

## Committee of the Whole (2) Report

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**DATE:** Tuesday, May 10, 2022

**WARD(S):** ALL

**TITLE:** 2021 DELIVERY REPORT – INFRASTRUCTURE  
DEVELOPMENT

**FROM:**

Vince Musacchio, Deputy City Manager, Infrastructure Development

**ACTION:** FOR INFORMATION

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### **Purpose**

The annual Delivery Report provides Council with the portfolio's 2021 accomplishments, and asset group updates with inventory counts and values, as well as an overview of 2022 Infrastructure Development initiatives.

### **Report Highlights**

- Infrastructure Development Portfolio was established in 2019 and key results were immediately realized as evident in the 2021 delivery achievements
- 311 projects were undertaken in 2021 with an overall expenditure (inclusive of accruals) of more than \$64 million
- The Portfolio achieved a 92% “Burn Rate”, the percentage of actual versus forecasted cash flow
- The Development Engineering department joined the Portfolio in January 2022, allowing for further standardization of City-wide Capital Delivery
- Program delivery is expected to increase with the further refinement of processes and leveraging available technology

### **Recommendations**

1. That this report be received for information.

## **Background**

### **The Infrastructure Development Portfolio was created on July 1, 2019**

Following a corporate re-organization on July 1, 2019, the Infrastructure Development Portfolio was created by consolidating all of the City's capital delivery departments with the mandate to more efficiently deliver on Vaughan's approved and planned capital program. The portfolio oversees the majority of the City's Infrastructure planning and delivery, asset management, facility management and real estate functions.

In support of the City's vision, mission, values and Service Excellence Strategic Plan, the Portfolio developed a purpose statement to provide staff with the "what, how and why" as it relates to their vital roles and functional responsibilities.

**“We deliver City spaces through creative and inspired thinking to shape exceptional experiences.”**

In addition, the Portfolio's supplementary core values and corresponding behaviours help foster a culture of innovation, collaboration, and creativity. These supplementary core values complement the City's values of RESPECT, ACCOUNTABILITY and DEDICATION, further supporting and advancing our purpose.

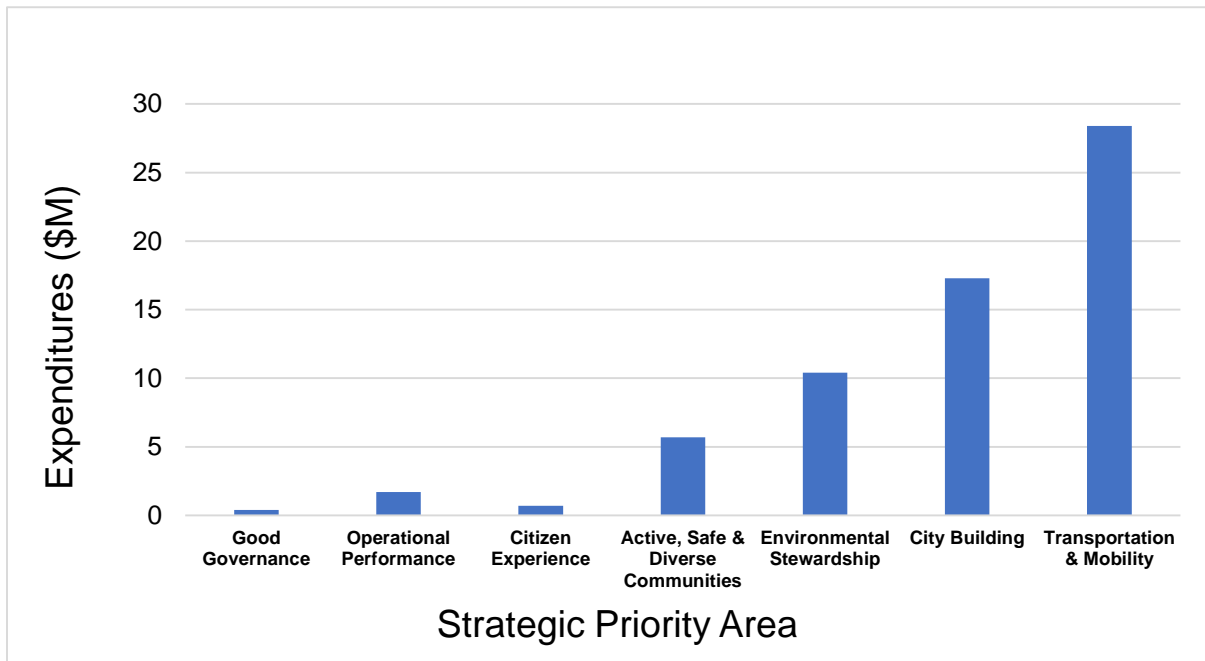
### **Infrastructure assets are built, owned, operated, and maintained by the City**

