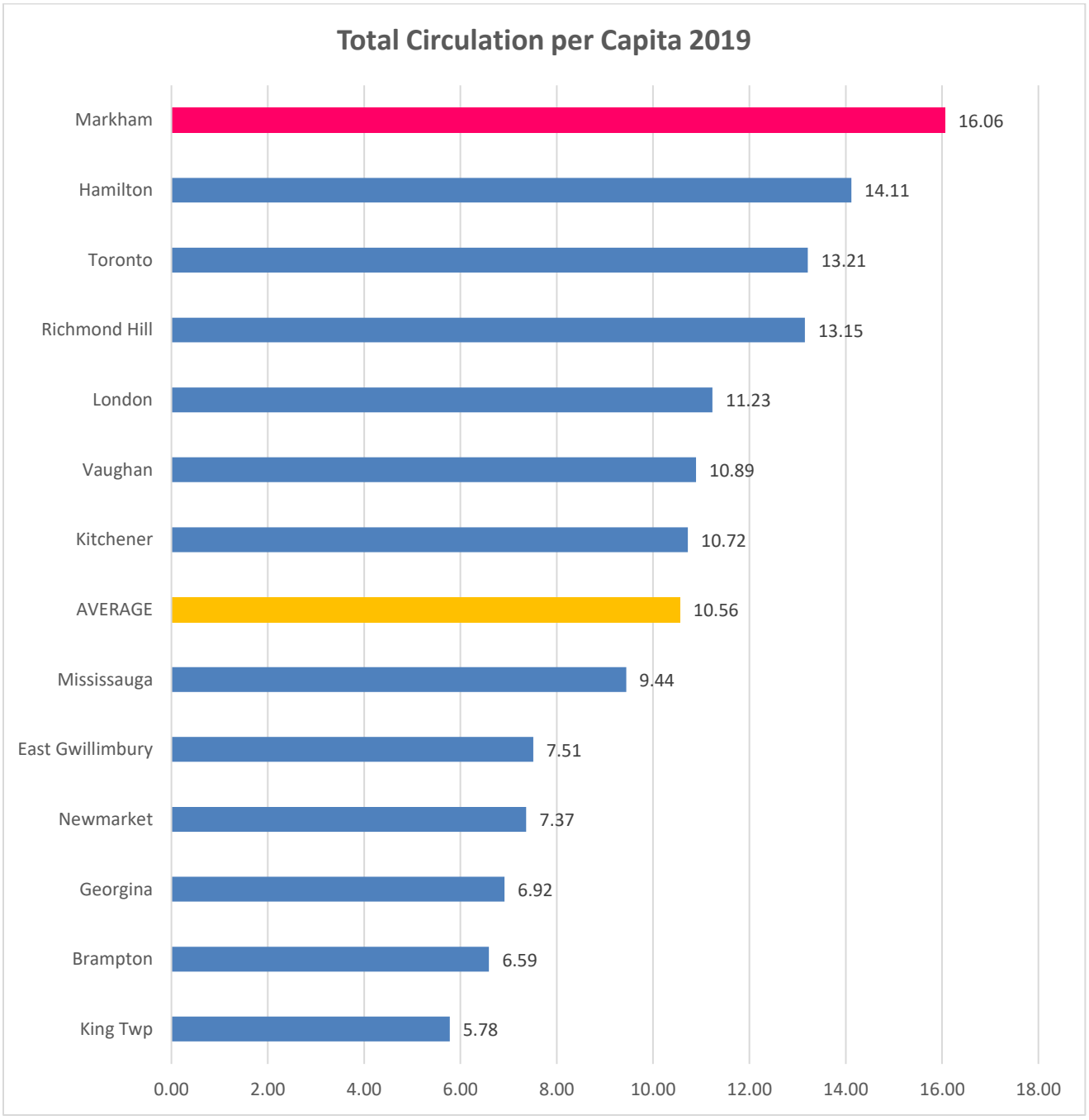
	2019
Importance	9.20/10
Satisfaction	8.03/10
Gap	1.17

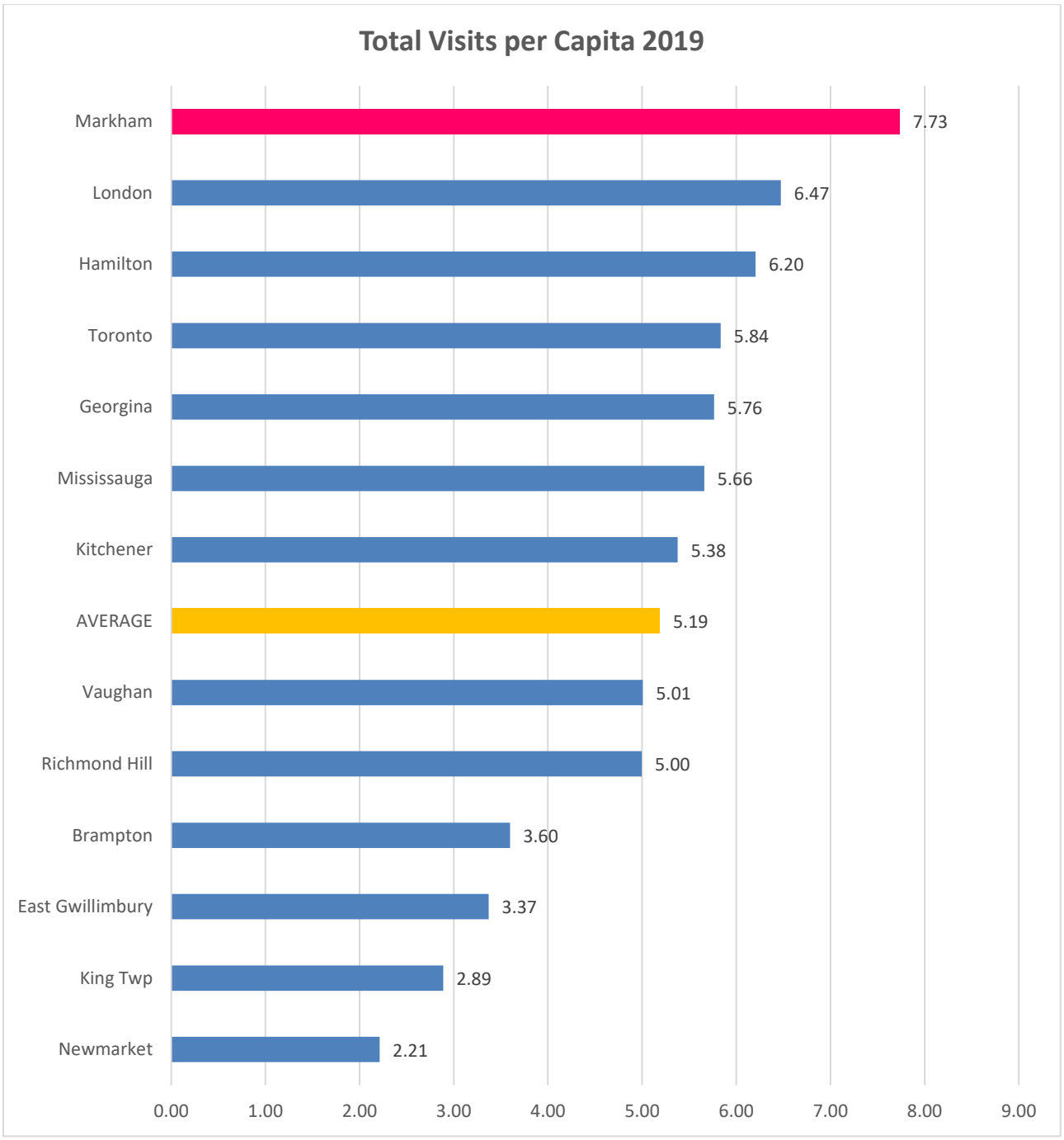
LANGUAGES COLLECTED:

- English, French, Arabic, German, Greek, Gujarati, Hebrew, Hindi, Italian, Korean, Persian, Panjabi, Russian, Spanish, Tagalog, Tamil, Urdu, and Chinese.

KEY PERFORMANCE INDICATORS

(Based on the latest 2019 statistics submitted to Ontario Ministry by Public Libraries)




Total Visits per Capita 2019
Markham
7.73
London
6.47
Hamilton
6.20
Toronto
5.84
Georgina
5.76
Mississauga
5.66
Kitchener
5.38
AVERAGE
5.19
Vaughan
5.01
Richmond Hill
5.00
Brampton
3.60
East Gwillimbury
3.37
King Twp
2.89
Newmarket
2.21
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00

2022 PROJECT FUNDING REQUEST FORM

Number: 22131

Project Cost: $180,100

Project Name: **Library Furniture, Equipment & Shelving Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Markham Public Library

Category: Annual

Project Mgr: Catherine Biss

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To replace furniture/shelving that is broken and/or in poor condition due to heavy usage in MPL branches. Required to maintain library facilities and operations. The public library is a high use municipal service that is valued by the community and helps make Markham a highly attractive place in which to live, work and study. Replacement of Milliken Mills Library shelving (Phase 1 of 3), which is original to this 1990 building. At 31 years of age, this is the oldest shelving in use at MPL branches and is now significantly past its expected lifespan (20 years). Phase 2 & 3 will be completed in 2023-2024.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	177,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	177,000	0
HST Impact:	3,115	0
Total Project Cost:	**180,100**	**0**

NOTES

This is an annual program. 2022 project will be used for replacement of Milliken Mills Library Shelving (Phase 1 of 3). The estimated cost is $100K/year. Other replacement will include public-facing loose furniture/shelving for various locations ($80.1K). The replacement is high priority due to structural damages/safety/public liability risks. 3 year average spend is $143.8k. Increase in 2022 reflects addition of FF&E replacements allocated for Cornell starting in year 10. This amount is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Furniture	Shelving			TOTAL	Future Phases
Operating Funded Life Cycle	180,100	80,100	100,000	0	0	180,100	0
TOTAL FUNDING	**180,100**					**180,100**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 180,100

Amount Incl HST 180,100

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22132

Project Cost: $6,749,200

Project Name: **Asphalt Resurfacing**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Zoyeb Vahora

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Asphalt resurfacing of roads throughout the City utilizing a pavement management program to select rehabilitation candidates. The overall goal is to maintain an acceptable pavement condition index and user satisfaction by implementing cost effective strategies designed to extend pavement life and reduce overall maintenance costs of the road network. Other work includes interlock, material testing, route and seal, steel, and AC index. Various strategies are utilized on a site specific basis to reach program goals.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	6,632,466	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	6,632,466	0
HST Impact:	116,731	0
Total Project Cost:	**6,749,200**	**0**

NOTES

Asphalt Resurfacing of approximatley 18.7km of two and four lane roads. 5.1km of two and four lane roads of pavement preservation. There is no substantial backlog in this program. The 2019 pavement laser condition survey, conducted biannually, identifies 72.9% of the road network as good or better (long term target 80%). The 2021 survey will be completed by December 2021.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	6,749,200	0	0	0	0	0	0
Operating Funded Life Cycle	0	0	0	0	0	0	0
TOTAL FUNDING	**6,749,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	6,838,200
Amount Incl HST	6,749,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Asphalt Resurfacing
2022 Capital Request	$6,749,200
Funding Source	Life Cycle Reserve
Description of Program	Asphalt resurfacing of roads throughout the City utilizing a pavement management program to select rehabilitation candidates. The overall goal is to maintain an acceptable pavement condition index and user satisfaction by implementing cost effective strategies designed to extend pavement life and reduce overall maintenance and reconstruction costs of the road network.
Project Rationale	Condition assessment is conducted bi-annually to determine specific locations. This is followed by a detailed visual inspection by Operations staff which verifies the laser condition assessment. Identified in the Life Cycle Reserve Study.
Legislative Requirement	O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highways outlines patrol and maintenance requirement related to roadway infrastructure inclusive of asphalt pavement and sidewalk.
History	n/a
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	..\Roads\Back up\Asphalt\Road_Resurfacing_Citywide_2022.pdf
Alignment to the Strategic Plan	Properly paved and well maintained roads help reduce accidents and promotes safe movement of traffic reducing traveling time. Contracts within this program call for reharvesting and recycling of construction materials. Strategies include warm mix designs which lowers emissions and utilizes recycled aggregate.

Year	Name	
	Asphalt Resurfacing	**2022 Update**
2022	A/C Premium	$ 176,900.00
2022	Asphalt Resurfacing	$ 3,056,600.00
2022	Route and Seal	$ 140,698.00
2022	Concrete Restoration	$ 2,275,000.00
2022	Interlock	$ 300,000.00
2022	Pavement Preservation	$ 700,000.00
2022	Material Testing	$ 60,000.00
2022	Steel	$ 40,000.00
	Total	**$ 6,749,200.00**

2022 Road Rehabilitation City-wide Map

Legend

- Road Rehabilitation (88 Segments)
- Micro Surfacing (11 Segments)
- Road
- Railway

0 1 2 4 KM

19TH AVE
ELGIN MILLS RD E
MAJOR MACKENZIE DR E
16TH AVE
14TH AVE
HWY 7 E
STEELES AVE E
WOODBINE AVE
KENNEDY RD
WARDEN AVE
MCCOWAN RD
HWY 48
9TH LINE
DONALD COUSENS PKY
MARKHAM RD
MAIN ST N
MAIN ST S
REESOR RD
11TH CONC
BAYVIEW AVE
LESLIE ST
YONGE ST

2022 PROJECT FUNDING REQUEST FORM

Number: 22133

Project Cost: $77,700

Project Name: **Parking Lots - Rehabilitation**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Zoyeb Vahora

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Complete rehabilitation of selected municipal parking lots throughout the City. Includes removal and replacement of concrete, interlock and asphalt infrastructure, as well as maintenance holes and catch basin adjustments.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	76,355	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	76,355	0
HST Impact:	1,344	0
Total Project Cost:	**77,700**	**0**

NOTES

Rehabilitation of Fire Station 96 and Milliken Mills Soccer Dome, There is no backlog in the program. The parking lots are in a state of good repair.
Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Fire Station 96	Milliken Socer Dome			TOTAL	Phases
Operating Funded Life Cycle	77,700	39,865	37,835	0	0	77,700	0
TOTAL FUNDING	**77,700**					**77,700**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	98,900
Amount Incl HST	77,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22134

Project Cost: $121,600

Project Name: **Localized Repairs - Parking Lots**

Repair/Replace

Commission: Community Services

Department: Operations - Roads

Project Mgr: Bob O'hara

Useful Life: 8 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Ongoing maintenance and repairs of municipal parking lots throughout the City. Includes repairs to concrete and asphalt infrastructure, maintenance holes and catchbasin adjustments and asphalt resurfacing.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	119,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	119,500	0
HST Impact:	2,103	0
Total Project Cost:	**121,600**	**0**

NOTES

2022 locations: Pan Am Center, Mount Joy CC arena parking lot, Mount Joy CC small lot off 16th ave and Hollingworth. This is an annual program. There is no substantial backlog in this program. 3 year avg is $145K.
Amount requested is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	121,600	0	0	0	0	0	0
TOTAL FUNDING	**121,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 121,600

Amount Incl HST 121,600

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22135

Project Cost: $893,900

Project Name: **Localized Repairs - Curb & Sidewalk**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Bob O'Hara

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Maintenance repairs to sidewalks, curbs, and catch basins throughout the City as identified by staff. Ensure that deficient sections are repaired to minimize trip and fall incidents and reduce associated liability to the City. The purpose of the concrete curb is to channel storm water into the storm sewer system.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	878,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	878,400	0
HST Impact:	15,460	0
Total Project Cost:	**893,900**	**0**

NOTES

Specific locations to be determined upon completion of condition audit in 2021. 3 year avg is $816K. Amount requested is higher due to growth and more deficiencies identified, consistent with the amount in the 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	893,900	0	0	0	0	0	0
TOTAL FUNDING	**893,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	893,900
Amount Incl HST	893,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Localized Repairs – Curb and Sidewalk
2022 Capital Request	$893,900
Funding Source	Life Cycle Reserve
Description of Program	Maintenance repairs to sidewalks, curbs, multi-use paths (MUP) and catch basins throughout the City as identified by staff through road patrol. Ensure that deficient sections are repaired to minimize trip and fall incidents, ponding/drainage issues, and reduce associated liability to the City. The purpose of conducting repairs to our concrete curbs are to removed damaged sections (hit by vehicles) and to ensure the channelization of storm water into the storm sewer system.
Project Rationale	Addresses minor repair locations of curb, sidewalk, MUP failures in order to reduce the City's liability, protect against claims of negligence and extend the Life Cycle. Identified in the Life Cycle Reserve Study.
Legislative Requirement	O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highways outlines patrol and maintenance requirement related to roadway infrastructure inclusive of asphalt pavement and sidewalk.
History	n/a
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	Localized Repairs Concrete/Asphalt, Asphalt Resurfacing
Related Maps	n/a
Alignment to the Strategic Plan	Program ensures roads and boulevards are made safe for all cyclists, pedestrians and vehicular traffic. Program removes hazards, deficiencies, and reduces risk to the City by replacing with new concrete. This program promotes safety, reduces liability and encourages walkability within the community.

2022 PROJECT FUNDING REQUEST FORM

Number: 22136

Project Cost: $59,600

Project Name: **Boulevard Repairs**

Repair/Replace

Commission: Community Services

Department: Operations - Roads

Project Mgr: Bob O'Hara

Useful Life: 10 Pre Approval: ☐

Category: Annual

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The purpose of this project is to maintain boulevard areas in good condition to minimize hazards for pedestrians. Repairs to boulevards throughout the City are for interlock brick pavers only (does not include concrete, curb or asphalt).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	58,600	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	58,600	0
HST Impact:	1,031	0
Total Project Cost:	**59,600**	**0**

NOTES

Some of the larger repairs include, traffic islands along Bur Oak, speed humps along Hawkridge and Thornhill CC and Library. Installation cost is $33/m2. The budget allows for 1775 SqM to be repaired. This is an annual program. There is no substantial backlog within this program and the boulevards are in a state of good repair. 3 year avg is $50K.
Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	59,600	0	0	0	0	0	0
TOTAL FUNDING	**59,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	59,600
Amount Incl HST	59,600
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22137

Project Cost: $26,300

Project Name: **Bridge Structure Preventative Maintenance - Roads**

Repair/Replace

Commission: Community Services

Useful Life: 30 Pre Approval: ☐

Department: Operations - Roads

Category: Annual

Project Mgr: Bob O'Hara

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual preventative maintenance of the 27 City owned bridge/culvert structures on an as required basis. Work to be carried out on an as required basis which includes fill and grade bridge approaches, route and seal cracks on bridge decks, concrete sealer application, concrete patches on approach.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	25,850	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,850	0
HST Impact:	455	0
Total Project Cost:	**26,300**	**0**

NOTES

Locations to be determined upon condition assessment. There is no substantial backlog and Bridge structures are in a state of good repair. Operations is responsible for preventative maintenance on bridges/culverts such as minor grading, patching, sealing of bridge approaches and bridge decks, while Environmental Services is responsible for its inspection/rehabilitation and replacement. Amount requested is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	26,300	0	0	0	0	0	0
TOTAL FUNDING	**26,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	52,600
Amount Incl HST	26,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Life Cycle resides in Environmental Services ($52,600) and is split 50:50 between Roads and Parks.

2022 PROJECT FUNDING REQUEST FORM

Number: 22138

Project Cost: $188,800

Project Name: **City Owned Entrance Feature Rehabilitation / Replacement**

Repair/Replace

Commission: Community Services

Department: Operations - Roads

Project Mgr: Zoyeb Vahora

Useful Life: 20 Pre Approval: ☐

Category: Annual

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Maintenance and repair of entrance features based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	185,512	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	185,512	0
HST Impact:	3,265	0
Total Project Cost:	**188,800**	**0**

NOTES

Locations for 2022 are Beckinridge Dr & 14th (2 replacements), Greystone and 16th Ave (replacement) and Stonemason and 16th Ave (removal - accelerated from 2026). Locations deferred to 2023due to condition assessment: 16th Ave and Village Pkwy (2),Carlton & Kennedy Road, John Button and Hoodview, Natasha Way and Woodbine and Steeles and Bayview. The City owns 144 features, there are 170 known to be located on private property with the remaining 17 of uncertain ownership for a total inventory of 331. An update report back to Council is expected in Q1/Q2 2022

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	188,800	0	0	0	0	0	0
TOTAL FUNDING	**188,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 328,600

Amount Incl HST 188,800

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

6 locations are being deferred and 1 location was accelerated from 2026.

2022 PROJECT FUNDING REQUEST FORM

Number: 22139

Project Cost: $50,900

Project Name: **City Owned Fence Replacement Program**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Bob O'Hara

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To remove and replace failing fence locations throughout the City on City owned property.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	50,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	50,000	0
HST Impact:	880	0
Total Project Cost:	**50,900**	**0**

NOTES

2022 locations include 55 Pillar Rock (11lm), behind Clatworthy Arena (145lm), near 332 John Street(17lm) and Miller Yard (443lm). All locations are chain link fencing. This is an annual program. There is no backlog in this program and the fences are in a state of good repair.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	50,900	0	0	0	0	0	0
TOTAL FUNDING	**50,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 134,100

Amount Incl HST 40,700

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22140

Project Cost: $66,100

Project Name: **Retaining Wall Repair Program**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Operations - Roads

Category: Annual

Project Mgr: Bob O'Hara

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repairs to failing retaining walls and other right of way structural assets on city owned property.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	65,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	65,000	0
HST Impact:	1,144	0
Total Project Cost:	**66,100**	**0**

NOTES

Location for 2022 is 115 Kreigoff. There is no backlog in this program. The retaining walls are in a state of good repair. Amount requested is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	66,100	0	0	0	0	0	0
TOTAL FUNDING	**66,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	75,600
Amount Incl HST	66,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22141

Project Cost: $156,800

Project Name: **Guiderail - Install / Upgrade**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Bob O'Hara

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Install new or upgrade existing guiderail to meet new Provincial Standards and minimize maintenance. Program ensures that the City maintains safe roadways for users.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	154,090	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	154,090	0
HST Impact:	2,712	0
Total Project Cost:	**156,800**	**0**

NOTES

153 locations identified in inventory. Guiderails are upgraded to meet standards only when they are due for replacement. To date, 60 locations have been upgraded to the Provincial Standard. There is no substantial backlog in this program. This is year 5 of 10 year program during which time the remaining locations will be upgraded.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	156,800	0	0	0	0	0	0
TOTAL FUNDING	**156,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	57,100
Amount Incl HST	156,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

10 locations were identified that are not currently in life cycle. They will be added during the next life cycle update

2022 Capital Budget Submission - Guiderail Install/Upgrade

Locations	Material	Quantity lm	$ Estimate	Comments
Bronte Rd. West side & East side	Metal/Wood Guiderail	158	$ 34,000	Upgrade
107 Tillie Sq	Metal/Wood Guiderail	9	$ 5,000	Upgrade
128 Tillie Sq	Metal/Wood Guiderail	9	$ 5,000	Upgrade
Weedon road	Metal/Wood Guiderail	9	$ 5,000	Upgrade
49 Dunnet Street	Metal/Wood Guiderail	9	$ 5,000	Upgrade
18 Loganberry Crt	Metal/Wood Guiderail	9	$ 5,000	Upgrade
Sprucewood Dr	Metal/Wood Guiderail	9	$ 5,000	Upgrade
Enterprise Dr. East of Cinema (north side) East Valley Dr. (North side)	Metal/Wood Guiderail	43	$ 17,477	Upgrade
Enterprise Dr. East of Cinema(south side)	Metal/Wood Guiderail	43	$ 17,477	Upgrade
Royal Orchard Blvd. @ School on the south side	Metal/Wood Guiderail	43	$ 17,477	Upgrade
Wembley Ave	Metal/Wood Guiderail	9	$ 3,722	Upgrade
West of 6492 Elgin Mills	New	150	$ 34,000	Upgrade
			$ 154,153	Pre-HST
			$ 156,866	Including HST impact
			$ 156,800	**Rounded**

2022 PROJECT FUNDING REQUEST FORM

Number: 22142

Project Cost: $22,400

Project Name: **Guiderail Repairs**

Repair/Replace

Commission: Community Services

Useful Life: 8 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Bob O'Hara

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repairs to guiderails damaged by vehicle accidents.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	22,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	22,000	0
HST Impact:	387	0
Total Project Cost:	**22,400**	**0**

NOTES

2022 locations are Elgin Mills west of Reesor Rd (20lm), and Dickson Hill Road and 19th Ave (35lm).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	22,400	0	0	0	0	0	0
TOTAL FUNDING	**22,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 57,100

Amount Incl HST 22,400

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 locations requiring upgrades are included in a separate 2022 request.

2022 Capital Budget Submission - Guiderail Repairs

Locations	Material	Quantity lm	$ Estimate	Comments
Elgin Mills west of Reesor Rd.	Metal Guiderail system	20	$ 7,500	Repair
Dickson Hill Rd. & 19th 20m	Metal Guiderail system	20	$ 7,500	Repair
19th and Dickson Hill 15m	Metal Guiderail system	15	$ 7,000	Repair
			$ 22,000	Pre-HST
			$ 22,387	Including HST impact
			$ 22,400	**Rounded**

2022 PROJECT FUNDING REQUEST FORM

Number: 22143

Project Cost: $138,400

Project Name: **Citywide Ditching Program**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: Operations - Roads

Category: Annual

Project Mgr: Ron Roffey/Dennis King

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual ditch restoration program per Council resolution. Program is to maintain roadside ditches & culverts which are a critical component of the broader storm drainage system. The program will protect the City's investments in road maintenance and avoid early erosion of Markham's infrastructure. The scope of the project has been increased to now include the testing and disposal of the material. Contractors were previously hauling the material to 555 Miller Ave where Operations had to test, haul and dispose of the material. The onus is now put onto the Contractor to test and dispose of the material (removing the need to double handle the material).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	136,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	136,000	0
HST Impact:	2,394	0
Total Project Cost:	**138,400**	**0**

NOTES

The ditching program will be able to maintain up to 4 linear km's per year. Ditch restoration work will be undertaken as part of the annual capital road improvements program and done prior to undertaking road rehab work on roads with rural profiles. Increased costs related to O. Reg. 406/19 & O. Reg. 347 (disposal of materials). The latest tender results showed unit price a increase of 65% which includes the disposal of materials by the contractor.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	138,400	0	0	0	0	0	0
TOTAL FUNDING	**138,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	93,200
Amount Incl HST	138,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Updated unit price as per latest tender will be reflected in the 2022 Life Cycle Study.

