CITY COUNCIL WORKSHOP AGENDA

January 22, 2025, 4:00 p.m.

This is an in-person meeting at Saugatuck City Hall, 102 Butler St, Saugatuck, MI 49453.
The meeting will also be available live, virtually on Zoom.

1. **Call to Order**

2. **Roll Call**

3. **Agenda Changes** *{Additions/Deletions)*

4. **Guest Speaker**

5. **Public Comment on Agenda Items Only** *(Limit 3 minutes)*

6. **Discussion Items:**
   - **A.** Maple Street - Improvements Planning and Options. ***Pg.2***
   - **B.** Sea Wall and Concrete Repairs - Proposal for Design Engineering & Bidding Assistance ***Pg.82***
   - **C.** Mt. Baldhead Bathroom Plans ***Pg.86***
   - **D.** Renaming Old Airport Property ***Pg.99***
   - **E.** Retroactive Right of Way Encroachment Request - 560 Mill ***Pg.103***

7. **Public Comments** *(Limit 3 minutes)*

8. **Correspondence** ***Pg.130***
   - A. Wendy Colsen
   - B. Tim and Tracey Leffler

9. Council Comments

10. Adjourn

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Join online by visiting:
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Join by phone by dialing:
(312) 626-6799 -or-
(646) 518-9805

Then enter "Meeting ID":
2698572603

Please send questions or comments regarding meeting agenda items prior to meeting to:
rcummins@saugatuckcity.com

Requests for accommodations or interpretive services must be made 48 hours prior to this meeting. Please contact Saugatuck City Clerk at 269-857-2603 or jwolters@saugatuckcity.com for further information.

City Council Agenda Item Report

FROM: Ryan Cummins, City Manager

MEETING DATE: January 22, 2025

SUBJECT: Maple Street Improvements Planning and Options

DESCRIPTION:

Maple Street and the underground water main are in need of replacement. City Council listed roads, asset management, and lead service line replacement as essential infrastructure priorities for the fiscal year. This work is also on the City's capital improvement plan.

In June, Council approved an engineering proposal to plan for the Maple Street improvements. Since that time, the City's engineers have conducted an open house to gather public feedback, topographic surveys, meetings with Township officials, and developed estimates for various options, which include:

- Road resurfacing or reconstruction
- Water main replacement (including replacement of services, some to inside the home/building)
- Drainage and stormwater management improvements
- Non-motorized improvements (widened shoulders, sidewalk, or similar)

Attached is a planning report from the engineer as well as cost estimates for various options. Also attached is a copy of the public feedback forms, preliminary layout on sidewalk/path which was used to develop the cost estimates, and former report analyzing stormwater options for the area. The engineer will have a PowerPoint presentation for the meeting.

The City has secured a $250,000 grant to help fund the roadwork. Current discussions with the Township include a 50/50 cost share to replace the water main and the side of the road the water main is under. Funding for the remainder of the project would come from a combination of streets, water-sewer, and general fund balances. The Township and City have also reached out to our elected officials in Lansing to discuss additional funding options.

Staff seeks Council feedback on the options so we can conduct further planning and take the next engineering steps.

LEGAL REVIEW:
The City Attorney will be at your meeting to answer any questions you may have.

SAMPLE MOTION:
N/A. Workshop item at this time.

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January 18, 2024

Via Email: rcummins@saugatuckcity.com

Ryan Cummins, City Manager
City of Saugatuck
102 Butler Street
PO Box 86
Saugatuck, MI 49453

RE: Maple Street Improvements Planning (DRAFT for City Review/Feedback)

Ryan,

In coordination with the City of Saugatuck, Saugatuck Township, corridor residents and other stakeholders, Fleis & VandenBrink (F&V) has completed planning activities for various improvements on Maple Street between Blue Star Highway and the work completed in 2023 near North Street, approximately 1 mile in length. The purpose of this planning phase was to identify and evaluate options to help City Council to determine the scope of improvements to be made on Maple Street, looking toward design in 2025 and construction in 2026.

