STM – GG7028 108 Carrousel Ln. Flooding Mitigation

Executive Summary

A comprehensive Drainage Assessment is being conducted at 108 Carrousel Lane to evaluate the existing storm drainage conditions and assess potential solutions for mitigating structural flooding of the residence. The assessment includes a technical evaluation of the site's drainage infrastructure and identifies remedial measures aimed at reducing future flooding risks. This involves proposed improvements or modifications to the existing street drainage system and residential private property improvements.

The property in question, 108 Carrousel Lane, is in the Madison Oaks neighborhood of Cary. This residence is located on a residential street west of Oscar Lane and East of the intersection of Madison Avenue, Carrousel Lane. The assessment focused on the drainage conditions affecting this specific property and surrounding area within the Madison Oaks neighborhood.

The assessment was prompted by a rainstorm in April 2023 resulting in structural flooding of the crawl space at 108 Carrousel Lane and reported by the property owner. By evaluating the causes of flooding and identifying potential solutions, this assessment aims to mitigate those risks, protect private properties, and preserve public health. Under Policy Statement 35 (PS-35)**,** Cary assists private property owners who experience structural flooding caused by storm drainage issues. PS-35 provides a framework for determining when assistance is warranted, based on the severity of flooding and the feasibility of corrective measures. By addressing flooding in a targeted and systematic way, this assessment supports Cary's ongoing efforts to help mitigate stormwater management challenges while ensuring that public funds are used in alignment with the policy's public purpose criteria. Implementing the recommended measures will not only help alleviate further damage to the affected property but also benefit the community by improving overall drainage conditions in the area.

Project Overview and Timeline

On April 14, 2023, the owner of 108 Carrousel called in a 311-request concerning driveway, yard and structure flooding during a rainstorm. Cary staff met the homeowners on site shortly after the 311 request.

Subsequent to the site visit Cary staff hired an on-call engineering firm to review the flood inundation issues on the property. This entailed a detailed survey of the upstream and downstream areas helping build and qualify a flood inundation model. Modeling formulates and test theoretical solutions as a preliminary planning study. This preliminary planning study (not for construction) was presented to the homeowners of 108 Carrousel via the PowerPoint titled '108-Carrousel_Modeling-Results20251008.pptx' on September 18, 2025. The exhibits contain maps of the area in and around 108 Carrousel of the estimated existing floodplain during the 10- and 100-year storms. It also conveys the estimated proposed floodplain during the 10- and 100-year storms with the proposed improvements. Currently the proposed right-of-way improvements include adding four new curb inlets near the subject property. Contract documents to construct these improvements are underway but no funding has been approved to implement the construction. The owners of 108 Carrousel will be responsible for installing a berm on the back of the property as shown by the exhibit titled 'Carrousel_Berm-Concept-Sketch_print20251024'. This berm is intended to divert flood waters back into the channel. Cary cannot fund this work on private property since it does not meet the definition of public purpose.

Once the construction drawings are complete (no time line at this time), a request for funding will be submitted. Currently there is no construction project in Cary's stormwater capital project list that is funded or has a timeline for completion at 108 Carrousel Lane.