Assets are essential to provide the necessary services that contribute to the high quality of life enjoyed by City of Vaughan residents. It is imperative to ensure services are delivered in a safe, reliable, and efficient manner, while sustaining a growing community. Important elements of the Asset Management cycle are the acquisition, renewal and replacement of infrastructure that provide these services.

### **Strong alignment with the 2018-2022 Term of Council Service Excellence Strategic Plan**

Infrastructure Development continued to contribute to the City of Vaughan's Strategic Plan by planning, designing, initiating, and completing projects to support Active, Safe and Diverse Communities; City Building; Environmental Stewardship; and Transportation and Mobility. This contribution significantly aids in delivering on the City's vision to become a city of choice that promotes diversity, innovation, and opportunity for all citizens, fostering a vibrant community life that is inclusive, progressive, environmentally responsible, and sustainable.

The following is a summary of the 2021 expenditures (including accruals) by strategic priority:



**The introduction of the Program Management Office (PMO) in 2020 has allowed for the development of a new Delivery Approach**

The newly established Program Management Process demonstrates how the need for an asset transforms into a project to deliver a new asset or changes to an existing asset. The process ensures that asset and project information is gathered, analyzed, monitored, and shared with appropriate stakeholders to support evidence-based decision-making. In 2020 the Program Management Committee (PMC) was created to govern the Program Management Process. The PMC responsibilities include strategic planning, project prioritization, approval of significant project changes and monthly review of project reports. The PMO introduced standardized processes including monthly reporting, approval of project changes and development of charters to support 2021 budget requests.

**Previous Reports/Authority**

Not applicable.

**Analysis and Options**

**In 2021, the City invested \$29.8 million in State of Good Repair projects and \$34.8 million in Growth-Related projects, for a total of \$64.6 million in expenditures**

The City's capital program can be sub-divided into two categories: State of Good Repair and Growth-Related programs.

### State of Good Repair Program

This program is established through a risk-based review of the condition of the City's infrastructure and its ability to provide the Level of Service to Vaughan's Citizens. Each asset class is reviewed and the investment requirements (including rehabilitation and replacement) are determined to ensure that the City achieves maximum Value for Money. Funding sources for this program are generally capital through taxation, infrastructure reserves and Gas Tax.

### Growth-Related Program

This program is established to deliver on new infrastructure to support growth. This infrastructure includes community infrastructure (such as community centres, parks, fire stations, etc.), as well as linear infrastructure (such as watermains, sewers, roads, etc.). These programs are typically established through the City's Growth Management Strategy and the corresponding master plans in support of development. The funding sources for this program are primarily Development Charges.

A detailed review of these expenditures, summarized per asset class, are noted below.

### **In 2021, an investment of \$29.1 million in 80 projects was made to the City's road network**

Roads asset class consists of a network of arterial, collector and local roadways and associated assets to provide the safe passage of vehicles throughout the community. The bridges asset class consists of structures which provide a roadway or walkway for the passage of vehicles, pedestrians or cyclists across an obstruction, gap or facility and are greater than or equal to 3 metres in span.

