

Improving the Identification, Monitoring, and Tracking of Development Charges Related Projects at the City of Windsor

Contents

- Executive Summary 1
- Purpose of this document 4
- Methodology..... 5
- Tracking and Reporting DC Projects..... 6
 - Primary Milestones and Major Processes..... 6
 - Stakeholders 8
 - Systems..... 9
- Current State Assessment 10
- Challenges and Inefficiencies 11
 - Manual Data Analysis and Information Management 11
 - Reliance on Excel spreadsheets 11
 - Retrospective review 16
 - Inconsistent language and project profiles 16
 - Limitations in Technology and Systems Functionality..... 17
 - Lack of data centralization and absence of integration..... 17
 - Inability to append assets and multiple asset categories to projects 17
 - Lack of on-demand project close-out reporting 20
 - Lack of flexible reporting, analytics, and dashboards 20
- Next Steps 21
- Building a More Efficient Future State..... 22
 - The Right Technology 22
 - The Right Business Process 30

- Table 1 Tracking DC Projects: Primary Milestones and Major Processes 6
- Table 2: Key Stakeholders 8
- Table 3 Systems Used 9
- Table 4: Key Milestones and Overarching Efficiencies 10
- Table 5 Spreadsheet Review 11
- Table 6: Technology Ecosystem: Financial Reporting, Budgeting, and Asset Management..... 22
- Table 7: Minimum Desired Systems Functionalities for Efficient DC Reporting 23
- Table 8: DC Project Creation in CPA: Example Data..... 30
- Table 9: DC Project Creation Using CPA..... 31

- Figure 1: Review of Primary Spreadsheets - Finance 13
- Figure 2 Review of Primary Spreadsheets: Engineering..... 15
- Figure 3 Functional Limitations in Questica 19
- Figure 4: Asset Records in CityWide Asset Manager..... 25
- Figure 5: CityWide CPA Overview: Project Listing 27
- Figure 6: CityWide CPA Overview: Project Plan 28
- Figure 7: CityWide CPA Overview: Project Funding and Visualization 29
- Figure 8: DC Project Creation in CPA - Project Builder..... 30

Executive Summary

The purpose of this report is to identify major inefficiencies within the DC project tracking processes. In our assessment, with such an expansive development program, improvements in the City's technological ecosystem would expedite the identification, monitoring, and reporting of DC-related tasks and processes. This report also outlines potential solutions and recommendations for the City of Windsor to improve the tracking and monitoring of its DC related capital program.

Development charges (DC) offer an essential source of revenue for municipalities to ensure 'growth pays for growth'. DCs are one-time fees imposed on new developments to help pay for new capital infrastructure that must be built to support growth. Municipalities are required to establish a DC by-law every five years. Prior to the update, a development charges background study must be completed. The study outlines residential and non-residential growth, the resultant increase in infrastructure services, and the associated development charges. The City of Windsor's most recent background study was completed in 2020.

Over the ten-year period between 2020-2029, the City's population is expected to reach 230,462 residents, an increase of 10,433 from 2019 estimates. Employment is expected to increase by 2,713 jobs and will reach 112,265 over the next decade. Supporting this growth will require residential and non-residential developments. These new developments will in turn require an expansion of the City's infrastructure programs.

The 2020 background study estimates the City's 10-year development related program at a gross cost of more than \$3 billion, comprising nearly 150 major infrastructure projects. Portions of these capital costs can be attributed to new developments, and as a result, can be recovered through development charges. Once collected, ensuring all available DC funding is applied against eligible projects requires sound financial management and highly nuanced analysis. Staff must develop detailed project profiles, and actively monitor, track, and report on the progress of each project through its lifecycle.

Effective identification, tracking, and financial reporting of DC-related projects is essential for the City's annual budget, and for enabling the development of future iterations of the background study. Staff must complete at least 25 highly technical tasks and major processes, most through manual work. This has created substantial administrative burden across the City's Finance and Engineering teams. The overall update and review process is not only inefficient, but also creates potential for human errors, including misallocation of DC funding and missed opportunities to apply available DC funds against eligible projects.

Multiple systems are used to support the annual financial reviews of the City's development program and the comprehensive review ahead of each background study. Pertinent information regarding a project, including intricate funding details, are dispersed across multiple,

unconnected systems, requiring staff to constantly cycle between applications to generate basic reporting.

Given the size and scope of the City's DC capital program, current systems deployed across various departments may no longer be capable of facilitating essential reporting functions. Currently, no singular application exists that can centralize, consolidate, and automate all 25 major and highly technical processes that staff must complete as part of the ongoing DC tracking and reporting. However, in our assessment, the City is well-positioned to further leverage its existing technological ecosystem to optimize DC related reporting and program management.

Functional limitations within these systems force staff to do much of the required analysis in Excel. This often means duplicating data entry and redundant reviews. Staff use two primary spreadsheets, including a manually created digital replica of the background study used to track projects. These spreadsheets contain more than 10,000 hardcoded and formula generated entries—each highly vulnerable to human error, with direct implications on financial reporting. Like most Excel documents, the structure, layout, and methodologies used in these sheets is highly unique to individual users. The management of these documents can consume hundreds of hours of staff time each year—diverting attention, time, and resources away from core responsibilities.

Major capital works can include many asset types, such as roads, and water and wastewater infrastructure, each with its own associated development charges. Ensuring optimal and appropriate allocation of available DC funding requires a detailed understanding of the asset composition of each project. However, none of the current systems allows staff to append individual assets to a project. Staff must rely on verbal project descriptions for clues on which specific assets are contained in the project, hold time consuming discussions with colleagues, and parse through multiple documents to improve project clarity.

These verbal descriptions, as well as how projects are named and identified, can also vary across documents, systems, and evolve over time—creating discontinuity between historical data and documentation, requiring even more manual analysis. There is also no dynamic, automated alignment between project IDs. Each project has different IDs across the various systems, requiring manual reconciliation. This process is made more complicated for multi-year, multi-phased projects with multiple sources of applicable DC funding, e.g., roads, storm, wastewater, that must be carefully applied and tracked. Changes to project scope and timing adds even more administrative burden and demands more manual analysis.

An effective solution will facilitate completion of all major processes and support the administration and financial management of Windsor's development program. It will deliver on-demand reporting, including detailed project status reports, DC funding consumed to date, available funds, and assets impacted by each project.

Currently, Windsor deploys at least five systems to support essential corporate functions and business processes, including financial reporting, budgeting, and asset management. These are: Questica, PeopleSoft, Microsoft Excel, CityWide™ Asset Manager, and CityWide™ CPA.

Neither CityWide™ Asset Manager nor CPA are currently used in the identification, tracking, nor reporting of Windsor's development charges program. However, based on the type and volume of data contained in these two applications - approximately 50,000 asset records are managed within Asset Manager - they may offer a suitable platform for staff to expedite the DC process, both annually and ahead of each iteration of the DC background study.

Together, the applications overcome some of the principal constraints identified through the current state assessment. Individual assets can be appended to each project, allowing for maximum accuracy in project costing. This data also endures any mutations in project naming conventions, scopes, and descriptions over time, and across various data sources.

The systems are also integrated, allowing staff to retrieve data dynamically, and attach other informative asset attribute to each project profile, including risk and condition. Native reporting in the systems reduces manual analysis by staff that must be conducted to support development of capital budgets, and ahead of each DC background study.

We recommend the City further explore the implementation of CityWide™ CPA for its development charges program. However, technology alone cannot eliminate all inefficiencies. The ongoing success of any new implementation hinges on good business practices and procedures.

Regardless of the application deployed to facilitate the DC process, we recommend more frequent project status and close-out reviewed and the development of a standard operating procedure (SOP) specific to the DC program's reporting and analysis. The SOP should outline roles and responsibilities, as well as detailed guidance on information management, including standardize project descriptions and naming conventions.

Purpose of this document

The intent of this report is to document, map, and evaluate the process staff follow at the City of Windsor in selecting, tracking, and reporting on development charge (DC) projects. The document identifies inefficiencies within this complex overarching process, and provides recommendations on how workflow can be improved to save staff time and resources; minimize the potential for errors in financial analysis and reporting; improve internal communications; expedite and facilitate information sharing; maximize the use of existing software systems; and, optimize the use of DC funds—critical in maintaining credibility with industry partners and ensuring the City’s DC by-laws are defensible.

