



Report to: Development Services Committee

Meeting Date: October 31, 2023

SUBJECT: Implementation of Development Review Process Technology Projects

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REVIEWED BY: John Yeh, RPP, MCIP, Manager, Strategy & Innovation, Ext.7922

RECOMMENDATION:

1. That the report dated October 31, 2023 titled “Implementation of Development Review Process Technology Projects” be received;
2. That the report titled “Implementation of Development Review Process Technology Projects” be forwarded to the Ministry of Municipal Affairs and Housing as per the terms of the Streamline Development Approval Fund; and further;
3. That Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to provide a summary of the update and outcome of the following four technology projects that were implemented as part of the Streamline Development Approval Fund:

- ePLAN Project Dox 9.2 Upgrade,
- ePLAN Web Portal Update and Mobile Inspection App
- 3D Model Development and Procedural Rules; and
- MappiT – Development Application Viewer

BACKGROUND:

In January 2022 through the Streamline Development Approval Fund (SDAF), the Province invited the City to submit proposals to receive up to \$1,000,000 for development approval initiatives aimed to get development approved faster. In March 2022 the City executed the Transfer Payment Agreement with the Province to implement continuous improvement projects.

The funded projects are:

- Conduct a Lean review of the development review process;
- Upgrade ePLAN development review and commenting software to version 9.2 ;

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- Implement updated ePLAN website application submission process for development and building permit applications;
 - Build a Mobile app for building permit inspections;
 - Acquire 3D modelling software and professional services to build modelling of selected secondary plan areas with capability to calculate development site statistics; and
 - Prepare a Geographical Information System (GIS) map interface for the public to view development application details

The Lean review is described in a separate report for Development Services Committee while the remaining projects are discussed in this report.

The above projects have all been substantially completed. The costs of the latter five technology related projects are noted in Appendix 'A'.

The implementation of these projects have positioned the City to modernize its core digital platforms and processes that support development processes and providing valuable information back to our stakeholders.

OPTIONS/ DISCUSSION:

This report provides a summary of the update and outcome of the following technology related projects implemented as part of the Streamline Development Approval Fund. Broader outcomes from the following projects include:

- Improved customer service for applicants
- Maximized the City's investment in ePLAN
- Enhanced web-based development application viewer search functions
- Improved development data to make more informed decisions and recommendations
- Improved overall service resulting in higher quality applications

ePLAN Project Dox 9.2 Upgrade

ePLAN Project Dox has been the City's electronic development application and building permit review and commenting software tool since 2018. This software eliminates the need for investing multiple tools, resulting in cost savings and increased efficiencies. The ePLAN Project Dox 9.2 Upgrade project involved the migration and deployment of the Production and Test Environments from the City's on-premise environment to cloud followed by the ePLAN Project Dox Upgrade from version 9.1 to 9.2. The City retained Avolve in November 2022 to perform this work. The upgrade of the ePLAN Project Dox software to version 9.2 enabled additional features that have improved both the applicant and reviewer experience.

The additional features included the following upgrades to the applicant's experience:

- Providing easier drawing upload tools,
- Consolidating corrections,

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- Accessing and distributing corrections to multiple consultants,
 - Automatic filing of versions and identification of duplicate files,
 - Notifying the user when new files are uploaded and identifying the versions,
 - Providing project status emails to multiple project members (applicants); and
 - Providing a simpler City comments response form

It also includes the following reviewer's experience upgrades for Staff:

- Packaging drawings and providing a single window for review /comment,
- Providing a read/unread feature for drawings and ability to select drawings that are acceptable,
- Simplifying the file version and global file compare options,
- Providing a tool similar to a shopping cart for overall corrections added; and
- Simplifying the quick review initiation process with outside agencies and other departments.