Overall, the road network includes the following assets:

- roadways
- curb and gutters
- barriers
- pedestrian bridges
- roadway bridges

The 80 road network projects were in various phases throughout 2021:

- 20 in the study phase (includes Master Plans, Environmental Assessments, Feasibility Studies, Pre-Design, etc.)

- 15 in the detailed design phase
- 8 in the construction phase
- 37 were completed

Some of the key projects include:

- Canada Drive – America Avenue Bridge
- King Vaughan Road Bridge
- Kirby Road Extension – Dufferin Street to Bathurst Street
- LED Streetlight Retrofit Program – Phase 2
- Pavement Management Program
- Woodbridge Avenue Improvements – Design Phase Complete

**An investment of \$7.6 million in 38 projects was made to the City’s water, wastewater, and stormwater network**

The water, wastewater and stormwater asset class consist of a network of water and sewer mains and associated assets to provide the safe conveyance of drinking water, sanitary and storm water. This asset class also includes residential and commercial service connections, maintenance holes, and storm water management ponds.

Overall, the water network includes the following assets:

- Watermains
- Chambers
- Hydrants
- Junctions
- Service connections
- Valves
- Water Booster Stations

Overall, the wastewater network includes the following assets:

- Sanitary sewer mains
- Maintenance Holes
- Pump Stations
- Service Connections

Overall, the stormwater network includes the following assets:

- Stormwater mains
- Catch basins
- Inlet/Outlet Structures
- Maintenance Holes
- Management Ponds
- Service Connections

The 38 water, wastewater and stormwater network projects were in various phases throughout 2021:

- 4 in the study phase (includes Master Plans, Environmental Assessments, Feasibility Studies, Pre-Design, etc.)
- 11 in the detailed design phase
- 8 in the construction phase
- 15 were completed

Some of the key projects include:

- Black Creek Renewal, Edgeley Park and Pond
- Block 20 Sanitary Sewer Diversion
- Kleinburg Village Improvements
- Old Maple Area Infrastructure Improvements
- Stormwater Management Facility Improvements (SWMF)
  - Blackburn, Franklin and Pondview Ponds
  - Fieldstone and Ashbridge Circle Ponds
  - Gallanough Park SWMF
- Watermain Replacement Program

**An investment of \$15.6 million in 86 projects was made to the City's facilities assets**

Facilities asset class consists of all buildings owned by the City of Vaughan to serve citizens, businesses, and City staff.

Overall, the facilities network includes the following assets:

- Administration Buildings
- Community Centres
- Fire Stations
- Heritage Buildings
- Libraries
- Operations Yards
- Sport/Senior Clubs/Other

The 86 facilities projects were in various phases throughout 2020:

- 2 in the study phase (includes Master Plans, Environmental Assessments, Feasibility Studies, Pre-Design, etc.)
- 18 in the detailed design phase
- 38 in the construction phase
- 28 were completed

Some of the key projects include:

- Accessibility for Ontarians with Disabilities Act (AODA) Program Plan
- New! Carrville Community Centre, Library and District Park

- Energy Management Program
- Facility and Energy Renewal of Fire Station 7-1 – advancing through the design phase
- New! Fire Station 7-12 – advancing through design phase
- Garnet A. Williams Community Centre major renovation
- Installation of Ultra Violet filtration units at all City facilities as well as retrofit to ultra-high efficiency Merv 13 filtration systems
- Maple Bowling Alley revitalization
- Maple Library and Community Centre renovation
- Roof Replacement Program
- Upgraded 35 Closed Circuit Television (CCTV) systems with new Internet Protocol (IP) recorders and IP cameras at various parks, installed new CCTV and Access Control systems at seven Fire Stations and 11 Wastewater Stations

**An investment of \$10.5 million in 89 projects was made to the City’s Parks and Open Spaces Assets**

The parks and open space asset class consist of play spaces and amenities for residents as well as linear open spaces that either expand on the park system or create enhanced linkages between the system of parks and open spaces.