2022 PROJECT FUNDING REQUEST FORM

Number: 22144

Project Cost: $21,100

Project Name: **Don Mills Storm Channel**

Repair/Replace

Commission: Community Services

Useful Life: 1 Pre Approval: ☐

Department: Operations - Roads

Category: Annual

Project Mgr: Dennis King

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Storm channel is located east of Woodbine between Steeles and John Street. Remove overgrowth, vegetation and debris from storm channel to ensure proper storm water conveyance. Program will include periodic clean-up of debris, garbage and excess vegetation found in the channel. It will also include channel maintenance after large storm events, and in response to dumping.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	20,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	20,700	0
HST Impact:	364	0
Total Project Cost:	**21,100**	**0**

NOTES

To support ongoing annual maintenance. 3 yr average is $8K. This is an annual program. 2 site visits per year in July/Oct. Operations is responsible for minor above ground maintenance on the Don Mills storm channel such as debris and vegetation removal while Environmental Services is responsible for its flood reduction strategies and implementation. Higher funding requested this year for more frequent work which will improve water flow and volume capacity and minimize flooding and breaching of banks.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	21,100	0	0	0	0	0	0
TOTAL FUNDING	**21,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Life Cycle resides in Environmental Services.

2022 PROJECT FUNDING REQUEST FORM

Number: 22145

Project Cost: $209,700

Project Name: **Storm Water Retention Pond Maintenance Program**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Operations - Roads

Category: Minor

Project Mgr: Bob O'Hara

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Ongoing minor maintenance activities to all storm water management ponds throughout the City. The work includes repairing/replacing grates, headwalls and fences. This maintenance program will include localized repairs of identified deficiencies as reported by 2021 site inspection. Repair defective items identified from the 115 storm water management (SWM) ponds inspected in the fall of 2021.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	206,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	206,100	0
HST Impact:	3,627	0
Total Project Cost:	**209,700**	**0**

NOTES

Items include repairs to baffle blocks, inlets, backflow preventer, outlets, pipes and retaining walls. This is an annual program. There is no backlog in this program. Roads provide maintenance above the water line while Environmental Services provide rehabilitation below the water line. Amount requested is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	209,700	0	0	0	0	0	0
TOTAL FUNDING	**209,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Life cycle resides in Environmental Services.

2022 PROJECT FUNDING REQUEST FORM

Number: 22146

Project Cost: $168,500

Project Name: **Emergency Repairs**

Repair/Replace

Commission: Community Services

Department: Operations - Roads

Project Mgr: Dennis King/ Ron Roffey

Useful Life: 20 Pre Approval: ☐

Category: Annual

Cost Validation: Recent awards

Requirement Validation: Visual inspection

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Emergency repairs to guiderails, guide cable, storm sewers, entrance features, outfalls, inlets, and cross connections as required. These repairs could be necessary due to motor vehicle accidents, winter maintenance, and damage from storm water or pipe/road failures.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	165,600	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	165,600	0
HST Impact:	2,915	0
Total Project Cost:	**168,500**	**0**

NOTES

Examples of work done in previous years; Storm Sewer Repairs - 20 Heritage, 12 Vanwood, Silver Aspen, Main Street Markham, and Main Street Unionville- 3yr avg $168.5K. This is an annual program.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
Operating Funded Life Cycle	168,500	0	0	0	0	0	0
TOTAL FUNDING	**168,500**					**0**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 155,900

Amount Incl HST 168,500

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Amount requested is as per the 3 year actual average.

2022 PROJECT FUNDING REQUEST FORM

Number: 22147

Project Cost: $468,000

Project Name: **Incremental Growth Related Winter Maintenance Vehicles**

New Asset/Expansion

Commission: Community Services

Department: Operations - Roads

Project Mgr: Raymond Law

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Development Charge (DC) funding for additional growth-related winter maintenance vehicles purchased by contractors. If winter maintenance was done in-house, these vehicles would need to be purchased by the City, so this request is to obtain DC funding to offset a portion of the capital cost included in the winter maintenance paid through Operating accounts.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	468,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	468,000	0
HST Impact:	0	0
Total Project Cost:	**468,000**	**0**

NOTES

Amount requested is as per the 2017 DC Study plus 2% inflationary increase.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	468,000	0	0	0	0	0	0
TOTAL FUNDING	**468,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22148

Project Cost: $73,400

Project Name: **Backstop and Outfield Fence Replacement - John Button Park**

Repair/Replace

Commission: Community Services

Useful Life: 35 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: James Bingham

Cost Validation: Internal peer review

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Backstop fence and outfield fence replacement for John Button Park South Major # 1

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	72,162	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	72,162	0
HST Impact:	1,270	0
Total Project Cost:	**73,400**	**0**

NOTES

This is an asset based program and is subject to condition assessment. This location requires the full replacement of posts, fabric and hardware. Unit cost is based on original cost of construction plus inflation. This is an annual program and funding will be requested each year for baseball and softball field's city wide. Project costs vary depending on the number of locations. There is no substantial backlog and assets are in a state of good repair.

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget					TOTAL	Phases
Gas Tax	73,400	0	0	0	0	0	0
TOTAL FUNDING	**73,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

4 locations deferred - Coldedale (76K), Elson #1 (76k), Robinson Major (76K) and Robinson Minor (10K).

2022 PROJECT FUNDING REQUEST FORM

Number: 22149

Project Cost: $27,200

Project Name: **Cemetery Fence Repair/Replacement**

Repair/Replace

Commission: Community Services

Department: Operations - Parks

Project Mgr: Dean McDermid

Useful Life: 25 Pre Approval: ☐

Category: Annual

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Fence repairs at St. Johns Cemetery and Byer Family Cemetery (City owned cemeteries = 14) based on condition assessment to maintain a formal border between private adjacent lands and burial grounds.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	26,700	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	26,700	0
HST Impact:	470	0
Total Project Cost:	**27,200**	**0**

NOTES

This is an asset based program and is subject to condition assessment. Locations for 2022: St Johns Cemetery and Byer Family Cemetery. The Byer Family Cemetery fence is in poor condition and requires replacement with a similar fence. Both locations are wood fence. There is no backlog in this program.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: St Johns	Components: Byer			TOTAL	Future Phases
Operating Funded Life Cycle	27,200	13,500	13,700	0	0	27,200	0
TOTAL FUNDING	**27,200**					**27,200**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 17,600

Amount Incl HST 27,200

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

St Johns deferred from 2021. Ramer Cemetery deferred ($3.8K)

2022 PROJECT FUNDING REQUEST FORM

Number: 22150

Project Cost: $38,400

Project Name: **Cricket Backstop Practice Area Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: James Bingham

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of the backstop and surrounding fence structure at the practice area of the cricket pitch at Yarl Cedarwood Park.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	37,691	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	37,691	0
HST Impact:	663	0
Total Project Cost:	**38,400**	**0**

NOTES

This is an asset based program and is subject to condition assessment. The backstop and fencing allows players to practice in the confines of an enclosed area without allowing errant balls to interfere with the safety of others on site. The entire fence structure requires replacement inclusive of posts, footings, fabric and hardware. Wear on this amenity is much greater that other backstops resulting in 15 year useful life.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	38,400	0	0	0	0	0	0
TOTAL FUNDING	**38,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22151

Project Cost: $54,000

Project Name: **Cricket Pitch Wicket Artificial Turf Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: James Bingham

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of artificial turf in pitching area at Yarl Cedarwood.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	53,045	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	53,045	0
HST Impact:	934	0
Total Project Cost:	**54,000**	**0**

NOTES

This is an asset based program and is subject to condition assessment. The 2022 Cricket Pitch location is Yarl Cedarwood and is heavily used for both league and tournament play. The playing field is natural turf and the pitching and practice area is artificial turf to tolerate the high wear and use. The pitching area and practice area is deteriorating and both require replacement to ensure continued playable facilities. Useful life aligns with other City artificial turf field surfacing.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	54,000	0	0	0	0	0	0
TOTAL FUNDING	**54,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22152

Project Cost: $409,100

Project Name: **Millennium Park Waterplay Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Matt Busato

Cost Validation: Internal peer review

Ward(s): CW ☐ 1 ☐ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The Splash Pad at Millennium Park requires replacement based on condition assessment and life expectancy.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	377,040	0
Internal Charges:	0	0
External Consulting:	25,000	0
Sub Total:	402,040	0
HST Impact:	7,076	0
Total Project Cost:	**409,100**	**0**

NOTES

This is an asset based program subject to condition assessment. This splash pad was installed in 2001 and this is the first replacement cycle.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	409,100	0	0	0	0	0	0
TOTAL FUNDING	**409,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22153

Project Cost: $854,000

Project Name: **Playstructure & Rubberized Surface Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 17 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Dave Plant

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of playground equipment, and safety surfacing as required, to maintain the current standards (CSA – Canadian Standards Association CAN/CSA-Z614-07. Children's Playspaces and Equipment) and AODA compliance. There are 9 structures to be completed in 2022, 2 of them with rubberized surfacing and 7 which require the removal of the sand surfacing and installation of Engineered Wood Fiber (EWF).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	821,654	0
Internal Charges:	0	0
External Consulting:	17,600	0
Sub Total:	839,254	0
HST Impact:	14,771	0
Total Project Cost:	**854,000**	**0**

NOTES

This is an asset based program with all locations subject to condition assessment and changed based on those findings. Funding amount changes every year based on life cycle replacement of specific playstructures. There is no backlog of play structure equipment upon completion of the 2022 project and the assets are in a state of good repair. For AODA compliance there is a backlog of playground safety surfacing which requires removal and replacement with EWF by 2025 which will be addressed starting in 2023.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	854,000	0	0	0	0	0	0
TOTAL FUNDING	**854,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	828,100
Amount Incl HST	854,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Bayview Lane North structure is accelerated and the rubberized surface in not in Life Cycle and will be added in 2022. Deferred locations: Henry Wright rubberized surface ($97K), South Unionville rubberized surface ($66K), Butternut Parkette structure ($17K), and Frederick Peterson Park structure ($17K).

Project	Playstructure & Rubberized Surface Replacement
2022 Capital Request	$854,000
Funding Source	Life Cycle Reserve
Description of Program	Replacement of playground equipment and where installed rubberized safety surfacing, per condition assessment, to ensure CSA certified playgrounds.
Project Rationale	These structures require replacement prior to any failures occurring, based on condition assessment to meet the CSA guidelines (Z614-07 Children's Play spaces and Equipment).
Legislative Requirement	City play structures are required to be CSA – Canadian Standards Association CAN/CSA-Z614-07 certified at the time of installation and throughout their useful life. Monthly inspections by certified playground inspectors combined with a yearly third party safety audit ensures compliance.
History	This project is reflective of play structures identified in the parks lifecycle and supported by condition assessment. Play structures are identified for inspection after 17 years of service with the total number of structures yearly being reflective of growth which occurred 17 years previously.
Future Phases	This funding is requested each year based on lifecycle.
Total Project Cost	n/a
Related Projects	Play Structure Rubberized Surface Replacement
Related Maps	n/a
Alignment to the Strategic Plan	The City provides safe use of outdoor recreation facilities for families which aligns with the guidelines established in the Integrated Leisure Master Plan.

2022 PLAYGROUND - STRUCTURE AND RUBBERIZED SAFETY SURFACE

			CAPITAL PROJECT COST
Inventory Description	**Facility**		
Playground - Rubberized Surface	Swan Lake		$ 116,202
Playground - Rubberized Surface	Bayview Lane Park North Playground		$ 82,775
Playground Surface - Engineered Wood Fiber	Lump sum - for remaining 7 locations (other than Swan Lake and Bayview Lane)		$ 120,000
Playground Structure	Bayview Lane Park North Playground		$ 49,419
Playground Structure	Clarence Chant (1-Senior)		$ 48,709
Playground Structure	Edith M. Mairs Park (formerly Forest Manor Parkette (1-Junior)		$ 27,061
Playground Structure	Huntington Park (2-Senior)		$ 102,831
Playground Structure	James Thomas Park Everett (1-Senior)		$ 37,885
Playground Structure	Matthew Rae Park (1-Senior)		$ 27,061
Playground Structure	Roy Walker Parkette (1-Senior)		$ 48,709
Playground Structure	Simonston Park (1-Junior, 1-Senior)		$ 97,419
Playground Structure	Swan Lake (1-Senior, 1-Junior)		$ 81,182
		Pre - Tax	**$ 839,254**
		HST Impact	$ 14,771
		Total Inc. HST Impact	$ 854,025
			$ 854,000

2022 PROJECT FUNDING REQUEST FORM

Number: 22154

Project Cost: $43,700

Project Name: **Shade Structure Rehabilitation and/or Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 35 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Deam McDermid

Cost Validation: Internal peer review

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☑ 5 ☑ 6 ☐ 7 ☑ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Rehabilitation and/or replacement of shade structures (gazebo minor, major and trellis) based on condition assessment. There are 4 locations in 2022.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	42,973	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	42,973	0
HST Impact:	756	0
Total Project Cost:	**43,700**	**0**

NOTES

This is an asset based program and is subject to condition assessment. 2022 locations are: Joseph Street Parkette (Major Rehab), Angus Glen Village (Minor Rehab), Avida Pond (Minor Rehab) and, Chelsea Park (Minor Rehab). There is currently no backlog and the assets are in a state of good repair.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	43,700	0	0	0	0	0	0
TOTAL FUNDING	**43,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	197,200
Amount Incl HST	43,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Deferred: Millennium Bandstand ($132K), Colty's Corners ($7K), Monarch Park ($8K), Peace Park ($5K) and South UnionvillePark ($5K). These locations were deferred due to condition assessment.

2022 SHADE STRUCTURE PROJECT

Inventory Description	Facility	PROJECT COST
Gazebo - Major (Rehab.)	Joseph Street Parkette - 2007	$ 17,575
Gazebo - Minor (Rehab.)	Angus Glen Village	$ 6,885
Gazebo - Minor (Rehab.)	Avida Pond	$ 4,743
Gazebo - Minor (Rehab.)	Chelsea Park	$ 13,770
	Pre - Tax	**$ 42,973**
	HST Impact	$ 756
	Total Inc. HST Impact	$ 43,729
		$ 43,700

2022 PROJECT FUNDING REQUEST FORM

Number: 22155

Project Cost: $145,500

Project Name: **Pathways Resurfacing**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Dean McDermid

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Paving and repairs of aggregate pathways at various parks and locations. These locations are prone to wear and tear and washouts following heavy rain and flooding. Paving will help to alleviate this problem. Limestone pathways require additional material to be added and compacted. Locations will be assessed and determined based on condition assessment in spring. Staff will investigate environmental options for future considerations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	143,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	143,000	0
HST Impact:	2,517	0
Total Project Cost:	**145,500**	**0**

NOTES

This is an annual program and funds will be requested each year. Locations subject to condition assessment to be done spring 2022. Condition assessments are done in early spring when total quantities and materiality of repairs is determined. Asphalt park pathways are assessed for trip edges greater than 2.0cm as outlined in Prov Leg O.Reg. 239/02 for minimum maintenance standards. There is no substantial backlog and the pathways are in a state of good repair.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	145,500	0	0	0	0	0	0
TOTAL FUNDING	**145,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	145,500
Amount Incl HST	145,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22156

Project Cost: $27,500

Project Name: **Relamping & Fixtures Refurbishment**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Operations - Parks

Category: Annual

Project Mgr: James Bingham

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

An independent audit of electrical services in municipal parks and sportsfields identifies locations for repair/maintenance of electrical components based on condition assessment. Untimely outages may pose potential hazards.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	21,000	0
Internal Charges:	0	0
External Consulting:	6,000	0
Sub Total:	27,000	0
HST Impact:	475	0
Total Project Cost:	**27,500**	**0**

NOTES

This is an annual program and funds will be requested each year. Locations to be determined. Project scope includes bulb, defective ballast, cables, broken lens replacements. Work to completed is based on condition assessment by the lighting consultant and is location specific. This is an annual program and funding will be requested each year. 3 year average- $23K The assets are in a state of good repair.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	27,500	0	0	0	0	0	0
TOTAL FUNDING	**27,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	40,900
Amount Incl HST	27,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Amount requested has been lowered to reflect actual average yearly spend and will be monitored for 2022 to ensure this trend continues.

2022 PROJECT FUNDING REQUEST FORM

Number: 22157

Project Cost: $26,300

Project Name: **Bridge Structure Preventative Maintenance in Parks**

Repair/Replace

Commission: Community Services

Useful Life: 30 Pre Approval: ☐

Department: Operations - Parks

Category: Annual

Project Mgr: Dean McDermid

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Annual preventative maintenance of parks and open space bridges. Locations to be determined based on Spring 2022 condition assessment. Work includes fill and grade bridge approaches, remove and replace wooden decks on pedestrian bridges, railings and curbs.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	25,850	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	25,850	0
HST Impact:	455	0
Total Project Cost:	**26,300**	**0**

NOTES

This is an annual program and funds will be requested each year. There is no backlog and bridge structures are in a state of good repair. Operations is responsible for preventive minor maintenance on bridges/culverts such as minor grading, patching, sealing of bridge approaches and bridge decks, and siltation removal from culverts, while Environmental Services is responsible for its inspection/rehabilitation and replacement.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	26,300	0	0	0	0	0	0
TOTAL FUNDING	**26,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Life cycle resides in Environmental Services ($52,600) and is split 50% for Roads and 50% for Parks.

2022 PROJECT FUNDING REQUEST FORM

Number: 22158

Project Cost: $54,900

Project Name: **Court Resurfacing / Reconstruction / Maintenance**

Repair/Replace

Commission: Community Services

Useful Life: 7 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Dean McDermid

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repair and resurfacing of tennis and basketball courts based on condition assessment.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	53,936	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	53,936	0
HST Impact:	949	0
Total Project Cost:	**54,900**	**0**

NOTES

This is an asset based program and is subject to condition assessment. Tennis club court replacement/rehabilitation will proceed subject to satisfactory club finance review and agreement of the club to undertake repayment. There has been deferments of court resurfacing/replacement at some tennis clubs but it is not causing any safety issues. The City is responsible for 50% of the annual maintenance of the clay courts at Unionville Tennis Club upto a maximum of $3k per court (total of $9k per year for 3 clay courts).

SOURCE(S) OF FUNDING ($)		Components				
Funding Type	Budget	Clay Tennis Courts	Basketball Courts		TOTAL	Future Phases
Operating Funded Life Cycle	54,900	9,000	45,900	0	54,900	0
TOTAL FUNDING	**54,900**				**54,900**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 126,900

Amount Incl HST 54,900

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Deferred Boxgrove ($15K), Carlton ($31K) due to condition assessment and Reesor ($23K) due to the construction of an inflatable structure.

2022 COURT RESURFACING

UPDATED:
June 3, 2021

Inventory Description	Facility	Project Cost Inc. HST Impact	Notes
Court Surfacing - Tennis/ Basketball	Berczy Park South - Basketball #1 (full) - Resurface	7,940	
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #5 (Clay)	3,000	Club - Unionville Tennis Club
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #6 (Clay)	3,000	Club - Unionville Tennis Club
Court Surfacing - Tennis/ Basketball	Carlton Park - Tennis #7 (Clay)	3,000	Club - Unionville Tennis Club
Court Surfacing - Tennis/ Basketball	Cornell Basketball #1 (half) - Resurface	6,437	
Court Surfacing - Tennis/ Basketball	Elson Basketball #1 (half) - Resurface	8,343	
Court Surfacing - Tennis/ Basketball	Highgate - Basketball (Full) - Resurface	9,528	
Court Surfacing - Tennis/ Basketball	John Canning Basketball #1 (half) - Resurface	3,811	
Court Surfacing - Tennis/ Basketball	Johnsview Park - Basketball #1 (full) - Resurface	9,825	
	Total	**54,885**	
	Rounded Off	**54,900**	

Summary:

Resurface or Maintenance	Component	Project Cost Inc. HST Impact	Notes
Resurface	Basketball - Berczy South #1, Cornell #1, Elson #1, Highgate #1, John Canning #1 & Johnsview #1	45,885	
Clay Court Maintenance	Carlton Park - Tennis #5, #6 & #7 (Clay)	9,000	Reimbursement to Unionville Tennis Club
	Total	**54,885**	
	Rounded Off	**54,900**	

2022 PROJECT FUNDING REQUEST FORM

Number: 22159

Project Cost: $33,800

Project Name: **Fence (Tennis Courts)**

Repair/Replace

Commission: Community Services

Useful Life: 35 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Dean McDermid

Cost Validation: Internal peer review

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of perimeter fencing of tennis courts helps to protect the playing surfaces from non-court uses while maintaining the limits of play and allowing securement of the courts when not available for users.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	33,220	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	33,220	0
HST Impact:	585	0
Total Project Cost:	**33,800**	**0**

NOTES

This is an asset based program and is subject to condition assessment. The 2022 location is Box Grove Tennis Courts. This is an asset based program and is subject to condition assessment. Unit cost is based on original cost of construction plus inflation. There is no substantial backlog and the fences are in a state of good repair.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	33,800	0	0	0	0	0	0
TOTAL FUNDING	**33,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22160

Project Cost: $178,500

Project Name: **City Park Furniture / Amenities**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Operations - Parks

Category: Annual

Project Mgr: Matthew Busato

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This is an annual replacement program to provide for the refurbishment or replacement of City furniture in parks and Civic property such as benches, games tables, picnic tables and umbrellas, waste receptacles, bike racks, banner arms, self-watering planters and hanging baskets. Project also includes refurbishment or replacement of existing Moloks, seasonal waste containers, tree grates and bollards/p gates. Moloks at large community parks are replaced if damaged as they are effective at these locations. Other Moloks damaged are being replaced with regular receptacles.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	175,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	175,400	0
HST Impact:	3,087	0
Total Project Cost:	**178,500**	**0**

NOTES

This is an annual program and funds will be requested each year. There is no substantial backlog and assets are in a state of good repair. Amount requested is consistent with the 2021 Life Cycle Reserve Study. Replacements are based on annual condition assessments at all City parks, trails, greenspace and facilities. Includes benches, waste receptacles/recycling and concrete pads for both, bike racks, planters and hanging baskets, P Gates, picnic table frames and wood/hardware, banner arms, parks information signs and plaques, seasonal decoration (LED trees), Muskoka chairs.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	178,500	0	0	0	0	0	0
TOTAL FUNDING	**178,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	178,500
Amount Incl HST	178,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22161

Project Cost: $17,200

Project Name: **Replace Recycling Containers**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Matt Busato

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of aging recycle containers with waste containers.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	16,900	89,897
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	16,900	89,897
HST Impact:	297	1,582
Total Project Cost:	**17,200**	**91,500**

NOTES

There are approximately 500 seasonal recycling bins in parks. Project will replace aging recycling containers with standard seasonal waste receptacles driven by close to 100% contamination of park recycling. This is a multi year project and will be requested each year until completed. Amount requested is consistent with the 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	17,200	0	0	0	0	0	91,500
TOTAL FUNDING	**17,200**					**0**	**91,500**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	17,200
Amount Incl HST	17,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22162

Project Cost: $12,200

Project Name: **Block Pruning Initiative - Year 3 of 3**

Repair/Replace

Commission: Community Services

Useful Life: 0 Pre Approval: ☐

Department: Operations - Parks

Category: Major

Project Mgr: David Plant

Cost Validation: Third party estimate

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

The City owns approximately 112,800 street trees.This is a 3 year capital project to prune City trees proactively to improve storm damage resistance and reduce residents complaints which currently are over 2,700 per year. This program will address proactive street tree pruning of 23,333 trees per year (total of 70,000 trees during the 3 year program).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	12,161	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	12,161	0
HST Impact:	0	0
Total Project Cost:	**12,200**	**0**

NOTES

Phase 2 is 91% complete with 2,300 trees remaining. The remaining 42,800 trees will be addressed over 5 years at which time all City trees will be part of an 8 year Block Pruning cycle moving forward. This request is for the HST impact (1.76%) which is not eligible for ICIP grant funding and will be funded from the Trees for Tomorrow Reserve. The total pre-tax cost of the block pruning will be wholly funded through the ICIP grant in 2021. Currently, the tree inventory is not in a state of good repair & backlog led to this proactive approach to updating the asset.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Other Internal	12,200	0	0	0	0	0	0
TOTAL FUNDING	**12,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22163

Project Cost: $370,500

Project Name: **Boulevard/Park Trees Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 50 Pre Approval: ☐

Department: Operations - Parks

Category: Annual

Project Mgr: Miles Peart

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Boulevard/Park replacement tree planting is an annual program which enables the City to replace approximately 700 dead, diseased or damaged trees. Cost per tree is approximately $424 to plant with 2 year warranty and $106 to grind the stump in preparation for planting. This funding will be requested each year to address tree loss through damage, accidents and normal mortality.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	364,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	364,100	0
HST Impact:	6,408	0
Total Project Cost:	**370,500**	**0**

NOTES

This is an annual program and funds will be requested each year. Current backlog is expected to be 1,000 trees by the end of 2021. This contract will address 700 and reduce the backlog to 300. Cost to address backlog is $150K. Operations will monitor tree losses through 2021 and should the average trend continue the life cycle will be increased in 2022 to reflect replacements required which currently supports an increase of the yearly capital project to 1,000 tree replacements annually. This increase will keep pace with tree loss and tree replacement.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	370,500	0	0	0	0	0	0
TOTAL FUNDING	**370,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	370,500
Amount Incl HST	370,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22164

Project Cost: $84,700

Project Name: **Markham Trees for Tomorrow**

New Asset/Expansion

Commission: Community Services

Department: Operations - Parks

Project Mgr: Matt Busato

Useful Life: 50 Pre Approval: ☐

Category: Annual

Cost Validation: Internal peer review

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Initiated in 2007, the program focuses on supporting canopy core initiatives through the engagement of community and corporate volunteers and Non-Government Organizations. The program scope is developed annually based on changing priorities that focus on education to promote and maintain the health and longevity of our urban forest. To date, over 400,000 trees have been planted citywide since the program's inception. This is an annual program and funds will be requested each year.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	83,250	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	83,250	0
HST Impact:	1,465	0
Total Project Cost:	**84,700**	**0**