Development charges (DCs) are one-time fees that municipalities collect from land developers, home builders, and institutions to help pay for the costs of infrastructure that must be built to support new developments. This can include hard or engineered services, such as roads, water, and wastewater, and soft or general services, including community and recreation centres, libraries, and parks. The rates levied on developers for each service type are outlined in a bylaw that must be renewed every five years, in accordance with *Development Charges Act, 1997* and its associated Ontario Regulation 82/98.

Prior to updating the DC bylaw, municipalities must conduct a development charges background study. The technical study outlines residential and non-residential growth, the resultant increase in infrastructure services, and the associated development charges. The City of Windsor’s most recent background study was completed in 2020.

Over the ten-year period between 2020-2029, the City’s population is expected to reach 230,462 residents, an increase of 10,433 from 2019 estimates. Employment is expected to increase by 2,713 jobs and will reach 112,265 over the next decade. Supporting this growth will require residential and non-residential developments. These new developments, will in turn, require an expansion of the City’s infrastructure programs.

The 2020 background study estimates the City’s 10-year development related program at a gross cost of more than \$3 billion, comprising nearly 150 major infrastructure projects. Portions of these capital costs can be attributed to new developments, and as a result, can be recovered through development charges. Ensuring all available DC funding is applied against eligible projects requires sound financial management and highly nuanced analysis. Staff must develop detailed project profiles, and actively monitor, track, and report on the progress of each project through its lifecycle.

Methodology

The findings and conclusions in this report relied on detailed discussions and interviews with staff, and a review of pertinent documents. Following an initial round of interviews, a full-day on-site workshop was held in August with key stakeholders. Staff also demonstrated how different software applications are used throughout the tracking and monitoring of DC-related projects.

Tracking and Reporting DC Projects

Updating the City’s development charges background study and conducting annual reviews require significant, dedicated staff time and resources, and the deployment of multiple software applications. Ensuring all available development charges funds are applied against eligible projects in a timely manner is essential not only for maximizing all revenue sources, but also for maintaining credibility and transparency with constituents and industry stakeholders.

Primary Milestones and Major Processes

The DC-related projects tracking process requires staff to complete three interconnected milestones:

1. Update status of projects from the previous Development Charges Background Study
2. Develop project list for the forthcoming background study
3. Annual review of DC-related projects and the development of the City’s capital budget

These milestones comprise 25 major, and highly technical processes and sub-processes, many of which are completed manually, and require considerable data gathering, analysis, parsing, and manipulation. These processes are not linear or sequential in nature, with many being completed in parallel with others.

Table 1 Tracking DC Projects: Primary Milestones and Major Processes

Milestone	Major Tasks and Processes
1. Update status of projects from the previous Development Charges Background Study	<ol style="list-style-type: none"> 1. Establish project status for each project identified in prior DC background study <ol style="list-style-type: none"> a. Identify projects already completed b. Identify deferred projects 2. Confirm all projects identified as completed by Engineering are contained in spreadsheet used by Finance 3. Update other completed projects not identified in spreadsheet 4. Review listing of DC projects funded by Capital since last DC study 5. Reviewing listing of DC projects planned for funding in 10-year capital budget 6. Confirm projects funded by DC allocations are linked to the DC project identified 7. Provide Hemson report on completed and deferred projects and financial information related to each, e.g., funding allocated

Milestone	Major Tasks and Processes
2. Develop project list for the forthcoming background study	<ol style="list-style-type: none"> 1. Identify new projects 2. Determine if projects from prior study should carry forward and amend if necessary 3. Identify and append applicable assets 4. Establish project costs 5. Review recent procurement data to ensure cost estimates reflect market conditions 6. Update financial tracking of DCs to include new projects in DC study and allocations of DC eligible funding
3. Annual review of DC projects and capital budget development	<ol style="list-style-type: none"> 1. Reconcile and align projects in capital budget with DC background study 2. Align PeopleSoft project ID with Questica ID 3. Identify projects that have already received DC funding current and previous year 4. Parse individual project to determine asset types and segments included 5. Review prior year capital budget project descriptions 6. Verify maximum, eligible DC funding was consumed in delivery of projects 7. Identify projects within the 10-year capital plan that will receive DC funding in the future 8. Identify and apply suitable funding sources - Proactive Allocations 9. Evaluate and apply suitable funding sources - Retroactive Adjustments/Funding Source Swaps 10. Apply applicable DC funding apportionment

Stakeholders

Several stakeholder groups are involved in delivering the milestones, including external consultants (Hemson), and staff from the City's Finance and Engineering groups. Table outlines key stakeholders who are typically involved in the development charges background study and the annual review process.

Table 2: Key Stakeholders

Role	Responsibility within the DC process
Engineering	
Manager, Design and Development	Responsible for reporting on which development charges projects have been completed, and which projects are to be added into the current DC background study
Engineer III	Develop projects to be included into the forthcoming DC background study, and their estimated costs; collaborate with finance
Engineer II	Collaborate with, and support Engineer III, on the development of estimates for new projects
Development Engineer	Responsible for reporting which new development projects should be included to the DC background study and support development of estimates
Finance	
Deputy Treasurer, Financial Planning	Work with external consultants to develop and update DC background, and continue to liaise on an as-needed basis
Financial Manager, Asset Planning	Review and approve allocations for development charges; review funding; capital budget;
Senior Capital Analysts (SCAs)	Determine DC allocations; identify DC projects found within the capital budget; identify eligible funding sources; serve as primary contact with Engineering; reconcile PeopleSoft and Questica to the development charges background study; monitor actual project costs against DC funding provided
Financial Planning Administrator (FPA)	Liaise between finance and engineering; collaborate with SCA; build capital budget
Senior Manager, Asset Planning	Liaise with chief financial officer (CFO)
Senior Management Team	Approve financial statements and use of funds

Council	Approve Development Charges Background Study and by-law, and capital budget
Consultant	Verify projects are growth related; establish DC funding allocations
Industry Representatives	Provide input during the background study process; act as a source of accountability

Systems

The City actively deploys three separate, independent, siloed software applications to complete the three primary milestones. Table 3 summarizes the systems used, the type of information contained within each system as it relates to the DC process, and any linkages or integration with other applications.

Table 3 Systems Used






System	General information contained	Linkages or integration with other systems
Microsoft Excel	Staff in both engineering and finance use several independent worksheets to conduct analysis for project status and reporting, including manually digitizing and replicating the static data contained in the DC background study produced by Hemson	No automated integration with other systems.
PeopleSoft	PeopleSoft is the City's primary accounting system and general ledger. All budget data is manually uploaded into PeopleSoft. The application is also used to track all actual spends related to each project.	No automated integration with other systems. No linkages to DC background study.
Questica	Questica is the City's budgeting tool, used to develop its capital budget and track all capital projects. All data is exported into Excel for further manual analysis to support DC project reporting and updates.	No automated integration with other systems. No linkages to DC background study.

Current State Assessment

The analysis contained in the current state assessment determined that the DC-related project tracking process requires City staff to complete three interconnected milestones that comprise 25 major and highly technical processes and sub-processes.

In completing these milestones, staff consistently face two overarching inefficiencies, each with multiple, and avoidable roadblocks that consume staff time, attention, and corporate resources.

Table 4: Key Milestones and Overarching Efficiencies

Key Milestones	Primary Inefficiencies	Select KPIs
 <p>Update status of projects from the previous Development Charges Background Study</p>	 <p>Manual Data Analysis and Information Management</p>	<p>148-222 staff hours required to review projects ahead of each DC study cycle (21-32 full workdays)</p>
 <p>Develop project list for the forthcoming background study</p>	 <p>Limitations in Technology and Systems Functionality</p>	<p>More than 10,000 hardcoded and formula generated entries in Excel, each highly vulnerable to human error, requiring manual oversight</p>
 <p>Annual review of DC-related projects and the development of the City's capital budget</p>		

Challenges and Inefficiencies

This section outlines inefficiencies and challenges staff face in the tracking, monitoring, and reporting of the City’s development related projects, and in completing the primary milestones outlined previously. The majority of these issues and constraints can be classified under **two broad, highly interrelated, and mutually reinforcing** categories:

1. Manual Data Analysis and Information Management
2. Limitations in Technology and Systems Functionality

Manual Data Analysis and Information Management

Although the City’s development charges background study is produced by external consultants, staff are required to provide essential information. This information—including project status reports, DC-related funding received to date, identification of projects with a planned use of DC funding—cannot be quickly generated. Each prior-period development project must be manually reviewed to determine if it has been completed or whether it remains relevant for the forthcoming planning period. New projects must also be identified. Collecting, consolidating, and collating this raw data consumes substantial time and resources and is subject to the following inefficiencies.