Background and Existing Conditions

Maple Street serves as the part of the eastern border of the City, along with being a de facto detour whenever Blue Star Highway is closed for construction, accidents or other reasons. The Maple Street corridor includes significant public utility infrastructure that serves a wider area than the corridor itself – two wastewater lift stations with associated force mains, the City's two municipal wells, regional stormwater infrastructure and others. A generational improvement project should consider all of these aspects.

Water System Infrastructure

The existing water main is a combination of 4-inch and 6-inch diameter cast iron pipe. Construction records are not available for much of the corridor, and its age is largely unknown. The water main has experienced several breaks in recent years, which result in costly emergency repairs, boil water advisories and traffic impacts. In recent years, a private water service was discovered to be connected to the system through the private water main that serves the Olde Mill Apartments, which has caused operational issues. As customers are reconnected to the new water main, it is anticipated that situation will be resolved with a direct connection to the public system. Fire hydrant locations and spacing will be coordinated with Kalamazoo Lake Sewer and Water Authority (KLSWA) from an operations and maintenance standpoint (hydrant flushing and other activities) and the Saugatuck Township Fire District (STFD).

The City's two wells are located west of Maple Street. A looped water main connects the wells to the distribution system at Maple Street to the east and along the east side of the high school to the west (the water main loop around the high school was replaced in recent years). This water main was identified as a priority for replacement in recent years, as it is expected to be similar age and construction as on Maple Street. The water main connection to Maple Street is through an easement on private property, while the access road to the wells uses the frontage of the City's property.

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In 2024, the City received a Technical, Managerial, and Financial (TMF) Grant from the Michigan Department of Environment, Great Lakes and Energy (EGLE) to investigate the materials of its customers' existing water services for which the material was unknown. The TMF project is ongoing and will not confirm 100% of the service materials, however, those results that are available have been incorporated here. Of the 18 City water services on Maple Street that have been physically exposed ("potholed") as part of the TMF project, eight were found to be galvanized, four copper, and six plastic. EGLE's current Lead and Copper Rule requires galvanized services to be replaced from the main to the home/business, as they are more likely to contain leaded "gooseneck" connections at the water main (or may have at some point in the past). The Township recently undertook a similar process and has reported similar results for their services in the corridor.

Wastewater System Infrastructure
Wastewater system infrastructure in the corridor includes sanitary sewer collection system piping, primarily 8-inch diameter, a lift station on the west side of Maple Street north of Mason Street (with forcemain running south in Maple Street and west in Mason Street), a lift station on the east side of Maple Street south of North Street (with forcemain running north in Maple Street and west in North Street) and a pair of 16-inch forcemains that cross through the Maple Street corridor around 610 N Maple Street. Most of the corridor is served with sanitary sewer, with the exception of approximately 3 City parcels near North Street (Ridgewood Apartments are served through the lift station near North Street), which are assumed to be served by private septic systems.

The existing wastewater infrastructure was evaluated in 2016 as a part of the KLSWA Stormwater, Asset Management and Wastewater (SAW) project. The sanitary sewer was televised, and the condition of the manholes was evaluated. The sewer was generally found to be in fair to good condition. Recommended repairs included lining one section of sanitary sewer and repairs to most of the manholes.

Drainage System Infrastructure
A series of cross culverts run underneath Maple Street, carrying stormwater runoff from the east side of the road to the west, following the topography of the area. They include a 12-inch crossing at Blue Star Highway, a 36-inch plus 12/15-inch crossing north of Mason Street (which is the end point of the Allegan County Drain Commissioner's ongoing Blue Star Highway Drain project), a 15-inch crossing south of Ridgeview Lane, a 36-inch crossing near 730 N Maple Street, and a 15-inch crossing just south of North Street (which was evaluated in 2022-2023 as part of that project). Visual evaluation was completed as part of this planning process and additional investigation is being considered, however, visual evaluation has found the observable portions of the culverts to be in an acceptable condition.