NOTES

This program facilitates tree planting projects that incorporate community engagement and partnership opportunities.
2019-2022 Goals -1. Increase tree canopy by 30%; 2.Partnerships 3. Outreach, Education, Promotions. Focal point for 2022 will be to resume 10,000 Trees project and corporate and community engagement projects to promote education and stewardship opportunities. Internal chargeback for 1-150 day staff. Funding source is Trees for Tomorrow Reserve (balance as at 31-Jul-21 is $700K)

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Other Internal	84,700	0	0	0	0	0	0
TOTAL FUNDING	**84,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22165

Project Cost: $143,100

Project Name: **Sportsfield Maintenance & Reconstruction**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Operations - Parks

Category: Annual

Project Mgr: James Bingham

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Life cycle program includes top dressing, grass seed, sod, fertilizer, and irrigation upgrades as per contracts. Funds within this project may be reallocated to sportsfield maintenance materials and services that require immediate attention unforeseen at time of submission such as sodding of damaged fields. Locations to be determined each spring and again at the end of playing season based on inspection.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	140,600	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	140,600	0
HST Impact:	2,475	0
Total Project Cost:	**143,100**	**0**

NOTES

This is an annual program and funds will be requested each year. There are 212 sportsfields existing in various parks and schools which consist of baseball diamonds, rugby, soccer, cricket and football fields. The lack of weeds on City fields is due largely to promoting healthy turf through sound cultural practices tailored to each field based on requirements. This is an annual program and funding will be requested each year. There is no substantial backlog within this program and assets are in a state of good repair. Project cost is based on existing contracts. 3 year avg is $127K.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	143,100	0	0	0	0	0	0
TOTAL FUNDING	**143,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 143,100

Amount Incl HST 143,100

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22166

Project Cost: $127,200

Project Name: **Swan Lake Shoreline Restoration**

Repair/Replace

Commission: Community Services

Useful Life: 50 Pre Approval: ☐

Department: Operations - Parks

Category: Minor

Project Mgr: Matt Busato

Cost Validation: Third party estimate

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Following consultation exercise with TRCA the modification of the shoreline will remove/control invasive species and modify the shoreline to reduce Canada Geese from walking onto land while creating opportunities to view the lake from a larger perspective.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	110,000	0
Internal Charges:	0	0
External Consulting:	15,000	0
Sub Total:	125,000	0
HST Impact:	2,200	0
Total Project Cost:	**127,200**	**0**

NOTES

Swan Lake is the subject of concurrent studies for water quality (ES) and shoreline modification (Ops) working with an active community group to improve the overall quality of Swan Lake as a ward 5 amenity. Shoreline modifications will focus on natural products with the least invasive approach following the success realized at Toogood Pond. Construction costs are estimated based on feedback from the TRCA and are subject to change depending on scope of work.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	127,200	0	0	0	0	0	0
TOTAL FUNDING	**127,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22167

Project Cost: $10,200

Project Name: **Corporate Fleet Growth - Non-Fleet**

New Asset/Expansion

Commission: Community Services

Useful Life: 7 Pre Approval: ☐

Department: Operations - Fleet

Category: Annual

Project Mgr: Raymond Law/Peter Englezakos

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To purchase growth related Non- Fleet equipment such as push mowers, portable generators, cord trimmers, leaf blowers and other small tools.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	10,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	10,000	0
HST Impact:	176	0
Total Project Cost:	**10,200**	**0**

NOTES

Additional equipment for additional seasonal staff based on growth. The 2 year average is $9.6K.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	10,200	0	0	0	0	0	0
TOTAL FUNDING	**10,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Public Works - Fleet	2022	10,200	385,300
TOTAL FUNDING		10,200	385,300

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22168

Project Cost: $37,800

Project Name: **Corporate Fleet Refurbishing**

Repair/Replace

Commission: Community Services

Useful Life: 3 Pre Approval: ☐

Department: Operations - Fleet

Category: Annual

Project Mgr: Raymond Law/Peter Englezakos

Cost Validation: Internal peer review

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Equipment and vehicles require periodic refurbishing, rust proofing and corrosion protection to meet the Ministry of Transportation safety requirements and to ensure life cycle requirements are met. Program helps to mitigate maintenance costs and keeps the equipment in a state of good repair.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	37,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	37,100	0
HST Impact:	653	0
Total Project Cost:	**37,800**	**0**

NOTES

Project includes rust protection, body work and painting. Requirement Validation - condition assessment and legislative compliance. This is an annual program. 3 year average is $36K. Amount requested is consistent with Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	37,800	0	0	0	0	0	0
TOTAL FUNDING	**37,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	37,800
Amount Incl HST	37,800
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22169

Project Cost: $1,980,700

Project Name: **Corporate Fleet Replacement - Fire**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☐

Department: Operations - Fleet

Category: Major

Project Mgr: Chris Nearing/Raymond Law

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments were consulted with respect to the units in this program. Total units for replacement - 6 units (5 Vehicles, 1 Apparatus).

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	1,946,412	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	1,946,412	0
HST Impact:	34,257	0
Total Project Cost:	**1,980,700**	**0**

NOTES

Useful life varies from 5 to 10 years based on units types. Requirement validation - Condition assessment, vehicle reliability & down time, & operating costs. Units specified in this replacement program will be purchased with the most recent technology available at time of purchase providing maximized fuel economy with minimal emissions. Project completion estimated at Q2/Q3 2023 for apparatus units due to time required to build the vehicles (built in USA). USD foreign exchange used was $1.27 USD to CDN - USD $1,274,642

SOURCE(S) OF FUNDING ($)		Components				
Funding Type	Budget	Fire	Fire Apparatus		TOTAL	Future Phases
Operating Funded Life Cycle	1,980,700	361,900	1,618,800	0	1,980,700	0
TOTAL FUNDING	**1,980,700**				**1,980,700**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	2,217,400
Amount Incl HST	1,980,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Corporate Fleet Replacement - Fire
2022 Capital Request	$1,980,700
Funding Source	Life Cycle Reserve
Description of Program	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments are consulted with respect to the units in this program. Total units for replacement - 6 units
Project Rationale	2022 Annual Fleet Replacement Program is based on the Council adopted Corporate Fleet Policy Guidelines and condition assessment. To maintain current service levels for all user departments.
Legislative Requirement	n/a
History	
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	
Alignment to the Strategic Plan	Providing reliable fleet units allowing effective municipal services to local residents and businesses. Promoting the continued use of new technology along with alternate energy solutions that reduce fuel consumption and improved fleet efficiencies with reductions in overall fleet emissions.

2022 Corporate Fleet Replacement - Fire

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Category	Model Year	2022 Cost	Comments
9096	FIRE COMMAND VAN	109,856		FIRE-1- Fire	2014	88,913	Specification change to cab/chassis with service body instead of Transit van. Transit vans do not match service delivery method and approaches as anticipated. Cost is approximately the same.
9097	FIRE COMMAND VAN	119,156		FIRE-1- Fire	2015	88,913	Accelerated replacement by 1 year, to synchronize procurement with 9096 to ensure standardization between the two units. Retain 9097 as replacement for 9950 for 5 years.
9501	COMPACT VAN	77,249		FIRE-1- Fire	2012	38,933	Deferred from 2020 to 2022
9607	FLASH OVER SIMULATOR	N/A		FIRE-1- Fire	2000	88,740	Deferred from 2020 to 2022
9950	FULL SIZE WINDOW VAN	105,496		FIRE-1- Fire	2008	50,114	Defer replacement by 5 years, while using former 9097.
9996	105' SMEAL AERIAL SPARTAN GLADIATOR	75,177	4,155	FIRE-1- Fire Apparatus	2012	1,590,798	US$ conversion - 1.27; Formerly Unit 9896 - change effective Oct 27, 2020
					Total Pre-Tax	**1,946,411**	
					HST impact	**34,257**	
					Total Project Cost	**1,980,668**	
					Rounded Off Project Cost	**1,980,700**	

PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
5	Fire - Licensed	355,613	6,259	**361,872**
1	Fire Apparatus	1,590,798	27,998	**1,618,796**
				-
		1,946,411	**34,257**	**1,980,668**
6			**Rounded Off - Project Cost**	**1,980,700**

2022 PROJECT FUNDING REQUEST FORM

Number: 22170

Project Cost: $2,679,000

Project Name: **Corporate Fleet Replacement - Non-Fire**

Repair/Replace

Commission: Community Services

Useful Life: 5 Pre Approval: ☑

Department: Operations - Fleet

Category: Major

Project Mgr: Raymond Law/Peter Englezakos

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Multiple(specify)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments were consulted with respect to the units in this program. Total units - 44 units

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,632,669	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	2,632,669	0
HST Impact:	46,335	0
Total Project Cost:	**2,679,000**	**0**

NOTES

Useful life varies - 4 to 12 years based on units types. Operations-Non Fleet ($54k) includes cord trimmers, chainsaws, blowers, etc. Cost Validation- Most recent purchase of similar unit type; Requirement validation - Condition assessment, vehicle reliability & down time, & operating costs. Units specified in this program will be purchased with the most recent technology available at time of purchase providing maximized fuel economy with minimal emissions. Unit 5121 will be switched with a High Roof Cargo van already purchased for Bylaws - Animal Services (project #21185).

SOURCE(S) OF FUNDING ($)		Components					Future
Funding Type	Budget	Licensed	Non Licensed	Non Fleet		TOTAL	Phases
Operating Funded Life Cycle	2,679,000	1,851,600	773,400	54,000	0	2,679,000	0
TOTAL FUNDING	**2,679,000**					**2,679,000**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	-$9,500	$0	-$9,500

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	3,321,200
Amount Incl HST	2,679,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Corporate Fleet Replacement – Non Fire
2022 Capital Request	$2,679,000
Funding Source	Life Cycle Reserve
Description of Program	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments are consulted with respect to the units in this program. Total units - 44 units
Project Rationale	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. To maintain current service levels for all users department
Legislative Requirement	n/a
History	
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	n/a
Alignment to the Strategic Plan	Providing reliable fleet units allowing effective municipal services to local residents and businesses. Promoting the continued use of new technology along with alternate energy solutions that reduce fuel consumption and improved fleet efficiencies with reductions in overall fleet emissions.

2022 Corporate Fleet Replacement - Non-Fire

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2022 Cost	Comments
1240	COMPACT SUV FWD	91,310		OPERATIONS-Licensed	Licensed	2012	39,981	Deferred from 2020 to 2022; Originally approved Project 21140, vehicle to be transferred to Engineering; replacement to be deferred to 2022; based on 224-T-16; conversion to hybrid
1246	FULL SIZE CREW CAB PICK UP 4X4	167,840		OPERATIONS-Licensed	Licensed	2014	39,575	
1247	FULL SIZE REG CAB PICK UP 4X4	276,689		OPERATIONS-Licensed	Licensed	2014	43,478	
1250	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	88,162		OPERATIONS-Licensed	Licensed	2014	96,540	
1275	5M TONNE CRANE TRUCK 39,000 GVW	77,394		OPERATIONS-Licensed	Licensed	2004	275,910	Life cycle for this unit was set longer than other 5-ton trucks because it was anticipated that because it is specialized, it would have less use. Changes in service delivery model has seen increased usage of this vehicle
1435	COMPACT TRACTOR 4X4		3,041	SIDEWALK-Non Licensed	Non Licensed	2014	54,382	
1437	COMPACT WHEEL LOADER		5,750	OPERATIONS-Non Licensed	Non Licensed	2010	134,028	
1968	RINGOMATIC-VACUUM EXCAVATOR TRAILER MOUNTED		511	OPERATIONS-Licensed	Licensed	2012	96,900	
3319	COMPACT EXTENDED CAB PICK UP	79,346		OPERATIONS-Licensed	Licensed	2014	37,902	Conversion to crew cab; cost based on MSRP
3329	FULL SIZE PICK UP 4X4 WITH 8' ARCTIC PLOW	116,961		OPERATIONS-Licensed	Licensed	2013	53,557	Deferred from 2021 to 2022
3336	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	70,635		OPERATIONS / PARKS-Licensed	Licensed	2014	96,540	
3338	COMPACT EXTENDED CAB PICK UP	96,225		OPERATIONS-Licensed	Licensed	2014	37,902	Conversion to crew cab; cost based on MSRP
3339	COMPACT EXTENDED CAB PICK UP	91,916		OPERATIONS-Licensed	Licensed	2013	37,902	Deferred from 2021 to 2022; conversion to crew cab; cost based on MSRP
3352	FULL SIZE PICK UP 4X4 C/W PLOW	74,501		OPERATIONS-Licensed	Licensed	2014	53,557	
3353	FULL SIZE PICK UP 4X4 C/W PLOW	107,880		OPERATIONS-Licensed	Licensed	2014	53,557	
3357	FULL SIZE PICK UP 4X4 C/W PLOW	81,673		OPERATIONS-Licensed	Licensed	2014	53,557	
3374	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	95,057		OPERATIONS-Licensed	Licensed	2014	96,540	
3375	19,500 GVW FLATBED WITH 9' ARCTIC PLOW	77,167		OPERATIONS-Licensed	Licensed	2014	96,540	
3431	COMPACT WHEEL LOADER		3,353	OPERATIONS / PARKS-Non Licensed	Non Licensed	2014	134,028	
3447	TRACTOR 4X4 62 PTO HP C/W CAB		5,090	OPERATIONS / PARKS-Non Licensed	Non Licensed	2010	56,421	

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2022 Cost	Comments
3448	TRACTOR 4X4 62 PTO HP C/W CAB		3,877	OPERATIONS / PARKS-Non Licensed	Non Licensed	2010	56,421	
3461	TRACTOR 2WD 56 HP C/W CAB		3,142	OPERATIONS-Non Licensed	Non Licensed	2007	44,483	Deferred from 2019 to 2022
3464	TRACTOR 2WD 56 HP C/W CAB		4,148	OPERATIONS-Non Licensed	Non Licensed	2007	44,483	Deferred from 2019 to 2022
3479	FRONT MOUNT 61" MOWER	N/A		OPERATIONS / PARKS-Non Licensed	Non Licensed	2014	10,538	Deferred from 2019 to 2022
3484	ZERO TURN 60" REAR DISCHARGE DIESEL		731	OPERATIONS-Non Licensed	Non Licensed	2012	19,654	Deferred from 2020 to 2022
3486	STUMP CUTTER		605	OPERATIONS / PARKS-Non Licensed	Non Licensed	2001	52,311	Deferred from 2019 to 2022
3931	FORKLIFT		3,620	OPERATIONS-Non Licensed	Non Licensed	1988	34,889	
4037	ROTARY MOWER 72" 4WD	N/A		OPERATIONS-Non Licensed	Non Licensed	2014	24,948	
4038	ZERO TURN 60" SIDE DISCHARGE DIESEL		1,734	OPERATIONS-Non Licensed	Non Licensed	2014	19,196	
4129	20' TANDEM LANDSCAPE TRAILER	N/A		OPERATIONS-Licensed	Licensed	2010	8,877	Deferred from 2020 to 2022
4328	ROTARY MOWER 11' CUT 4WD	N/A		OPERATIONS / PARKS-Non Licensed	Non Licensed	2014	74,231	
4494	20' TANDEM LANDSCAPE TRAILER	N/A		OPERATIONS-Licensed	Licensed	2011	8,877	Deferred from 2021 to 2022
5121	FULL SIZE CARGO VAN	56,434		OPERATIONS-Licensed	Licensed	2013	39,535	Deferred from 2021 to 2022
5130	TOYOTA PRIUS HYBRID	94,549		OPERATIONS-Licensed	Licensed	2008	49,263	Project 18247 closed, return to source; Re-submit in 2022 as a replacement of BEV; cost of $46,800 based on 192-Q-20
5132	TOYOTA PRIUS HYBRID	134,097		OPERATIONS-Licensed	Licensed	2008	49,263	Project 18247 closed, return to source; Resubmit in 2022 as a replacement of BEV; cost of $46,800 based on 192-Q-20
5134	TOYOTA PRIUS HYBRID	81,206		CLERK-1-Licensed	Licensed	2008	49,263	Project 18247 closed, return to source; Resubmit in 2022 as a replacement of BEV; cost of $46,800 based on 192-Q-20
5350	FULL SIZE PICK UP-GMC SIERRA 1500	295,625		MUSEM-1-Licensed	Licensed	2008	37,266	Previously approved Project 21140; re-submit in 2022 cost based on 102-T-21A; specification change to full battery electric vehicle
5350	FULL SIZE PICK UP-GMC SIERRA 1500 - Specification change to full battery electric vehicle				Licensed		44,784	Specification change to full battery electric vehicle
6133	COMPACT SUV FWD HYBRID	99,072		ENFOR LIC-Licensed	Licensed	2011	55,661	Deferred from 2019 to 2022; conversion to PHEV hybrid - Bylaw vehicle

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Facility	Category	Model Year	2022 Cost	Comments
6134	COMPACT VAN	79,578		ENFOR LIC-Licensed	Licensed	2013	55,661	Deferred from 2021 to 2022; conversion to PHEV hybrid - Bylaw vehicle
6140	COMPACT SUV FWD HYBRID	91,613		ENFOR LIC-Licensed	Licensed	2011	55,661	Deferred from 2019 to 2022; conversion to PHEV hybrid - Bylaw vehicle
7036	FULL SIZE QUAD CAB PICK UP 4X2	90,653		WASTE-1 / OPERATIONS-Licensed	Licensed	2008	42,022	Deferred from 2017 to 2022; conversion to crew cab
8054	COMPACT SUV FWD	83,770		ENGIN-1-Licensed	Licensed	2011	37,841	Deferred from 2019 to 2022; based on 224-T-16; conversion to hybrid
8055	COMPACT SUV FWD	62,711		ENGIN-1-Licensed	Licensed	2011	37,841	Deferred from 2019 to 2022; based on 224-T-16; conversion to hybrid
8058	COMPACT SUV FWD HYBRID	70,297		ENGIN-1-Licensed	Licensed	2009	37,841	Deferred from 2019 to 2022; Cost PD18245; Based on 224-T-16; conversion to hybrid
All	Operation Non Fleet < $5,000 or Misc			OPERATIONS- Operation Non Fleet < $5,000 or Misc	Operation Non Fleet < $5,000 or Misc	2021	53,060	
						Total Pre-Tax	**2,632,669**	
						HST impact	**46,335**	
						Total Project Cost	**2,679,004**	
						Rounded Off Project Cost	**2,679,000**	

PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
30	Licensed	1,819,595	32,025	**1,851,620**
14	Non Licensed	760,014	13,376	**773,390**
	Operations Non-Fleet <$5,000 or Misc	53,060	934	**53,994**
		2,632,669	**46,335**	**2,679,004**
44			**Rounded Off - Project Cost**	**2,679,000**

2022 PROJECT FUNDING REQUEST FORM

Number: 22171

Project Cost: $664,500

Project Name: **Corporate Fleet Replacement - Waterworks**

Repair/Replace

Commission: Community Services

Useful Life: 8 Pre Approval: ☑

Department: Operations - Fleet

Category: Major

Project Mgr: Raymond Law/Pete Englezakos/Eddy Wu

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Part of the Annual Fleet Replacement Program based on the Council adopted Corporate Fleet policy guidelines. Life Cycle costing targets Optimal Replacement Intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment (10 units) contained in this program have reached or surpassed the ORI. This is funded by Waterworks reserve.

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	653,019	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	653,019	0
HST Impact:	11,493	0
Total Project Cost:	**664,500**	**0**

NOTES

10 units - Requirement Validation - meeting the approved replacement criteria, pending condition assessment. All units in this request will be purchased with the most recent technology available at time of purchase providing maximum fuel economy with minimal emissions.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Licensed (8)	Components: Non Licensed (2)	Components: Non Fleet		TOTAL	Future Phases
Waterworks	664,500	625,900	36,500	2,100	0	664,500	0
TOTAL FUNDING	**664,500**					**664,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	880,900
Amount Incl HST	664,500
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Project	Corporate Fleet Replacement - Waterworks
2022 Capital Request	$664,500
Funding Source	Life Cycle Reserve
Description of Program	2022 Annual Fleet Replacement Program based on the Council adopted Corporate Fleet Policy Guidelines. Life cycle costing targets optimal replacement intervals (ORI) which identifies the most cost effective time period for replacement. All vehicles and equipment contained in this program have reached or surpassed the ORI. User Departments are consulted with respect to the units in this program. Total units for replacement - 10 units
Project Rationale	2022 Annual Fleet Replacement Program is based on the Council adopted Corporate Fleet Policy Guidelines and condition assessment. To maintain current service levels for all user departments.
Legislative Requirement	n/a
History	
Future Phases	This funding is requested each year.
Total Project Cost	n/a
Related Projects	
Related Maps	
Alignment to the Strategic Plan	Providing reliable fleet units allowing effective municipal services to local residents and businesses. Promoting the continued use of new technology along with alternate energy solutions that reduce fuel consumption and improved fleet efficiencies with reductions in overall fleet emissions.

2022 Waterworks Fleet Replacement

Asset ID	Inventory Description	Mileage (Km)	Usage (Hours)	Category	Model Year	2022 Cost	Project Notes
2165	FULL SIZE PICK UP 4X2	98,166		WATER- Licensed	2013	30,031	Deferred from 2021 to 2022
2175	FULL SIZE CARGO VAN	92,191		WATER- Licensed	2014	38,079	
2184	FULL SIZE CARGO VAN	119,201		WATER- Licensed	2014	38,079	
2189	FULL SIZE CARGO VAN	95,678		WATER- Licensed	2012	38,079	Deferred from 2020 to 2022
2191	SEWER CAMERA TRUCK	70,880		WATER- Licensed	2010	385,713	Previously approved Project 20224; Resubmitting in 2022 due to budget shortfall Cost based on 010-T-21
2192	FULL SIZE CARGO VAN	108,031		WATER- Licensed	2014	38,079	
2193	FULL SIZE CARGO VAN	94,049		WATER- Licensed	2014	38,079	
2203	STEAMER		N/A	WATER- Non Licensed (Tools & Equip)	2009	17,962	Deferred from 2021 to 2022;
2204	STEAMER		N/A	WATER- Non Licensed (Tools & Equip)	2011	17,962	Previously approved Project 21141; Re-submit in 2022 due to budget shortfall; Cost based on 2021 Clark-Kavanagh Homes Inc Quote
2252	18' TANDEM LANDSCAPE TRAILER	N/A		WATER- Licensed	2011	8,877	Deferred from 2021 to 2022
	Waterworks Non Fleet < $5,000 or Misc			WATER - Waterworks Non Fleet < $5,000 or Misc		2,081	
					Total Pre-Tax	**653,019**	
					HST impact	**11,493**	
					Total Project Cost	**664,512**	
					Rounded Off Project Cost	**664,500**	

PROJECT COST

No. of Units	Category	Pre-Tax	HST Impact	Project Cost
8	Licensed	615,014	10,824	**625,838**
2	Non Licensed (Tools & Equipment)	35,924	632	**36,556**
	Waterworks Non Fleet < $5,000 or Misc	2,081	37	**2,118**
		653,019	**11,493**	**664,512**
10			**Rounded Off - Project Cost**	**664,500**

2022 PROJECT FUNDING REQUEST FORM

Number: 22173

Project Cost: $40,500

Project Name: **New Fleet - Parks**

New Asset/Expansion

Commission: Community Services

Useful Life: 8 Pre Approval: ☐

Department: Operations - Fleet

Category: Minor

Project Mgr: Raymond Law/Peter Englezakos

Cost Validation: Other(specify in Notes)

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Purchase and acquisition of two (2) Kubota Zero Turn Mowers (per current specs), and one (1) Galvanized Equipment Trailer with tool racks (per current specs).