Reliance on Excel spreadsheets

Both the Engineering and Finance groups rely primarily on two Excel spreadsheets to manage the tracking and reporting of the City’s development related program. Substantial data is included in each document. Combined, the two spreadsheets contain more than **10,000 hardcoded and formula generated entries**—each highly vulnerable to human error.

Table 5 Spreadsheet Review

Spreadsheet	Data Contained (non-exhaustive)	Key Findings
<i>Spreadsheet 1: “2021 DC Engineering - Reallocation of Reserve Funds.xls”</i>	<ul style="list-style-type: none"> • Digital replica of projects identified in DC background study (PDF) • DC balances • Usage and forecasting • Project costing • Associated PeopleSoft and Questica project IDs • Grants and other supplemental funding • Used by Finance, updated annually ahead of capital budget 	<ul style="list-style-type: none"> • Across the 11 tabs contained within the spreadsheet, there are more than 6,700 cells that contain data, requiring manual input or analysis by staff. • Lack of input controls and data validations can compromise data integrity. • Hardcoded values are prone to data input error, and difficult to track and verify without first-hand knowledge. • Although the spreadsheet contains project numbers that align with the

Spreadsheet	Data Contained (non-exhaustive)	Key Findings
<p><i>Spreadsheet 2: "Eng. Capital Programs templates - City-wideSSPD-2019 Update.xls"</i></p>	<ul style="list-style-type: none"> • Digital replica of projects identified in DC background study (PDF) • Project costs • Project engineer • Used by Engineering 	<p>current DC background study, these IDs are not globally unique.</p> <hr/> <ul style="list-style-type: none"> • Across the 9 tabs contained within the spreadsheet, there are nearly 4,000 cells that contain data, requiring manual input or analysis by staff. • Lack of input controls and data validations can compromise data integrity. • Project-related data duplicate of Spreadsheet 1. • No dedicated column for 'Project Status'; status is entered in the 'Comments' section, which contains other text entries. Lack of standardized, fixed inputs prevents data aggregation and quick reporting. • Must be manually updated to reflect future projects, resulting in multiple spreadsheets that serve the same purpose. • Staff must manually ensure that Sandwich South projects are not double counted.

As is common with spreadsheets, both documents contain color coded cells and columns, many miscellaneous notes, prompts, and warnings, the origin, relevance, and purpose of which are not contained within spreadsheets.

Figure 1: Review of Primary Spreadsheets - Finance

NO.	PeopleSoft	Total YTD	Total DC YTD	Total Grants and Other	Number	2020-2027 Total	Total Grants and Other	Total Project Cost	Grants and Other	Total Municipal	Eligible DC	Used DC	Remaining DC	Notes
12	7111031 A	\$ 9,454,118	\$ -	\$ 1,819,851	OPS-014-07	\$ 2,700,000	\$ -	\$ 12,154,118	\$ 1,819,851	\$ 10,334,267	\$ 5,167,134	\$ -	\$ 5,167,134	Budgets for 2015-2019 used for PeopleSoft amounts
	7171092 I	\$ 827,500	\$ -	\$ 167,500	ECP-003-09	\$ 325,000	\$ -	\$ 1,152,500	\$ 167,500	\$ 985,000	\$ 492,500	\$ -	\$ 492,500	Funds per-commitment in 7152001 - Cabana Road 2020
	7171094 I	\$ 638,057	\$ -	\$ 250,000	N/A			\$ 638,057	\$ 250,000	\$ 388,057	\$ 194,029	\$ -	\$ 194,029	Funds transferred from 7111031 to 7171092 to 7171074
1	7152001 A	\$ 17,586,575	\$ 12,453,000	\$ 146,250	ECP-003-09	\$ 28,064,675	\$ 175,000	\$ 45,651,250	\$ 146,250	\$ 45,505,000	\$ 22,752,500	\$ 12,628,000	\$ 10,124,500	Amount reduced by \$325,000 7111031
45	7171084 A	\$ 475,000	\$ -	\$ -	ENG-005-17	\$ 8,993,891	\$ -	\$ 9,468,891	\$ -	\$ 9,468,891	\$ 7,101,668	\$ -	\$ 1,668,000	Rest of 7052 is SS
30	7161061 A	\$ 1,722,000	\$ 90,000	\$ -	ENG-005-17	\$ 5,860,000	\$ -	\$ 7,582,000	\$ -	\$ 7,582,000	\$ 3,791,000	\$ 90,000	\$ 2,125,000	\$800,000 funded from F176
32					OPS-001-07	\$ 8,500,000	\$ -	\$ 8,500,000	\$ -	\$ 8,500,000	\$ 2,125,000	\$ -	\$ 2,125,000	\$1,867,000 funded F176
25					OPS-003-07	\$ 2,266,000	\$ 566,500	\$ 2,266,000	\$ -	\$ 2,266,000	\$ 566,500	\$ -	\$ -	Traffic Lights
26					OPS-007-12	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Budget 2027+
27					ECP-003-07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Budget 2027+
28					ECP-003-07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Budget 2027+
47	7096001 A	\$ 150,000	\$ 75,000	\$ -	ECP-003-08	\$ 12,000,000	\$ -	\$ 12,150,000	\$ -	\$ 12,150,000	\$ 6,075,000	\$ 75,000	\$ 6,000,000	Budget 2026-2027 Partial funded by F176
22					OPS-004-									Sidewalks and Traffic Lights-

1
Project Numbers are simple sequential IDs. Although they align with current DC background study, they are not globally unique, making project tracking across different systems, documents, and over time, a highly manual process.

2
Without any cross-system integration, components of the project cost are first identified in Qwestica, then manually entered (hardcoded) into Excel to generate 2020-2027 totals. In addition to significant time spent entering data from one system to another, this approach can be vulnerable to errors.

For 23 Roads and Related projects for which total 2020-2027 cost was available, 68 individual cost components were manually entered in the '2020-2027 Total' column alone, with some containing additional formulas and inputs, the purpose and meaning of which may be localized to the author of the spreadsheet.

In addition to roads, this process is applied across all asset categories, including sanitary, storm, and municipal drains.

3
Any changes to project costing will render these immediately outdated, requiring a manual update first in Qwestica, and then in the spreadsheet.

4
Critical project detail is captured using open-ended text entries that cannot be analyzed and reported on without manual review and analysis.

For Finance, developing Spreadsheet 1 consumed approximately three weeks of staff time distributed over three months, or 105 dedicated hours. Input of Questica and PeopleSoft IDs alone required seven full days and collaboration with Engineering. Additional effort was also spent on updates to the spreadsheet as part of the annual review, including 24 hours over 1.5 months ahead of budget 2021, and a full day to integrate new DC-related projects. The review is essential to ensure maximum DC funding was applied during the year against development projects. Without a more suitable solution, this process must be repeated annually.

For Engineering, the DC process is similarly laborious. Staff estimate that approximately 1-1.5 hours are required to complete a status review of each project identified in the prior DC study. This process is completed by individual project leads. The 2020 DC background study contains 148 projects for Roads and Related, Sanitary Sewers, and Storm & Municipal Drains, inclusive of city-wide and the Sandwich South Planning District (SSPD).

Without improvements to current processes and tools, a future review would require between 148 to 222 hours of dedicated task time (“time-on-task”), or between 21 and 32 full workdays. This administrative burden would be added to existing staff roles and responsibilities, further extending the duration of this process.