The City has storm sewer infrastructure at many of the intersections within the corridor and sections along the west side of the road between Blue Star Highway and Mason Street with an outfall in the northwest quadrant of the Mason Street intersection, serving portions of Pleasant Street, Allegan Street, Mason Street and Maple Street itself. Between Mason Street and North Street, storm sewer infrastructure is limited to the area between Maple Woods Drive and north of Singapore Drive, which primarily serves the corridor itself. Notably, the City's outfall at the northwest quadrant of Mason Street outfalls to an open channel (small stream) that runs through private properties to the northwest. F&V completed a drainage study in 2022 (letter report dated November 22, 2022) that reviewed bank erosion concerns in the open channel and presented a range of mitigation options, which have been further evaluated and incorporated in this planning process.

The south approach of Maple Street at Blue Star Highway has experienced seasonal seepage through the pavement for a number of years, which is a maintenance concern and tends to prematurely deteriorate the road. A similar condition existed on Campbell Road near Park/Ferry Street and was resolved with additional underdrain.

The current roadway is not curbed, either with asphalt or concrete. Water sheds off the road into the adjacent green areas and in some cases shallow swales or ditches before entering the storm sewer system, where it exists.

Roadway Infrastructure
The asphalt pavement received a Paser Rating of 2 ("very poor") in the 2022 Paser Rating study and has deteriorated further since that time. The Department of Public Works (DPW) regularly patches potholes, but the additional traffic during closure of Blue Star Highway in 2024 for roundabout construction highlighted the

deteriorated condition of the roadway on Maple Street. The asphalt is beyond its useful life and needs to be replaced, along with improvement of the base material.

Non-Motorized Infrastructure
Finally, the Maple Street corridor currently has no non-motorized infrastructure, and the pavement is narrow, making walking or other non-motorized travel problematic. The City and Township have sidewalk on the north side of Allegan Street and are working toward constructing the Blue Star Trail, which is anticipated to cross Maple Street along the north side of Blue Star Highway. No other cross streets in the corridor currently have non-motorized facilities.

Other Infrastructure
The Maple Street corridor serves as secondary/rear access for the City's DPW facilities at 3338 Blue Star Highway and the STFD facility at 3342 Blue Star Highway. Configuration and construction of the drive approaches for both facilities will be coordinated with the appropriate personnel. The asphalt pavement at the DPW facility is in poor condition and has been considered as part of planning activities.

Evaluation of Options

F&V considered all of the above concerns during this planning process and identified improvement options for the City's consideration.

Water System Infrastructure
The existing 4-inch and 6-inch water main should be replaced with an 8-inch water main. While 6-inch is the minimum allowable diameter allowed by EGLE for public water main, 8-inch is the recommended minimum size, as it provides significantly greater capacity for fire flows with just a nominal increase in cost.

An updated water agreement amongst the community members of KLSWA is in process. In the meantime, F&V met with representatives from the City and the Township to discuss a 50-50 cost sharing for the water main and related infrastructure (fittings, valves and hydrants) in the portion of the corridor that has City parcels on the west side and Township parcels on the east side (near North Street, the City Limits cover both sides of Maple Street). A similar cost sharing for one lane of road restoration was also discussed, as that work is required for water main replacement. The details will need to be finalized, but based on the discussion, cost estimates have been broken down using those assumptions, as well as each community being responsible for water service replacements for customers within its own jurisdiction. This breakdown is in alignment with the City's recent project on Cambell Road with Douglas, in terms of precedent.

Another item in the ongoing water system agreement discussions is the development of standard specifications amongst the KLSWA member communities. The Maple Street project could be an opportunity for determining/using those standards.

An estimate has provided for replacing the water main loop for the well field between Maple Street and the high school loop. In light of the ongoing discussions related to ownership of this infrastructure, we would recommend constructing a simple stub for future relocation of the connection at Maple Street (relocating it from the easement to follow the access road) and addressing replacement of the loop itself with a future project.