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PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	39,800	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	39,800	0
HST Impact:	700	0
Total Project Cost:	**40,500**	**0**

NOTES

Zero Turn Mowers (2) - $31,960, Equipment Trailer (1) $8540. Growth of 2021/2022 in community parks, neighborhood parks in Ward 4,5,7 requires an additional trim crew. Current hectares per crew is 20 and pending growth in late 2021 is over 21 ha. While we have added wide area mowers we have not added zero turns and new parks are smaller and require more small machines and less wide area mowers. Parks projected growth for 2022 is 3.97 hectares.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget	Zero Turn Mowers	Trailer			TOTAL	Future Phases
DCA	40,500	31,960	8,540	0	0	40,500	0
TOTAL FUNDING	**40,500**					**40,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$10,700	$0	$10,700

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study
Public Works - Fleet	2022	40,500	385,300
TOTAL FUNDING		40,500	385,300

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22174

Project Cost: $41,700

Project Name: **New Fleet - Survey & Utility**

New Asset/Expansion

Commission: Community Services

Department: Operations - Fleet

Project Mgr: Raymond Law/Peter Englezakos

Useful Life: 8 Pre Approval: ☐

Category: Minor

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Purchase and acquisition of one (1) full size pick up truck for the usage of staff in the Utility and ROW team. The vehicle should be equipped with a beacon light, TC-12 arrow board and be able to transport pylons or tc-54's to help facilitate traffic staging (very short duration work as defined by OTM Book 7).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	41,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	41,000	0
HST Impact:	722	0
Total Project Cost:	**41,700**	**0**

NOTES

As part of the JD's for the ROW technician, Technical Coordinators and Utility Coordinators, they are required to do inspections on site as part of the permitting process. There are times when traffic control is required on site (e.g. doing a culvert inspection, streetlights, utilities related site inspection on a rural road with an operating speed of 60 km/h)

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
DCA	41,700	0	0	0	0	0	0
TOTAL FUNDING	**41,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$3,880	$0	$3,880

DCA/LIFE CYCLE DETAILS

DCA

Name	Year	Amount	Amount in Study
Public Works - Fleet	2022	41,700	385,300
TOTAL FUNDING		41,700	385,300

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22175

Project Cost: $34,500

Project Name: **New Fleet - Waterworks**

New Asset/Expansion

Commission: Community Services

Useful Life: 8 Pre Approval: ☐

Department: Operations - Fleet

Category: Minor

Project Mgr: Raymond Law/Peter Englezakos

Cost Validation: Third party estimate

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hydraulic dewatering trailer, with motor, power pack and accessories for external tools and the ability to operate mainline valves. The current dewatering and valve turning trailer can be pulled by any van, and has been utilized with valve exercising programs, and the running of hydraulic tools, such as the jack hammer, hydraulic chainsaw for cutting watermain.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	33,950	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	33,950	0
HST Impact:	598	0
Total Project Cost:	**34,500**	**0**

NOTES

The need is driven by growth and the corresponding increase in valves and infrastructure requiring preventative maintenance. With the increased hours of operators time going to Ontario One Call requests, water sampling, hydrant inspections and maintenance, the trailers offer efficiencies relating to the valve preventative maintenance program.These trailers have also been used with the Operator's standby duties, where previously a second operator would have been called in to assist with difficult valving situations, where further damage to public/private property could be occurring.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	34,500	0	0	0	0	0	0
TOTAL FUNDING	**34,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$2,550	$0	$2,550

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22176

Project Cost: $114,600

Project Name: **German Mills Meadow - Equipment Maintenance**

Repair/Replace

Commission: Community Services

Useful Life: 2 Pre Approval: ☐

Department: Operations - Utility Inspection & Survey

Category: Major

Project Mgr: Negar Mahmoudi

Cost Validation: Internal peer review

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Repairs to components of the gas collection and environmental monitoring systems at the German Mills Meadow and Natural Habitat to ensure that the appropriate protection is provided to the abutting residential properties and German Mills Creek.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	90,080	0
Internal Charges:	0	0
External Consulting:	22,520	0
Sub Total:	112,600	0
HST Impact:	1,982	0
Total Project Cost:	**114,600**	**0**

NOTES

This project is for the maintenance of the equipment that performs the monitoring. A consultant will be hired to inspect and assess the monitoring equipment and recommend rehabilitation work that is required. Consulting is 25% of rehabilitation works. This program is required every two years. Amount requested is consistent with Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	114,600	0	0	0	0	0	0
TOTAL FUNDING	**114,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	114,600
Amount Incl HST	114,600
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22177

Project Cost: $40,000

Project Name: **Survey Monument Replacement**

Repair/Replace

Commission: Community Services

Useful Life: 60 Pre Approval: ☐

Department: Operations - Utility Inspection & Survey

Category: Annual

Project Mgr: Negar Mahmoudi

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to replace damaged survey monuments to maintain integrity of City's survey control network and maintain the assets in a state of good repair. A well developed survey control network will help to achieve an efficient engineering design and construction program and also reduce layout time.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	39,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	39,300	0
HST Impact:	692	0
Total Project Cost:	**40,000**	**0**

NOTES

The survey monument replacement is an annual program to maintain the assets in state of good repair. Total approx. survey monuments in the City is 2,645. Addition through subdivision assumption process approx. 35/year. Replacement plan-Approx. 28 horizontal monument (avg. $1000/unit) and 2 Benchmarks (avg. $3000/unit). Unit costs are consistent with recent award plus inflation. Life cycle is updated from 45 monuments at $580/unit to match the noted current unit rates. The budget increase is required to maintain the monument in state of good repair.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	40,000	0	0	0	0	0	0
TOTAL FUNDING	**40,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	40,000
Amount Incl HST	40,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22178

Project Cost: $6,200

Project Name: **Installation of Traffic Control Cabinet Wraps**

Repair/Replace

Commission: Community Services

Useful Life: 10 Pre Approval: ☐

Department: Operations - Business & Technical Services

Category: Annual

Project Mgr: Tanya Lewinberg

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Installation of artistic vinyl wraps on Highway 7 recently added, City-owned traffic control cabinets.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	6,118	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	6,118	0
HST Impact:	108	0
Total Project Cost:	**6,200**	**0**

NOTES

7 intersections have new traffic control cabinets. They include: Birchmount & Aviva Way, Birchmount & Frontage, Bur Oak & Roy Rainey, John & Rockingham, Allstate & Centurian, Norman Bethune & Aristotle and Enterprise and Andre De Grasse. Cost per cabinet will be approximately $874.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	6,200	0	0	0	0	0	0
TOTAL FUNDING	**6,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22179

Project Cost: **$81,400**

Project Name: **Public Realm - Gateway Masterplan Update**

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval: ☐

Department: Operations - Business & Technical Services

Project Mgr: Tanya Lewinberg

Category: Major

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Cost Validation: Recent awards

Requirement Validation: Visual inspection

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Markham's Public Realm is a long term program to create dynamic, beautiful public space that reflect our diverse social and cultural identity. Projects include enhancements that promote community engagement, beautification and sustainability, as well as the implementation of the Public Realm Strategy.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	**2022**	**Future Phases**
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	80,000	0
Sub Total:	80,000	0
HST Impact:	1,408	0
Total Project Cost:	**81,400**	**0**

NOTES

Develop the Gateway Master Plan document to include a way forward for the City to coordinate the existing subdivision entrance features in the City as well as a proposal for the development of new subdivision entrance features.

SOURCE(S) OF FUNDING ($)	**Components**						
Funding Type	**Budget**					**TOTAL**	**Future Phases**
Tax	81,400	0	0	0	0	0	0
TOTAL FUNDING	**81,400**					**0**	**0**

OPERATING BUDGET IMPACT	**Personnel**	**Non Personnel**	**Revenues**	**Expenditures/(Revenues)**
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	**Year**	**Amount**	**Amount in Study**

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22180

Project Cost: $36,600

Project Name: **Public Realm - Message Boards**

Studies/Pilot Programs

Commission: Community Services

Department: Operations - Business & Technical Services

Project Mgr: Tanya Lewinberg

Useful Life: 10 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Supply and installation of 12 message boards in various locations across the City. The message boards support community engagement and volunteerism amongst residents.

BUILDING MARKHAM'S FUTURE TOGETHER: Engaged, Diverse & Thriving City

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	36,000	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	36,000	0
HST Impact:	634	0
Total Project Cost:	**36,600**	**0**

NOTES

Initially completed as a pilot program in 2018, it has proven to be a successful program and the City has received several requests from residents for implementation of message boards. Locations include: Ward 8 Ada MacKenzie Park, Ward 8 Armadale Park, Ward 8 Risebrough Park,Ward 8 Randall Park, Ward 5 Swan Lake Park, Ward 5 Grand Cornell Park, Ward 3 Park in the Northeast section of Ward 3, Ward 3 Roseberry Park (Markham Centre), Ward 1 Grandview Park, Ward 1 Royal Orchard Park, Ward 1 Franklin Carmichael Park, Ward 1 Stornoway Park.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	36,600	0	0	0	0	0	0
TOTAL FUNDING	**36,600**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22181

Project Cost: $91,300

Project Name: **Bridges and Culverts - Condition Inspection**

Studies/Pilot Programs

Commission: Community Services

Department: ES - Infrastructure

Project Mgr: Hossein Sharif

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hire a consultant to inspect vehicular bridges (11), pedestrian bridges (31), large culverts (51), small culverts (20) and boardwalks (10) as mandated by Public Transportation and Highway Act - Regulation 104/97 to ensure public safety. A total of 123 structures will be inspected out of 354. This program ensures inspections take place within the regulated timelines. Refer to attached exhibit for inventory of structures and inspection frequency.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	89,700	0
Sub Total:	89,700	0
HST Impact:	1,579	0
Total Project Cost:	**91,300**	**0**

NOTES

This is an annual program. There is no backlog and structures are in a state of good repair.
Operations is responsible for preventative maintenance on bridges/culverts such as minor grading, patching, sealing of approaches and decks, and siltation removal from culverts, while Env. Services is responsible for its inspection, rehabilitation and replacement.
Unit cost is consistent with recent award plus inflation. Amount requested is consistent with 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	91,300	0	0	0	0	0	0
TOTAL FUNDING	**91,300**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	100,400
Amount Incl HST	91,300
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22183

Project Cost: $6,900

Project Name: **MNRF Monitoring for Capital Projects at Water Crossings**

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval: ☐

Department: ES - Infrastructure

Category: Minor

Project Mgr: Hossein Sharif

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Hire a Consultant to prepare reports to the Ministry of Natural Resources and Forestry (MNRF). Program commenced in 2016 as required under Section 17, item 5e of the Endangered Species Act, 2007. Total of 4 site reports are required for 2022.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	6,800	0
Sub Total:	6,800	0
HST Impact:	120	0
Total Project Cost:	**6,900**	**0**

NOTES

This is an annual program. It is a requirement to submit the following to MNRF:
(a) Monitoring Reports every year for 5 years after the completion of capital works at water crossings; and
(b) Mitigation Plan Reports for some structures as determined by MNRF.
3 year average is not applicable as requirement varies each year. Unit cost is consistent with recent award plus inflation. Amount requested is consistent with 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	6,900	0	0	0	0	0	0
TOTAL FUNDING	**6,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	28,100
Amount Incl HST	6,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

22183 - MNRF Monitoring for Capital Projects at Water Crossings										
		Monitoring Reports								
Year	**Project Completed that requires reporting**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023 (Est.)**	**2024 (Est.)**
2015 Construction	8	8	8	8	8	8				
2016 Construction	1		1	1	1	1	1			
2017 Construction	2			2	2	2	2	2		
2018 Construction	1				1	1	1	1	1	
2019 Construction	1					1	1	1	1	1
2020 Construction	0						0	0	0	0
2021 Construction	0							0	0	0
2022 Construction (Estimated)	1								1	1
Sub Total (Monitoring Reports)		***8***	***9***	***11***	***12***	***13***	***5***	***4***	***3***	***2***
Sub Total (Mitigation Plan, where required)						***4***	***7***	***0***	***0***	***0***
Total		**8**	**9**	**11**	**12**	**17**	**12**	**4**	**3**	**2**
Budget Amount		**$15,500**	**$15,900**	**$15,900**	**$16,200**	**$27,000**	**$27,600**	**$6,900**		
Project Number		#16217	#17205	#18268	#19224	#20235	#21146	**#22183**		

2022 PROJECT FUNDING REQUEST FORM

Number: 22184

Project Cost: $288,100

Project Name: **Structures Rehabilitation (3 Structures) - Design & Construction**

Repair/Replace

Commission: Community Services

Useful Life: 15 Pre Approval: ☐

Department: ES - Infrastructure

Category: Major

Project Mgr: Hossein Sharif

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☑ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Design and construction for rehabilitation of 3 structures (2 pedestrian bridges and 1 culvert). P026: Summerdale Park, 70m N / Rosemount Ave; P055: Swan Lake Park 2 77m S/ Swan Park Rd; C222:19th Ave 1000m E/ Warden Ave. See attached map for locations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	233,100	0
Internal Charges:	0	0
External Consulting:	50,000	0
Sub Total:	283,100	0
HST Impact:	4,983	0
Total Project Cost:	**288,100**	**0**

NOTES

This project includes rehabilitation of 3 structures (P026, P055, C222). Amount requested is consistent with 2021 Life Cycle Reserve Study update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Design + Contract Admin	Construction			TOTAL	Future Phases
Gas Tax	288,100	50,900	237,200	0	0	288,100	0
TOTAL FUNDING	**288,100**					**288,100**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

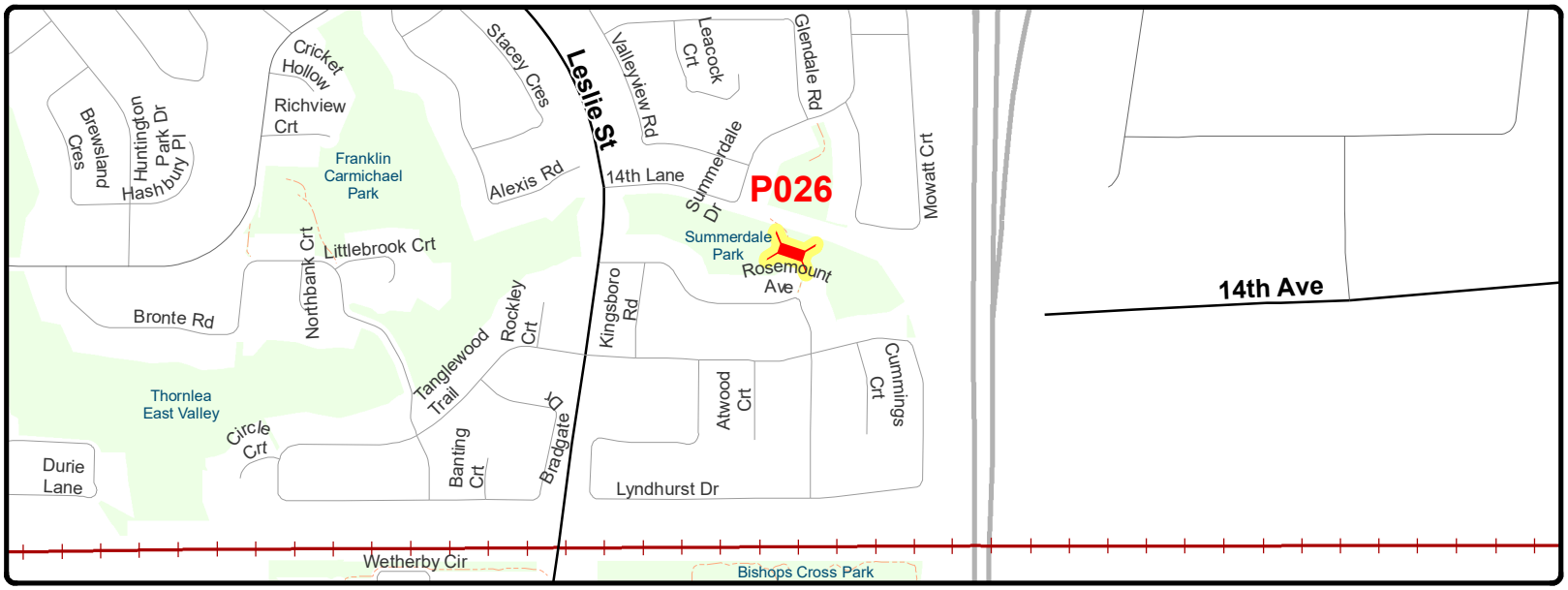
Amount in Study:	316,900
Amount Incl HST	0
Year in the study	2022

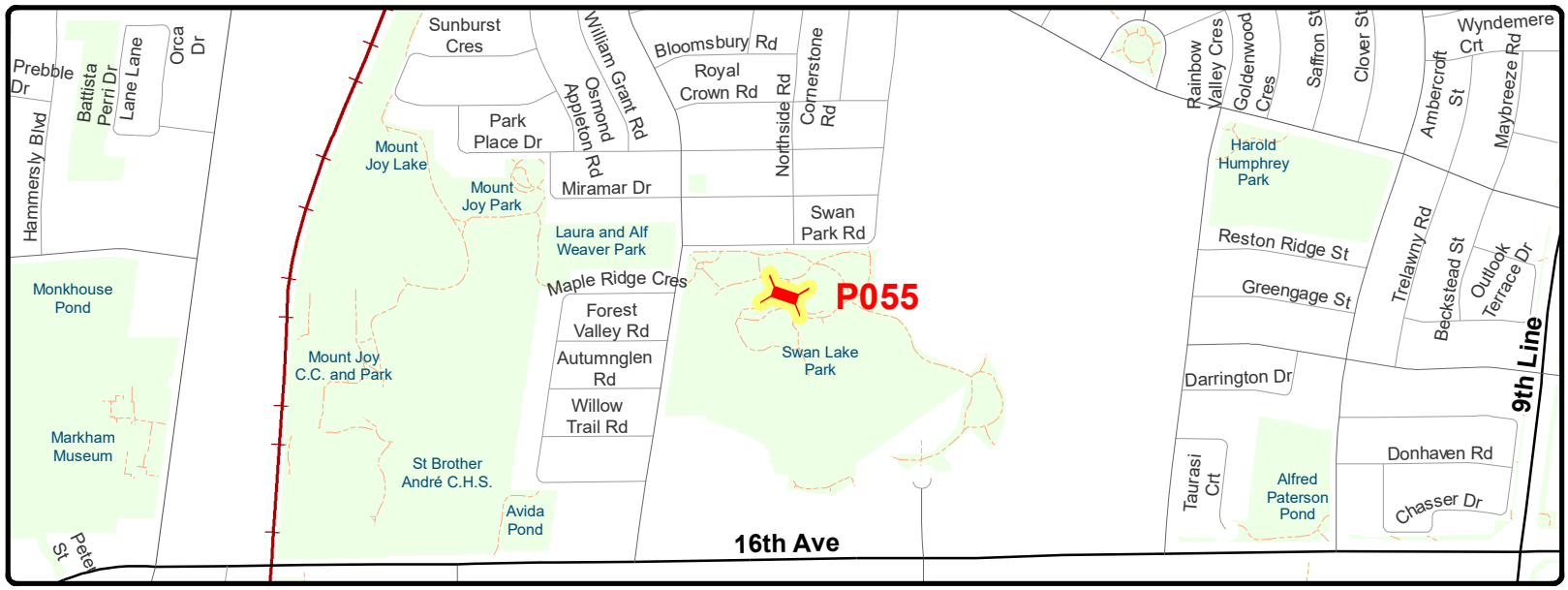
DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

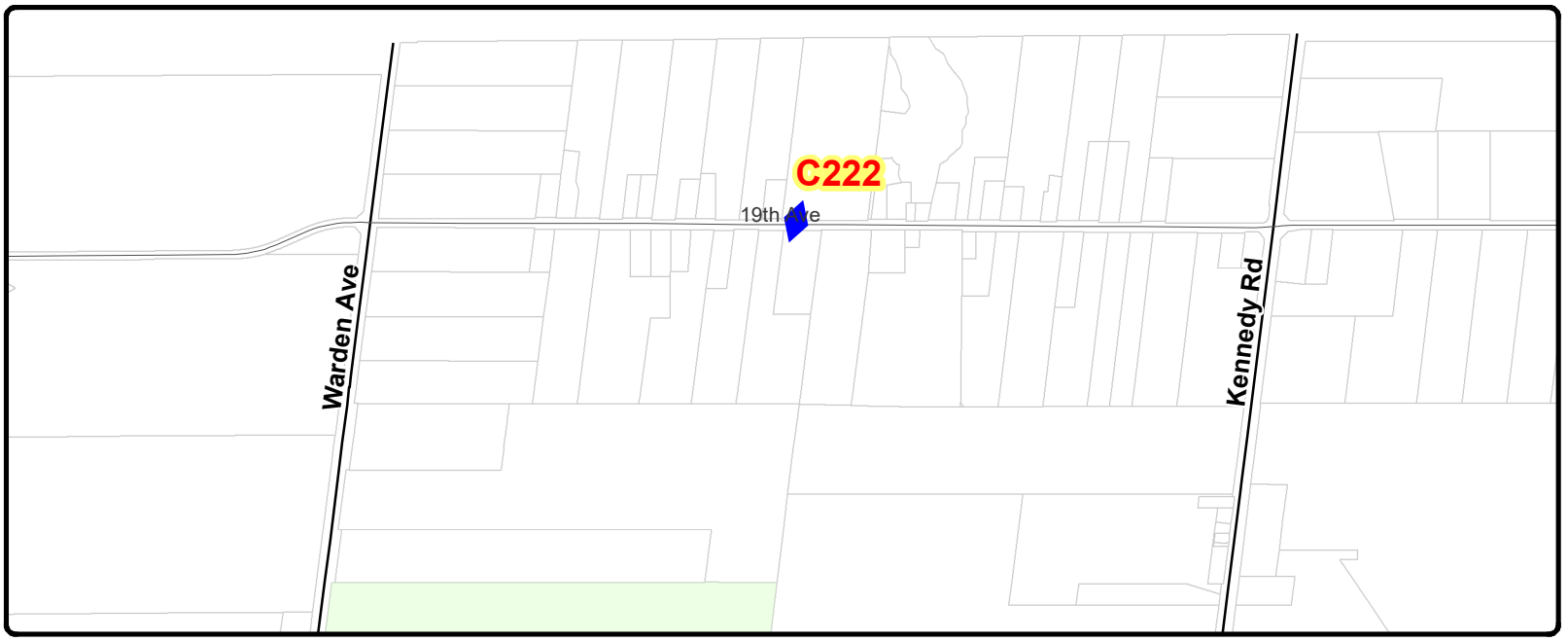
Structures Rehabilitation (3 Structures) - Design & Construction

(Pedestrian Bridge # P026, P055 , Culvert # C222)

ES - Infrastructure (2022)







2022 PROJECT FUNDING REQUEST FORM

Number: 22185

Project Cost: $88,700

Project Name: **Storm Culvert Rehabilitation (2 Structures) - Design**

Repair/Replace

Commission: Community Services

Useful Life: 0 Pre Approval: ☐

Department: ES - Infrastructure

Category: Minor

Project Mgr: Hossein Sharif

Cost Validation: Internal peer review

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Design for rehabilitation of 2 storm sewer culverts. SC04: Clark Ave culvert east of Yonge St.; SC05: Henderson Ave culvert south of Clark Ave. See attached map for locations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	2,672,900
Internal Charges:	0	0
External Consulting:	87,200	0
Sub Total:	87,200	2,672,900
HST Impact:	1,535	47,043
Total Project Cost:	**88,700**	**2,719,900**

NOTES

This project includes design for rehabilitation of 2 storm sewer culverts (SC04 and SC05). Amount requested is consistent with 2021 Life Cycle Reserve Study update. This request is for design only. Construction budget will be requested in 2023. Future cost may change based on design outcome.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	88,700	0	0	0	0	0	2,719,900
TOTAL FUNDING	**88,700**					**0**	**2,719,900**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map
Storm Culvert Rehabilitation (2 Structures) - Design

SC04: Clark Ave E /Yong St
SC05: Henderson Ave S/Clark Ave

Q:\Environmental Services\CAPITAL RIGHT OF WAY\Department Share\00_GIS_Capital Planning\02_Capital Projects\2022_Capital Projects\MXD\2022_Storm Sewers Rehabilitation (SC04 &SC05).mxd

Date: 2021-05-28

2022 PROJECT FUNDING REQUEST FORM

Number: 22186

Project Cost: $568,900

Project Name: **Storm and Sanitary Sewer CCTV Inspection**

Studies/Pilot Programs

Commission: Community Services

Department: ES - Infrastructure

Project Mgr: Philip Zhang

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☑

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to determine the condition of the storm and sanitary sewers using closed circuit television (CCTV) inspection. Pipe rehabilitation/ replacement programs will be developed based on the condition inspection results. 2022 Program includes:
a) 82 km storm sewers out of total 923 km (Life Cycle funded); b) 81 km sanitary sewers out of total 918 km (Waterworks funded)

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	502,100	4,117,925
Internal Charges:	0	0
External Consulting:	57,000	0
Sub Total:	559,100	4,117,925
HST Impact:	9,840	72,475
Total Project Cost:	**568,900**	**4,190,400**

NOTES

This is an annual program (10 year cycle) - Phase 4 of 10. Program will be re-evaluated at the end of the 10 year cycle. External consultant is retained to identify deficiencies on CCTV inspection. Unit cost is consistent with recent award.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Contractor	Components: Consultant			TOTAL	Future Phases
Operating Funded Life Cycle	210,900	181,900	29,000	0	0	210,900	1,554,200
Waterworks	358,000	329,000	29,400	0	0	358,400	2,636,200
TOTAL FUNDING	**568,900**					**569,300**	**4,190,400**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 232,000

Amount Incl HST 210,900

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

STORM AND SANITARY SEWER - CCTV INSPECTION

CLUSTER PLAN - 10 YEARS CYCLE

Legend

CCTV -Clusters

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- Flush Point (Sanitary & Storm)

N W E S

0 1 2 4 km

19TH AVE
ELGIN MILLS RD E
WARDEN AVE
KENNEDY RD
MAJOR MACKENZIE DR E
9TH LINE
DONALD COUSENS PKY
16TH AVE
MCCOWAN RD
HWY 7 W
HWY 7 E
WOODBINE AVE
LESLIE ST
BAYVIEW AVE
YONGE ST
14TH AVE
JOHN ST
DON MILLS RD
STEELES AVE E
MARKHAM RD
BOX GROVE BY-PASS
REESOR RD

FPA#83 FPA#82 FPA#49 FPA#62 FPA#48 FPA#50 FPA#51 FPA#53 FPA#46 FPA#47 FPA#52 FPA#45 FPA#44 FPA#43 FPA#81 FPA#54 FPA#61 FPA#60 FPA#72 FPA#73 FPA#74 FPA#75 FPA#59 FPA#57 FPA#58 FPA#64 FPA#66 FPA#70 FPA#69 FPA#79 FPA#84 FPA#56 FPA#67 FPA#71 FPA#65 FPA#68 FPA#55 FPA#63 FPA#80 FPA#07 FPA#18 FPA#08 FPA#06 FPA#14 FPA#17 FPA#13 FPA#12 FPA#05 FPA#03 FPA#11 FPA#02 FPA#20 FPA#23 FPA#29 FPA#34 FPA#31 FPA#33 FPA#24 FPA#28 FPA#22 FPA#27 FPA#16 FPA#19 FPA#25 FPA#26 FPA#30 FPA#21 FPA#09 FPA#10 FPA#15 FPA#01 FPA#04 FPA#41 FPA#42 FPA#77 FPA#76 FPA#38 FPA#39 FPA#40 FPA#78 FPA#37 FPA#35 FPA#36 FPA#32

Cluster: 10 2025
Cluster: 9 2023
Cluster: 8 2020
Cluster: 7 2019
Cluster: 5 2024
Cluster: 6 2021
Cluster: 2 2027
Cluster: 3 2028
Cluster: 1 2026
Cluster: 4 2022

Date: 2019-07-23

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Program Name: CCTV Inspection Program

Department: Environmental Services

Phase #	Inspection year	Project #	Past	2022	Future	Total	Comments
Phase 1	2019	#19225 / #19248/ 760-510-5300	$524,003			$524,003	52 km storm; 52 km sanitary; 1,400 laterals
Phase 2	2020	#20237	$1,585,200			$1,585,200	90 km storm; 91 km sanitary; 6,946 laterals
Phase 3	2021	*#21149*	*$652,800*			$652,800	80 km storm; 94 km sanitary
Phase 4	2022	***#22186 (This request)***		***$568,900***		$568,900	82 km storm; 81 km sanitary
Phase 5 to Phase 10	2023 - 2028				$4,190,400	$4,190,400	
Total Cost			$2,762,003	$568,900	$4,190,400	$7,521,303	

Description of Program

Program to determine the condition of the storm and sanitary sewers using closed circuit television (CCTV) inspection

What was completed in the past

3 phases have been completed or in progress (out of 10 phases): $2.8M

Current ask

CCTV inspection of 82 km storm sewers (out of 925 km) and 81 km sanitary sewers (out of 918 km) - $568,900