Figure 2 Review of Primary Spreadsheets: Engineering

Eng. Capital Programs templates - City-wideSSPD - 2019 Update (3).xlsx

SANDWICH SOUTH PLANNING DISTRICT DEVELOPMENT-RELATED CAPITAL PROGRAM ROADS AND RELATED UTIL. 2004

ENSURE NO DOUBLE COUNTING WITH CITY-WIDE PROJECTS

NO.	Infrastructure Requirement	From	To	Length	Timing		Estimated Project Costs									
					Start	Finish	Gross Cost	Grants and Subsidies	Net Municipal Cost	Benefit to Existing Share	City-wide DC Share	Sandwich South Post-2036	East Pelton & County Road 42 2019-2036			
Roads and Related Infrastructure																
Road Improvements																
1	7th Concession	County Road 42	E-W Arterial	1.2	2018	2033	\$9,390,000	\$0	\$9,390,000	10%	\$939,000	\$1,267,650	\$3,869,667	\$3,313,683		
2	8th Concession	County Road 42	Hwy 401	2.33	2018	2033	\$18,000,000	\$0	\$18,000,000	10%	\$1,800,000	\$2,430,000	\$7,417,892	\$6,352,108		
3	9th Concession	County Road 42	Hwy 401	3.1	2018	2033	\$24,260,000	\$0	\$24,260,000	10%	\$2,426,000	\$3,275,100	\$9,997,870	\$8,561,230		
4	Baseline Road	7th Concession	E. City Limits	4.8	2024	2036	\$27,620,000	\$0	\$27,620,000	10%	\$2,762,000	\$3,728,700	\$11,382,343	\$9,746,957		
5	County Road 17	County Road 42	Hwy 401	3.45	2024	2036	\$26,610,000	\$0	\$26,610,000	10%	\$2,661,000	\$3,592,350	\$10,966,117	\$9,396,533		
Subtotal Road Improvements							\$105,880,000	\$0	\$105,880,000		\$10,588,000	\$14,293,800	\$43,631,689	\$37,364,511		
Road Construction																
6	Collector Roads - County Road 42 Secondary Plan				2018	2033	\$32,660,000	\$0	\$32,660,000	10%	\$3,266,000	\$4,409,100	\$0	\$24,984,900		
7	Collector Roads - East Pelton Secondary Plan				2018	2033	\$38,920,000	\$0	\$38,920,000	10%	\$3,892,000	\$5,254,200	\$0	\$29,773,800		
8	County Road 42 - Engineering				2021	2021	\$2,000,000	\$0	\$2,000,000	25%	\$500,000	\$0	\$800,049	\$691,951		
9	Lauzion Parkway / County Road 42 - Engineering				2023	2023	\$1,000,000	\$0	\$1,000,000	25%	\$250,000	\$0	\$404,025	\$345,975		
10	County Road 42 - Engineering & Land Acquisition				2024	2028	\$2,750,000	\$0	\$2,750,000	25%	\$687,500	\$0	\$1,111,968	\$951,432		
11	County Road 42 - Engineering & Construction	Walker Road	E. City Limits	5.1	2024	2036	\$70,750,000	\$0	\$70,750,000	25%	\$17,687,500	\$7,959,375	\$24,297,030	\$20,806,095		
12	Lauzion Parkway - Engineering & Construction	E.C. Row Expressway	Hwy 401	5.1	2024	2036	\$169,500,000	\$0	\$169,500,000	25%	\$42,375,000	\$19,068,750	\$58,209,847	\$49,846,403		
13	E-W Arterial - Engineering & Construction	Walker Road	Lauzion Parkway	3.58	2024	2036	\$42,750,000	\$0	\$42,750,000	25%	\$10,687,500	\$4,809,375	\$14,681,245	\$12,571,080		
Subtotal Road Construction							\$360,330,000	\$0	\$360,330,000		\$79,348,500	\$41,600,000	\$98,911,263	\$138,972,437		
Studies and Other																
14	Functional Servicing Reports				2018	2020	\$440,000	\$0	\$440,000	0%	\$0	\$66,000	\$204,240	\$89,760		
Subtotal Studies and Other							\$440,000	\$0	\$440,000		\$0	\$66,000	\$204,240	\$89,760		
New Projects																
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
Total Roads Projects							\$466,650,000	\$0	\$466,650,000		\$89,935,500	\$55,860,000	\$143,429,933	\$177,426,707		

Eng. Capital Programs templates - City-wideSSPD - 2019 Update (3).xlsx

CITY OF WINDSOR 2015 DC STUDY DEVELOPMENT-RELATED CAPITAL PROGRAM 2004

*TO BE UPDATED TO REFLECT 2020-2029 PLANNED PROJECTS EXCLUDING SANDWICH SOUTH

NO.	Infrastructure Requirement	From	To	Timing	Gross Cost	Grants and Subsidies	Benefit to Existing Share	Available DC Reserves	Growth-Related Not Included	Post Period Allocation	Net Growth Related	Engineer	Comments	
														Estimated Project Costs
42	Quince Street	Huron Church Road	Donnison Boulevard	10+	\$1,438,872	\$0	10%	\$143,887	\$0	\$0	\$1,294,985	\$0	Pat	
43	Betta Avenue / Ojibway Street	Huron Church Road	Donnison Boulevard	10+	\$1,774,896	\$0	10%	\$177,490	\$0	\$0	\$1,597,406	\$0	Pat	
44	Ojibway Street	Donnison Boulevard	South Cameron Street	10+	\$473,880	\$0	10%	\$47,388	\$0	\$0	\$426,492	\$0	Pat	
45	Donnison Road / Alexandra Avenue	Northwood Street	Tatten Road	10+	\$12,000,000	\$0	25%	\$2,821,740	\$0	\$0	\$9,178,260	\$0	Sergio	3% per year over 10 years
46	Howard Avenue	Cebena Road	Dougal Pkwy	10+	\$2,460,162	\$0	50%	\$1,230,081	\$0	\$0	\$1,230,081	\$0		
47	Howard Avenue	Dougal Pkwy Interchange		10+	\$2,020,000	\$0	50%	\$1,010,000	\$0	\$0	\$1,010,000	\$0		
48	Howard Avenue	Dougal Pkwy	Hwy 3	10+	\$7,500,000	\$0	50%	\$3,775,916	\$0	\$0	\$3,775,916	\$0	Sergio	3% per year over 10 years
49	Wyandotte Street	Barwell Road	Jarvis Avenue	10+	\$1,500,000	\$0	0%	\$0	\$0	\$0	\$1,500,000	\$0	Andrew	
50	Tatten Road	Betta Avenue	Donnison Boulevard	10+	\$415,600	\$0	50%	\$207,800	\$0	\$0	\$207,800	\$0	Janele	\$558,531.65 (assuming 3% inflation over 10 yrs)
51	South Service Road	Warehette Street	Conservation Drive	10+	\$217,620	\$0	85%	\$179,262	\$0	\$0	\$38,358	\$0	Operations	
52	Hasten Road	Huron Church Road	E.C. Row Expressway	10+	\$6,864,000	\$0	50%	\$3,432,000	\$0	\$0	\$3,432,000	\$0	Operations	
53	Hasten Road	E.C. Row Expressway	City Limits	10+	\$10,487,160	\$0	50%	\$5,243,580	\$0	\$0	\$5,243,580	\$0	Operations	
54	Matchette Blvd	E.C. Row Expressway	Prince Road	10+	\$2,400,000	\$0	50%	\$1,200,000	\$0	\$0	\$1,200,000	\$0	Operations	
55	Central	Tecumseh Road	Grand Marais Road	10+	\$3,525,000	\$0	75%	\$2,643,750	\$0	\$0	\$881,250	\$0	June	
56	Edinburgh Avenue	Howard Avenue	Dougal Avenue	10+	\$1,438,000	\$0	50%	\$719,000	\$0	\$0	\$719,000	\$0	June	
57	Howard Avenue / South Cameron Boulevard			10+	\$1,550,000	\$0	50%	\$775,000	\$0	\$0	\$775,000	\$0	Sergio	3% per year over 10 years. Per Central Box EA Plate 1687 (That the recommended option)
58	Temple Drive Extension			10+	\$1,693,841	\$0	50%	\$846,921	\$0	\$0	\$846,920	\$0	Fahd	
59	Riverside Drive at C.P.R. Tracsa			10+	\$1,579,000	\$0	85%	\$1,342,660	\$0	\$0	\$236,340	\$0	Mike	assumed inflation of 3% over 10 years \$2,122,850.31
60	Donnison Boulevard / Norfolk Street			10+	\$244,128	\$0	75%	\$183,096	\$0	\$0	\$61,032	\$0	Operations	
Studies														
61	Lauzion Pkwy / County Rd 42 / E-W Arterial EA			1 - 5 yrs	\$293,000	\$0	50%	\$146,500	\$0	\$0	\$96,690	\$49,810	Transportation	
62	Active Transportation Master Plan			1 - 5 yrs	\$200,000	\$0	75%	\$150,000	\$0	\$0	\$33,000	\$17,000	Transportation	
63	Tecumseh Road West ESR			1 - 5 yrs	\$75,000	\$0	75%	\$56,250	\$0	\$0	\$12,375	\$6,375	Transportation	
64	Soth Concession / North Tabor ESR			1 - 5 yrs	\$186,269	\$0	50%	\$93,135	\$0	\$0	\$61,466	\$31,664	Transportation	
65	Centre Box ESR			1 - 5 yrs	\$418,802	\$0	75%	\$314,052	\$0	\$0	\$89,275	\$35,697	Transportation	
66	E.C. Row Expressway ESR			1 - 5 yrs	\$760,000	\$0	75%	\$570,000	\$0	\$0	\$115,500	\$59,000	Transportation	
67	Truck Route Study			1 - 10 yrs	\$300,000	\$0	50%	\$150,000	\$0	\$0	\$127,218	\$22,782	Transportation	
Subtotal Roads and Related Infrastructure					\$485,334,462	\$1,865,000		\$278,919,625	\$0	\$0	\$185,386,546	\$19,363,891		

