

Prueter Drain

Storm Sewer and Road Improvements

Public Informational Meeting

February 4th, 2020

Buena Vista Charter Township Hall
Saginaw County Public Work Commissioner
Brian J. Wendling



Engineering & Design Completed by



Purpose of Meeting

- Public Information
 - Inform landowners in the drainage district
- Review of project
 - Review Project History
 - Review of design and cost estimate
 - Review what to expect during construction
 - Receive input from landowners

Meeting Agenda

- Background
- Establishing a County Drain
- Drainage district
- Engineering & design
- Preliminary Design
 - Storm sewer Improvements
 - Road Improvements
- Construction
- Clean up & site restoration
- Preliminary cost estimate
- Questions & Comments

Background

- December 10, 2018
 - Landowner application to layout and designate a drainage district filed with SCPWC
- February 11, 2019
 - Petition to locate, establish & construct a drain filed by Buena Vista Charter Twp.
- April 10, 2019 –
 - Board of Determination Held
 - Public Testimony regarding flooding streets and deteriorated pipe
 - Project is found necessary



Establishing a County Drain

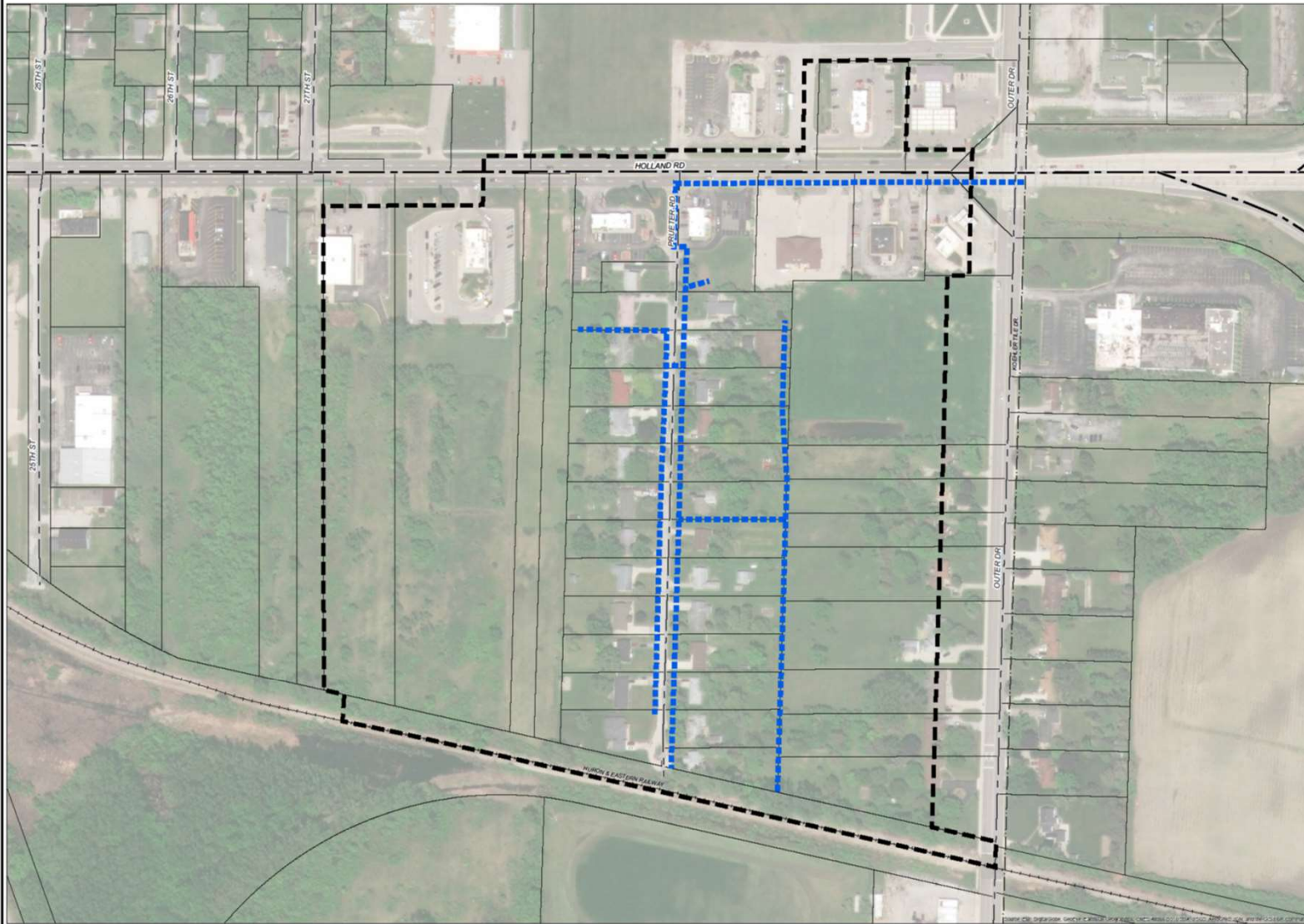
- Drain comes under jurisdiction of SCPWC per Michigan Drain Code
- Special assessment district established based on drainage area
- Drainage district

