

An aerial photograph of a suburban neighborhood, showing a grid of streets, numerous houses with varying roof colors, and green lawns with trees. The image is slightly darkened to make the white text stand out.

CITY OF MARKHAM

3D MODELLING PROJECT

DEVELOPMENT SERVICES COMMITTEE

October 31st, 2023

Outline

1. The Project
2. What is CityEngine?
3. CityEngine Examples
4. Model Fly-throughs
5. Questions



The Project

Experimentally develop a 3D model to assist staff with review and analysis of current and future development.

- Tool to **analyze** development proposals and **scenarios**
- 3D Model created in **CityEngine**
- Models cover **Markham Centre** and **Markham Road-Mount Joy** Secondary Plan Areas.
- **Existing conditions** (i.e. existing buildings, parcels, road network, etc.)
- **Proposed Buildings**
- **Site info and statistics** (i.e. density, building height, land use designations, zoning, etc.)

What is CityEngine?

3D modelling software for creating interactive virtual urban environments at any scale:

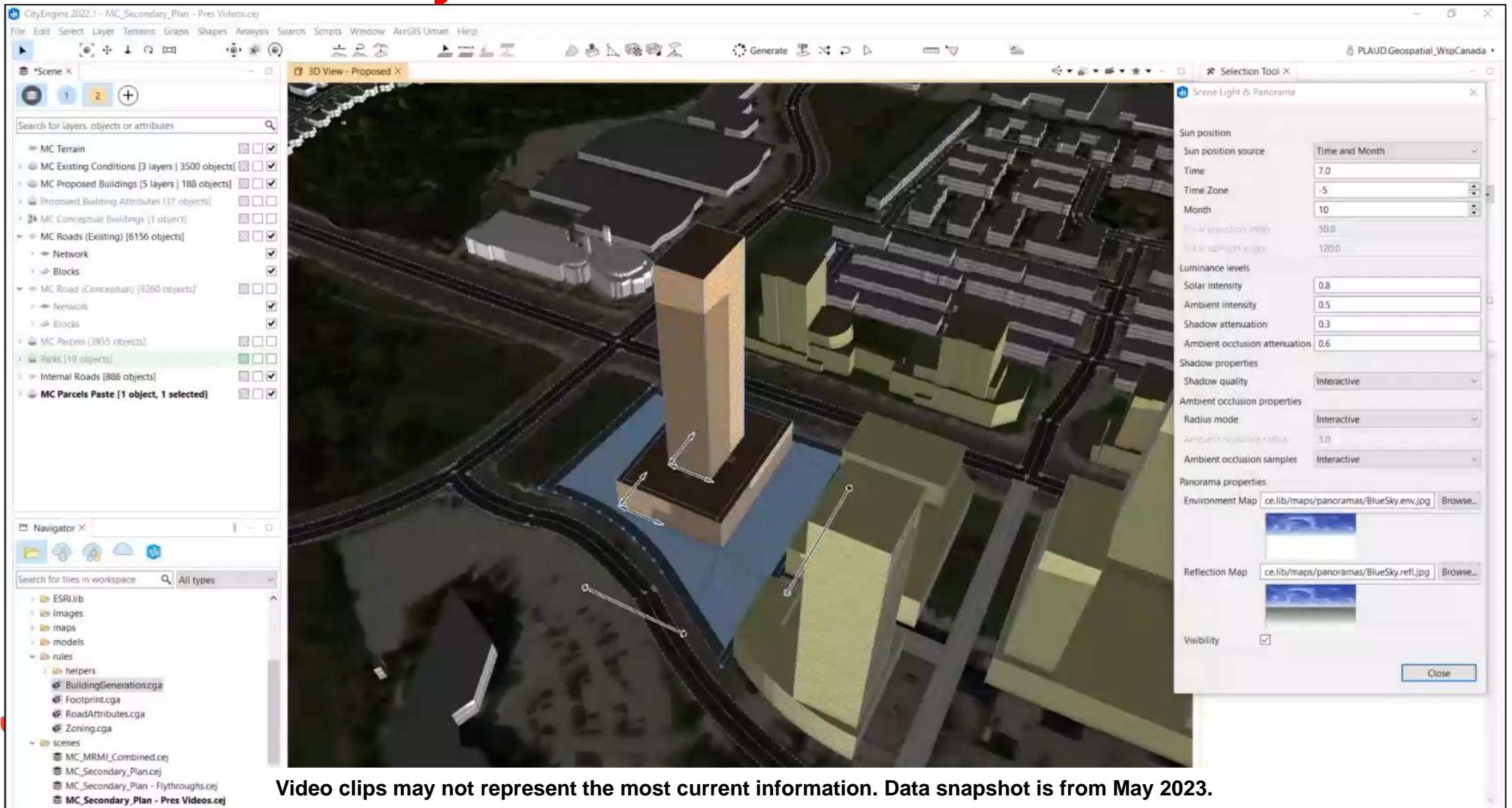
1. **Less time & resources** than traditional methods.
2. Provides a **foundational central data repository** for modelling.
3. Leverage **City & third-party data**, where available.
4. Leverage “**procedural**” modelling approach using **defined rules** (i.e. zoning standards).
5. **Rapidly** create, **visualize & analyze** alternative **development scenarios**.
6. Automatically estimate **site statistics**.
7. Built-in **analysis tools** (i.e. measurement, shadow & viewsheds)
8. Add **custom tools** through programming.
9. **Export** models for use in other platforms (i.e. renders, graphics, etc.).