Overall, Parks and Open Space includes the following assets:

- Playgrounds
- Skate areas
- Soccer and Baseball fields
- Splash Pads/Waterplay areas
- Tennis and Basketball courts

The 89 parks and open space projects were in various phases throughout 2021:

- 28 in the study phase (includes Master Plans, Environmental Assessments, Feasibility Studies, Pre-Design, etc.)
- 7 in the detailed design phase
- 9 in the construction phase
- 45 were completed

Some of the key projects include:

- Block 18 District Park Engagement and Final Concept
- North Maple Regional Park – Initiated trail improvements and Phase 2 Design Build contract
- Local Off-leash Dog Park Strategy
- Glen Shields Park Redevelopment design and tender award
- Playground Renewal and Surfacing Improvements
- Park Improvement Projects
- Playground Rubberized Resurfacing at North Thornhill District Park

- Summit Park Completion in Block 55 (Kleinburg Summit Way)

### **An investment of \$1.8 million in 18 projects was made to the City's Active Transportation network**

The Active Transportation asset class consists of walking and cycling infrastructure and facilities offering residents recreational transportation and feasible transportation alternatives to the automobile.

Overall, the active transportation network includes the following assets:

- Sidewalks
- Multi-Use Pathways
- Cycle Tracks
- Bike Lanes
- Multi-use Recreational Trails
- Pathways

The 18 Active Transportation network projects were in various phases throughout 2021:

- 3 in the study phase (includes Master Plans, Environmental Assessments, Feasibility Studies, Pre-Design, etc.)
- 4 in the detailed design phase
- 7 in the construction phase
- 4 were completed

Some of the key projects include:

- First Annual Active Transportation Program Council [Report](#) brought to Council in February 2021 and 2021 Annual Update in February 2022
- Humber Trail Feasibility Study
- Jane Street (Portage Parkway to Teston Road) Functional Design completed
- Pedestrian Cross-over (Type B) at York Hill Boulevard construction completed
- Riverwalk Phase 2A – Doctors McLean District Park construction completed
- Bartley Smith Greenway – Langstaff Road underpass design
- 60% increase in cycling along Clark Avenue in 2021 following installation of cycle tracks
- 10-year cycling and trails capital programs developed
- 120+ kilometres of cycling facilities, multi-use pathways, and recreational trails were advanced through municipal, regional and partner projects



## **The Infrastructure Development portfolio continues to develop long-range infrastructure planning studies to support future growth**

The portfolio works closely with the Planning and Growth Management portfolio to develop important infrastructure plans to help support and guide future growth within the City. Infrastructure Development oversees a number of long-range master plans, strategies and studies, which integrate infrastructure requirements with environmental assessments and planning principles.

The team is committed to protecting the City's interests and needs as it oversees third party projects, plans and initiatives which may impact Vaughan's linear infrastructure. Some of the key projects include:

- Highway 427 Expansion Project – Highway 7 to Major Mackenzie Drive | Ministry of Transportation
- John Lawrie Overpass | Ministry of Transportation
- Core Asset Management Plan
- Integrated Urban Water Master Plan
- Vaughan Transportation Plan
- Kirby Road Widening Environmental Assessment – Dufferin Street to Jane Street
- Bass Pro Mills Drive Extension Environmental Assessment
- Teston Road Operational Environmental Assessment

## **The Real Estate Department continues to support the Growth-Related Projects, ensuring the timely delivery of infrastructure**

The Real Estate team supports city-wide initiatives by securing property rights such as Permissions to Enter, Temporary Easements and, where required, securing and/or disposing of land. In 2021, non-tax revenue of more than \$37.2 million was generated from the sale of surplus City lands and/or easements. More than 120 Development applications were reviewed and commented on, resulting in more than \$32.8 million cash-in-lieu of parkland revenue.

