



To: President and Members of Town Council
From: Staff of Public Works
Meeting: March 3, 2025
Re: Main Street Stormwater Management System

The Town was awarded \$6,136,065 in federal funds through NIRPC to reconstruct Main Street from Columbia Avenue to Cypress Drive. DLZ was awarded the design engineering contract in 2022 and a supplemental agreement was approved at the October 7, 2024, meeting. Since then, DLZ has been working with Staff on various design elements including drainage. Four areas of conflict between the Town standards have been identified, and DLZ is requesting a variance for each from the Town of Munster Storm Water Technical Standards Manual, January 2023.

Town stormwater standards call for Type II NRCS design rainfall distribution for hydraulic analysis. Analysis of the roadside ditch/detention stormwater management for both water quality and conveyance performance require a critical duration analysis. The Type II NRCS system does not address all of the factors involved. DLZ is requesting a hydraulic design variance to use the Huff rainfall distribution method within the project limits.

Town stormwater standards call for an inlet grate opening adequate to pass the designed ten-year flow with 50% of sag inlet areas clogged. The existing sag stormwater inlets at the edge of the pavement meet the 50% sag limit. DLZ is requesting a hydraulic design variance within the project limits for each proposed roadside ditch inlet.

Town stormwater standards have a 0.2cfs/ac target release rate. Because of the conditions in place (i.e. utility locations, limited right-of-way width, topographical limitations) only underground or pipe detention can meet the target release rate within the other requirements. Two box culverts would be needed. Another option to meet the requirement would require 2' diameter pipes in other locations. The size of the box culverts and enlarged drainage structures would likely create conflicts with other utilities in the corridor creating project scheduling conflicts and a significant project cost increase of between \$1,000,000 and \$2,000,000. DLZ is requesting a hydraulic design variance within the project limits to use a release rate based on the existing ten-year stormwater event.

Town stormwater standards require the removal of floatables in stormwater runoff and treatment to the maximum extent practicable. Much of the project addresses water quality through construction of modified roadside ditches wherever possible. These ditches include underdrains configured for a 1" storm runoff event. There are areas within the right-of-way and where existing utilities prohibit construction of these ditches. In these cases, other methods will be used to handle the runoff that do not meet the standard. DLZ is requesting a hydraulic design variance within the project limits at four specific locations.

DLZ has worked with Staff on each of these matters. SEH has worked closely with DLZ to ensure the best way forward and is in agreement with the requested variances.

Recommendation:

By motion and roll call vote approve the requested design variances from the Town of Munster Storm Water Technical Standards Manual, January 2023 version for the Main Street project.