Future Phases

Phases 5 to 10 between 2023 - 2028: $4.19M

Related 2022 Project(s)

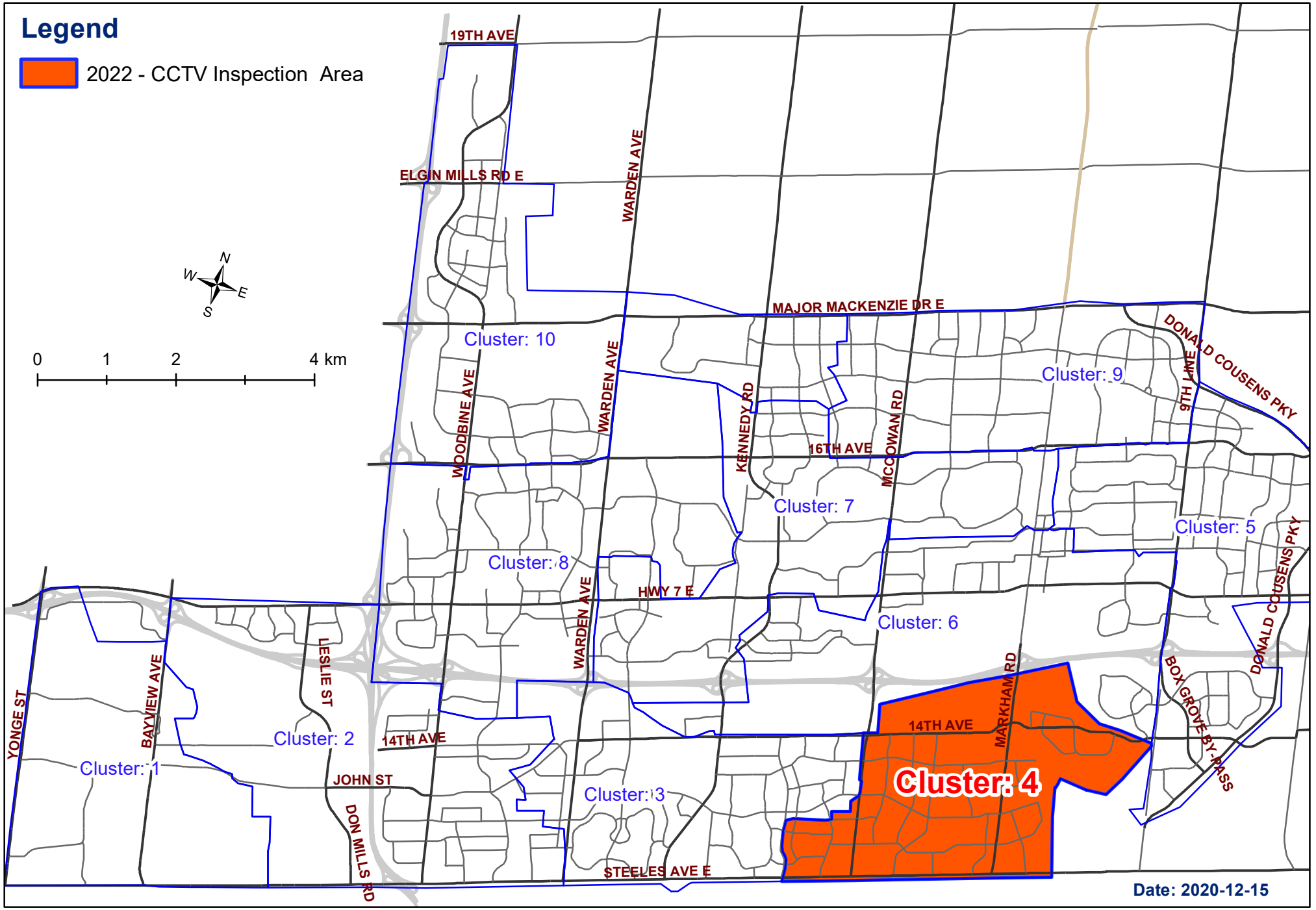
Sanitary Sewer Rehabilitation (#22210): $981,900

Storm Sewer Rehabilitation (#22188): $364,600

Map Attached

Location Map
Storm and Sanitary Sewer CCTV Inspection

ES - Infrastructure (2022)



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2022 PROJECT FUNDING REQUEST FORM

Number: 22187

Project Cost: $42,200

Project Name: **Storm Pumping Stations - Equipment Inspection**

Studies/Pilot Programs

Commission: Community Services

Department: ES - Infrastructure

Project Mgr: Peter Michaud

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Regular inspection of the pumps and associated equipments at two stormwater pumping stations (Enterprise Drive and 14th Ave. - Hagerman Diamond).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	41,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	41,500	0
HST Impact:	730	0
Total Project Cost:	**42,200**	**0**

NOTES

This is an annual program.
Regular inspection is required for pumping station equipments.
Amount requested is consistent with 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	42,200	0	0	0	0	0	0
TOTAL FUNDING	**42,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

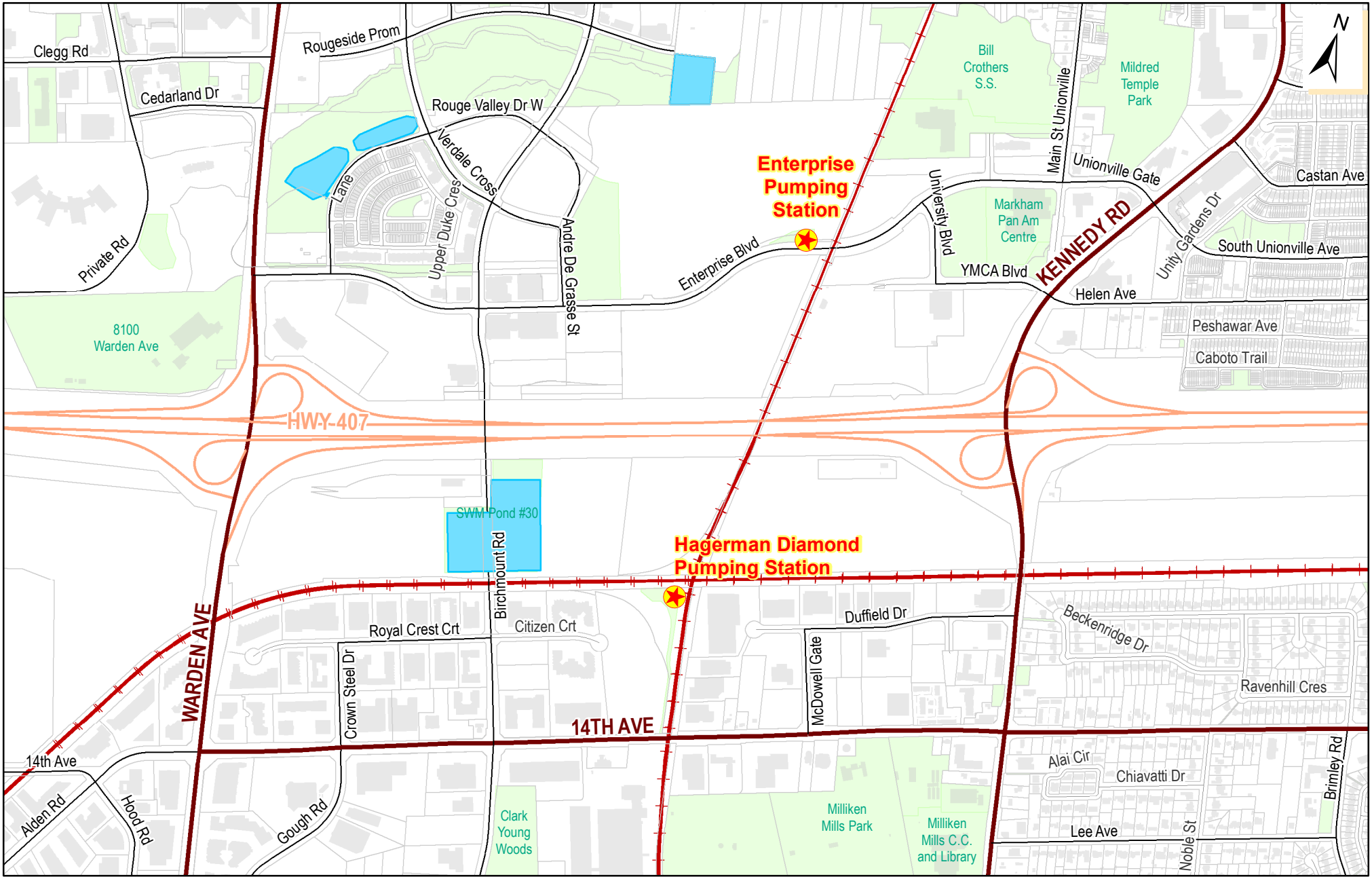
Amount in Study: 42,200

Amount Incl HST 42,200

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map
Storm Pumping Stations - Equipment Inspection



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PDF Date: 2021-05-28

2022 PROJECT FUNDING REQUEST FORM

Number: 22188

Project Cost: $364,600

Project Name: **Storm Sewer Pipes - Rehabilitation**

Repair/Replace

Commission: Community Services

Useful Life: 25 Pre Approval: ☐

Department: ES - Infrastructure

Category: Major

Project Mgr: Philip Zhang

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Rehabilitation of deficient storm sewer pipes identified through CCTV (closed circuit television) inspection.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	308,300	0
Internal Charges:	0	0
External Consulting:	50,000	0
Sub Total:	358,300	0
HST Impact:	6,306	0
Total Project Cost:	**364,600**	**0**

NOTES

Storm sewer pipe rehabilitation is conducted once every two years. Approx. 80-90 km of storm sewers are inspected every year out of 923 km (10 year cycle). Based on the video inspections, deficient pipe sections are identified and rehabilitated.
There is no substantial backlog. Storm sewer pipes are in a state of good repair. Amount requested is consistent with 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Consulting	Components: Construction			TOTAL	Future Phases
Gas Tax	364,600	50,900	313,700	0	0	364,600	0
TOTAL FUNDING	**364,600**					**364,600**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22189

Project Cost: $57,200

Project Name: **Storm Sewer Pipes Emergency Repairs**

Repair/Replace

Commission: Community Services

Department: ES - Infrastructure

Project Mgr: Peter Michaud

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to carry out emergency repairs of storm sewer pipes on as required basis.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	56,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	56,200	0
HST Impact:	989	0
Total Project Cost:	**57,200**	**0**

NOTES

This is an annual program to conduct emergency repair of storm sewer pipes on as required basis.
Budget amount is based on previous 3 years average spent.
Previously this component was included as Emergency Repairs under Roads Operations.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
Operating Funded Life Cycle	57,200	0	0	0	0	0	0
TOTAL FUNDING	**57,200**					**0**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 57,200

Amount Incl HST 57,200

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22190

Project Cost: $10,655,900

Project Name: **West Thornhill Flood Control Implementation Ph. 3C - Construction**

Repair/Replace

Commission: Community Services

Useful Life: 100 Pre Approval: ☐

Department: ES - Infrastructure

Category: Major

Project Mgr: Paul Ahn

Cost Validation: External peer review

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation:

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To continue with the flood remediation program in the West Thornhill area based on Class EA study recommendations. This budget request is for upgrading the storm sewer pipes in Phase 3C area (Clark Ave and Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt). See attached location map. Program is as follows:
• Est. West Thornhill program cost is $110M (as of April 2019)
• Previous budget approved (up to 2021) represents 64% of West Thornhill Program cost.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	10,026,566	27,245,415
Internal Charges:	0	0
External Consulting:	445,079	0
Sub Total:	10,471,645	27,245,415
HST Impact:	184,301	479,519
Total Project Cost:	**10,655,900**	**27,724,900**

NOTES

Req. Validation: Council direction to upgrade the storm sewer system in West Thornhill to 100 year level protection.
Funding Source: Stormwater Fee. External charges include contract administration. The City will receive 40% of the eligible cost through DMAF Grant. Net cost to the City will be 60%.

SOURCE(S) OF FUNDING ($)		Components				Future
Funding Type	Budget	CA	Construction	Int charge	TOTAL	Phases
Gas Tax	2,000,000	0	2,000,000	0	0 2,000,000	0
Infrastructure Grant	4,262,360	181,147	4,081,213	0	0 4,262,360	0
Reserve Fund	4,393,540	271,720	4,121,820	0	0 4,393,540	27,724,900
TOTAL FUNDING	**10,655,900**				**10,655,900**	**27,724,900**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	
Amount Incl HST	
Year in the study	

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map: West Thornhill Flood Control Implementation - Ph 3C - Construction

LEGEND:

- STORM SEWER UPGRADE
- WATERMAIN REPLACEMENT

Implementation Phase

- Phase 3C
- Phase 3B
- Phase 3A

Marie Crt
Paul St
John St
John St
Vintage Lane
Annswell Park
Alcaine Crt
Honsberger Field
Orsi Crt
Henderson Ave
Ida St
Dudley Ave
Elgin St
Albion Close
Yonge St
Dudley Ave
EJ Sand PES
St Andres Crt
Johnson St
Dove Lane
Phase 3B 2021-2022
Don Valley Park
Thornhill S.S.
Pheasant Valley Crt
Doreen Quirk Park
Phase 3C 2022-2023
Mira Rd
Lillian Ave
Wiarton Crt
Vanwood Rd
Sprucewood Dr
Clark Ave
Phase 3A 2020-2021
Morgan Ave
Dudley Ave
Willowdale Blvd
Glen Cameron Rd
Phase 3C 2022-2023
Glen Cameron Rd
Proctor Ave
Proctor Ave
Lion's Gate Crt
Sprucewood Dr
Charlie Clifford Park
Proctor Park

N

Date: 2021-01-25

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WEST THORNHILL FLOOD CONTROL IMPLEMENTATION PHASES

Phase 4 (2021 - 2026)

Phase 3 (2020 -2023)

Phase 4D (2025-2026)

Phase 4C (2024-2025)

Phase 4A 2021-2022

Phase 4B (2023-2024)

Phase 3B 2021-2022

Phase 3C 2022-2023

Phase 3A 2020-2021

Phase 3C 2022-2023

Phase 2B (2017-2018)
Substantially Completed as of December, 2017
(Warranty until December, 2019)

Phase 2D (2019)
Substantially Completed as of Nov, 2019
(Warranty until Nov, 2021)

Phase 2C (2018-2019)
Substantially Completed as of Nov, 2019
(Warranty until Nov, 2021)

Phase 2A (2016 - 2017)
Substantially Completed as of December, 2016
(Warranty until December, 2018)

Phase 1C (2016-2017)
Substantially Completed as of December , 2016
(Warranty until December, 2018)

Phase 1B (2015 - 2016)
Completed - (Warranty until August, 2018)

Phase 1A (2014 - 2015)
Completed - (Warranty until November, 2017)

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Date: 2020-12-18

Program Name: West Thornhill Flood Control Implementation

Department: Environmental Services

Component	Project #	Past	2022 Capital request	Future	Total
Phase 1 (East of Bayview, North of Steeles, SW of CN tracks)	#8530, #9330, #14271, #15014	$19,310,616			$19,310,616
Phase 2 (West of Bayview, East of Yonge, N of Steeles, S of CN Tracks)	#16210, #17201, #18279, #19232	$26,051,767			$26,051,767
Phase 3 (West of Bayview, East of Yonge, S of John, N of CN tracks)	#16211, #20252 #21164, **#22190 (This Request)**	$13,235,680	**$10,655,900**		$23,891,580
Phase 4 (Royal Orchard/ Romfield - West of Bayview, East of Yonge)	#18280 #21165	$12,412,539		$27,724,934	$40,137,473
Total Cost		**$71,010,602**	**$10,655,900**	**$27,724,934**	**$109,391,436**
		65%	10%	25%	

Description of Program

To upgrade the storm sewer system in West Thornhill to 100 year level protection

What was completed in the past

10 phases have been completed or in progress (out of 14 phases) since 2013 - 2021: $71.01M

Current ask

Phase 3C Construction of storm sewer upgrades (Clark Ave and Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt) (#22190): $10,655,900

Future Phases

Phase 4B, 4C, 4D Construction 2023 - 2026 - $27.7M

Related 2022 Project(s)

CI watermain Replacement - West Thornhill Phase 3C Construction (#22204): $3,102,500

Map Attached

PROGRAM STATUS

Phases	Project Status
1A (Doncrest Dr and Daffodil Ave)	Total completion in Aug 2017
1B (Laureleaf Rd, Poinsetta Dr, Multiflora Pl)	Total completion in Aug 2018
1C (Canadiana Dr)	Total completion in Dec 2018
2A (Grandview Ave, Brightbay Cr, Courtham Ave, Rayneswood Cr, Pineval Dr, Elspeth Pl)	Total completion in Dec 2018
2B (Grandview Park, Henderson Ave and Proctor Ave)	Total completion in Dec 2019
2C (Grandview Ave/ Woodward Ave/ Highland Park Blvd - between Jewll St and Yonge St, Meadow Ave, Willowdale Blvd, Dudley Ave, Jewell St)	Substantially completed in Nov 2019; Under warranty until Nov 2021
2D (Grandview Ave/ Woodward Ave/Highland Park Blvd - between Henderson Ave and Jewell St.; Dalmeny Rd, Delcair Cr, Henderson Ave between Grandview Ave and Dalmeny Rd)	Substantially completed in Nov 2019; Under warranty until Nov 2021
3A (Morgan Ave - between Henderson ad Yonge; Clark Ave - between Hendwerson and Johnson)	Project commenced in May 2020; Anticipated Substantial completion in Nov 2021
3B (Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarton Crt)	Project commenced in May 2021; Anticipated Substantial completion in Aug 2022
4A (Royal Orchard - between Doral Gate to Pomona Creek, Kirk Dr, Knotty Pine Trail, Blus Spruce Ln, Doral Gate, Augusta Crt)	Project commenced in May 2021; Anticipated Substantial completion in Dec 2022
3C (This Request) (Clark Ave and Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt)	Design 100% completed; Construction in 2022 - 2023
4B, 4C & 4D (Romfield Cir Area; Royal Orchard - between Yonge St. and Bay Thorn Dr, Wild Cherry Ln, Apple Orchard Path, Silver Aspen Dr, Normark Dr, Donalbain Cr)	Design 90% completed; Construction in 2023 - 2026

2022 PROJECT FUNDING REQUEST FORM

Number: 22191

Project Cost: $91,000

Project Name: **Streetlights - Miscellaneous Requests**

New Asset/Expansion

Commission: Community Services

Useful Life: 60 Pre Approval: ☐

Department: ES - Infrastructure

Project Mgr: Michael Manserra

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Based on photometric analysis and evaluation against lighting level standards IES -RP8-14 (Illuminating Engineering Society) by Staff, the City will install new streetlights at the locations, where lighting is deficient. Note that the lighting levels requirement varies depending on road type and pedestrian activity.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	89,400	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	89,400	0
HST Impact:	1,573	0
Total Project Cost:	**91,000**	**0**

NOTES

This is an annual program. Streetlights requests from the residents are reviewed for justification and are implemented to improve lighting levels in older areas. 3 year average: $130K
Locations will be prioritized based on photometric analysis and this budget request is to install approx. 15-18 new poles with LED fixtures.
Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	91,000	0	0	0	0	0	0
TOTAL FUNDING	**91,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22192

Project Cost: $117,500

Project Name: **Streetlights - Poles Replacement Program**

Repair/Replace

Commission: Community Services

Useful Life: 60 Pre Approval: ☐

Department: ES - Infrastructure

Category: Minor

Project Mgr: Michael Manserra

Cost Validation: Recent awards

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to replace/repair deteriorated streetlight poles identified through 2020 streetlight poles condition inspection and internal inspection.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	115,500	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	115,500	0
HST Impact:	2,033	0
Total Project Cost:	**117,500**	**0**

NOTES

This is an annual program. City's current inventory is 25,247 poles. Based on the age of streetlight poles, staff estimates the following as part of this request:

- 25-30 pole replacements
- 10-20 minor pole rehabilitation work

The above quantity will be updated depending on the results of the streetlight pole condition inspection project in 2020. Unit cost is consistent with recent award plus inflation. Amount requested is consistent with 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	117,500	0	0	0	0	0	0
TOTAL FUNDING	**117,500**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22194

Project Cost: $115,600

Project Name: **Oil Grit Separators (OGS) - Inspection and Cleaning**

Studies/Pilot Programs

Commission: Community Services

Department: ES - Stormwater

Project Mgr: Kate Rothwell

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Legislative compliance

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

OGS are structures consisting of one or more chambers that remove sediment, screen debris, and separate oil from stormwater run-off prior to stormwater being discharged downstream. The accumulated pollutants need to be removed as part of a regular maintenance program. The inspection program will identify the OGS that require cleaning to monitor and establish future frequency.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	95,200	0
Internal Charges:	0	0
External Consulting:	18,400	0
Sub Total:	113,600	0
HST Impact:	1,999	0
Total Project Cost:	**115,600**	**0**

NOTES

This is an annual program.
Inventory: 40. Inspection frequency is twice a year (spring & winter). 20 OGS requires cleaning based on historical inspection analysis. Environmental Services is responsible for inspection and Road Operations is responsible for sediment cleaning.
Requirement Validation: Condition assessment & legislative compliance (Section 53 of Ontario Water Resources Act)

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: Inspection	Components: Cleaning			TOTAL	Future Phases
Operating Funded Life Cycle	115,600	18,700	96,900	0	0	115,600	0
TOTAL FUNDING	**115,600**					**115,600**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 127,200
Amount Incl HST 115,600
Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22195

Project Cost: $144,000

Project Name: **SWM Pond Cleaning ID#44 & #96 - Design & Contract Administration**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: ES - Stormwater

Category: Minor

Project Mgr: Rob Grech

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☐ 6 ☐ 7 ☑ 8 ☐

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Design and contract administration (CA) of Sediment cleaning and maintenance of 2 stormwater management (SWM) ponds: Pond #44: Austin Drive Pond (Ward 3) with current sediment level: 60% and Pond #96: Box Grove Pond (Ward 7) with current sediment level of 52%. Refer to attached location map.
SWM Ponds require maintenance to function efficiently. Sediment levels need to be monitored and when the percentage of accumulated sediment is above regulatory limits (varies depending on the pond design), ponds need to be cleaned to ensure that the approved quality control function of the pond is maintained.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	760,818
Internal Charges:	0	0
External Consulting:	141,500	0
Sub Total:	141,500	760,818
HST Impact:	2,490	13,390
Total Project Cost:	**144,000**	**774,200**

NOTES

Total inventory: 59 wet ponds
Requirement Validation: Condition assessment & Legislative compliance (Section 53, Ontario Water Resources Act).
Operations is responsible for minor above ground maintenance on ponds while ES is responsible for inspection, sediment cleaning, rehabilitation and flood control strategies. Unit cost is consistent with recent award plus inflation. This request is for design & CA. Construction budget will be requested in 2023. Future cost may change based on design outcome.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	144,000	0	0	0	0	0	774,200
TOTAL FUNDING	**144,000**					**0**	**774,200**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

