



Department Source: City Utilities - Sewer/Stormwater

To: City Council

From: City Manager & Staff

Council Meeting Date: October 21, 2024

Re: Report: Prairieview Stormwater

## Executive Summary

At the June 3, 2024 meeting, Council requested a report regarding stormwater drainage along Prairieview Drive be provided.

## Discussion

Staff and Council have received concerns related to storm water drainage from residents along West Prairieview Drive. Specifically, the area between 909 W. Prairieview and 815 W. Prairieview Drive. Prairie Hills Subdivision Plat No 1 was recorded in 1969 and was developed in unincorporated Boone County. The home at 909 W. Prairieview Drive was constructed in 1984. The four lots to the east were constructed between 1994 and 2003. Aerial photography from 1994 shows a defined drainage channel through these four lots prior to home construction. In 1994, the channel was piped under the driveway at 909 W Prairieview Drive. The road pavement between 909 and 811 W. Prairieview Drive was not placed until after 1994. The installation of the road did not include a designed system to manage the storm water runoff. Drainage was left to be addressed by each individual lot owner at the time the individual homes were constructed. The property owners addressed drainage in various manners including a combination of different size and number of pipes, concrete channels, wood timber channel and ditches. The majority is located in the street right-of-way and some located on private property.

The runoff from approximately 20 acres of mostly residential neighborhood drains through this area and these facilities. This is shown on the attached Prairieview Conceptual Project Map. These facilities were not designed to meet City requirements. Current City requirements would include a piped system designed to convey a 10 year storm while maintaining a clear lane in the street. Storms in excess of a 10 year storm will still result in street flooding. Since the existing system was not designed to convey the 10 year storm, it is likely that for some rainfall runoff events there will be yard and street flooding.

Responsibility for the drainage system in this location is unclear. Some of the lots in this subdivision have been annexed into the City and some have not been annexed. The west 300 +/- feet of W. Prairieview Drive has been annexed into the City. The remainder of the street right-of-way has not been annexed and is still under the authority of Boone County. The City's Storm Water Utility has gone out to clear debris from the pipes to ensure the system functions. Maintenance activities for the Storm Water Utility include clearing debris and obstructions from pipe openings and culverts and replacing failing City owned pipes and inlets. The Storm Water Utility does not maintain open channels or ditches.



# City of Columbia

701 East Broadway, Columbia, Missouri 65201

These facilities are aging and are in need of significant maintenance. These facilities are not owned by the City and should be maintained by the property owners. Unfortunately, doing work on the individual pieces of this system will not solve the street flooding that occurs resulting in a level of stormwater management that is lower than expected.

The most appropriate solution would be to design and construct a storm drainage system that meets current city standards. Staff has developed a conceptual alignment for an improvement project that will meet current City drainage standards and is shown on the Prairieview Conceptual Project Map. A project based on this conceptual design is anticipated to cost approximately \$350,000. Completing a storm water improvement project is complicated by the fact that the majority of the street right-of-way and a fair number of the lots have not been annexed into the City. If Council desires to perform a capital improvement project to address stormwater at this location, it would be appropriate for this to be a joint project with Boone County. 16% of the drainage area is located outside the City limits and cost share based on percent of the area would be reasonable. An alternative would be for the City to design and construct the project and recover costs through the tax bill process where all costs are recovered by the properties benefited by the project.

In addition to the conceptual design, staff has ranked this project using the current storm project ranking workbook. This workbook is attached and shows all the different metrics considered when ranking a project. Also attached is the Project Ranking Scores page. This is a working document showing where the Prairieview project ranks in comparison to other storm projects in the current Capital Improvement Plan along with previously completed projects. There are more than 15 projects that currently rank ahead of Prairieview. Not all identified storm projects have been ranked. Staff works on project ranking as time allows. Currently, there are over 120 identified CIP storm drainage projects throughout the City. When prioritizing these projects to address the most severe flooding or infrastructure failures first, this project does not rank high in priority. The Storm Water Utility strongly relies on a system of prioritization to efficiently and effectively utilize ratepayer funds. Should it be decided to construct a low priority project the use of the tax bill process or a joint project is strongly encouraged.

## Fiscal Impact

Short-Term Impact: A capital improvement project to address stormwater in this area is anticipated to cost approximately \$350,000.

Long-Term Impact: A capital improvement project to address stormwater in this area would have minimal impact after the initial construction.

## Strategic & Comprehensive Plan Impact

[Strategic Plan Impacts:](#)



# City of Columbia

701 East Broadway, Columbia, Missouri 65201

Primary Impact: Reliable and Sustainable Infrastructure, Secondary Impact: Not Applicable, Tertiary Impact: Not Applicable

## [Comprehensive Plan Impacts:](#)

Primary Impact: Infrastructure, Secondary Impact: Environmental Management, Tertiary Impact: Inter-Governmental Cooperation

### Legislative History

Date	Action
n/a	n/a

### Suggested Council Action

Report is for information only.