In 2021, real estate services contributed to the advancement of the following:

- Black Creek Channel
- Kirby Road Extension (from Dufferin Street to Bathurst Street)
- Metrolinx Initiatives
- Portage Parkway
- Block 59 District Park land dedication and acquisition
- Vaughan Metropolitan Centre Initiatives

## **Development Engineering joined the Infrastructure Development portfolio in January 2022, further standardizing City-wide Capital Delivery**

With the City of Vaughan's new Organizational Structure introduced in January 2022, the portfolio welcomed the Development Engineering department. The team is responsible for the expeditious review, approval, inspection and processing of municipal services for land development. The addition of the department to the Infrastructure Development portfolio will help ensure that the vast majority of infrastructure is delivered in a standardized manner. Synergies between the infrastructure planning and delivery groups will allow for a coordinated and efficient approach to growth-related infrastructure projects.

The following is a summary of municipal infrastructure delivered through the development approval process and growth-related projects that were assumed by the City of Vaughan:

### **2021 Assumption Summary**

- 13 Land Development projects with a value of \$35.8M
  - 13 lane kilometres of road
  - 10.4 kilometres of watermain
  - 6.2 kilometres of sanitary sewer
  - 4.8 kilometres of sidewalk
  - 4.0 kilometres of storm sewers
  - 248 streetlights
  - 4 stormwater management ponds
  - 1 wastewater pumping station

### **A consolidated delivery approach was developed in 2021 to ensure effective and efficient capital delivery**

Following a rigorous review of the capital delivery approach (from project initiation to project completion), a delivery approach was developed to ensure that capital delivery was standardized. The Delivery Approach is guided by the Program Management Process (PMP), governance, and reporting, coupled with resources, procedures, tools and templates.

### **Program Management Office (PMO)**

The PMO is responsible for overseeing the entire Program Management Process. The PMO oversees selection of delivery approach, charter development and prioritization; facilitates monthly reporting and project change approvals; provides staff with the methodology, tools and systems needed to support the Program Management Process; performs quality checks on project artifacts; and applies a gated approach to ensure compliance to the methodology.

## **Program Management Process Governance and Oversight**

Program management process governance is provided through the Program Management Committee. The committee is made up of all of the Senior leadership members of the Infrastructure Development team. The committee is responsible for:

- Aligning projects with the 2018-2022 Term of Council Strategic Plan
- Prioritizing capital project funding submissions
- Approving project changes
- Providing oversight on all delivery projects and programs.

## **Communications for all projects were significantly enhanced in 2021**

Throughout 2021, Infrastructure Development -- in collaboration with City departments, consultants and our partners in Corporate and Strategic Communications -- developed and executed comprehensive communications strategies to promote awareness and support vital connections with clients, stakeholders, City Council, staff and the community. The following is a summary of the communications through a variety of tactics.

- 55 Internal Project Updates/Memos
- 50 Newsletters and Notices
- 64 Public Service Announcements and News Releases

## **Financial Impact**

There are no immediate financial impacts associated with this report.

## **Broader Regional Impacts/Considerations**

There are no broader regional impacts associated with this report.

## **Conclusion**

The significant achievements, as identified within this report, demonstrates that the portfolio remains focus on Capital Delivery. Advancing project management processes and technology has allowed the portfolio to achieve over \$64M in Capital Delivery with a 92% "burn rate", the percentage of actual vs. forecasted cashflow. The framework has been developed to undertake larger more complex City Building projects in all asset classes.

**For more information**, please contact: Vince Musacchio, Deputy City Manager, Infrastructure Development, 8311

## **Attachments**

1. Infrastructure Development 2021 Delivery Report

**Prepared by**

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**Approved by**



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**Reviewed by**



Nick Spensieri, City Manager