Generating Buildings



Video clips may not represent the most current information. Data snapshot is from May 2023.

Shadow Analysis

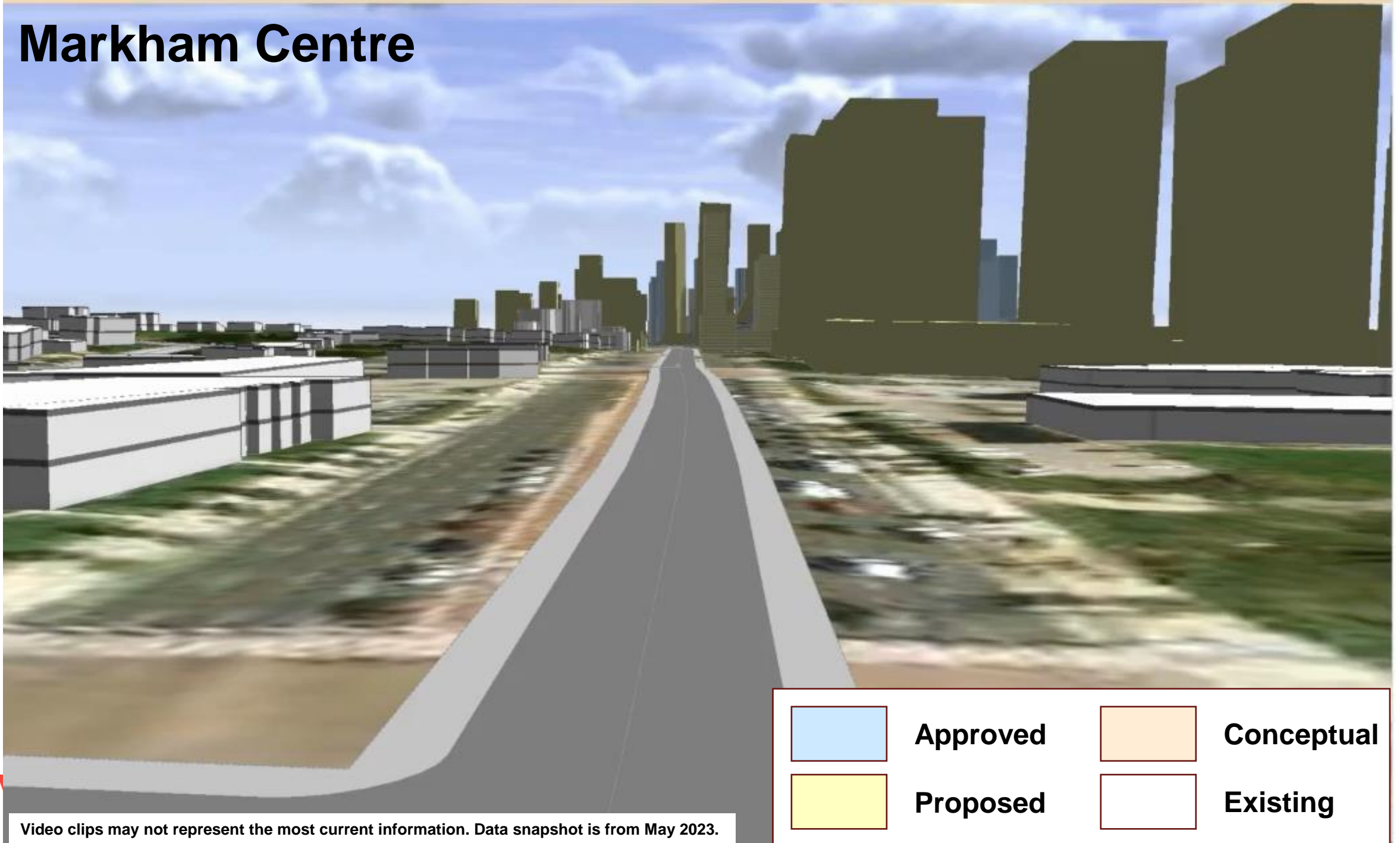


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Viewshed Analysis (View Corridor)



Markham Centre

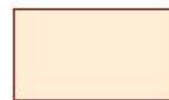


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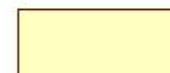
Markham Road – Mount Joy



Approved



Conceptual



Proposed



Existing



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Conclusions, Recommendations & Thank You!