1
Text entries are used to issue warnings about potential errors.

2
All data contained within this spreadsheet must be manually updated with each DC background study.

3
Multiple 'Comments' fields that serve as catch-alls for pertinent project-related updates, including project status.

Without a timestamp or a log associated with various field entries, particularly the 'Comments' section, it is unclear whether inputs remain valid or are outdated.

Engineering also uses a separate spreadsheet to identify projects completed each year.

Retrospective review

Much of the work staff complete for the background study and the annual review is retrospective. Currently, as a project is completed, no close-out analysis is conducted to determine whether DC funding allocations were optimal and appropriate. This review is conducted only annually, and at the time of the next background study.

The speed and accuracy with which project status, funding consumption, changes to scope and timing, cost estimates, and budgets vs. actuals, can be retrieved, reviewed, and verified, hinges heavily on individual staff proficiency, knowledge of internal documents and processes, and even memory. It is not uncommon to identify missed opportunities to apply DC funding, or overallocation of DC funds. In both cases, adjustments and funding swaps must be made retrospectively. Underallocation of collected DC funds can also impact future DC levels as unused reserve balances are deducted for future growth; it can also raise questions about the credibility of DC charges.

This process can take months and is also vulnerable to staff turnover. Essential knowledge about a previous DC project, including its status, scope, etc., can be lost with the departure of a staff member.

Inconsistent language and project profiles

Project analysis must be conducted across the City's capital budget, the background study, and the various systems in use. The following current practices impede project analysis.

Inconsistent project naming conventions and descriptions

No policy, standard, or version control exists to guide how projects are named and amended. The same project can adopt multiple names and descriptions across different systems, documents (e.g., background study and capital budgets), and over its lifecycle, creating confusion, uncertainty, and discontinuity between various information sources.

In addition to project names, their descriptions can also be unaligned across various documents. For example, projects are identified in greater detail within the background study than they are in the capital budget, which may consolidate multiple projects under one larger, or parent project. This information must be manually reconciled to determine the precise nature and scope of each project.

Inconsistent project IDs

Similar to naming conventions, there is no policy or standard that ensures all projects have a globally unique or absolute ID that can serve as an anchor or fixed constant across the project's lifecycle and be referenced to expedite status queries and financial reporting.

- Project IDs created in the background study are simple sequential numbers. With the exception of spreadsheets, these IDs are not found in any system used, further impeding reporting and analysis.
- There is no automated alignment between a project's Questica ID and its associated PeopleSoft ID(s). Staff must manually establish a relationship between these IDs across multiple platforms, namely, by entering a PeopleSoft project ID in the project's profile in Questica. This 'link' is only a text entry and does not integrate the two systems for data migration or dynamic update.
- Questica IDs are not entered in PeopleSoft reporting.

Limitations in Technology and Systems Functionality

Many of the challenges staff face today can be attributed directly to functional limitations in the systems used, namely Questica and PeopleSoft.

Lack of data centralization and absence of integration

Critical project related information—e.g., assets, budget vs. actuals, funding sources, status—is dispersed among several systems, each with its own limitations. As a result, staff must cycle between multiple systems, review and parse through isolated correspondences and internal communications with colleagues, personal notes, and exert individual and team effort—diverting time away from their core responsibilities.

A comprehensive listing of the City's asset inventory is contained in CityWide™ Asset Manager. This dataset includes nearly 50,000 unique asset records across 30 asset categories and critical information about each, including quantity, replacement costs, locations, and other important attributes. However, this data remains siloed.

Inability to append assets and multiple asset categories to projects

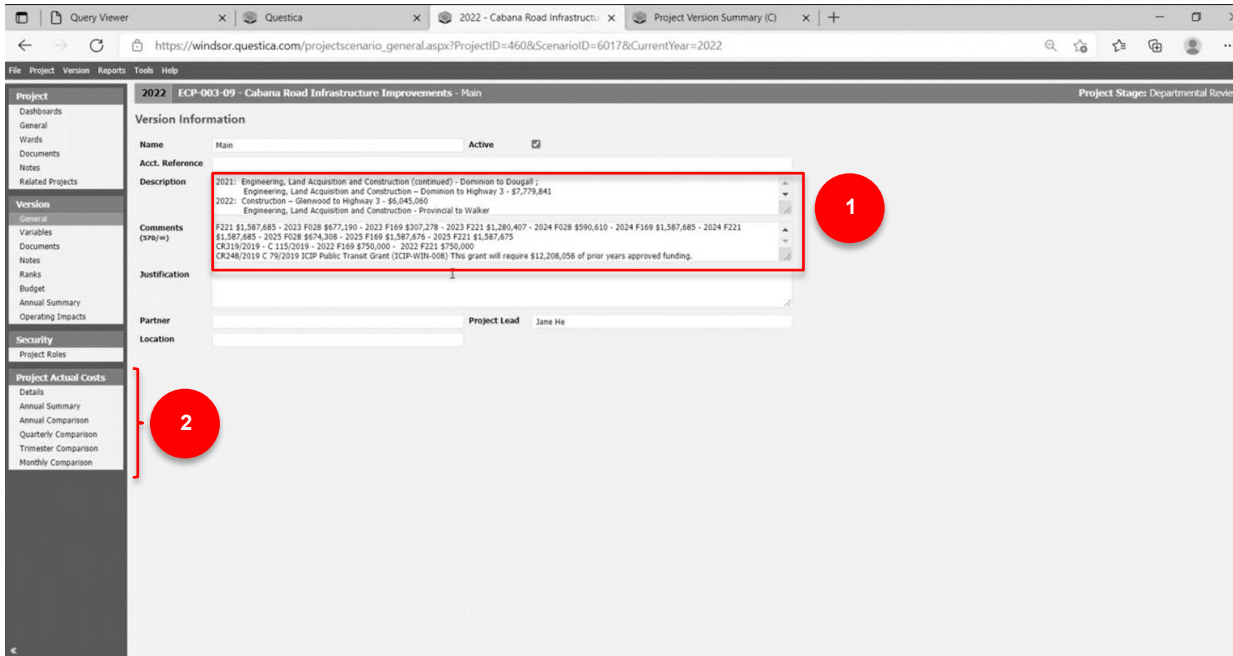
Major capital works projects typically include many types of infrastructure (or services), such as roads and sidewalks, and underground utilities, comprising water distribution, and wastewater and stormwater collection. Development charges levied on new developments are specific to each service type, and funds can only be spent on the services for which they were collected.

One of the principal constraints that staff face throughout the DC process and the annual review is the inability of any current system to append applicable, individual assets to a proposed project or delineate assets for current projects. Questica also allows only one asset category to be selected for each project. Further, neither the capital budget nor the DC background study itself offer enough detail and specificity to outline which assets will be included as part of a project. This poses a number of challenges.

- Finance staff must first dissect high-level project descriptions through manual reviews and discussions with Engineering staff to identify the types of assets that are included in the project scope before suitable funding sources can be identified and appropriate apportionment can be applied.

- Without an asset listing, the DC apportionments themselves become less precise, requiring staff to approximate the asset composition of a project.
- At times, despite a project's eligibility, opportunity to apply DC funds can be missed entirely, requiring retroactive adjustments—a manual process itself.
- For multi-year, multi-phase projects with multiple sources of associated DC funding types, any changes to project scope or timing after the initial apportionment and allocation of DC funds can require retroactive adjustments to reserves. This task can become exceedingly difficult without a comprehensive list of associated assets.
- The name and description of a project can change over time, losing continuity with the background study, previous capital budgets, and even internal departmental record keeping. Without an asset listing appended to the project, manual analysis is required to track the project, and generate status and financial updates.