Drainage District

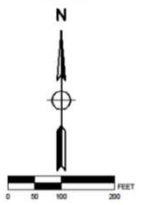


PRUETER DRAIN SAGINAW COUNTY, MICHIGAN

BRIAN J. WENDLING - SAGINAW COUNTY PUBLIC WORKS COMMISSIONER



AREA MAP
NOT TO SCALE



LEGEND

- DRAINAGE DISTRICT BOUNDARY
- DRAIN CENTERLINE
- APPROXIMATE LOCATION OF OUTLET DRAIN
- RAILROAD
- STATE ROADS
- COUNTY ROADS
- LOCAL ROADS

BY	MARK	REVISIONS	DATE
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<p>PRUETER DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>DRAINAGE DISTRICT MAP</p>			
		<p>ENGINEER OFFICE 200 S. Westinghouse Ave. Saginaw, MI 48607 Tel: 989-754-4111 www.spicergroup.com</p>	
DESIGN BY: LNO	CHECKED BY: MDC	PROJECT NO: 126725SG2019	
DRAWN BY: JWB	APPROVED BY: JWB		
STATUS:	SHEET 03 OF 21	DR 03	
DATE: JANUARY 2020	SCALE: 1" = 100'	DR-3901-03	

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Drainage District

- What is a drainage district?
 - Land that contributes storm water to the drain
 - Properties that are special assessed for improvements
- Drainage special assessment district includes:
 - County government
 - Township government
 - Railroad
 - MDOT
 - Property owners

Drainage District

- How is a drainage district determined?
 - Identify land that drains toward the potential new county drain
 - Directly or indirectly connected to drain
 - Based on surface water flow
 - Based on storm sewer flow
- Reviewed existing maps and aerial photos
- Visual field check

Drainage District

- Total drainage district area 45± acres
- County road Right of Way 2± acres
- MDOT road Right of Way 2.4± acres
- Railroad Right of Way 2± acres
- Total assessable parcels 44
 - Notified for this meeting

Engineering and Design

- Topographic Survey
- Hydrologic and hydraulic analysis
- Preliminary design
- Route of drain
- Utility coordination
- Preliminary estimate of cost

Engineering and Design

- Scope of Survey
 - Surveyed approximately $3/4 \pm$ miles
 - All topography within road right of way (signs, poles, trees, visible utilities)

Engineering and Design

- Hydraulic Design criteria include
 - Providing 10-year design storm protection
 - 3.5 inches of rain over 24 hours
 - During larger rain events you may experience temporary ponding around catch basins but will drain away faster
 - Outlet elevation
 - Replace deteriorated storm drain pipes
 - Minimize utility conflicts
 - Provide catch basin access between driveways
 - Cost effectiveness



Preliminary Design

- Proposed storm sewer and drainage structures
 - All proposed storm sewer will be placed in the lawn areas on either side of the road.
 - Drainage structures will be placed between driveways to collect surface water runoff from yards and road.
 - Main storm sewer (larger, deeper pipe, 30" to 12") will be placed along the east side of road and rear lots and will **be maintained by the SCPWC.**

Engineering and Design

- Parallel collection pipe
 - New storm sewer and C.B.'s will be placed between driveways on the west side of the road and **will be maintained by the SCRC.**
- Connections to existing storm sewer (sump lines) will be connected to the proposed storm sewer.
 - (do you have sump connection to existing storm sewer?)
- This project **will** address rear lot drainage problems **on the east side of Prueter Drive by** providing storm sewer and structures along property lines. It will also improve rear lot drainage on the **west side** by increasing the size of the outlet pipe between the Brown and Scott properties.