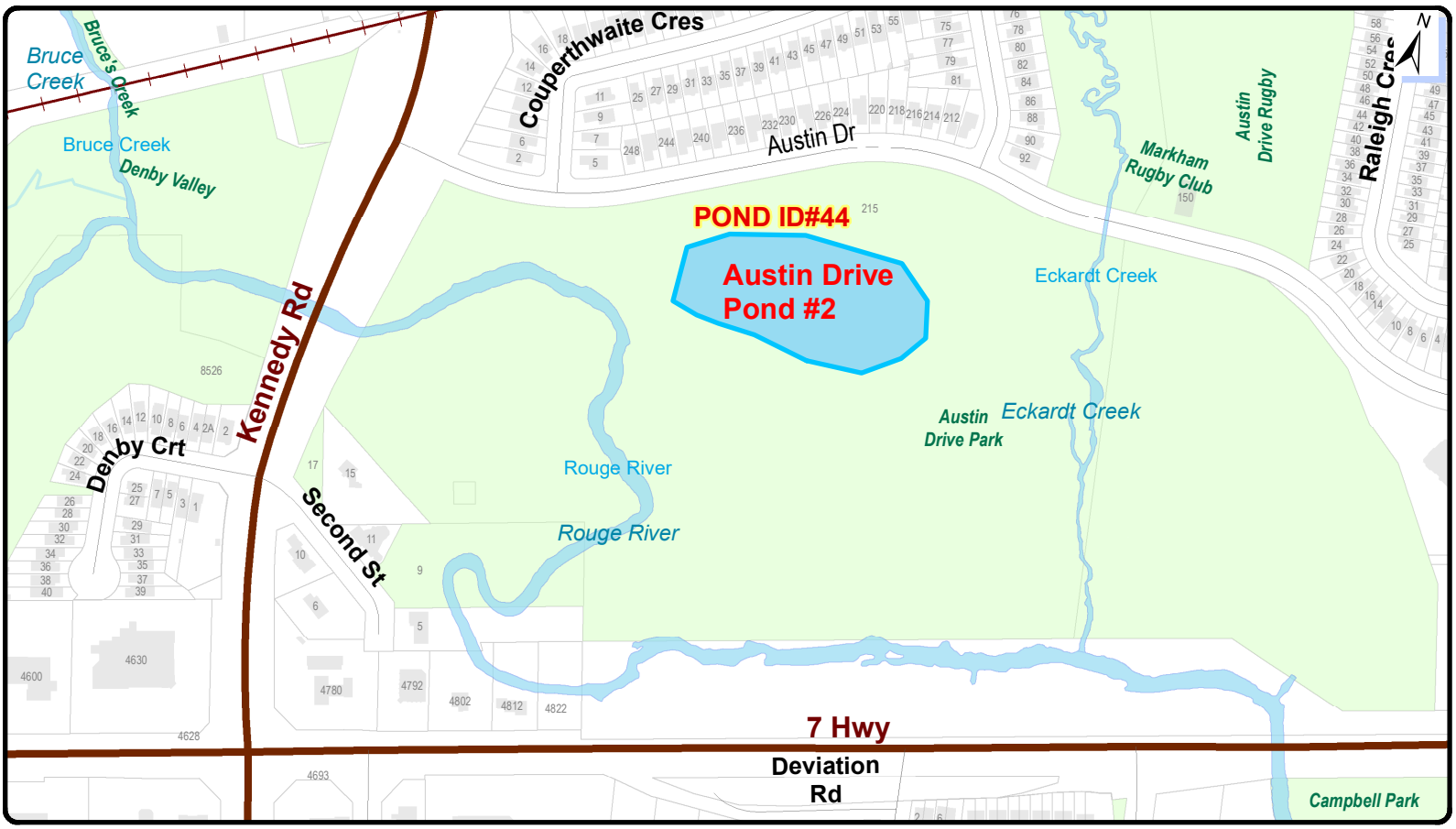
Amount Incl HST

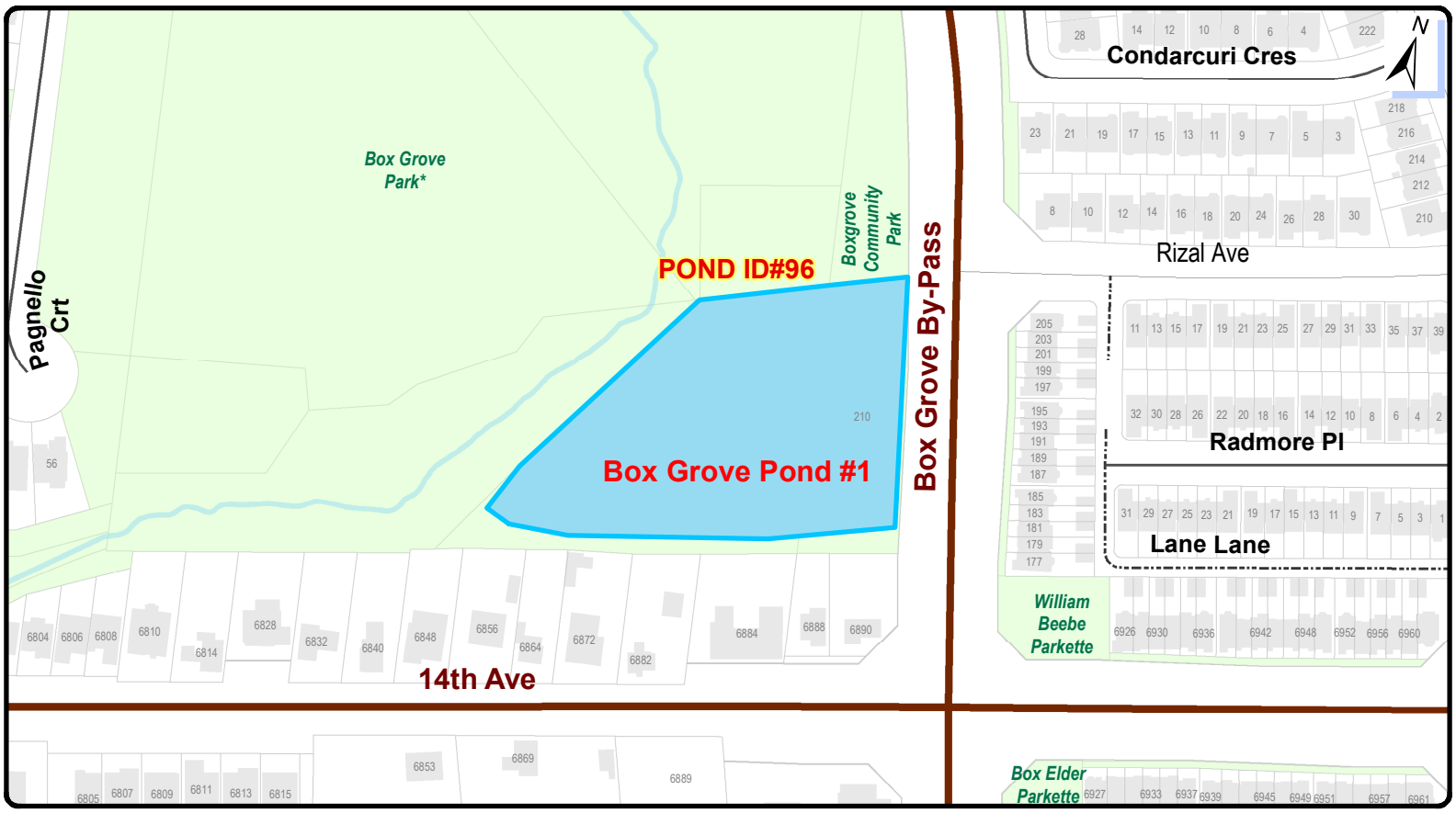
Year in the study: 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map
SWM Pond Cleaning (ID #44, #96) - Design & CA

ES - Infrastructure (2022)





2022 PROJECT FUNDING REQUEST FORM

Number: 22196

Project Cost: $433,100

Project Name: **SWM Pond Cleaning ID#47 & #119 - Construction**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: ES - Stormwater

Category: Major

Project Mgr: Rob Grech

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☑ 7 ☑ 8 ☐

Requirement Validation: Legislative compliance

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Sediment cleaning and maintenance of 2 stormwater management (SWM) ponds: Pond #47: Roxbury Pond (Ward 7) with current sediment level: 52% and Pond #119: Angus Glen Community Centre Pond (Ward 6) with current sediment level of 58%. Refer to attached location map.
SWM Ponds require maintenance to function efficiently. Sediment levels need to be monitored and when the percentage of accumulated sediment is above regulatory limits (varies depending on the pond design), ponds need to be cleaned to ensure that the approved quality control function of the pond is maintained.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	425,600	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	425,600	0
HST Impact:	7,491	0
Total Project Cost:	**433,100**	**0**

NOTES

Total inventory: 59 wet ponds
Requirement Validation: Condition assessment & Legislative compliance (Section 53, Ontario Water Resources Act).
Operations is responsible for minor above ground maintenance on SWM ponds while ES is responsible for all other aspects including inspection, sediment cleaning, rehabilitation and flood control strategies. Unit cost is consistent with recent award plus inflation.
This request is for construction only.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Gas Tax	433,100	0	0	0	0	0	0
TOTAL FUNDING	**433,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

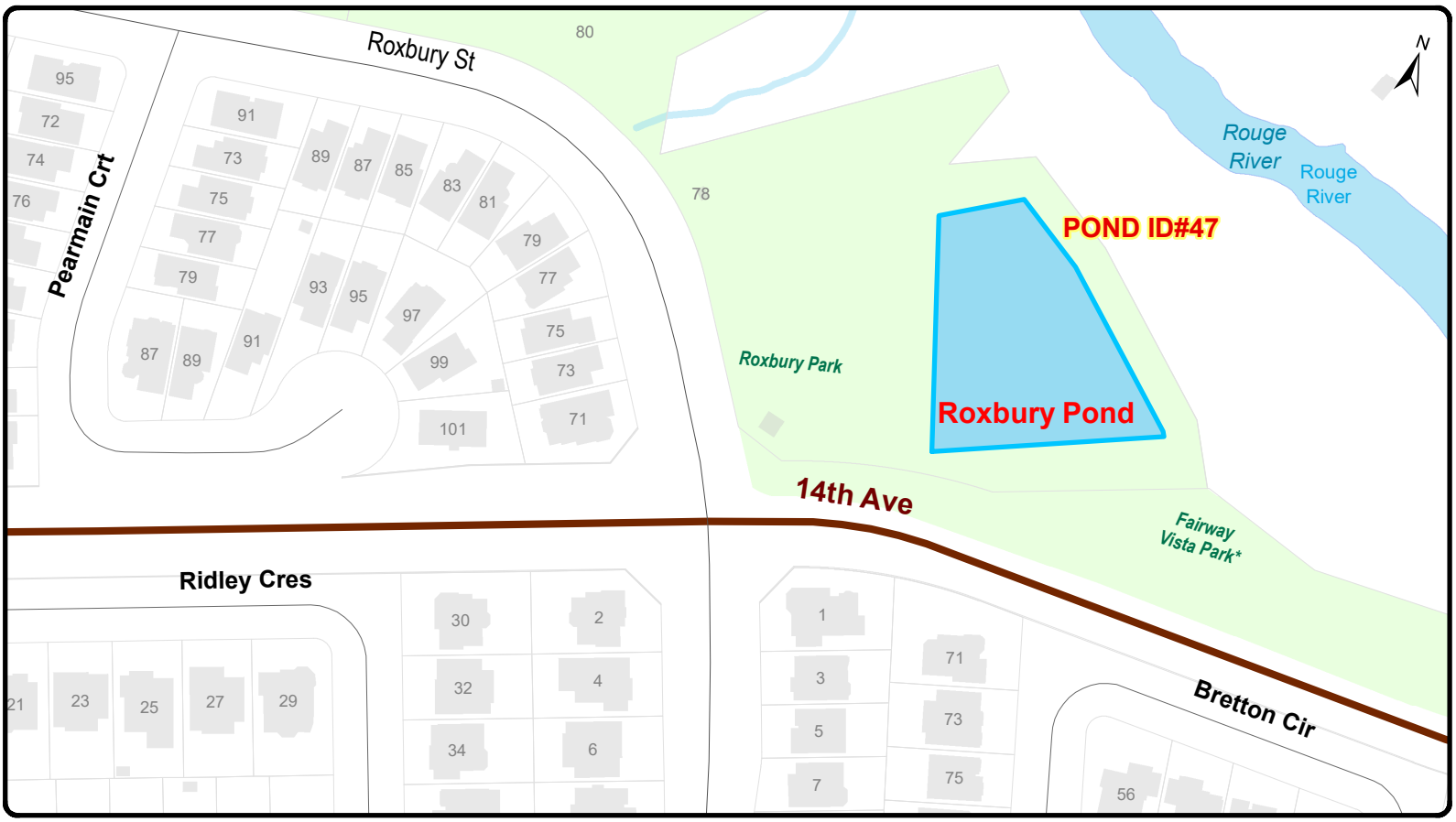
Amount Incl HST

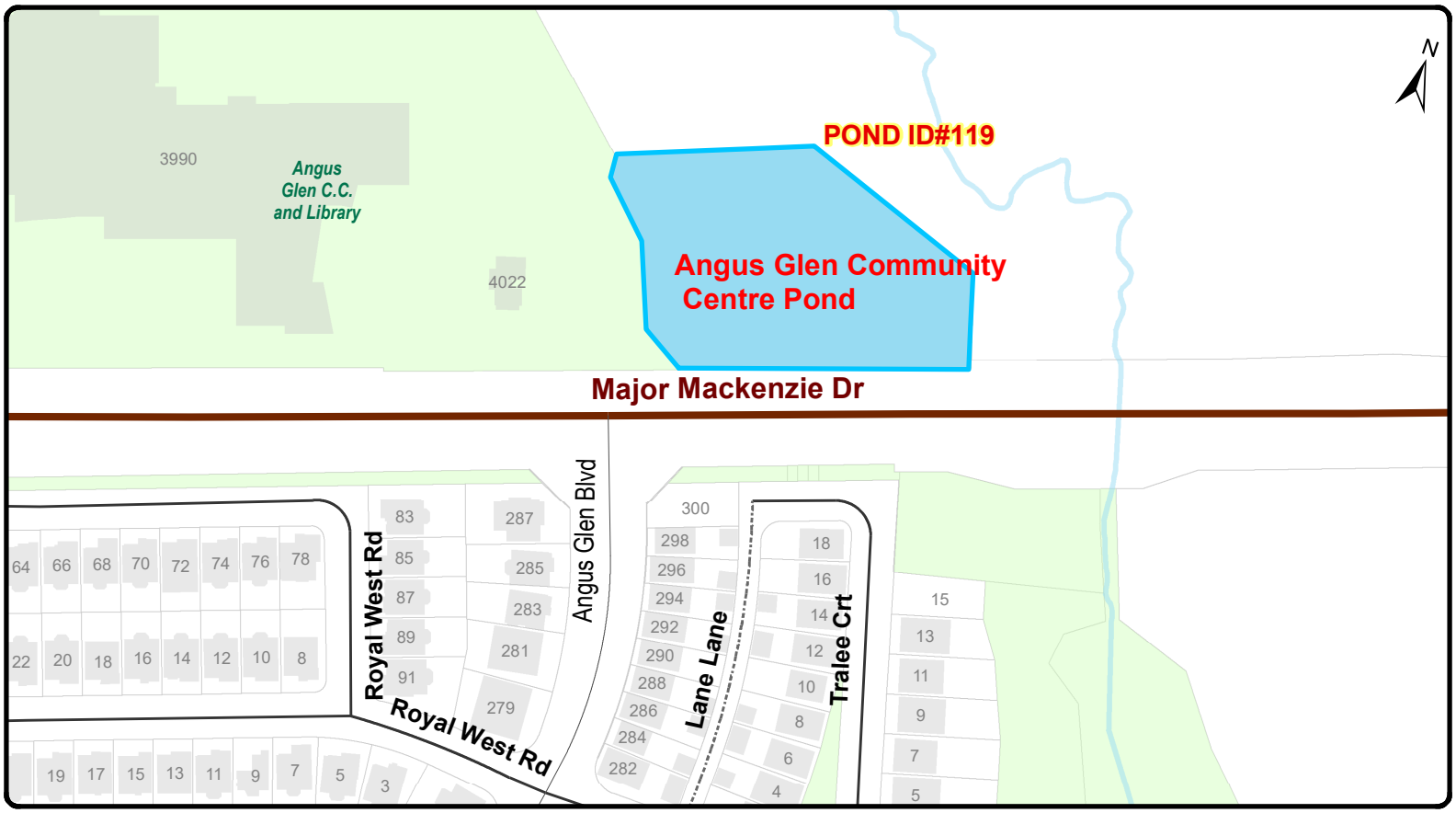
Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map
SWM Pond Cleaning (ID#47, #119) - Construction

ES - Infrastructure (2022)





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Date: 2021-05-25

2022 PROJECT FUNDING REQUEST FORM

Number: 22197

Project Cost: $28,800

Project Name: **Water Quality Improvements**

Commission: Community Services

Department: ES - Stormwater

Project Mgr: Zahra Parhizgari

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This project is to carry out geese control program at Swan Lake (Ward 5) and Toogood Pond (Ward 3). Program is intended to manage recurring water quality complaints and to reduce nutrient loading into Swan Lake and Toogood Pond.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	28,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	28,300	0
HST Impact:	498	0
Total Project Cost:	**28,800**	**0**

NOTES

This is an annual program to carry out geese control at Swan Lake and Toogood Pond.
Average 3 year expenditure (2018-2020): $25,600
Requirement Validation: To protect the water quality.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	28,800	0	0	0	0	0	0
TOTAL FUNDING	**28,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 31,700

Amount Incl HST 28,800

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22198

Project Cost: $26,100

Project Name: **Water Quality Monitoring at Swan Lake**

Studies/Pilot Programs

Commission: Community Services

Useful Life: 0 Pre Approval: ☐

Department: ES - Stormwater

Category: Major

Project Mgr: Zahra Parhizgari

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This request is to continue with the water quality sampling and analysis at Swan Lake.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	25,600	0
Sub Total:	25,600	0
HST Impact:	451	0
Total Project Cost:	**26,100**	**0**

NOTES

Req. Validation: In June 2020, Council approved continuation of monitoring at Swan Lake. The lake needs to be monitored for 12 months followed by another 3 months of analysis and report generation for the effectiveness of the program.
Unit cost is consistent with recent budget plus inflation. Amount requested is consistent with 2021 Life Cycle Reserve Study Update.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Operating Funded Life Cycle	26,100	0	0	0	0	0	0
TOTAL FUNDING	**26,100**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	28,700
Amount Incl HST	26,100
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22199

Project Cost: $104,000

Project Name: **Incremental Growth Related Waste Management Vehicles**

New Asset/Expansion

Commission: Community Services

Department: ES - Waste

Project Mgr: Claudia Marsales

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Development Charge (DC) funding for additional growth-related waste management vehicles purchased by contractor. If waste management was done in-house, these vehicles would need to be purchased by the City, so this request is to obtain DC Funding to offset a portion of the capital cost included in the waste management contract paid through Operating Budget

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	104,040	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	104,040	0
HST Impact:	0	0
Total Project Cost:	**104,000**	**0**

NOTES

Amount requested as per 2017 Development Charges background Study plus 2% annual inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
DCA	104,000	0	0	0	0	0	0
TOTAL FUNDING	**104,000**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22200

Project Cost: $15,800

Project Name: **Replenishing the MESF Reserve - Annual Program**

Commission: Community Services

Department: ES - Waste

Project Mgr: Claudia Marsales

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Annual

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

In 2001, Council created the Markham Environmental Sustainability Fund (MESF). The purpose of the fund is to provide supplementary financial support for internal City programs, community based programs and initiatives that promote environmental responsibility and innovation. This request is to replenish MESF to a base level of $50K.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	15,520	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	15,520	0
HST Impact:	273	0
Total Project Cost:	**15,800**	**0**

NOTES

Grants are requested by groups, which are reviewed and recommended for approval by Environmental Services, followed by Council approval. The balance in MESF as of June 30, 2021 will be $50,410. Project #20299 (MESF - Sustainable Neighborhoods Small Grant (SNSG) Program) and #20308 (MESF - Smart Irrigation System Pilot Milliken Mills Park) are scheduled for completion in 2021 at a total cost of $16,200. Therefore $15,800 is requested to replenish the reserve to the $50K threshold level. Account #087-280-0168.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Tax	15,800	0	0	0	0	0	0
TOTAL FUNDING	**15,800**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:

Amount Incl HST

Year in the study

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22201

Project Cost: $444,000

Project Name: **Cathodic Protection of Ductile Iron Watermains**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: ES - Waterworks

Category: Minor

Project Mgr: Richard Kit

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☑ 4 ☑ 5 ☐ 6 ☐ 7 ☑ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to install corrosion protection material (anodes) to ductile iron (DI) watermains to reduce/ prevent corrosion. Renewal of corrosion protection is necessary to replace the depleted anodes (17-19 years old) and test stations.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	436,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	436,300	0
HST Impact:	7,679	0
Total Project Cost:	**444,000**	**0**

NOTES

This is an annual program (Phase 4 of 17). Program commenced in 1993 with an avg. of 120 watermain breaks/year which has reduced to an avg. of 24 breaks/ year in last five years. Second cycle of ductile and cast iron watermains corrosion protection commenced in 2014.
This request is to install anodes for approx. 12 km length of DI watermain (Refer to attached map). Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components				TOTAL	Future Phases
Waterworks	444,000	0	0	0	0	0	0
TOTAL FUNDING	**444,000**					**0**	**0**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

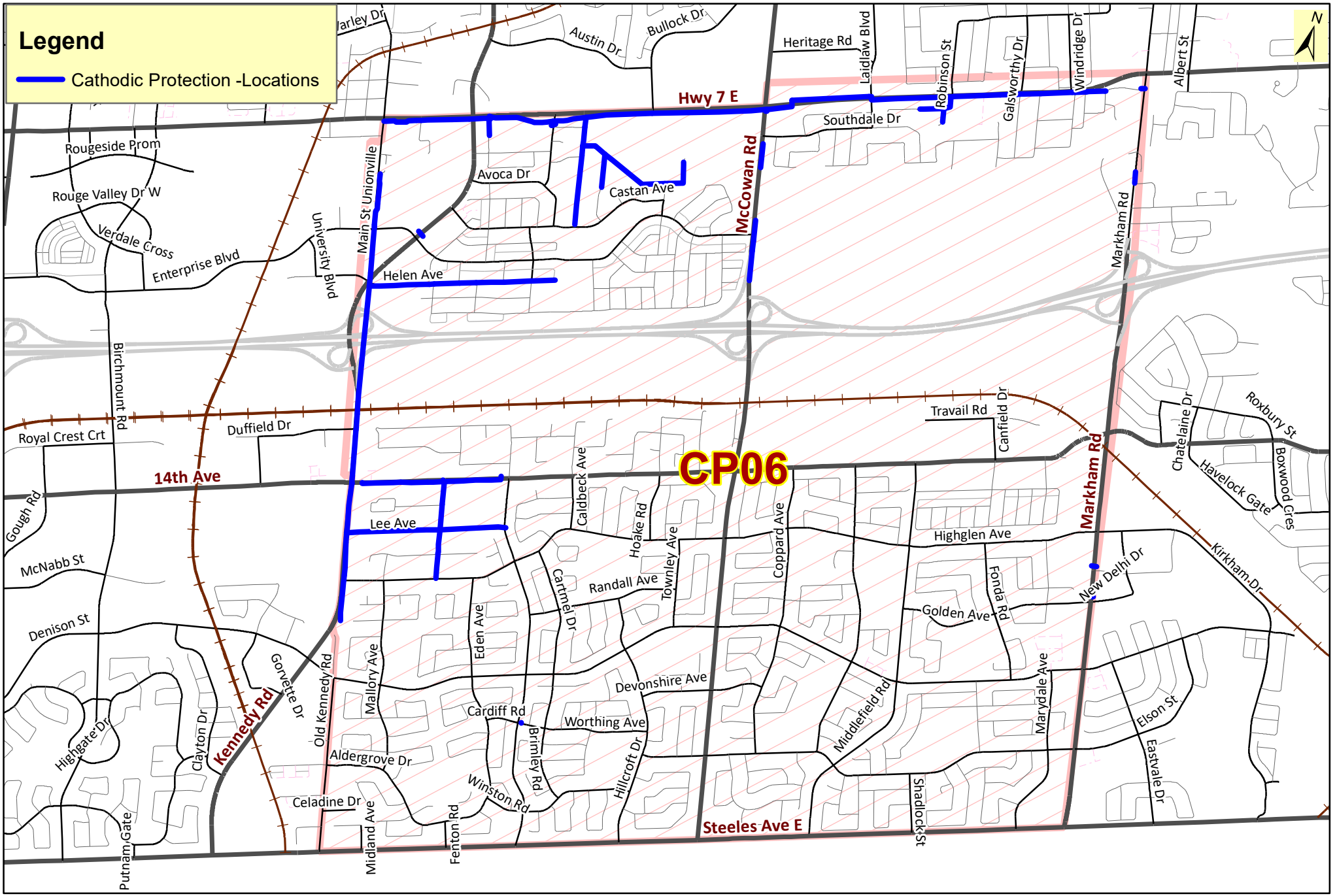
Amount in Study:	479,500
Amount Incl HST	444,000
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map

Cathodic Protection of Ductile Iron Watermains

ES - Infrastructure (2022)



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Date: 2021-03-24

2022 PROJECT FUNDING REQUEST FORM

Number: 22202

Project Cost: $4,816,900

Project Name: **Cast Iron Watermain Replacement - Construction & Contract Admin.**

Repair/Replace

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Paul Ahn

Useful Life: 90 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Construction and Contract Administration for replacement of 2.9 km of cast iron (CI) watermain that have reached the service life in the Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area (refer to attached map).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	4,468,600	56,613,404
Internal Charges:	0	0
External Consulting:	265,000	0
Sub Total:	4,733,600	56,613,404
HST Impact:	83,311	996,396
Total Project Cost:	**4,816,900**	**57,609,800**

NOTES

This is an annual program (Phase 4 of 15; ending in 2032).
Total CI Watermain: 54.1km
As part of the cast iron watermain replacement program, aged cast iron watermain will be systematically replaced with the PVC or will be rehabilitated with CIPP liner.
Cost is consistent with recent award prices plus inflation.