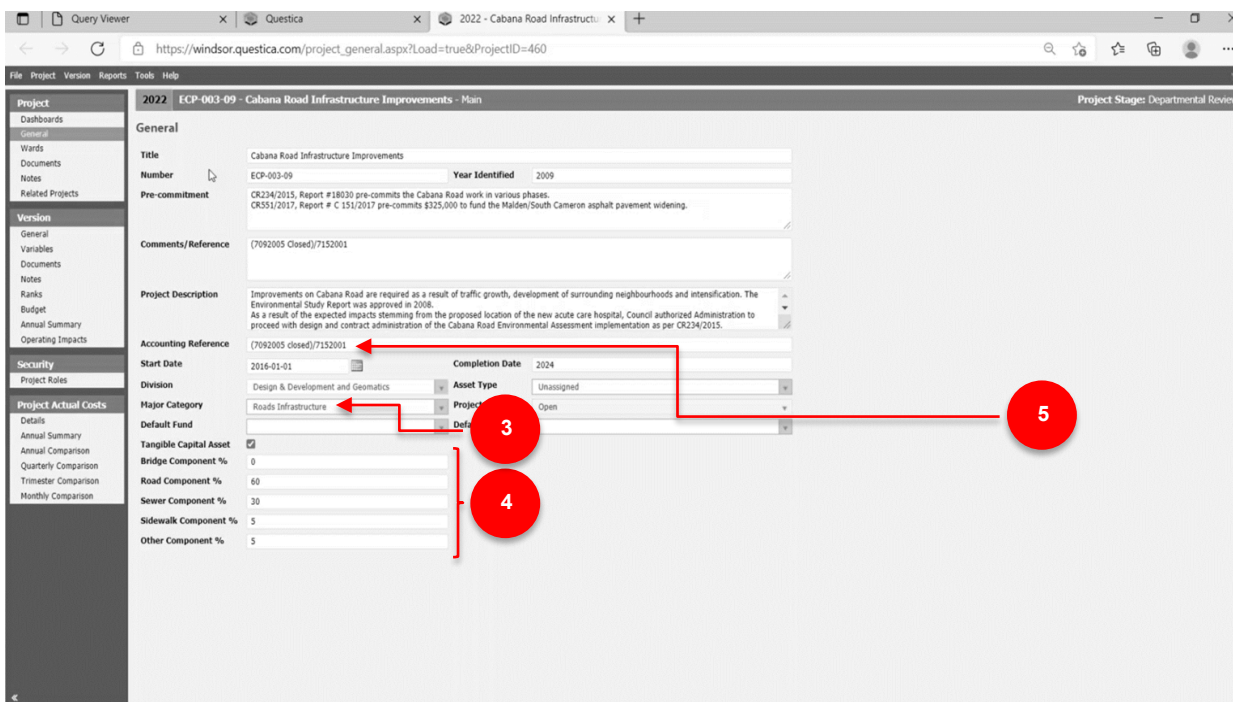
Figure 3 Functional Limitations in Questica



1
Critical project information is entered in open-ended, unstructured, text fields, rather than structured forms with standardized, fixed fields, and user input controls. For example, the 'Comments' field contains data on associated grants and funding commitments.

2
Staff do not enter project actuals within Questica. This data is available only in PeopleSoft and must be reviewed before a project can be manually closed in Questica.

3
Only one major asset category can be selected for each project. Functionality does not exist to append any individual assets to the project.



4
Component percentages are approximated. This can impact how DC funding is allocated.

5
A project's associated PeopleSoft ID is entered into the 'Accounting Reference' field to establish a link. However, this 'link' serves only as a reference to facilitate manual reviews and analysis; it does not create a dynamic integration between the two systems, allowing for automatic data updates. The information remains siloed.

Further, the 'Accounting Reference' does not appear on the 'Summary of Capital Budget by Funding Source' report generated through Questica. This report is critical as it's used to complete journal entries in PeopleSoft. Staff must manually map each Questica ID with its associated PeopleSoft project ID(s).

In this example, the project's Accounting Reference has changed from 7092005 to 7152001. Only a text input indicates that the previous project was closed. No semantic information is available.

Lack of on-demand project close-out reporting

Larger projects within the development program may contain many smaller projects that are completed throughout the year, in different phases, and each with its own potential DC funds available for allocation. However, only one project ID is established in Questica, and only for the parent project.

As a result, the project status loop can remain open until verified. Through discussions, staff must manually review each project, identify any project components that may have been completed, and ensure eligible DC funding allocations have been accounted for. No on-demand, current-to-date, project status and funding allocations reporting is possible.

Lack of flexible reporting, analytics, and dashboards

Rather than system-generated dashboard-style reporting, staff must manually extract raw data files from Questica for further analysis in Excel, particularly to support budget development.

For example, Questica's 'Summary of Capital Budget by Funding Source' report is used to prepare journal entries. However, it does not include the associated PeopleSoft IDs for projects listed—requiring significant manual work to map each Questica project to its often several PeopleSoft counterpart(s).

Next Steps

With a development-related budget that exceeds \$3 billion, the City of Windsor's development charges related processes can benefit from a more advanced technological ecosystem. This document was intended to identify inefficiencies within current systems and processes. In the next phase, recommendations will be developed to close systems functionality and process gaps.

Building a More Efficient Future State

A more streamlined process for the tracking and reporting of DC projects is predicated on the right mix of improved information management strategies, better workflow processes, and advanced technology to support and facilitate them. While not all manual staff input can be removed from sound financial management and reporting of the City’s development charges program, higher automation can deliver many essential benefits, including:

- help ensure maximum available DC funding is applied to all eligible projects at the right time, and proactively;
- alleviate staff burden by minimizing manual analysis and data entry;
- minimize potential for errors;
- support instant, on-demand reporting and analytics related to the development-related capital program

The Right Technology

Currently, Windsor deploys several systems to support essential corporate functions and business processes, including financial reporting, budgeting, and asset management. These are summarized in Table 2 (non-exhaustive). With respect to the DC tracking process, the current state assessment identified several shortcomings with Excel, PeopleSoft, and Qestica. These include:

- Lack of data centralization and absence of integration; siloed data management
- Inability to append assets and multiple asset categories to capital projects
- Lack of on-demand project close-out reporting
- Lack of flexible reporting, analytics, and dashboards
- Vulnerability to human error
- Manual, repetitive data entry, and data reconciliations cross different platforms

Table 6: Technology Ecosystem: Financial Reporting, Budgeting, and Asset Management

System	General information contained	Linkages or integration with other systems	Used for DC-related processes
Microsoft Excel	Staff in both engineering and finance use several independent worksheets to conduct analysis for project status and reporting, including manually digitizing and replicating the static data contained in the DC background study produced by Hemson	No automated integration with other systems.	Yes

System	General information contained	Linkages or integration with other systems	Used for DC-related processes
PeopleSoft	PeopleSoft is the City's primary accounting system and general ledger. All budget data is manually uploaded into PeopleSoft. The application is also used to track all actual spends related to each project.	No automated integration with other systems. No linkages to DC background study.	Yes
Questica	Questica is the City's budgeting tool, used to develop its capital budget and track all capital projects. All data is exported into Excel for further manual analysis to support DC project reporting and updates.	No automated integration with other systems. No linkages to DC background study.	Yes
CityWide™ Asset Manager	Asset Manager contains the City's comprehensive capital asset inventory, comprising approximately 50,000 asset records, across more than 30 asset categories.	Integrated with CPA	No
CityWide™ CPA	CPA is a financial modeling tool, linked to Asset Manager, that enables long-term capital planning and analysis. Currently, it contains 68 of the City's capital projects, totaling \$534.6 million in capital costs.	Integrated with Asset Manager	No

Through detailed discussions with other municipalities, we determined that the challenges the City of Windsor faces in efficiently monitoring its development charges process are ubiquitous. Although no single system contains all functionalities that would expedite the DC tracking process, the City is well-positioned to take advantage of its existing IT ecosystem.

