

To residents of the Casco Drain project and the Casco Twp. Board:

The Casco Drain project is a new Allegan County drain that was initially applied for by a resolution from Casco Twp. in February of 2015. The Drain was petitioned to establish public stormwater infrastructure to service an approximately 700-acre area that had significant flooding of lands and roadways within its watershed (a.k.a. Drainage District). The Drainage District is primarily determined by looking at all properties that contribute water to the end constructed Drain. On most drain projects, and the Casco Drain is no exception, those properties that get flooded or have drainage issues are in the minority within a drainage district. This means that in general most people’s property doesn’t flood or



Examples of the private, non-connected drainage system that existed prior

have significant drainage problems. However the law in Michigan, under the Drain Code of 1956, P.A. 40 (i.e. the Michigan Drain Code) all properties that contribute water to the Drain, whether directly or indirectly, ultimately pay for a percentage of the cost to establish, construct and maintain that drain. The same goes for any ‘At-Large’ entities

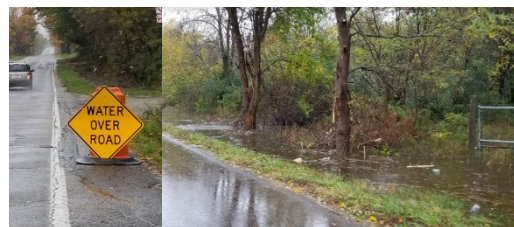
owning land within that drainage district boundary. These At-Large entities, like any Townships, Villages, Cities, etc., are also assessed either on their respective benefit from the drain to the public health of that municipality (Casco Township) or based upon the benefit to the County or State Owned roads (Allegan County & MDOT).



Flooding of several acres adjacent to 71st St. and water over the road



Prior to the petition to establish a County Drain there was no governmental entity that oversaw or was ultimately responsible for the drainage within this area. The only drainage systems in place were a series of ill-connected private ditches and culverts under and along some of the roads. However, this infrastructure within the roadways was primarily in place to address private drainage issues or to address specific drainage items along the roadway that were installed over time by the Road Commission. Without a County Drain being established to provide all these areas with a means to direct private land or roadway runoff, then drainage issues would only persist and worsen over time as more and more property within this 700-acre area began to develop and have houses put on individual undeveloped lands.



Prior flooding along and over Blue Star Hwy.

A Board of Determination was held in December 2015 and the three disinterested property owners from Allegan County comprising that Board determined the new drain petition necessary. In the time period from the Board of Determination to the project being bid out publicly for construction contracts, rights-of-way/drain easements were obtained for where the proposed drain route would be located when outside the road right of ways, an EGLE Permit was obtained for the construction of this new Drain system

and a design was completed that laid out the Drain in a route that limited the need for significant easements from other landowners and instead the primary route for the drain outside of areas along the roadways, would be located on property owned by Casco Township.

The Casco Drain Drainage District is approximately 712 acres in size with about 300 total parcels comprising the Drainage District. The Casco Drain serves primarily agricultural lands and large residential properties in Sections 7, 18 and 19 of Casco Township.



Prior flooding of several acres of private land adjacent to 71st St.



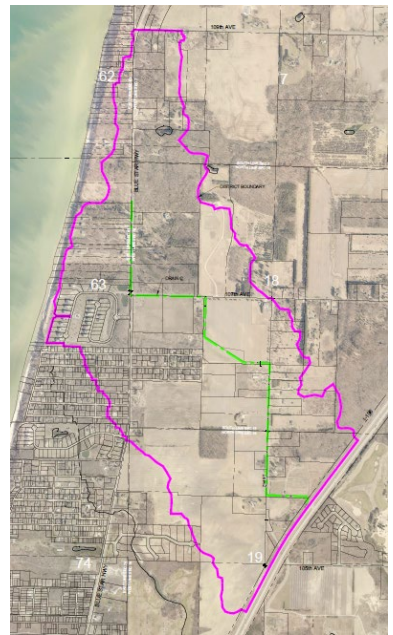
The proposed drain construction begins with a 48" enclosed storm sewer outletting near an existing 60" crossing under I-196, which is to the east of 71st Street and approximately 500 feet north of where 71st Street crosses under I-196. The new enclosed Drain will then go west to 71st Street and then will run north along the road to the Township's property on the corner of 71st St. & 107th Ave. From the Township's property, the enclosed drain then runs west along 107th Ave. and extends north to an existing 24" crossing under Blue Star Hwy. that was installed to alleviate flooding from runoff associated with the infiltration basins installed as part of the Boardwalk Estates development on the west side of Blue Star Hwy. The entire Drain construction consists of slightly over 1-mile of primarily 30" to 48" enclosed storm sewer along mostly existing County road right-of-way. The cheaper alternative of installing deep and wide ditches along the roadways was considered but limitations adjacent to the roads would have meant obtaining over a dozen additional easements in order to install these deep ditches along with the fact that these deep ditches are extremely undesirable with property owners along the roads. Included with the installation of this

new drain system, substantial road drainage work (ditching, culverts, etc.) is being done to facilitate drainage of Blue Star Hwy (north of 107th Ave. up to the Township's park on the west side of Blue Star Hwy), 107th Ave. and especially for 71st St. (between 107th Ave. and I-196), which consistently floods and water stands over the road. The other significant work taking place is construction of an approximately 7-acre detention basin on the property on which the Casco Twp. Hall is located. This detention basin is being installed to mitigate the additional stormwater that is being collected because of the new upstream drainage conveyances to be installed as part of this project.

