

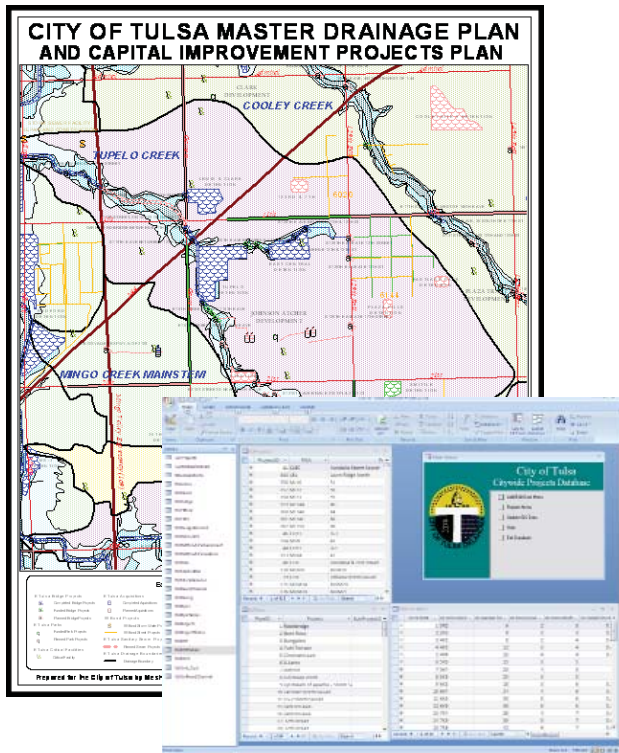
Citywide Master Drainage Plan

City of Tulsa, OK
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► Completed from 2005 to Ongoing

Meshek & Associates, PLC, is currently completing the fourth update to the City of Tulsa's Citywide Master Drainage Plan. The City of Tulsa's drainage basins have been divided into twenty-eight Master Drainage Plans (MDPs). Recognizing the need to combine the multiple MDPs into a single, comprehensive program, in 1990 the City of Tulsa developed its first Citywide Flood and Stormwater Management Plan (1990-2005).

This document pulled together the different basin analyses and recommendations, and developed a coherent set of goals and objectives as a comprehensive plan. At the same time, the projects recommended for each basin were compared and prioritized in a consistent manner. The *formula used to prioritize the projects assigned points for flood damage reduction, hazardous street overtoppings, residential inundation, non-residential inundation, and project costs.*



The above provides an illustration of the cost-estimating Microsoft Access database used to prepare construction estimates for the many recommended drainage improvement projects.

This work, begun by our firm in 1988, includes a prioritization of all the recommended projects within the twenty-eight basins that cover the City of Tulsa. Previous updates included conversion of the plan to an ArcGIS database and the addition of small projects identified from telephone complaints and those projects too small to have been included in master drainage plans.

This most recent update included preparation of a cost-estimating Microsoft Access database to prepare current construction cost estimates, and reprioritization of projects citywide based on an updated evaluation of the benefits of each project. The cost database was linked to the geodatabase for easy map illustration, reporting and data updating capabilities.

In addition, the MDP Update included relevant projects that are in the city's Capital Improvement Program (CIP), but for whatever reason were not listed in the basin master drainage plans. To rank projects, their beneficial impacts are quantified and then compared to cost. Notable aspects of the project include the development of an MS Access Database from various studies and capital improvement databases and spreadsheets. The database has many functional aspects including its greatest enhancement, the connection to spatial data for analysis and visualization functions using GIS.

Project Fee and Special Features

Project Fee: \$100,000

Notable aspects of the project include the combination of 28 MDPs into one coherent set of goals and objectives. A formula was used to rank projects based on points assigned by the Prioritization Criterion selected by the City.



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