

BLACK CREEK – FORMER MUSKEGON NEWAYGO DRAIN BRANCH 4: MEMO

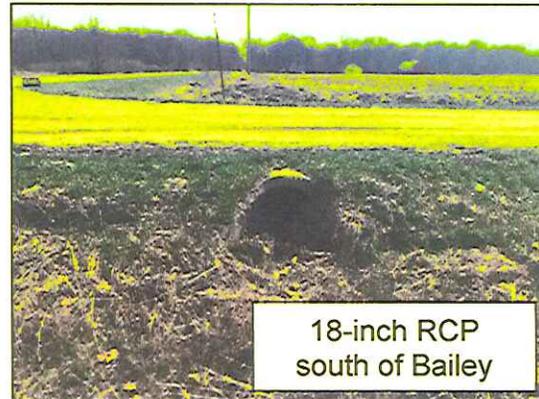
Date: April 10, 2020

By: Andrew Stoffel - Land & Resource Engineering (LRE)

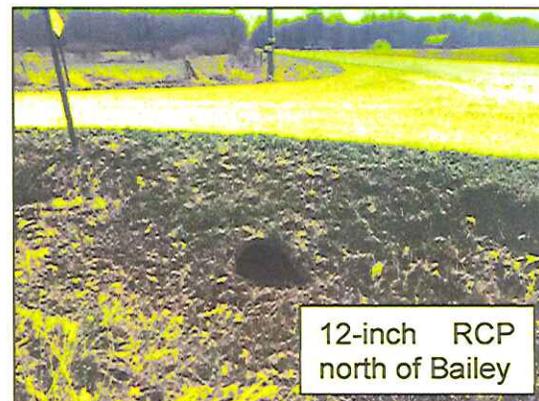
Re: Former Muskegon Newaygo Drain Branch 4 – Potential Branch

Introduction: The Muskegon County Drain Commissioner, Brenda M. Moore, requested LRE investigate adding a branch to the former Muskegon Newaygo Drain Branch 4 (Branch 4) along Bailey Road and Slocum Road to improve roadside drainage to Branch 4.

Existing Conditions: LRE staff performed a field investigation on April 6, 2020, at which time there was little water within the county road ditches. At the corner of Slocum Road and Bailey Road, there are cross culverts under Slocum Road on the north and south sides of Bailey Road. It appears that both culverts were installed to allow water to flow from west to east towards Branch 4. The north side culvert is a 12-inch RCP and the south side culvert is an 18-inch RCP. Both culverts have flared end sections and are in fair condition. The only issue noticed during the investigation was the lack of grade along the roadside ditch network and sediment partially plugging the north culvert.



Evaluation of Alternatives: Based on our field investigation, there are two feasible options to alleviate the standing water and improve drainage along Slocum Road at the intersection of Bailey Road.



Alternative 1: Perform proposed improvements to Branch No. 4 as part of the petition project and let the Road Commission be responsible for maintaining their culverts. The roadside ditches have an adequate outlet to Branch 4 on the north and south sides of Bailey Road.

Alternative 2: Establish new branches along the roadside ditches on the north and south sides of Bailey Road and conduct the ditch and culvert improvements as part of the Black Creek Drain petition project. This alternative will require a resolution from the Muskegon County Road Commission to establish the new branch within the Road ROW. An EGLE permit for improvements to the existing ditch system pursuant to Part 301 & 303 of the Natural Resources and Environmental Protection Act, 1994 PA 451 as amended (NREPA) may also be required.

Preliminary Recommendations: LRE recommends Alternative 1, as the drainage adjacent to Bailey Road and Slocum Road is already adequate and does not need a new branch to alleviate the drainage issues. Maintenance performed by the Road Commission should be sufficient to improve roadside drainage to Branch 4.

Implementation: Maintenance of the road ditches along Slocum Road and Bailey Roads should be performed by the Muskegon County Road Commission. No additional investigation by LRE are anticipated.

Please feel free to contact my cell at (708) 612-3313 with any questions or if we can be of further assistance.

Sincerely,

Land & Resource Engineering (LRE)



Andrew Stoffel
Project Engineer