The project was let for public bid contracts in January 2021 and Redline Excavating was the lowest responsible bidder, with a total bid construction cost of \$1,321,510.69, with an overall Computed Total Project Cost of \$1,765,000. The Drain project construction is set to begin immediately and the first major item of work will be to complete all storm sewer work by Memorial Day of this year so that Casco Twp. can crush, shape and then resurface all of 71st St. from 107th Ave. to I-196. That particular road work is a separate project that is part of work being planned by the Allegan County Road Commission and Casco Twp.



An existing 60" culvert under I-196 is the outlet for the Casco Drain



This map shows the Drainage District (purple) and the Route of the Casco Drain (green)

Much has been said about the assessments for the Drain project and I'd like to briefly explain how those assessments were determined. In Michigan, on every county drain project in any county within the State, when a petition is

determined necessary by a Board of Determination for a new county drain under the Michigan Drain Code of 1956, all costs associated with that petitioned new drain are then apportioned out to all lands

comprised within the determined Drainage District and to any At-Large entities within that drainage district. In the case of the Casco Drain, the At-Large entities are Casco Township, Allegan County (for benefit to County Roads) and MDOT. On most drain projects in Allegan County and in other counties in Michigan, the At-Large entities typically comprise between 15% to 25% of the total project cost. For the Casco Drain, because of the significant improvements to the public County roads within the District and a relatively larger benefit for purposes of public health, these entities comprised 38.75% of the overall project cost. The remaining 61.25% was apportioned out to the some 300 properties within the Drainage District. In Michigan, landowners do not pay any local, County or State taxes associated with County Drain projects and all costs for County Drain projects are paid for on an as-needed basis through special assessments.

To determine the percentages for each parcel within the Drainage District, several factors were used. A runoff factor was assigned to each parcel based on the way in which that parcel is zoned. That runoff factor is a relative determination as to the percentage of that parcels total land area that sheds off water looking at the relative imperviousness of that property. An impervious surface is something that doesn't allow or restricts the ability for water on its surface to infiltrate into the ground. As an example, for paved surfaces we typically use a runoff factor of 0.9, meaning relatively speaking 90% of the rain water that hits that ground will runoff or shed to other areas. Using this concept and applying it to an example property, a ½-acre residential property with a house, paved driveway and a garage has a higher percentage of runoff on the property than that same sized house, paved driveway and garage on a residential property that is say 5 acres in size. Using this example, that 5-acre parcel has a lot more percentage of its overall property that would have impervious surfaces, like lawns or fallow fields. For the Casco Drain assessment, a residential property larger than 5 acres had a 0.10 Runoff Factor, for residential properties less than 1/2 acre in size a Runoff Factor of 0.40 was used and for residential properties between the 1/2 and 5 acre size a runoff factor of 0.20 was used. Agricultural properties had a runoff factor of 0.05 applied to them as well.



Pictures showing the poor condition of 71st St. because of an inadequate prior drainage system

Along with a runoff factor, a proximity factor was also used, because properties directly adjacent to the new Drain have an easier ability to drain their property and use that drain then for properties that maybe are one or two parcels away from the Drain. Also considered was if lands had larger areas where natural detention takes place, like places where water wouldn't runoff and would be held on that property. So, a 'credit' is kind of given based on the percentage of someone's property that might have their own pond on it or has low-lying areas where there are wetlands on them. Lastly, for properties that had more than 50% of their total parcel land area within the Drainage District, a Base Assessment amount was applied. This is commonly done on new Drain projects to relatively account for the inherent cost of doing a drain project and establishing that Drain through the administratively complex County Drain process. This base assessment amount is meant to cover the costs for things like all the legal notices, holding a Day of Review, the Scope Meeting, the Board of Determination, Financing costs, Engineering, Permitting costs, etc. For the Casco Drain a Base Assessment of \$1,000 was used for any property having more than 50% of its land area within the drainage district. Of the 300 parcels within the Drainage District, the average assessment was about \$3,600 per parcel, which equates to an average of about \$260 dollars a year when financing it over a 20-year period.



I hope that this letter has explained some of the elements of the Drain project and how the assessments were determined. Myself and my staff are always able to answer any questions you have and explain any of the items associated with the project in greater detail to you. Please do not hesitate to reach out to my office and call if you have any questions.

Thank you and it is a pleasure and honor serving you and all the residents of Allegan County.

Sincerely,



Denise Medemar
Allegan County Drain Commissioner