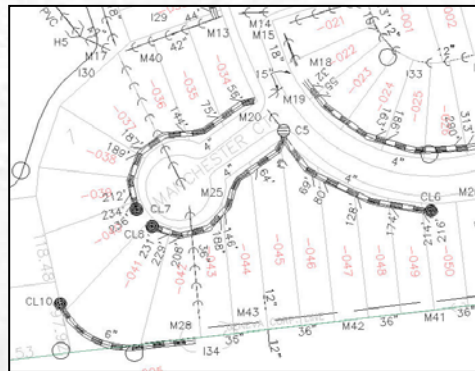


## Wastewater and Storm Utility Mapping is Converted from CAD to GIS for the City of Geneva

The primary focus of this project was the conversion of wastewater and storm utility mapping from MicroStation CAD format to ESRI GIS format. The conversion to GIS served to leverage the City's existing information about their utilities and made it possible to utilize industry standard GIS and database software. After conversion to GIS, the City's utility data gained considerable added value because it became spatially enabled, allowing a variety of spatial queries and spatial analyses to be performed. The scope of the project was as follows:



*After conversion to GIS, the City's utility data gained considerable added value because it became spatially enabled*

- Reproject the current wastewater and stormwater utilities from the NAD 27 to the NAD 83 coordinate system
- Perform data cleanup on the existing MicroStation utility maps files. The data cleanup upgraded the MicroStation mapping to a higher level of structure and standardization
- Realign a portion of the City's utility mapping to register correctly with parcel and orthophoto base maps recently updated by the County
- Convert the MicroStation mapping system into an ESRI geodatabase system
- Develop and populate the geodatabase to comply with the City's implementation of the CityWorks Asset / Maintenance Management System

A Geodatabase Model design, as well as general project planning and documentation were done first to ensure that the CAD files would convert efficiently to the CityWorks compliant geodatabase.

The quality assurance procedures implemented for each production task in the work plans are as follows:

Utility Realignment — The sequence of the various production operations were designed to maximize the precision of feature placement and minimize the chance for operator error.

Data Cleanup — The MicroStation drawings were normalized to comply with established level and cell definition standards. Attributes tables containing annotation data extracted from the MicroStation files were checked for non-standard text values and numeric values out of range. Batch processing was used to search the MicroStation files for errors and exceptions.