SOURCE(S) OF FUNDING ($)

Funding Type	Budget	Components: CA	Components: Construction			TOTAL	Future Phases
Waterworks	4,816,900	269,700	4,547,200	0	0	4,816,900	57,609,800
TOTAL FUNDING	**4,816,900**					**4,816,900**	**57,609,800**

OPERATING BUDGET IMPACT

Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	9,156,700
Amount Incl HST	4,816,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

CI Watermain Replacement cost in 2021 LC includes the following:
- CI Watermain Replacement – Construction & CA ($4,816,900) – This Request
- CI Watermain Replacement – Design ($418,300)
- CI Watermain Replacement – West Thornhill Ph 3C ($3,102,500)

Program Name: CI Watermain Rehabilitation / Replacement
Department: Environmental Services

Component	Project #	Past	2022 Capital request	Future	Total
Phase 1 (West Thornhill Ph 2D; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	#19245, #19243	$13,624,200			$13,624,200
Phase 2 (West Thornhill Ph 3A; Laureleaf Area / Milmar Crt Area)	#19242, #20257, #20258	$12,034,200			$12,034,200
Phase 3a (John St & 14th Ave end Section (Re-Lining))	#20256, #21168	$7,060,400			$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170	$4,036,300			$4,036,300
Phase 4a (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	**#21169, #22202 (This request)**	$447,700	**$4,816,900**		$5,264,600
Phase 4b (West Thornhill Area - Phase 3C)	#22204		$3,102,500		$3,102,500
Phase 5 - Design (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area)	#22203		$270,200	$5,001,800	$5,272,000
Phase 6 to Phase 15	N/A			$57,609,800	$57,609,800
Total Cost		**$37,202,800**	**$8,189,600**	**$62,611,600**	**$108,004,000**

Description of Program
To replace aged cast iron watermain (current age: 58 years; service life: 60 years) with PVC watermain (service life: 90 years)

What was completed in the past
3 phases (Phase 1, 2 & 3) have been completed (out of 15 phases) since 2019 - $37.2M

Current ask

Phase 4a Replacement of Cast Iron watermains (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area) (#22202): $4,816,900

Future phases
Phase 5a (construction) (2023) - $5.0M
Phase 6 to Phase 15 (2023- 2032) - $57.6M
Total (2022-2032): $62.6M

Related 2022 project(s)
Phase 4b Replacement of Cast Iron watermains (West Thornhill phase 3C area) (#22204): $3,102,500
Phase 5 Design of Cast Iron watermains (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area) (#22203): $270,200

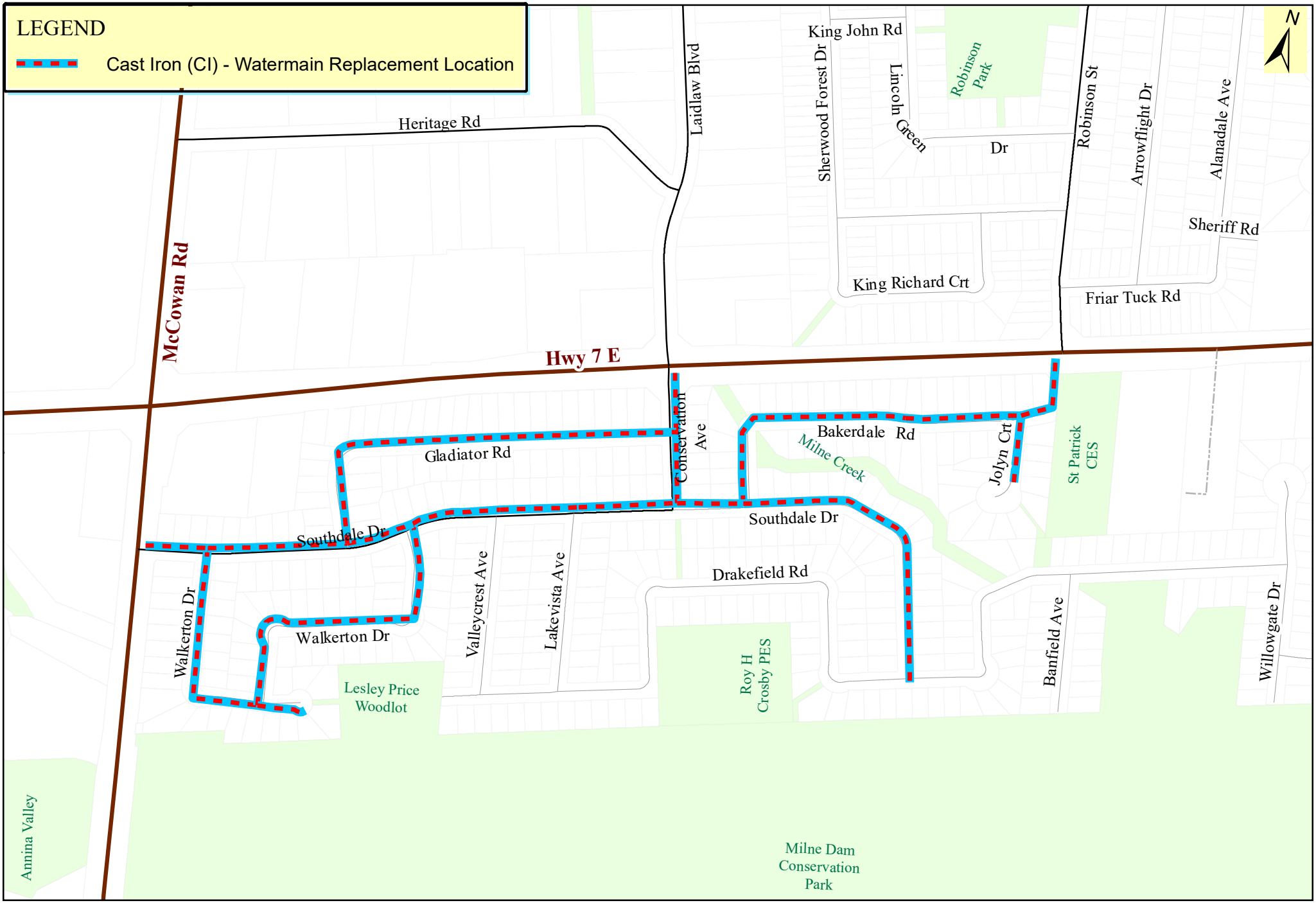
Map Attached

PROGRAM STATUS

Phases	Project Status
Phase 1	Completed in 2019
Phase 2a (Design) (Laureleaf Area / Milmar Crt & Alden Rd)	Completed in 2019
Phase 2a (Construction) (Laureleaf Area / Milmar Crt & Alden Rd)	Completed in 2020
Phase 2b (West Thornhill Area - Phase 3A: Morgan Ave - between Henderson ad Yonge; Clark Ave - between Hendwerson and Johnson)	Completed in 2020
Phase 3a (Design) (John St & 14th Ave end Section (Re-Lining))	Completed in Q2, 2021
Phase 3a (Construction) (John St & 14th Ave end Section (Re-Lining))	2021/ 2022
Phase 3b (Construction) (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarton Crt)	2021/ 2022
Phase 4a (Design) (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	2021
Phase 4a (Construction) (This Request) (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	**2022**
Phase 4b (Construction) (West Thornhill Area - Phase 3C - (Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt)	2022/ 2023
Phase 5 - Design (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area)	2022
Phase 5 (construction) to Phase 15 (various streets)	2023 - 2032

Location Map
CI Watermain Replacement - Construction & CA

ES - Infrastructure (2022)
Gladiotor Rd / Southdale / Bakerdale Area



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Date: 2021-01-20

2022 PROJECT FUNDING REQUEST FORM

Number: 22203

Project Cost: $270,200

Project Name: **Cast Iron Watermain Replacement - Design**

Repair/Replace

Commission: Community Services

Useful Life: 0 Pre Approval: ☐

Department: ES - Waterworks

Category: Minor

Project Mgr: Richard Kit

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Detailed design for replacement of approx. 2.8 km cast iron (CI) watermain in Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area (refer to attached map).

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	4,915,290
Internal Charges:	0	0
External Consulting:	265,500	0
Sub Total:	265,500	4,915,290
HST Impact:	4,673	86,509
Total Project Cost:	**270,200**	**5,001,800**

NOTES

This is an annual program (Phase 5 of 15; ending in 2032). Total CI Watermain: 54.1 km. As part of the CI watermain replacement program, 92% of aged CI watermain will be replaced with PVC and 8% will be rehabilitated with CIPP liner. This request is for design of cast iron watermain replacement design of 2.8km (5%) of CI watermain.
Construction and contract administration costs will be requested through 2023 capital budget request.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Design				TOTAL	Future Phases
Waterworks	270,200	270,200	0	0	0	270,200	5,001,800
TOTAL FUNDING	**270,200**					**270,200**	**5,001,800**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	9,723,500
Amount Incl HST	270,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

CI Watermain Replacement cost in 2021 LC includes the following:
•CI Watermain Replacement – Construction & CA ($4,816,900)
•CI Watermain Replacement – Design ($418,300) – This Request
•CI Watermain Replacement – West Thornhill Ph 3C ($3,102,500)

Program Name: CI Watermain Rehabilitation / Replacement
Department: Environmental Services

Component	Project #	Past	2022 Capital request	Future	Total
Phase 1 (West Thornhill Ph 2D; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	#19245, #19243	$13,624,200			$13,624,200
Phase 2 (West Thornhill Ph 3A; Laureleaf Area / Milmar Crt Area)	#19242, #20257, #20258	$12,034,200			$12,034,200
Phase 3a (John St & 14th Ave end Section (Re-Lining))	#20256, #21168	$7,060,400			$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170	$4,036,300			$4,036,300
Phase 4a (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	#21169, #22202	$447,700	$4,816,900		$5,264,600
Phase 4b (West Thornhill Area - Phase 3C)	#22204		$3,102,500		$3,102,500
Phase 5 - Design (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area)	**#22203 (This request)**		**$270,200**	$5,001,800	$5,272,000
Phase 6 to Phase 15	N/A			$57,609,800	$57,609,800
Total Cost		**$37,202,800**	**$8,189,600**	**$62,611,600**	**$108,004,000**

Description of Program
To replace aged cast iron watermain (current age: 58 years; service life: 60 years) with PVC watermain (service life: 90 years)

What was completed in the past

3 phases (Phase 1, 2 & 3) have been completed (out of 15 phases) since 2019 - $37.2M

Current ask

Phase 5: Design of Cast Iron watermains (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area) (#22203): $270,200

Future phases
Phase 5a (construction) (2023) - $5.0M
Phase 6 to Phase 15 (2023- 2032) - $57.6M
Total (2022-2032): $62.6M

Related 2022 project(s)
Phase 4a Replacement of Cast Iron watermains (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area) (#22202): $4,816,900
Phase 4b Replacement of Cast Iron watermains (West Thornhill phase 3C area) (#22204): $3,102,500

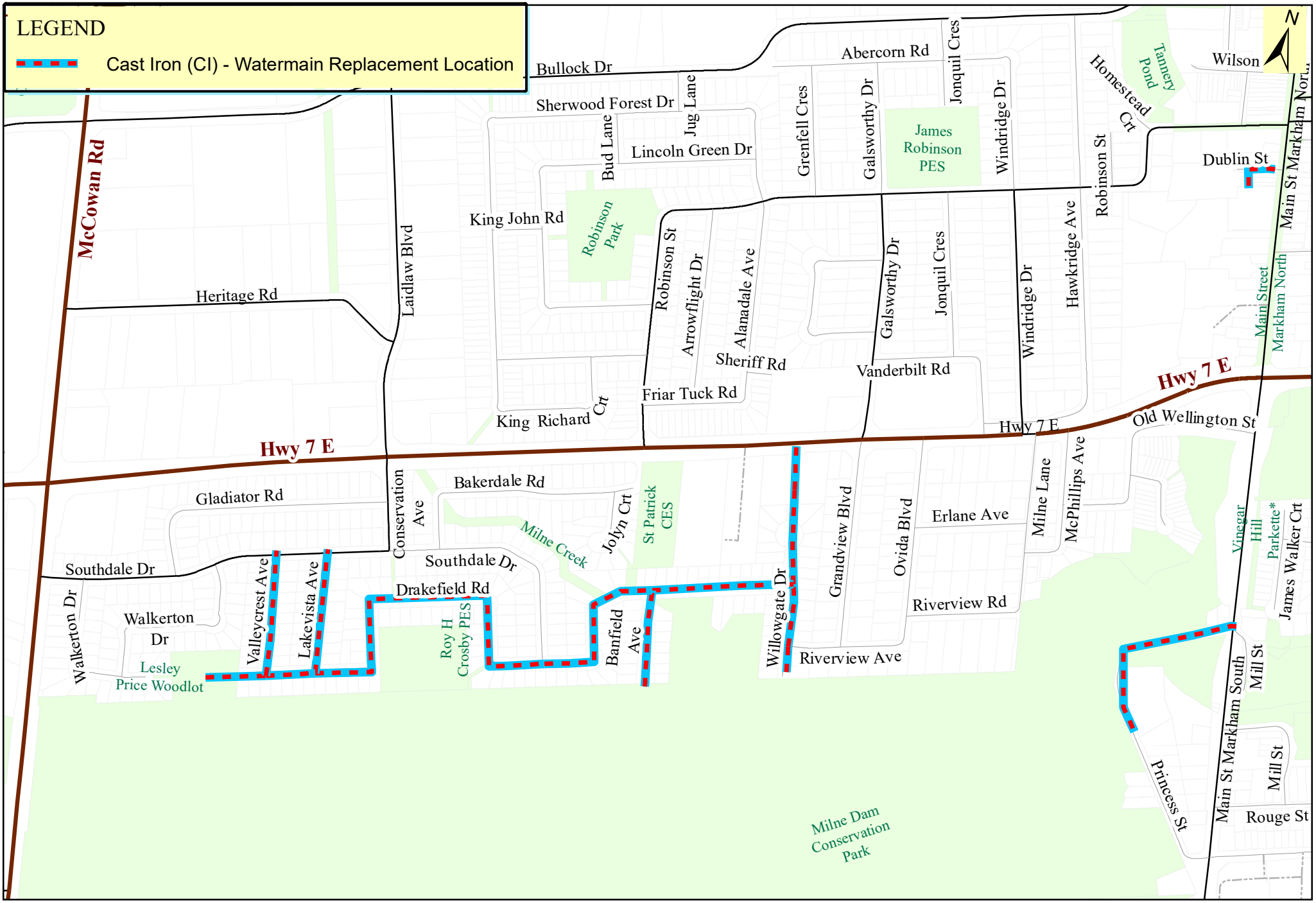
Map Attached

PROGRAM STATUS

Phases	Project Status
Phase 1	Completed in 2019
Phase 2a (Design) (Laureleaf Area / Milmar Crt & Alden Rd)	Completed in 2019
Phase 2a (Construction) (Laureleaf Area / Milmar Crt & Alden Rd)	Completed in 2020
Phase 2b (West Thornhill Area - Phase 3A: Morgan Ave - between Henderson ad Yonge; Clark Ave - between Hendwerson and Johnson)	Completed in 2020
Phase 3a (Design) (John St & 14th Ave end Section (Re-Lining))	Completed in Q2, 2021
Phase 3a (Construction) (John St & 14th Ave end Section (Re-Lining))	2021/ 2022
Phase 3b (Construction) (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarton Crt)	2021/ 2022
Phase 4a (Design) (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	2021
Phase 4a (Construction) (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	2022
Phase 4b (Construction) (West Thornhill Area - Phase 3C - (Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt)	2022/ 2023
Phase 5 - Design (This Request) (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area)	**2022**
Phase 5 (construction) to Phase 15 (various streets)	2023 - 2032

Location Map
CI Watermain Replacement - Design

ES - Infrastructure (2022)
Walkerton / Drakefield Rd Area+Princess St+ Dublin St



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Date: 2020-12-18

2022 PROJECT FUNDING REQUEST FORM

Number: 22204

Project Cost: $3,102,500

Project Name: **Cast Iron Watermain Replacement - West Thornhill Ph. 3C - Const + CA**

Repair/Replace

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Paul Ahn

Useful Life: 90 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of cast iron (CI) watermain that have reached end of the service life (Refer to attached map). As part of the cast iron watermain replacement program, aged cast iron watermains (current age 58 years; service life 60 years) will be replaced with the PVC watermain (1.3 km) with a service life of 90 years.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	2,999,300	0
Internal Charges:	0	0
External Consulting:	49,500	0
Sub Total:	3,048,800	0
HST Impact:	53,659	0
Total Project Cost:	**3,102,500**	**0**

NOTES

Total CI watermain inventory: 54.1 km as of 2019
All CI watermain will be replaced by the year 2032. There is no backlog in the watermain replacement program.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Construction	CA			TOTAL	Future Phases
Waterworks	3,102,500	3,052,100	50,400	0	0	3,102,500	0
TOTAL FUNDING	**3,102,500**					**3,102,500**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study: 9,156,700

Amount Incl HST 3,102,500

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

CI Watermain Replacement cost in 2021 LC includes the following:
•CI Watermain Replacement – Construction & CA ($4,816,900)
•CI Watermain Replacement – Design ($418,300)
•CI Watermain Replacement – West Thornhill Ph 3C ($3,102,500) – This Request

Program Name: CI Watermain Rehabilitation / Replacement
Department: Environmental Services

Component	Project #	Past	2022 Capital request	Future	Total
Phase 1 (West Thornhill Ph 2D; McCowan Rd & Heritage St.; Old English Lane & Limcombe Dr Area)	#19245, #19243	$13,624,200			$13,624,200
Phase 2 (West Thornhill Ph 3A; Laureleaf Area / Milmar Crt Area)	#19242, #20257, #20258	$12,034,200			$12,034,200
Phase 3a (John St & 14th Ave end Section (Re-Lining))	#20256, #21168	$7,060,400			$7,060,400
Phase 3b (West Thornhill Area - Phase 3B)	#21170	$4,036,300			$4,036,300
Phase 4a (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd A	#21169, #22202	$447,700	$4,816,900		$5,264,600
Phase 4b (West Thornhill Area - Phase 3C)	**#22204 (This request)**		**$3,102,500**		$3,102,500
Phase 5 - Design (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area)	#22203		$270,200	$5,001,800	$5,272,000
Phase 6 to Phase 15	N/A			$57,609,800	$57,609,800
Total Cost		**$37,202,800**	**$8,189,600**	**$62,611,600**	**$108,004,000**

Description of Program

To replace aged cast iron watermain (current age: 58 years; service life: 60 years) with PVC watermain (service life: 90 years)

What was completed in the past

3 phases (Phase 1, 2 & 3) have been completed (out of 15 phases) since 2019 - $37.2M

Current ask

Phase 4b Replacement of Cast Iron watermains (West Thornhill phase 3C area) (#22204): $3,102,500

Future phases
Phase 5a (construction) (2023) - $5.0M
Phase 6 to Phase 15 (2023- 2032) - $57.5M
Total (2022-2032): $62.5M

Related 2022 project(s)
Phase 4a Replacement of Cast Iron watermains (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area) (#22202): $4,816,900
Phase 5 Design of Cast Iron watermains (Drakefield Rd/ Banfield Ave./ Princess St/ Dublin St Area) (#22203): $270,200

Map Attached

PROGRAM STATUS

Phases	Project Status
Phase 1	Completed in 2019
Phase 2a (Design) (Laureleaf Area / Milmar Crt & Alden Rd)	Completed in 2019
Phase 2a (Construction) (Laureleaf Area / Milmar Crt & Alden Rd)	Completed in 2020
Phase 2b (West Thornhill Area - Phase 3A: Morgan Ave - between Henderson ad Yonge; Clark Ave - between Hendwerson and Johnson)	Completed in 2020
Phase 3a (Design) (John St & 14th Ave end Section (Re-Lining))	Completed in Q2, 2021
Phase 3a (Construction) (John St & 14th Ave end Section (Re-Lining))	2021/ 2022
Phase 3b (Construction) (West Thornhill Area - Phase 3B: Johnson St, Vanwood Rd, St. Andreas Crt, Ida St, Dove Ln, Wiarton Crt)	2021/ 2022
Phase 4a (Design) (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	2021
Phase 4a (Construction) (Gladiotor Rd / Southdale Dr/ Walkerton Dr/ Bakerdale Rd Area)	2022
Phase 4b (Construction) (This Request) (West Thornhill Area - Phase 3C - (Glen Cameron Rd, Lilian Ave, Mira Road, Pheasant Valley Crt)	**2022/ 2023**
Phase 5 - Design (Walkerton / Drakefield Rd Area+Princess St+ Dublin St Area)	2022
Phase 5 (construction) to Phase 15 (various streets)	2023 - 2032

LOCATION MAP - CI Watermain Replacement- West Thornhill Ph 3C

ES - Infrastructure (2022)

LEGEND:

- STORM SEWER UPGRADE
- WATERMAIN REPLACEMENT

Implementation Phase

- Phase 3C
- Phase 3B
- Phase 3A

Marie Crt
Paul St
John St
John St
Vintage Lane
Annswell Park
Alcaine Crt
Honsberger Field
Orsi Crt
Henderson Ave
Ida St
Dudley Ave
Elgin St
Albion Close
Yonge St
Dudley Ave
Phase 3B 2021-2022
St Andres Crt
Johnson St
Dove Lane
EJ Sand PES
Don Valley Park
Thornhill S.S.
Pheasant Valley Crt
Doreen Quirk Park
Phase 3C 2022-2023
Mira Rd
Lillian Ave
Wiarton Crt
Vanwood Rd
Sprucewood Dr
Clark Ave
Phase 3A 2020-2021
Morgan Ave
Willowdale Blvd
Dudley Ave
Glen Cameron Rd
Phase 3C 2022-2023
Glen Cameron Rd
Proctor Ave
Proctor Ave
Lion's Gate Crt
Sprucewood Dr
Charlie Clifford Park
Proctor Park

N

Date: 2021-01-25

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2022 PROJECT FUNDING REQUEST FORM

Number: 22205

Project Cost: $639,700

Project Name: **Curb Box Inspection and Replacement Program**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: ES - Waterworks

Category: Minor

Project Mgr: Vikas Thakur

Cost Validation: Recent awards

Ward(s): CW ☐ 1 ☑ 2 ☑ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☑

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to conduct inspection of curb boxes and repair /replace defective curb boxes which are normally located at the property line. Curb box/ stop valve is the main control appurtenance for the City to turn on/off water supply to the private property. Over time, curb boxes/ stop valves deteriorate and become inoperable. Proactive inspection and repairs are required to ensure continuous water supply and reduce service interruptions.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	628,600	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	628,600	0
HST Impact:	11,063	0
Total Project Cost:	**639,700**	**0**

NOTES

This is an annual program.
Total inventory: 84,350 curb boxes. This request is to inspect approx. 4,018 curb boxes and replacement of approx. 25% curb boxes and damaged sidewalk bays as required (Refer to attached map).
There is no substantial backlog and curb boxes are in a state of good repair. Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING ($)		Components					
Funding Type	Budget					TOTAL	Future Phases
Waterworks	639,700	0	0	0	0	0	0
TOTAL FUNDING	**639,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	703,700
Amount Incl HST	639,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Program Name: Curb Box Inspection and Replacement Program

Department: Environmental Services

Year	Project #	Past	2022	Future	Total
2019	#19246	$392,200			$392,200
2020	#20259	$614,100			$614,100
2021	#21171	$714,900			$714,900
2022	**#22205**		**$639,700**		$639,700
2023 Onwards				varies	varies
Total		$1,721,200	$639,700		

Description of Program

Program to conduct inspection of curb boxes and repair /replace defective curb boxes which are normally located at the property line. This is an annual program.

What was completed in the past

See above table

Current ask

$639,700

Future Phases

Varies

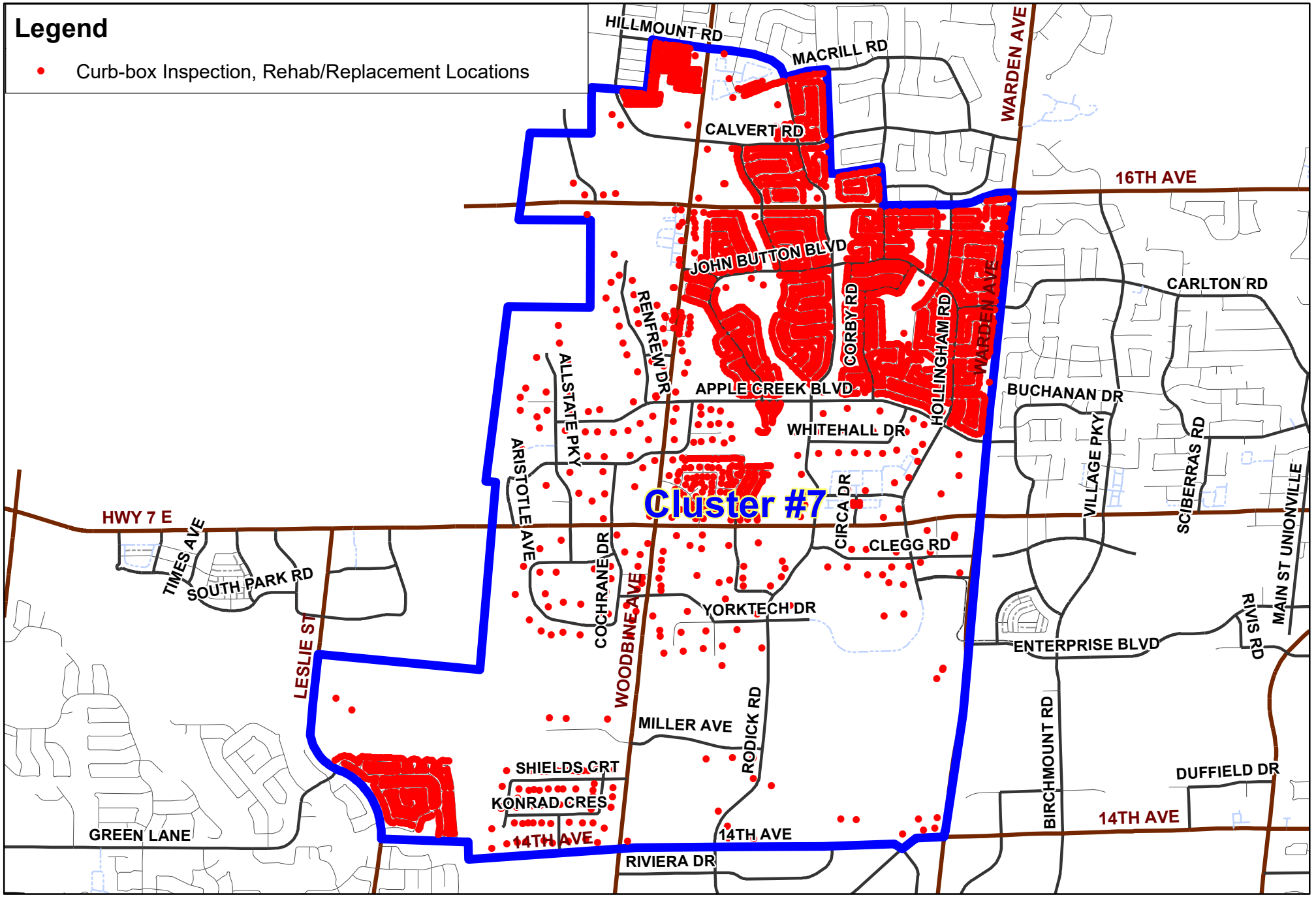
Related 2022 Project(s)

N/A

Map N/A

Location Map:Curb Box Inspection and Replacement Program

ES Infrastructures 2022



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Date: 2020-12-15

2022 PROJECT FUNDING REQUEST FORM

Number: 22206

Project Cost: $639,900

Project Name: **Suspended Watermain Insulation Replacement/Rehabilitation**

Repair/Replace

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Paul Ahn

Useful Life: 20 Pre Approval: ☐

Category: Minor

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Rehabilitation / Replacement of insulation and supports at five (5) locations. Refer to attached map for location.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	578,800	0
Internal Charges:	0	0
External Consulting:	50,000	0
Sub Total:	628,800	0
HST Impact:	11,067	0
Total Project Cost:	**639,900**	**0**

NOTES

City has Suspended Watermain Insulation at 13 locations. Based on the 2020 suspended watermain condition inspection, Consultant recommended rehabilitation and replacement of insulation at the following 5 locations:

- Yonge Street, south of Glen Cameron Road
- Rodick Road, south of Clegg Road
- Woodbine Ave, north of Esna park Dr
- Bayview Ave, south of Doncrest Dr
- John Street, east of Aileen Road

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget	Consulting	Construction			TOTAL	Future Phases
Waterworks	639,900	50,900	589,000	0	0	639,900	0
TOTAL FUNDING	**639,900**					**639,900**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	703,900
Amount Incl HST	639,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