The project was implemented in January 2023 and the new features are now accessible to all external and internal users.

ePLAN Web Portal Update and Mobile Inspection App

The ePLAN Web Portal Update and Mobile Inspection App project involved updating the current ePLAN Web Portal to allow for easy navigation and implementing changes to improve the applicant's web portal for a better user interface. The Mobile Inspection App project involved the creation of a mobile app to be used for building inspections. The app is intended to improve the inspectors' process by allowing them to easily access inspection requests, approval documents, and property history in the field. Random Access was retained by the City to update the ePLAN Web Portal and implement the Mobile Inspection app.

This two component project commenced in November 2022 and was completed in three phases. The ePLAN Web Portal Update involved two phases – the first phase was a like to like migration of the current ePLAN web portal to the new interface and the second phase involved further user enhancements for easy navigation of the portal. The second component of the project involved the completion of the mobile inspection app for the Building Inspectors.

The improvements to the web portal include the following:

- Clarity in application selection types
- Providing simpler navigation tools
- Transparency in the approval process status

Phase 1 of the ePLAN Web Portal was implemented in May 2023. Phase 2 was implemented in October 2023.

The main objectives of the Mobile Inspection app are to:

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- Provide an inspections phase section for booking and identifying applications to be inspected; and
 - Offer an accessible location for uploading inspection documents and certifications.

The Mobile Inspection app was implemented in July 2023. Staff can access the inspection drawings directly from the app and take relevant pictures and provide their recommendation directly in the app on site. Since the app is linked to the City's database system (AMANDA), Staff further save time as their pictures and responses are directly recorded in the database.

3D Model Development and Procedural Rules

The City retained WSP Canada Inc. in November 2022 to prepare an electronic 3D model for Markham Centre and Markham Road/ Mount Joy Secondary Plan areas in ArcGIS CityEngine. The purpose of this model is to improve and add productivity and efficiency in the functions of the development application review process.

The objectives of this project are to:

- Enable Staff to calculate development site statistics and compare alternative site statistics quickly
- Assist Staff to analyze proposed developments and provide recommendations
- Enable Staff to review the impact of the development application on the surrounding context; and
- Inform policy initiatives such as Secondary Plans, Official Plan reviews.

This project was completed in two phases. Phase 1 involved building the two areas in CityEngine while Phase 2 involved creating procedural rules for these two areas based on the proposed zoning.

The project scope for Phase 1 included:

- Markham Centre and Markham Road/Mount Joy Secondary Plan areas.
- Existing, proposed, approved and buildings under construction.
- Proposed developments based on a snapshot in time.
- Common base layers such as aerial imagery, roads and parcels.
- Site statistics such as building heights, density, Official Plan designation, in-effect zoning, zoning for proposed developments, building uses, site setbacks, gross floor area, floor space index and lot coverage.
- An ArcGIS Urban experiment to explore the tools and capabilities of ArcGIS Urban and its compatibility with CityEngine.

Phase 1 of the 3D model was completed and delivered to the City in February 2023. A summary report (see Appendix 'B') outlines the tasks that were completed and recommendations for the use of ArcGIS CityEngine by Staff.

Phase 2 was completed in October 2023 and included:

- Procedural rules based on zoning for Markham Centre and Markham Road Mount Joy Secondary Plan Areas

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- Input standards such as height, density, setbacks, lot area, lot coverage, podium height, Gross Floor Area and setbacks.
 - Output calculations through reporting to show dwelling units, Gross Floor Area, Floor Space Index, parkland estimate, people per unit, population estimate, job estimate and total required parking.

MappiT – Development Application Viewer

MappiT is the City's GIS Interface project for development applications. The intent of this project is to help increase transparency in the development application process. MappiT also supports the private sector and consultants by allowing technical studies identified or already completed to be leveraged to support future applications and technical requirements. This project showcases all development applications by type and year and includes supporting documentation related to each application.