Table 7: Minimum Desired Systems Functionalities for Efficient DC Reporting

Desired Fields and Functionalities	Questica	PeopleSoft	CityWide™ (AM + CPA)
Project Creation and Profile			
Create new projects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Option to add multiple asset categories to reflect project scope			<input checked="" type="checkbox"/>
Option to append individual assets to each category selected			<input checked="" type="checkbox"/>
Unique project ID that is common across multiple platforms			<input checked="" type="checkbox"/>
Accounting for assets not currently in inventory (placeholder)			<input checked="" type="checkbox"/>
Ability to rank/prioritize projects			<input checked="" type="checkbox"/>
Financial Profile			
Gross costs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Net Municipal Costs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Benefits to Existing			<input checked="" type="checkbox"/>
Calculate DC			<input checked="" type="checkbox"/>
Integration with city capital asset inventory			<input checked="" type="checkbox"/>

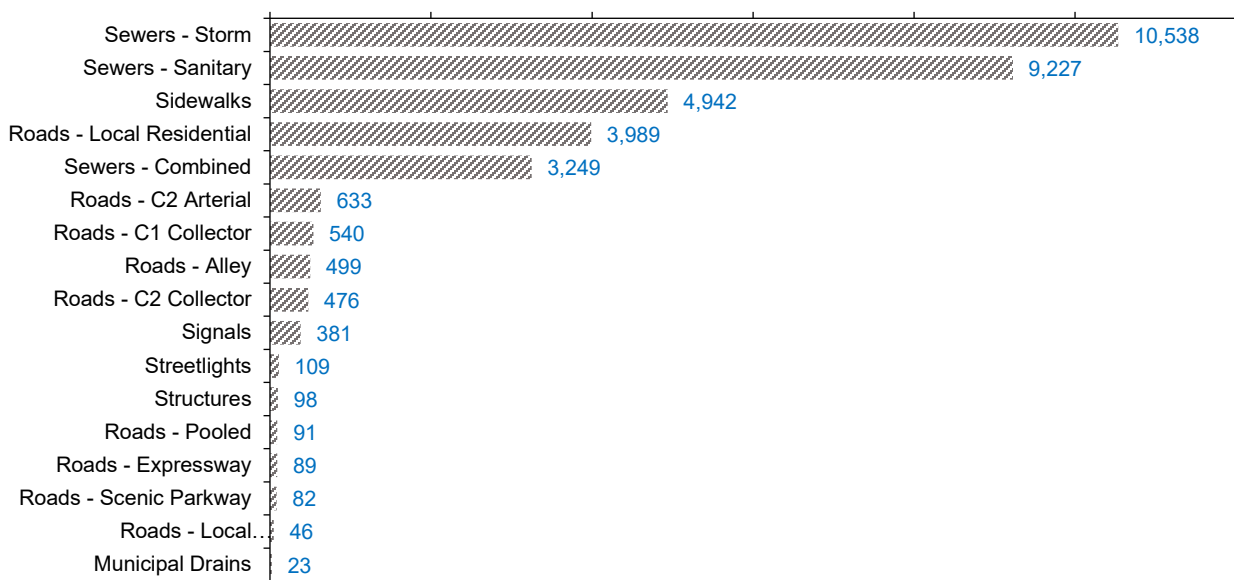
Current replacement costs to support costing estimates			<input checked="" type="checkbox"/>
Native On-demand Reporting			
DC funding consumed to date			
DC funding available			<input checked="" type="checkbox"/>
Summary of applicable grants and available funding			<input checked="" type="checkbox"/>
Grant funding consumed			
Project status reports			
Projects completed and in progress	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Managing multi-phase projects			<input checked="" type="checkbox"/>
Option to close out projects within projects			
Handling adjustments to project schedules			
Integration			
Integration with project financials/actuals			
Integration with GIS			<input checked="" type="checkbox"/>

Neither CityWide™ Asset Manager nor CPA are currently used in the identification, tracking, nor reporting of Windsor’s development charges program. However, based on the type and volume of data contained in these two applications, they may offer a suitable platform for staff to expedite the DC process, both annually and ahead of each iteration of the DC background study.

Together, the applications overcome some of the principal constraints identified through the current state assessment, including:

- Appending assets to each project**
 CityWide™ Asset Manager contains nearly 50,000 unique asset records. Figure 1 summarizes the asset count for major asset classes, including roadways and underground utilities. Associated assets that are already in-service, along with key asset attributes such as current replacement costs, estimated useful life (EUL), condition, and risk profile can be attached to each project at the creation phase or thereafter.

Figure 4: Asset Records in CityWide Asset Manager



The ability to append individual assets to a proposed DC project overcomes critical inefficiencies and yields important benefits:

- Manual reviews of project descriptions can be minimized, or virtually eliminated.
 - The accuracy of DC apportionment improves, and more precisely reflects the asset composition of each project.
 - A more complete understanding of each project's asset composition ensures that a project's eligibility for DC funding can be determined quickly, and appropriate funding applied proactively. This eliminates the need to make retroactive adjustments to funding allocations.
 - A detailed listing of assets associated with each project improves continuity in record keeping and can endure mutations to project descriptions and names over multiple years, phases, capital budgets, and DC studies. This further minimizes manual reviews that staff currently undertake to generate project status and financial updates.
- Integrated systems with centralized data**
 As both CPA and Asset Manager are part of the same suite of applications, they are fully integrated.
 - Native reporting and analytics**
 Aggregate reporting data, e.g., project statuses, completion levels, and pertinent financial details can be generated within the CPA module to facilitate the DC process and the development of the capital budget. This further minimizes manual analysis. Currently, staff must first export raw datasets from Questica prior to conducting further analysis in Excel.

- **Familiar user-interface and technology**

Introduction of new technologies can temporarily add new administrative challenges and in fact, can temporarily increase workloads as staff learn unfamiliar systems and business processes. At times, the net staff workload can increase.

CityWide™ CPA offers a familiar user-interface and systems architecture to CityWide™ Asset Manager, an application already in-use by staff. Although implementation of any new systems or methodologies will invariably require a learning curve, the use of CPA for DC related functions will require short, incremental strides, rather than quantum leaps, reducing the volume of new procedural knowledge staff must absorb.

The following series of screenshots provides a very high-level overview of CityWide™ CPA and how it would support Windsor staff in the identification, tracking, and reporting of the City's development charges related program.

Figure 5: CityWide CPA Overview: Project Listing

Name	Description	Start Year	End Year	Priority	Cost	Actions
Connecting Link Intake 5 Project - Huron Church Rd.	OPS-009-20	2021	2023	Medium	\$6,009,930.00	Propos
Connecting Links Intake 6	OPS-002-21	2022	2026	Medium	\$5,635,255.00	Propos
Coronation Street Mill and Pave - Jefferson to Cul-de-sac	OPS-015-17	2021	2030	Medium	\$55,000.00	Propos
Courtland Cres. - South National to South National - Mi...	ECB-031-18	2023	2023	Medium	\$120,000.00	Propos
Crawford Ave. - Wyandotte to Tecumseh - Engineering	ECB-006-18	2029	2030	Medium	\$3,000,000.00	Propos
Devon Drive Reconstruction - Sydney to South Service	OPS-016-17	2021	2030	Medium	\$800,000.00	Propos
East Riverside Planning District Infrastructure Improve...	ECP-010-07	2021	2030	Medium	\$2,400,000.00	Propos
Grand Marais Rd. Infrastructure Improvements	ECP-003-07	2028	2030	Medium	\$6,000,000.00	Propos
Howard Avenue Corridor Infrastructure Improvements...	ECP-003-08	2021	2030	Medium	\$18,050,000.00	Propos
ICIP - City Wide Sidewalks (Intake 1)	OPS-007-20	2021	2026	Medium	\$4,702,581.00	Propos
Intersection Improvements Program	ECP-009-07	2021	2030	Medium	\$3,500,000.00	Propos
La Bella Strada - Erie St. Business Improvement Area S...	ECP-013-09	2021	2030	Medium	\$300,000.00	Propos
Lake Trail Drive Mill and Pave	OPS-026-17	2021	2030	Medium	\$400,000.00	Propos
Lauzon Parkway & County Rd. 42 Infrastructure Impro...	EDG-001-11	2021	2030	Medium	\$27,635,000.00	Propos
Local Improvement Program	FNG-006-20	2021	2030	Medium	\$15,545,000.00	Propos
					\$534,375,302.00	

1
Current project listing, with the functionality to append individual assets.

2
Project priority defined by users, ranging from low to critical.

Asset ID	Asset Name	Asset Description	Event Name	Event Description	Event Date	Cost	Category	Risk Rating	Condition Rating	Actions
49537	(unitID 11270-0140) CABANA RD E	PROVINCIAL RD to SIXTH CONCESSION RD	<Asset Replacement>	End of life replacement	2034-10-01	\$349,258.00	Roads Infrastructure	14.15 - High	0 - Very Poor	
53946	(unitID 11270-0150) CABANA RD E	SIXTH CONCESSION RD to DIVISION RD	<Asset Replacement>	End of life replacement	2025-10-01	\$97,444.00	Roads Infrastructure	14.15 - High	0 - Very Poor	

3
Individual assets can be appended to each project, by their unique asset ID. The current replacement cost of each asset can improve estimation of total project costing.

