

Project Experience

3D GIS for Campus Master Planning and Facilities Management

Client:

University of Rochester

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Completion Date:

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Project Highlights:

- Survey-enhanced Lidar Terrain Dataset
- Highly detailed 3D modeling of campus structures
- 3D Geodatabase design & implementation
- Utility and Infrastructure GIS Data Development
- Compiled run-time model using the Unity platform
- Unity, ArcGlobe, Geodatabase, and staff training deliverables



Description:

The University of Rochester (U of R) is a major research university located in Rochester, New York. Rapid expansion has led to a complex and often difficult-to-manage matrix of utilities located throughout the university campus. The university has responsibility for domestic water, chilled water, hot water, steam, condensate return, fiber-optic, telephone, natural gas, storm sewer, sanitary sewer, electric distribution, street lighting systems, and medical gases inside the hospital and research complex. None of these utilities follow a traditional right-of-way layout—systems often crisscross each other to form a complex web of underground utilities. Utility excavations are a constant concern.

Initial work for the university included georeferencing hundreds of existing utility plans and as-built drawings and converting them into file geodatabase feature classes. This greatly simplified the internal "call-before-you-dig" process.

Following the launch of its successful new solution for infrastructure development management and the successful development of the utility GIS layers, the university realized that these new solutions could potentially enable comprehensive campus master planning and enhance decision making, promotions, and fund-raising.



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