Preliminary Design

- Existing Outlet
 - Existing 18" and 12" storm sewer along M-46 that outlets to the Koehler Drain
 - Koehler Drain - 54" storm sewer along outer drive @ M-46
- New Outlet
 - New 36" & 30" pipe will replace 18" & 12" along M-46.
 - Deeper outlet allows for minimum grade and cover for proposed storm sewer.

Preliminary Design

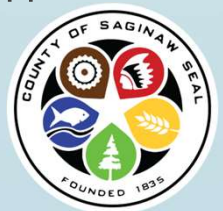
- Road Improvements
 - M-46 (Holland Road)
 - Replace (2) southerly eastbound lanes and curb & gutter and driveway approaches between Outer Drive and Prueter Street.
 - Prueter Drive
 - Crush and shape road surface
 - Regrade crushed material
 - Grade road to provide 20' paved surface with a 2% cross slope and 1' gravel shoulders
 - Pave with 3.5 inches new asphalt
 - Replace driveways with in-kind material.

Construction

- Site clearing
- Clean-up & restoration
- Traffic control
- Utilities
- Driveways
- Schedule

Site Clearing

- Trees and shrubs will be removed as needed for construction.
- Landscaping will be removed and stockpiled for landowner to re-install.
- Fences will be removed and re-installed as needed for rear lot drainage.
- If needed, mailboxes will be temporarily relocated and reinstalled for construction. A temporary central location may be established for pickup and drop off of mail.



Construction

- Drive culverts will be removed
- Drives will be restored with “in kind” material.
- All parcels will have access to a storm water catch basin
- Coordinate with Waste Management to limit trash pickup interruptions.

Construction & Utilities

- Water service disruptions will occur, but Buena Vista Twp. Water Dept. will notify you in advance of any water shutdown or boil water alerts. Disruptions will be kept to a minimum.
- Other utilities; if they need to be disturbed you will be advised ahead of time and will be kept to a minimum.

Construction & Utilities

- ▶ Emergency vehicle access will be maintained
- ▶ Please advise us if there are medical conditions, we need to be aware of.
 - ▶ **EXAMPLE:** Someone on oxygen, or other medical equipment that cannot tolerate utility disruptions.

Traffic Control

- Road closures will be kept to a minimum.
- Attempt to keep one lane open as much as possible.
- Access to homes and businesses will be maintained.
 - However, driveways closed as needed for construction.
 - Landowners will be notified a minimum of 24 hours in advance of driveway closures.

Cleanup and Restoration

- ▶ All disturbed lawn areas will be landscape graded and seeded with a minimum 4" of imported screened topsoil.
- ▶ **Restored lawns must be watered by the residents to assure grass growth.**
- ▶ Mailboxes moved during construction will be re-installed.
- ▶ Driveways shall be restored with in kind material.
- ▶ Any landscaping removed for construction will be the responsibility of the landowner to replace.

Construction Schedule

- Bid opening Feb. 18, 2020
- Day of review drainage boundary Feb. 19, 2020
- Day of review apportionments March 3, 2020
- Construction start May/June
- Substantial completion Sept. 15, 2020
 - All Stm. Swr. placed and roads paved
 - Initial grading and seeding of lawns
- Final restoration Oct. 15, 2020



Preliminary Estimate of Cost

- Site clearing
- Storm sewer installation
- Drainage Structures
- Road improvements
- Driveway repairs
- Utility relocations
- Erosion & Sediment control
- Cleanup and restoration
- Traffic Control
- Engineering and survey
- Construction staking and inspection
- Legal fees
- Administration and financing
- Capital Interest
- Contingencies



Approximate Breakdown of Cost

► Saginaw County	5.0%
► SCRC	14.08%
► Buena Vista Charter Twp.	10.0%
► MDOT	11.13%
► Railroad	4.47%
► Landowners	55.32%
► 44 assessable parcels in drainage district	

Preliminary Estimate of Cost

- Total Estimated Project Cost \$1,370,000
- MDOT \$660,000
- SCPWC \$710,000
 - Saginaw County \$35,500
 - BVCT \$71,000
 - SCRC \$100,000
 - Railroad \$31,737
 - MDOT \$79,023
 - Landowners \$392,740
- 44 Assessable Parcels
 - \$7,500 to \$8,200 for parcels along Prueter Drive
 - \$3,800 to \$4,600 for parcels along Outer Drive
 - \$10,000 to \$30,000 for commercial parcels

Amounts are
ESTIMATES
only. Final
principal costs to
each landowner
will be available
on March 3, 2020
at SCPWC office.





Public Comments