Wastewater System Infrastructure
In accordance with the recommendations from the KLSWA SAW project, cost estimates have been prepared for a section of sewer lining and manhole repairs. Similar to the water main, it is assumed that sanitary sewer and manhole repairs would be shared costs, as they all occur in the portion of the corridor with City parcels on the west side and Township on the east.

A separate estimate has been prepared for extending 8-inch sanitary sewer to serve 721, 730, and 1042 N Maple Street, all of which are located in the City (1039 is Ridgewood Apartments, which is already served and the parcel north of 1042 is City-owned property, primarily Goshorn Creek floodplain area not suitable for development). With only three parcels, the cost per parcel may make gravity sewer extension cost prohibitive. Instead, the City could consider extending smaller diameter (~2-inch) and shallower pipe for future grinder/ejector pump connections (how 713 N Maple is connected to the system), which would be a much more cost-effective solution.

Drainage System Infrastructure
Visual evaluation of the culvert crossings was completed as part of the planning process, to the extent they are observable from the ends of the pipe. Additional evaluation with sewer televising or other technology is currently being discussed with the DPW. Based on the visual evaluation, the cross culverts appear to be in serviceable condition. It is anticipated that the cross culverts could be lined or other repairs made short of full replacement, if conditions warrant at some point. We have prepared cost estimates for replacement for reference.

Storm sewer in the corridor is relatively new. Adjustment of structures and other nominal modifications are anticipated as part of road improvements and are included in those estimates.

To help mitigate peak flows at the Mason Street storm sewer outfall (and lower the erosive forces downstream), we have prepared a cost estimate for constructing underground detention at the intersection of Maple Street and Mason Street. Property acquisition required for a traditional detention pond proved to be cost-prohibitive and redirecting the flow is anticipated to have environmental and maintenance challenges, along with potentially causing or exacerbating similar erosion issues elsewhere.

A cost estimate has been prepared to address the seepage issues on the south side of Blue Star Highway. Because it is not directly contiguous with the rest of the project, the City could consider addressing the seepage as part of a future or standalone project without affecting the other work in the corridor.

In conjunction with road improvements, the City could curb the road, either with concrete curb and gutter or asphalt valley gutter. To realize the full benefit of curbing the roadway, a series of catch basins (or leach basins) and storm sewer would be required (the alternative would be a series of spillways to improved swales/ditches. A public open house was held on September 17, 2024. A few drainage concerns were raised, but they were not generally ones that curbing would directly address. Furthermore, curbing the road improves the efficiency of transporting stormwater. Similar improvements on other streets in the area are understood to have contributed to the current concerns at the Mason Street outfall. Cost estimates for curbing, either with concrete or asphalt, have been provided, but based on cost and other factors are likely not warranted.

Roadway Infrastructure
Replacement of the water main will require reconstructing the west lane of the road, which involves installing new sand subbase (typically 12 inches) and gravel aggregate base (typically 8 inches) prior to asphalt paving. The east lane could be reconstructed to match the west, or a crush and shape strategy could be used. Crush and shape involves grinding up the existing pavement to supplement the existing base materials and placing new asphalt on the improved base. Crush and shape will raise the road elevation a few inches. With less earthwork required, crush and shape is less costly than full reconstruction, while still improving the base strength. This was the strategy used on the recent Campbell Road project. Allegan Street between Lake Street and Elizabeth Street is a recent example of a full reconstruction. Cost estimates have been provided for both options and we consider them to be “good” and “better”.

A 3-inch asphalt thickness is common of residential streets. Cost estimates include 4 inches for Maple Street, due to DPW and STFD and other non-residential properties along the corridor. The assumed cross section for either option is a 10-foot travel lane, with 1-foot asphalt shoulders and 2-foot gravel shoulders. Striping the shoulder helps to make the road feel narrower to drivers, a traffic calming strategy for controlling speeds that tend to increase on new, smooth asphalt.