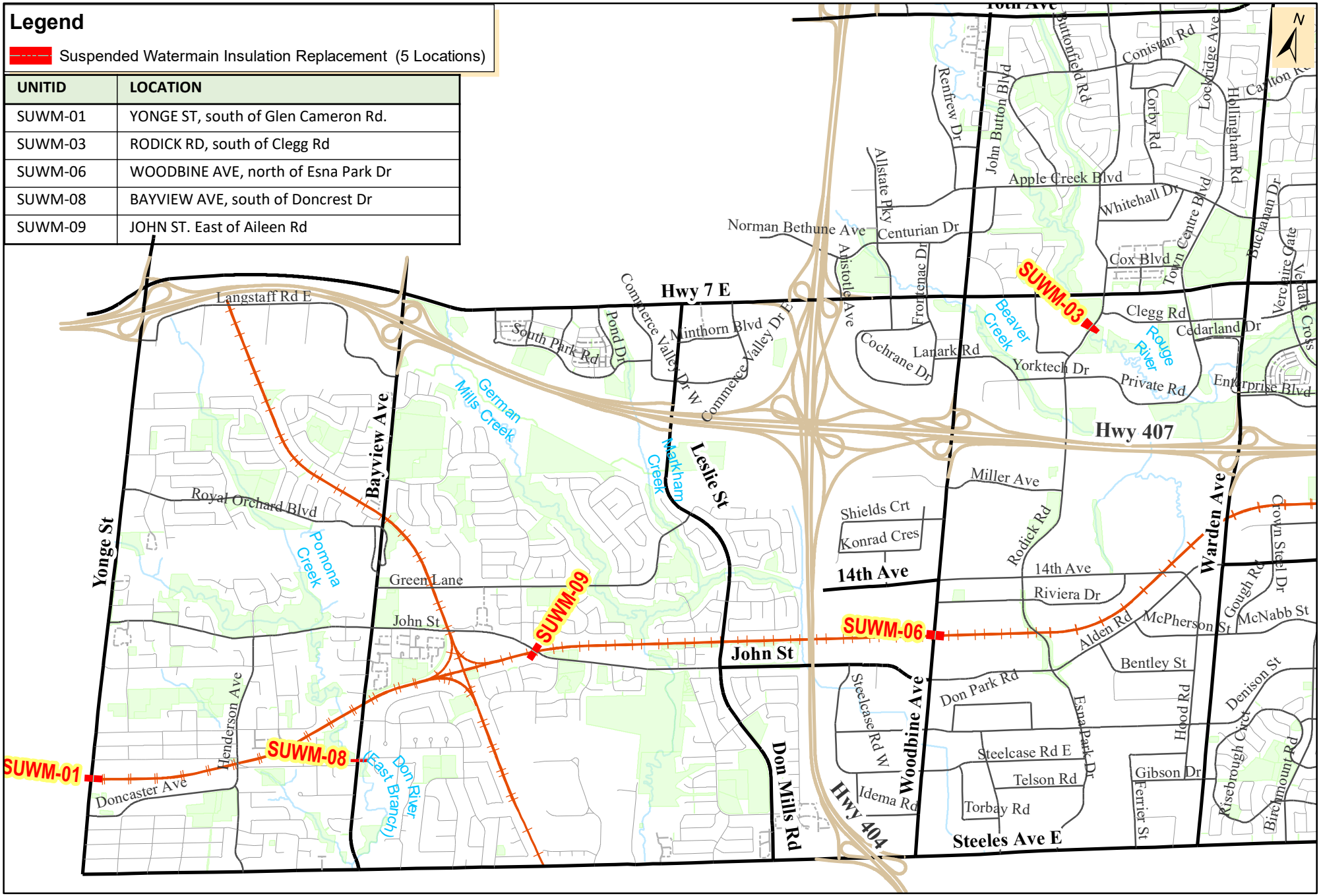
Location Map
Suspended Watermains Insulation Replacement / Rehab

ES - Infrastructure (2022)

Legend

Suspended Watermain Insulation Replacement (5 Locations)

UNITID	LOCATION
SUWM-01	YONGE ST, south of Glen Cameron Rd.
SUWM-03	RODICK RD, south of Clegg Rd
SUWM-06	WOODBINE AVE, north of Esna Park Dr
SUWM-08	BAYVIEW AVE, south of Doncrest Dr
SUWM-09	JOHN ST. East of Aileen Rd



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Date: 2021-04-27

2022 PROJECT FUNDING REQUEST FORM

Number: 22207

Project Cost: $70,700

Project Name: **Watermain Leak Detection at Easement and River Crossings**

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Celia Fan

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Internal peer review

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This is a pilot project to perform leak detection on watermain at easements and river crossings which will identify leaks where repairs are required. Results of the pilot will be analyzed to determine the need to establish a leak detection program for watermain at easements and river crossings.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	69,500	0
Sub Total:	69,500	0
HST Impact:	1,223	0
Total Project Cost:	**70,700**	**0**

NOTES

The regular Leak Detection program utilizes fire hydrants as access points to detect potential leaks. Watermain at easements and river crossings are usually at remote locations that don't have access to fire hydrants. Therefore, the pilot project cannot be accommodated through the regular Leak Detection Program. 50 locations are proposed to be done in 2022. About 150 locations in inventory based on the City's GIS database. Further investigations and field works are required to confirm the locations upon project approval.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	70,700	0	0	0	0	0	0
TOTAL FUNDING	**70,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	77,800
Amount Incl HST	70,700
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22208

Project Cost: $31,200

Project Name: **Watermain Leak Detection Program**

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Celia Fan

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Minor

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This is an annual program. 2021 completed the leak survey on 50% of metallic watermain within the City. 2022 is to complete leak survey on the other 50% metalic watermain. The total inventory of metallic watermain is 280 km. In addition to the leak survey, leak correlation is to be completed to pin-point leaks on those potential leak locations identified from the previous year leak survey. The results of investigation from leak correlation will identify the confirmed leak location to be repaired.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	30,636	0
Sub Total:	30,636	0
HST Impact:	539	0
Total Project Cost:	**31,200**	**0**

NOTES

Amount requested is consistent with 2021 Waterworks Reserve Study Update. Approximately 50 locations will be done in 2022. There are about 150 locations in inventory based on the City's GIS database. Further investigations and field works are required to confirm the locations upon project approval.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	31,200	0	0	0	0	0	0
TOTAL FUNDING	**31,200**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	34,300
Amount Incl HST	31,200
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

2022 PROJECT FUNDING REQUEST FORM

Number: 22209

Project Cost: $936,400

Project Name: **Water Meters - Replacement Program**

Repair/Replace

Commission: Community Services

Useful Life: 20 Pre Approval: ☐

Department: ES - Waterworks

Category: Minor

Project Mgr: Vikas Thakur

Cost Validation: Recent awards

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Replacement of Residential, Multi Residential and Industrial/ Commercial/ Institutional (ICI) water meters that have reached the end of their service lives.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	920,200	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	920,200	0
HST Impact:	16,196	0
Total Project Cost:	**936,400**	**0**

NOTES

This is an annual program. Total inventory: 83,415. This request is to replace approx. 3,928 water meters (3,800 residential, 23 multi residential and 105 ICI) and perform random testing of approx. 5% of meters for accuracy per AWWA C700 (Recommendation #1 for Improvement on Metering Practices, 2015 by Region of York). There is no substantial backlog and water meters are in a state of good repair. Unit cost is consistent with recent award plus inflation.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	936,400	0	0	0	0	0	0
TOTAL FUNDING	**936,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,030,000
Amount Incl HST	936,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Program Name: Water Meters - Replacement Program

Department: Environmental Services

Year	Project #	Past	2022	Future	Total
2019	#19253	$802,500			$802,500
2020	#20266	$996,700			$996,700
2021	#21175	$1,013,200			$1,013,200
2022	**#22209**		**$936,400**		$936,400
2022 Onwards				varies	varies
Total		$2,812,400	$936,400		

Type of Water Meter	Total Inventory (as of Jan 2021)	2022 Program	
Residential	80,706	3,800	4.7%
Multi Residential	581	23	4.0%
Industrial/ Commercial/ Institutional (ICI)	2,128	105	4.9%
Total	**83,415**	**3,928**	**4.7%**

Description of Program

Replacement of Residential, Multi-Residential and Industrial/Commercial/Institutional (ICI) water meters that have reached the end of their service life (20 years)

What was completed in the past

See above table

Current ask

Water Meters - Replacement Program (#22209): $ *936,400*

Future Phases

Varies

Related 2022 Project(s)

N/A

Map N/A

2022 PROJECT FUNDING REQUEST FORM

Number: 22210

Project Cost: $981,900

Project Name: **Sanitary Sewers - Rehabilitation**

Repair/Replace

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Philip Zhang

Useful Life: 50 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Condition assessment

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to rehabilitate the main sanitary sewer, service laterals using structural liner including repairs to manholes.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	964,900	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	964,900	0
HST Impact:	16,982	0
Total Project Cost:	**981,900**	**0**

NOTES

This is an annual program.
Program is to rehabilitate the main sanitary sewer, service laterals using structural liner and repairs to manholes identified through the inspection programs.
Sanitary sewers are in a state of good repair. 3-year historical average $739k. Requesting higher amount since the 2021 award is $1,059k based on 2020 CCTV inspection results and anticipate 2022 will remain at a higher amount.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	981,900	0	0	0	0	0	0
TOTAL FUNDING	**981,900**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

Amount in Study:	1,080,100
Amount Incl HST	981,900
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Program Name: Sanitary Sewer Rehabilitation Program

Department: Environmental Services

Year	Project #	Past	2021	Future	Total
2019	#19249	$1,130,600			$1,130,600
2020	#20261	$910,600			$910,600
2021	#21173	$1,405,000			$1,405,000
2022	**#22210**		**$981,900**		$981,900
2023 Onwards				varies	varies
Total		**$3,446,200**	**$981,900**		

Description of Program

Program to rehabilitate the main sewer, service laterals using structural liner including repairs to manholes identified through CCTV inspection

What was completed in the past

See above table

Current ask

$981,900

Future Phases

Varies

Related 2022 Project(s)

N/A

Map N/A

2022 PROJECT FUNDING REQUEST FORM

Number: 22211

Project Cost: $113,400

Project Name: **Wastewater Flow Monitoring**

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Lijing Xu

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Recent awards

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

This program is to hire a Consultant to record the sanitary system flows to help quantify areas that require further investigation and remedial works to reduce the wastewater system flood risk during large storm events from inflow and infiltration (I/I). Approximately 10 locations will be monitored in 2022 (refer to attached map) to establish the level of extraneous flow into the wastewater collection system from rainfall events.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	0	0
Internal Charges:	0	0
External Consulting:	111,400	0
Sub Total:	111,400	0
HST Impact:	1,961	0
Total Project Cost:	**113,400**	**0**

NOTES

This is an annual program. Monitoring is for 12 months, followed by another 12 months of analysis and report generation. The results will be used to determine the degree of improvement needed to minimize wastewater system flooding. Project cost is based on current contract (expires in 2023).

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	113,400	0	0	0	0	0	0
TOTAL FUNDING	**113,400**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

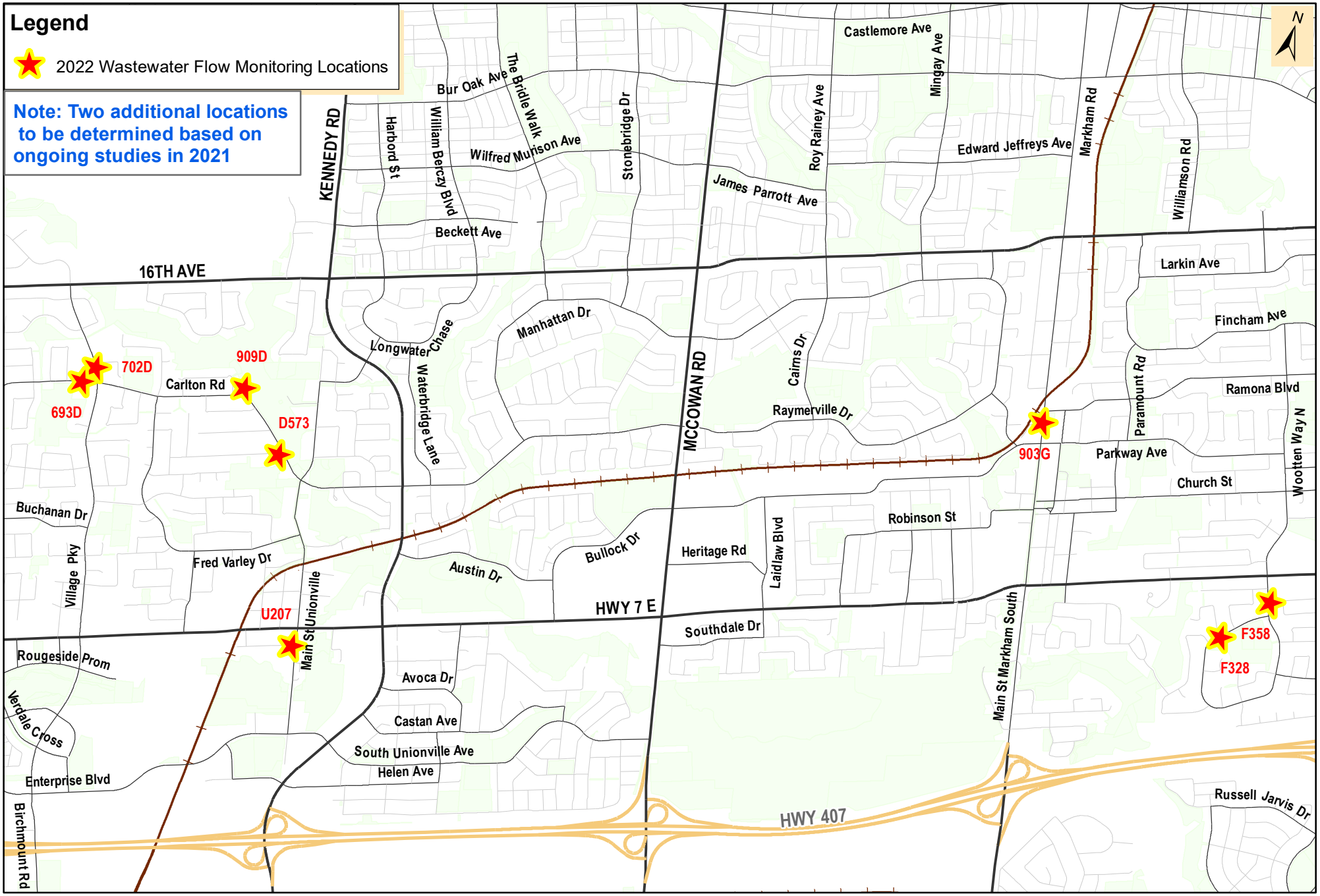
Life Cycle

Amount in Study:	124,700
Amount Incl HST	113,400
Year in the study	2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

Location Map
Wastewater Flow Monitoring

ES - Infrastructure (2022)



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Date: 2021-05-03

2022 PROJECT FUNDING REQUEST FORM

Number: 22212

Project Cost: $381,700

Project Name: **Critical Sanitary Sewers - CCTV Inspection**

Commission: Community Services

Department: ES - Waterworks

Project Mgr: Philip Zhang

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

Studies/Pilot Programs

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Third party estimate

Requirement Validation: Condition assessment

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Program to determine the condition of sanitary sewers that are in the valley land and deep flat sewers using closed circuit television (CCTV) inspection.

BUILDING MARKHAM'S FUTURE TOGETHER: Safe & Sustainable Community

PROJECT COSTS ($)	2022	Future Phases
Cost/Quote:	375,100	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	375,100	0
HST Impact:	6,602	0
Total Project Cost:	**381,700**	**0**

NOTES

This is a new program carried out every 5 years to identify pipe conditions and to develop rehabilitation/ replacement programs. Program includes 39 km length of CCTV inspection out of total sanitary sewers inventory of 918 km.

SOURCE(S) OF FUNDING ($)	Components						
Funding Type	Budget					TOTAL	Future Phases
Waterworks	381,700	0	0	0	0	0	0
TOTAL FUNDING	**381,700**					**0**	**0**

OPERATING BUDGET IMPACT	Personnel	Non Personnel	Revenues	Expenditures/(Revenues)
	$0	$0	$0	$0

DCA/LIFE CYCLE DETAILS

DCA Name	Year	Amount	Amount in Study

Life Cycle

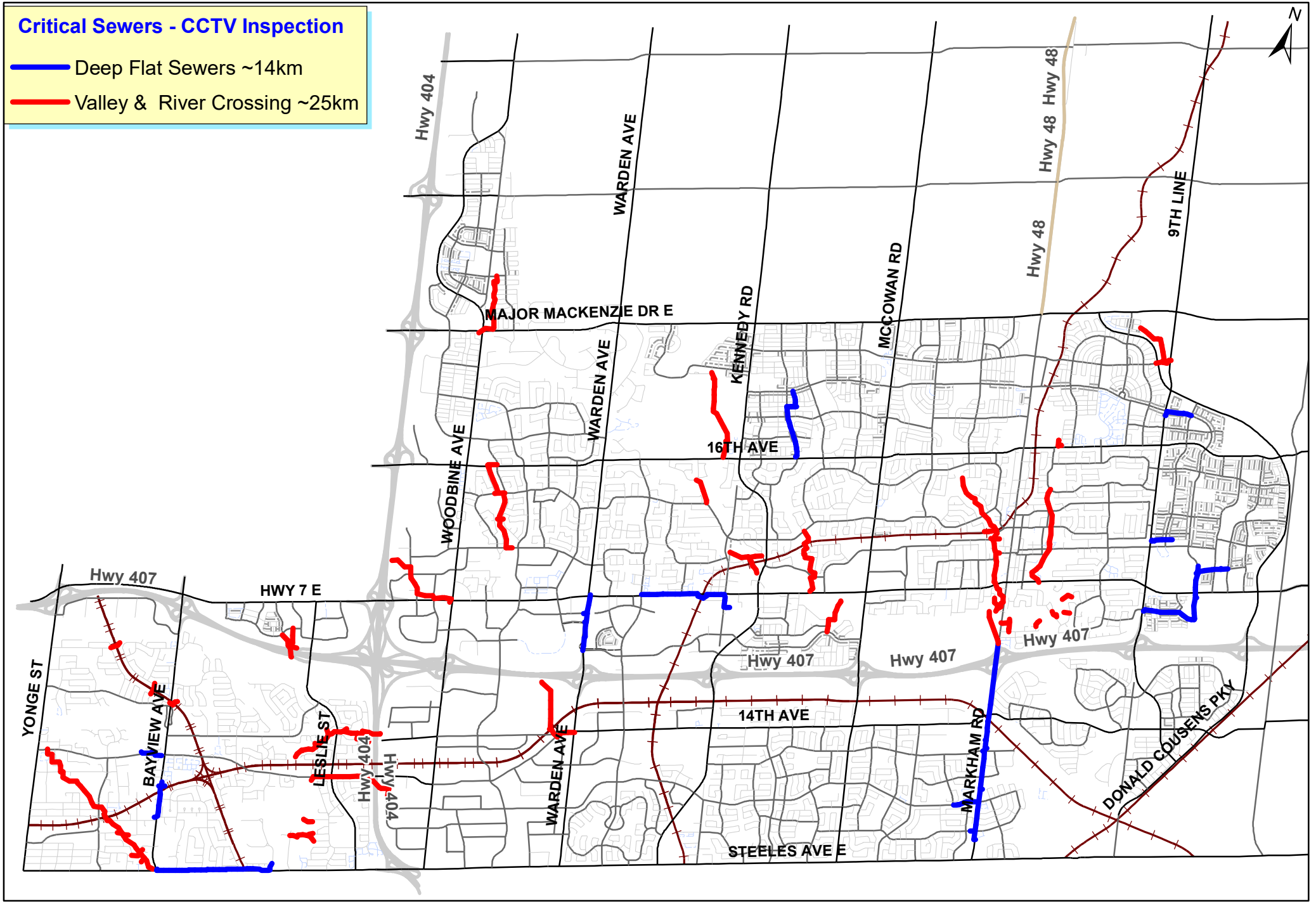
Amount in Study: 419,900

Amount Incl HST 381,700

Year in the study 2022

DCA and/or Life Cycle: Explain if there is a change in the year and/or cost:

CRITICAL SANITARY SEWERS - CCTV INSPECTION



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Date: 2021-03-15

2022 PROJECT FUNDING REQUEST FORM

Number: 22213

Project Cost: **$5,583,700**

Project Name: **City-Wide Staff Salary Recovery**

Repair/Replace/New/Expansion

Commission: Corporate-Wide

Department: Corporate-Wide

Project Mgr:

Useful Life: Pre Approval: ☐

Category: Major

Cost Validation: Internal peer review

Requirement Validation:

Ward(s): CW ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

DETAILED DESCRIPTION (SCOPE OF PROJECT):

To recover personnel costs of staff who work on capital projects. Staff (full-time, part-time and contract) are first charged to the operating budget and then a portion is charged to the capital budget. The request includes $719,500 of new staffing requests and $4,864,200 of existing personnel costs incurred for purposes of implementing capital projects. In previous years' budgets, these amounts were either included within individual capital budgets, or as a stand-alone staffing capital budget by department.

BUILDING MARKHAM'S FUTURE TOGETHER: Exceptional Services by Exceptional People

PROJECT COSTS ($)	**2022**	**Future Phases**
Cost/Quote:	0	0
Internal Charges:	5,583,700	0
External Consulting:	0	0
Sub Total:	5,583,700	0
HST Impact:	0	0
Total Project Cost:	**5,583,700**	**0**

NOTES

New Staffing Requests $719,500 (refer to next page for details):

1. ENG - Sr. Environmental Engineer (FT), FUA MESP
2. ENG - Capital Works Engineer (FT), Hwy 404 Ramp Extension
3. SAM - PM (contract), Mt Joy CC Approaching NZEE Pilot
4. ES - Asset Management Analyst (conversion)

Existing Personnel Costs Charged to Capital: $4,864,200

Planning $849,934, Engineering $699,757, Finance $947,665, ITS $243,500, SAM $1,167,400, Operations $117,202, Environmental Services $838,742.

Please refer to the next page for additional information.

2022 Capital Budget Internal Charges
(Prepared: September 17, 2021)

						Funding Source				Total
Department	**2022 Project Name**	**Project associated with staffing request**	**Staffing Status**	**# of Yrs**	**Position Title**	**Life Cycle**	**Development Charges**	**Other**	**Other Funding Description**	**Internal Charges**
NEW STAFFING REQUEST										
Engineering	MESP for FUA Employment Block Secondary Plan[1]	22205	Full Time	N/A	Senior Environmental Engineer		14,600	131,700	Development Fee	146,300
Engineering	Hwy 404 Ramp Ext. at Major Mackenzie (EA Amendment)[2]	22215	Full Time	N/A	Capital Works Engineer		146,300			146,300
SAM	Mount Joy CC's "Approaching NZEE" Pilot Project[3]	22064	Contract	2.5	Project Manager	312,900				312,900
ES - Waterworks	Asset Management Analyst[4]	22201, 22205, 22210	Conversion	1	Asset Management Analyst			114,000	Waterworks Reserve	114,000
	TOTAL NEW STAFFING REQUEST					**312,900**	**160,900**	**245,700**		**719,500**

[1] To fund a Senior Environmental Engineer to support the MESP for FUA Employment Block Secondary Plan Project
[2] To fund a Capital Works Engineer to support the Hwy 404 Ramp Ext. at Major Mackenzie (EA Amendment) Project
[3] To fund a Project Manager to support the Mount Joy CC's "Approaching NZEE" Pilot Project
[4] This position will assist the IMS/Capital Planning Manager to effectively manage strategic asset management and capital planning for all ES assets. Historically, Waterworks would request $160k of internal recovery through 3 separate projects for 3 seasonal inspectors (For 2022, these projects are 22201, 22205, 22210). Staff is recommending to hire 1 FT Asset Management Analyst at $114k in place of these 3 inspectors. This would result in an annual saving of $46k ($160k - $114k). If this is not approved, department will need to add back requests for the 3 seasonal inspectors.

Department	**2022 Project Name**	**Life Cycle**	**Development Charges**	**Other**	**Other Funding Description**	**Internal Charges**
EXISTING STAFFING						
Planning	Planning & Design Staff - delivery of growth related hard infrastructure		849,934			849,934
Engineering	Engineering Staff - Capital Works and Transportation staff on projects related to Region of York or Metrolinx projects		699,757			699,757
Finance	Internal Project Management - allocate resources related to the administration of growth projects		947,665			947,665
ITS	IT Lifecycle Asset Replacement - Client Advisor supporting replacement projects	194,800		48,700	WW, Bldg Fees, Dvlp Fees	243,500
SAM	Sustainability and Asset Management - project management staff related to facility projects	771,300	-	396,100	MECO	1,167,400
Operations	Asphalt Resurfacing and Trees for Tomorrow - Survey Instrument and contract staff	80,402	-	36,800	Trees for Tomorrow Reserve	117,202
ES Infrastructure	Flood Control and Structures (bridges and culverts) program staff	146,241	-	544,400	Stormwater Reserve	690,641
ES - Waterworks	Cast Iron Watermain - Project Engineer responsible for the design component	-	-	148,100	Waterworks Reserve	148,100
	TOTAL EXISTING STAFF	**1,192,744**	**2,497,356**	**1,174,100**		**4,864,200**
Grand Total		**$ 1,505,644**	**$ 2,658,256**	**$ 1,419,800**		**$ 5,583,700**

2022 PROJECT FUNDING REQUEST FORM

Number: 22214

Project Cost: **$5,233,300**

Project Name: **Corporate Capital Contingency**

Commission: Corporate-Wide

Department: Corporate-Wide

Project Mgr:

Ward(s): CW ☑ 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐

New Asset/Expansion

Useful Life: 0 Pre Approval: ☐

Category: Major

Cost Validation: Other(specify in Notes)

Requirement Validation: Other(specify in Notes)

DETAILED DESCRIPTION (SCOPE OF PROJECT):

Total contingency amounts for applicable 2022 capital projects.

BUILDING MARKHAM'S FUTURE TOGETHER:

PROJECT COSTS ($)	**2022**	**Future Phases**
Cost/Quote:	5,233,300	0
Internal Charges:	0	0
External Consulting:	0	0
Sub Total:	5,233,300	0
HST Impact:	0	0
Total Project Cost:	**5,233,300**	**0**

NOTES

SOURCE(S) OF FUNDING ($)

Funding Type	**Budget**
DCA	1,815,950
Development Fees	3,600
Gas Tax	378,000
Infrastructure Grant	17,800
Non-DC Growth	177,950
Operating Funded Life Cycle	183,400
Other Internal	1,190,300
Parks Cash-in-Lieu	46,400
Tax	89,600
Waterworks	1,330,300
TOTAL FUNDING	**5,233,300**

OPERATING BUDGET IMPACT	**Personnel**	**Non Personnel**	**Revenues**	**Expenditures/(Revenues)**
	$0	$0	$0	$0