Figure 6: CityWide CPA Overview: Project Plan

1

Unrestricted naming with no limitations on characters. This overcomes an ostensibly minor, but insidious drawback in existing systems, allowing for easier cross-referencing across multiple platforms.

2

As individual assets can be attached to each project, each associated asset's risk profile and condition are aggregated to create a cumulative risk and condition profile.

Asset risk ratings are determined through an analysis of probability of failure (typically age and condition), and consequences of failure can include adverse financial, economic, political, and environmental impacts on the organization, the residents, and the community's reputation.

3

An alphanumeric Project/Import ID may allow for tracking the project across its lifecycle, and across multiple platforms and DC studies.

psdcitywide
Home > CPA > Project Plan > Projects > Cabana Road Infrastructure Improvements
City of Windsor supportmd

Save M

Details D

Notes 0

Attached Files 0

Activities 2

Project Funding 1

Project Details

Name 1	<input type="text" value="Cabana Road Infrastructure Improvements"/>	Description	<input type="text" value="ECP-003-09"/>
Cost	<input type="text" value="\$25,432,286.00"/>	Priority	<input type="text" value="Medium"/>
Start Year	<input type="text" value="2021"/>	End Year	<input type="text" value="2030"/>
Cumulative Risk	14 - High 2	Cumulative Condition	0 - Very Poor 2
Status	<input type="text" value="Proposed"/>		

Additional Details

Address/Location <input type="text" value="Address/Location"/>	Project/Import ID <input style="border: 1px solid #00a0e3; border-radius: 50%; padding: 2px 5px; color: #00a0e3; font-weight: bold; text-align: center;" type="text" value="ECP-003-09"/> 3
Tender # <input type="text" value="Tender #"/>	Drawing Number <input type="text" value="Drawing Number"/>
Accounting Reference <input style="border: 1px solid #00a0e3; border-radius: 50%; padding: 2px 5px; color: #00a0e3; font-weight: bold; text-align: center;" type="text" value="Accounting Reference"/> 4	Growth <input checked="" type="checkbox" value="Yes"/> <input type="checkbox" value="No"/>
Deferred <input type="checkbox" value="Yes"/> <input checked="" type="checkbox" value="No"/>	Pre-Commitment <input checked="" type="checkbox" value="Yes"/> <input style="border: 1px solid #00a0e3; border-radius: 50%; padding: 2px 5px; color: #00a0e3; font-weight: bold; text-align: center;" type="checkbox" value="No"/> 6
D/C Eligible <input type="checkbox" value="Yes"/> <input checked="" style="border: 1px solid #00a0e3; border-radius: 50%; padding: 2px 5px; color: #00a0e3; font-weight: bold; text-align: center;" type="checkbox" value="No"/> 5	Completed <input type="checkbox" value="Yes"/> <input type="checkbox" value="No"/>

4

A common accounting reference can be added to allow for referencing against other systems and platforms.

5

As CPA serves as a repository for the City's capital projects, a project's DC eligibility can be indicated through a toggle rather than a text input. Deferred projects, regardless of DC eligibility, can also be flagged.

6

Binary project attributes, including any pre-commitments by council and whether the project is growth-related, can be quickly toggled, and require no text input that must be manually parsed.

The Right Business Process

Using a sample project case study, this section provides a high-level overview of how CityWide™ CPA may be used in conjunction with other applications, including Asset Manager, Questica, and PeopleSoft to expedite project tracking.

Table 8: DC Project Creation in CPA: Example Data

Asset Type	Estimated Cost	DC Eligible (Yes/No)	DC Eligible (%)	DC Eligible (\$)
Roadway	\$1,800,000	Yes	50%	\$900,000
Sidewalk	\$250,000	No	0%	\$0
Active Transportation	\$450,000	Yes	100%	\$450,000
Total	\$2,500,000			\$1,350,000

Figure 8: DC Project Creation in CPA - Project Builder

The screenshot shows the 'Add Project' form in the CityWide CPA Project Builder. The form is titled 'Add Project' and has tabs for 'Activities', 'Details', 'Notes', 'Attached Files', and 'Costs'. The 'Details' tab is active. The form is divided into two main sections: 'Project Details' and 'Additional Details'. The 'Project Details' section includes fields for Name, Description, Cost (\$0.00), Start Year (2021), Cumulative Risk (Unknown), and Status (Proposed). The 'Additional Details' section includes fields for Address/Location, Tender #, Accounting Reference, Deferred (Yes/No), D/C Eligible (Yes/No), Project/Import ID, Drawing Number, Growth (Yes/No), and Pre-Commitment (Yes/No). The form is set against a background of a data table with columns for asset types and years.

Table 9: DC Project Creation Using CPA

Task	Considerations
<p>1. Using Project Builder, enter primary project details, e.g., Name, Cost, Start Year, End Year, etc. Toggle DC Eligibility in CPA.</p>	<ul style="list-style-type: none"> • Ensure Project Name is consistent across all platforms and data sources, including Excel, Questica, PeopleSoft, and CityWide™. • Both Questica and PeopleSoft IDs can be entered into CPA.
<p>2. Enter Cost Estimates and attach supporting documentation.</p>	<ul style="list-style-type: none"> • For existing assets, these costs can be retrieved directly from CityWide™ Asset Manager ‘Replacement Cost’ fields. As a caveat, the accuracy of these costs can be improved with regular updates to replacement costs as part of the City’s asset management and TCA reporting exercises.
<p>3. Append existing assets using CityWide™ Asset Manager.</p>	<ul style="list-style-type: none"> • This ensures that as assets are appended to projects with costing data, the data attached is current and relevant and requires minimal reviews by staff.
<p>4. Flag project as DC Eligible.</p>	
<p>5. Enter DC eligibility percentage for each asset type</p>	<ul style="list-style-type: none"> • In this example, of the \$2.5 million total project cost, \$1.35 million is eligible for DC funding.
<p>6. Allocate applicable funding sources, including DC Reserves, by asset class.</p>	
<p>7. As required, update project status annually.</p>	<ul style="list-style-type: none"> • Project status must be updated in all software applications. Within CPA, this status can be selected or toggled, rather than entered using text entries. • As projects are completed, retrieve actuals from PeopleSoft. • If a scope change is required, assets can be added or removed individually from each project. CPA will automatically recalculate eligible amount.

Recommendations

Considering the findings of the current state assessment, and ongoing dialogue with key stakeholders within the City of Windsor, we recommend the following.

- The use of CityWide™ CPA to facilitate the DC process should be considered. City staff continue to work with PSD Citywide on customizing the application's functionality to ensure it would support pertinent reporting functions related to DC project tracking and monitoring.
- More frequent reviews of project status should be conducted to minimize year-end burden and reduce workload ahead of each DC study update. Quarterly or semi-annual reviews and close-out analyses should be considered.
- To support implementation of any new application, a DC-focused data management policy and/or standard operating procedure (SOP) should be developed. This SOP should outline current roles and responsibilities, as well as guidelines on establishing project profiles, including:
 - Project profiles and descriptions should be standardized, beginning with agreed-upon naming conventions. Currently, the level of detail varies by department and the project engineer. Where suitable, effort should also be made to safeguard a project's name across time and data sources.
 - The use of unique, global project IDs should be explored. Currently, multiple IDs are used across various platforms, limiting their efficacy in reconciling project data. Although a Hemson DC Study ID cannot be established at the asset level, there is an opportunity to incorporate this into PeopleSoft and Qestica to establish a common node.
- Explore feasibility of doing an area-specific interim development charges background study.