The City received $250,000 in funding from the Michigan Department of Transportation’s Category B (Villages and Small Cities) program, which will offset some of the roadway costs. The application for that funding assumed a crush and shape strategy would be used for the east side of the road, but we anticipate MDOT would be open to the reconstruction option as well.

Non-Motorized Infrastructure
The addition of non-motorized infrastructure has been a focus of the planning process and was the most common topic of conversation at the open house. Cost estimates have been developed for three options (a combination could be used also).

A widened shoulder could be a 3-foot asphalt shoulder on the west side of Maple Street (the width selected for Campbell Road), which is what the cost estimate reflects. It could also be widened shoulder on the east side or

both sides. A widened shoulder has the advantage of being the lowest cost option, both in terms of the initial capital cost and the long-term maintenance cost (the asphalt can be plowed, resurfaced, etc. along with the rest of the road). One disadvantage is that it places non-motorized corridor users directly adjacent to the vehicle lane, though it would still be an improvement. Another disadvantage is the wider pavement potentially producing increased speeds.

A standard 5-foot concrete sidewalk could be constructed on the west side of Maple Street. Sidewalks tend to be constructed in straight segments but can also be strategically curved around trees and other obstructions to limit the impact, which is one of the concerns commonly raised at the open house.

An asphalt path could also be constructed. The practical minimum pavement width (based on readily available asphalt paving equipment) is approximately 6 feet, which is what has been used in the cost estimate. The slightly wider section has proportionally greater impact, but asphalt tends to be more conducive to curved alignments around obstructions. The additional width also more conducive to bicycle traffic (some communities restrict bicycle riding on sidewalks).

Removals, grading, retaining walls and fencing are anticipated for either a sidewalk or path, depending on the northern limits of construction. For the purposes of the estimates, the northern end point has assumed to be the Ridgewood Apartments entrance area.

All these options were discussed at the open house. From the responses received during and following the open house, approximately 7% of respondents wanted no pedestrian facility, 10% wanted a widened shoulder, 34% wanted a sidewalk, and 7% wanted an HMA shared use path. 21% wanted some version of a pedestrian facility but had no opinion on which of the options occurred. 21% of respondents had no opinion on the matter. All but one of the 29 responses received were from year-round residents.

Other Infrastructure
As part of road improvements, some portion of all drive approaches will need to be rebuilt, including the STFD approach. Sight distance for that approach is impacted by a large tree (approximately 5-foot diameter) directly adjacent to the road. Its proximity to the vehicle lane makes the tree a hazard to the road itself. Removal of that tree is recommended.

Repaving the parking lot and access roads at the DPW facility has been on the DPW's "wish list" for some time. With the DPW property being adjacent to the work occurring on Maple Street, it would be economically efficient to including crushing, shaping and resurfacing those areas as a part of this project. A cost estimate has been provided for Council's consideration.

Conclusion

Cost estimates for the various options presented are attached. The cost estimates are presented in a "menu" format to allow the City to pick which options they want to move forward with vs. which options they want to forgo. We will prepare a proposal for design phase engineering services when the project scope has been determined.

We appreciate the opportunity to assist you with this study and look forward to discussing it with City Council and other stakeholders. In the meantime, please feel free to contact us with any questions.