The following development application types are displayed on MappiT:

- Condominium Application (CNDO)
- Consent to Sever Application (CSNT)
- Minister's Zoning Order Application (MZO)
- Minor Variance Application (MNV)
- Part Lot Control Application (PTLT)
- Planning Project Application (PLAN)
- Site Alteration Permit App (SALT)
- Site Plan Control Application (SPC); and
- Tree Bylaw (TREE)

The project was developed internally by the City's ITS- GIS team. The provincial funding was used for training the ITS-GIS team on implementation. MappiT is publicly accessible through the City's website:

<https://www.markham.ca/wps/portal/home/business/planning/sa-mappit/00-mappit>.

MappiT Phase 1 was implemented in January 2023 and included development applications and tree permits from 2021 and 2022. MappiT has filtering capabilities that allows users to filter by application number, application year, ward, application type and status. Users can also search by address in the City. MappiT Phase 2 was implemented in May 2023 that included development applications in 2020. In addition, a social campaign was launched in June 2023 for two weeks on Twitter, LinkedIn and Facebook.

Next Steps

Now that the 3D model and procedural rules have been prepared using ArcGIS CityEngine software, Staff will be provided training in the software to enable them to effectively use the model for their work. Staff will explore opportunities to expand the 3D model to other areas of Markham that is anticipated to attract significant growth.

Staff will be reviewing opportunities to build on the Streamline Development Approval Fund technology related projects to further enhance and streamline the development community planning process. Examples include opportunities to enhance MappiT and potentially add more information including regular dashboard reporting of development

activity statistics and customize the review of different application types in Project Dox through individual workflows. Staff will also continue to seek feedback from users including staff involved in development review and the development industry on these technology improvements.

FINANCIAL CONSIDERATIONS

The Streamline Development Approval Fund covers the project implementation costs and first year annual subscription or licensing costs for the projects described in this report. As outlined in Appendix 'A' the total cost the technology projects is \$758,003.58 including 13% HST. The other SDAF project, which is the Lean review, is reported to Development Services Committee under separate cover and the cost of that project is \$254,250. This brings the total cost of all SDAF projects to \$1,012,254.58 including 13% HST. The City has already received \$500,000 from the Province. The remaining \$512,254.58 (includes 13% HST) and after conversion to \$411,565.70 (includes 1.76 HST after Provincial rebate), the latter amount will be remitted to the City once Staff submits a Final Report Back to the Province by November 1, 2023.

The City will be responsible for paying subsequent annual subscription or licensing costs in the following amounts:

- Project Dox – \$180,894
- Web Portal - \$28,250
- Mobile Inspection App - \$18,080
- ESRI CityEngine for 3D model - \$11,810
- GIS for MappiT – already covered by existing software maintenance agreements

The costs above will be transferred to Building Services, Planning and Engineering departments through indirect transfer and ultimately be funded by Building Fees and Development Fees. There is thus no net impact to tax operating budget.

HUMAN RESOURCES CONSIDERATIONS

Not applicable

ALIGNMENT WITH STRATEGIC PRIORITIES:

The Streamline Development Approval Fund projects supports efforts to manage growth and provide efficient and high quality municipal services, which are key elements of the Exceptional Services by Exceptional People; Safe and Sustainable Community; and Stewardship of Money and Resources strategic priorities.

BUSINESS UNITS CONSULTED AND AFFECTED:

Planning and Urban Design, Building Standards, Engineering, and Information Technology Services

RECOMMENDED BY:

Darryl Lyons, RPP, MCIP
Deputy Director, Planning and Urban Design

Giulio Cescato, RPP, MCIP
Director, Planning and Urban Design

Stephanie Di Perna, MAATO
Chief Building Official
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Sumon Acharjee
Chief Information Officer

Trinela Cane
Commissioner, Corporate Services

Arvin Prasad, RPP, MCIP
Commissioner, Development Services

ATTACHMENTS:

Appendix 'A': Streamline Development Approval Fund Costs for Technology Projects

Appendix 'B': City of Markham 3D Modelling Project - Project Summary Report