UrbanVision: An Integrated Approach to Designing, Modeling and Visualizing Sustainable Communities

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UrbanVision

- **What is is UrbanVision?**
  - A software platform for 3D urban visualization and analysis
  - Designed and coordinated by Dr. Paul Waddell, Professor and Chair of the Department of City and Regional Planning, UC Berkeley
  - Developed with students and collaborators at UC Berkeley and Purdue University
  - Funded by the National Science Foundation, the University of California, and the Metropolitan Transportation Commission

- **What are the Objectives for UrbanVision?**
  - To engage communities in creating a **Vision** for their sustainable community
  - To use automated generation of 3D buildings and neighborhoods to **Visualize** alternative scenarios or visions of community development patterns
  - To work with a parcel-level land use model (UrbanSim) and the MTC travel model to **Analyze** scenarios and their impacts on travel and urban development

UrbanVision Uses Procedurally-Generated Buildings to Visualize Development in Scenarios

UrbanVision creates plausible 3D models of buildings quickly, to enable rapid visualization of alternative scenarios. It does **not** try to compete with the photorealism of movies and video games, and it does **not** try to exactly replicate the look of every existing building. But it does use all available information on parcels and buildings, and the data can be improved over time, to improve the quality of the visualization.

UrbanVision now uses14 building types and 65 variations on these types.

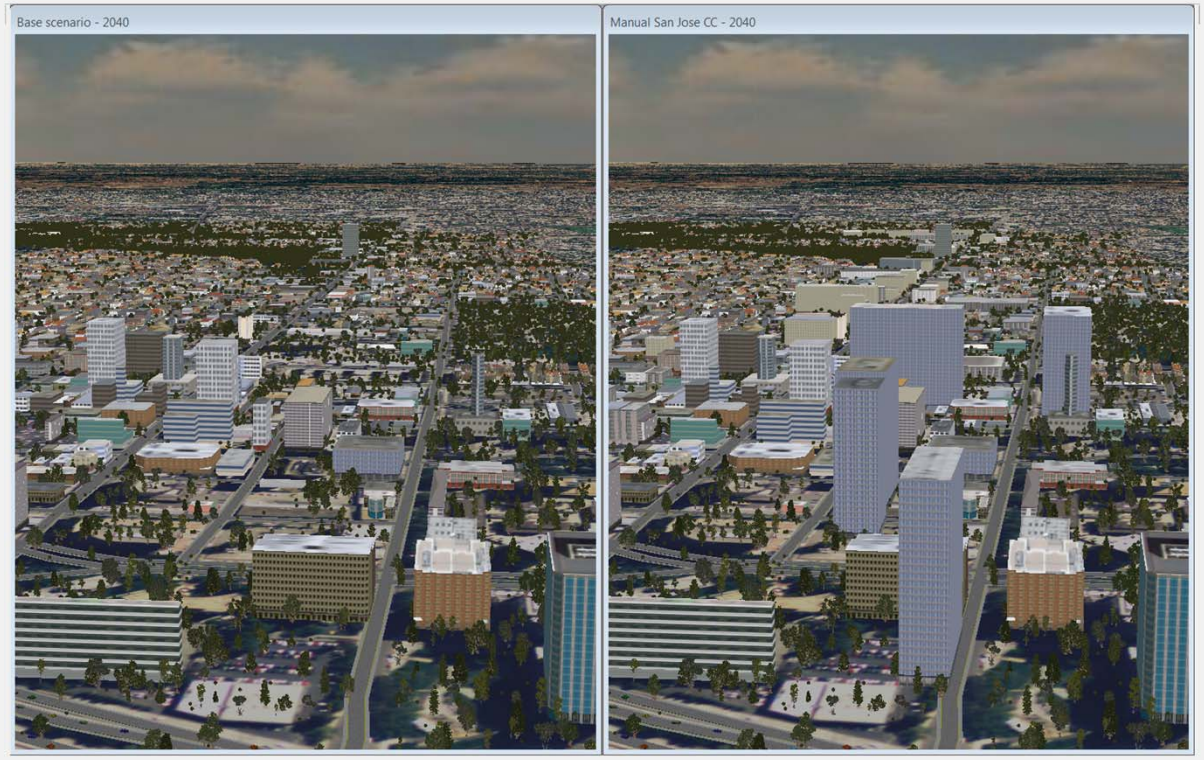
- Single-Family Builder
- Single-Family One-off
- Multi-Family
- Condo
- Office
- Manufacturing Industrial
- Warehouse Industrial
- Neighborhood-retail
- Auto-oriented Retail
- Big-Box Retail
- MXD-MultiFam
- MXD-Condo
- MXD-Office

In Public Workshops UrbanVision can be used to:

- Visualize scenarios developed by ABAG and MTC

In Public Workshops UrbanVision can be used to:

- Compare two scenarios side by side in synchronized views



Now for an interactive demonstration…