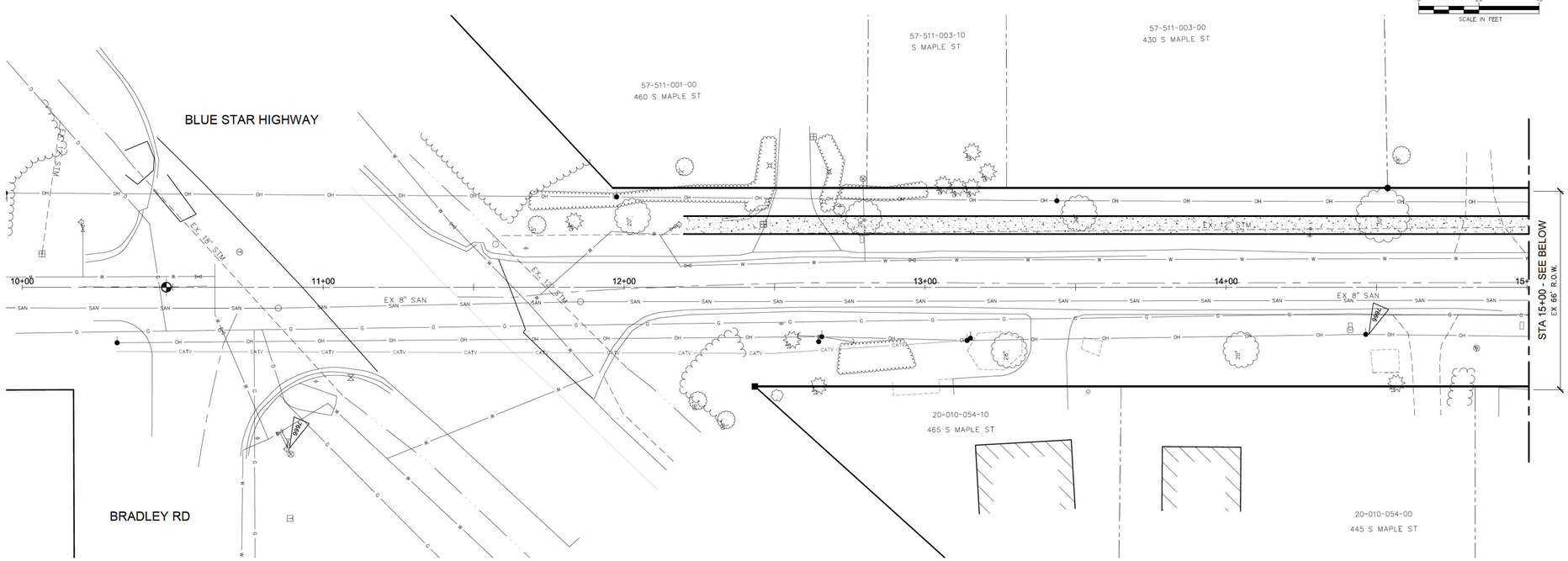
Sincerely,

FLEIS & VANDENBRINK

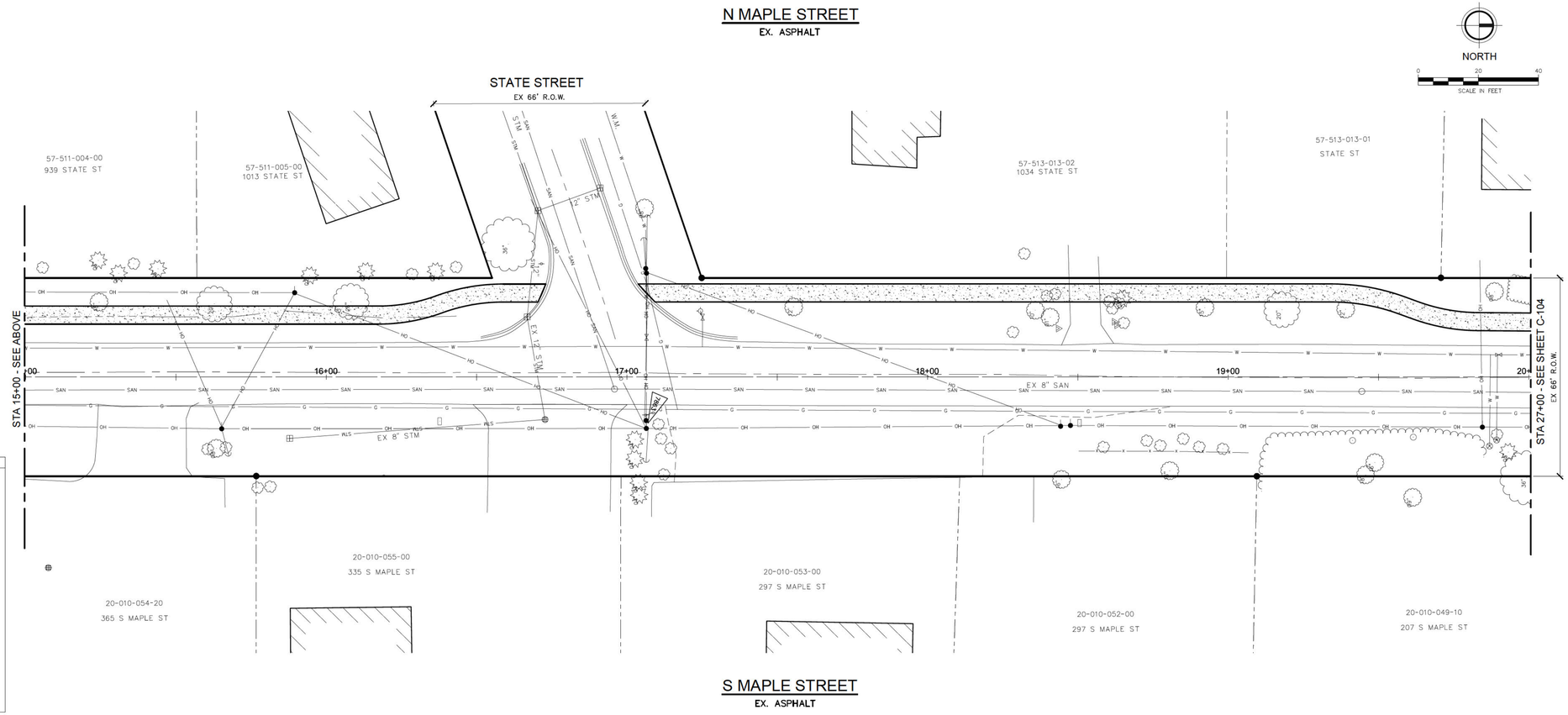
Jonathan Moxey, P.E.
Project Manager

Peter Tierney, P. E.
Project Engineer

Cc: Scott Herbert, City of Saugatuck, Public Works Superintendent (scott@saugatuckcity.com)



N MAPLE STREET
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S MAPLE STREET
EX. ASPHALT

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TREE (DECIDUOUS)		CABLE BOX		SURVEY CONTROL POINT
	BUSH		TELEPHONE RISER	BM	BENCHMARK
	TREE (CONIFEROUS)		TELEPHONE MANHOLE		SECTION CORNER
	DEAD TREE		TELEPHONE HANDHOLE		BOUNDARY LINE
	STUMP		ELECTRICAL RISER		PROPERTY LINE
	MANHOLE		ELECTRICAL MANHOLE		WATERMAIN
	SANITARY CLEANOUT		ELECTRICAL HANDHOLE		SANITARY SEWER
	RD. CATCH BASIN		POWER POLE		STORM SEWER
	SQ. CATCH BASIN		LIGHT POLE		CULVERT [12" AND UNDER]
	FIRE HYDRANT		GUY POLE		CULVERT [24" AND UP]
	WATER VALVE		GUY ANCHOR		CABLE T.V. CATV
	CURB STOP & BOX		PED CROSSING SIGNAL		TELEPHONE T
	WELL		YARD LIGHT		ELECTRIC E
	WATER MANHOLE		SIGN		GAS G
	WATER METER		MAILBOX		OVERHEAD LINES OH
	SOIL BORING		POST		GUARDRAIL
	MONITORING WELL		FOUND CONC. MONUMENT		FENCE X
			FOUND IRON ROD		WOODLINE
			SET IRON ROD		

NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

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REVISION:

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MAPLE STREET

MAPLE STREET EXISTING

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PROJ MNGR: PMT
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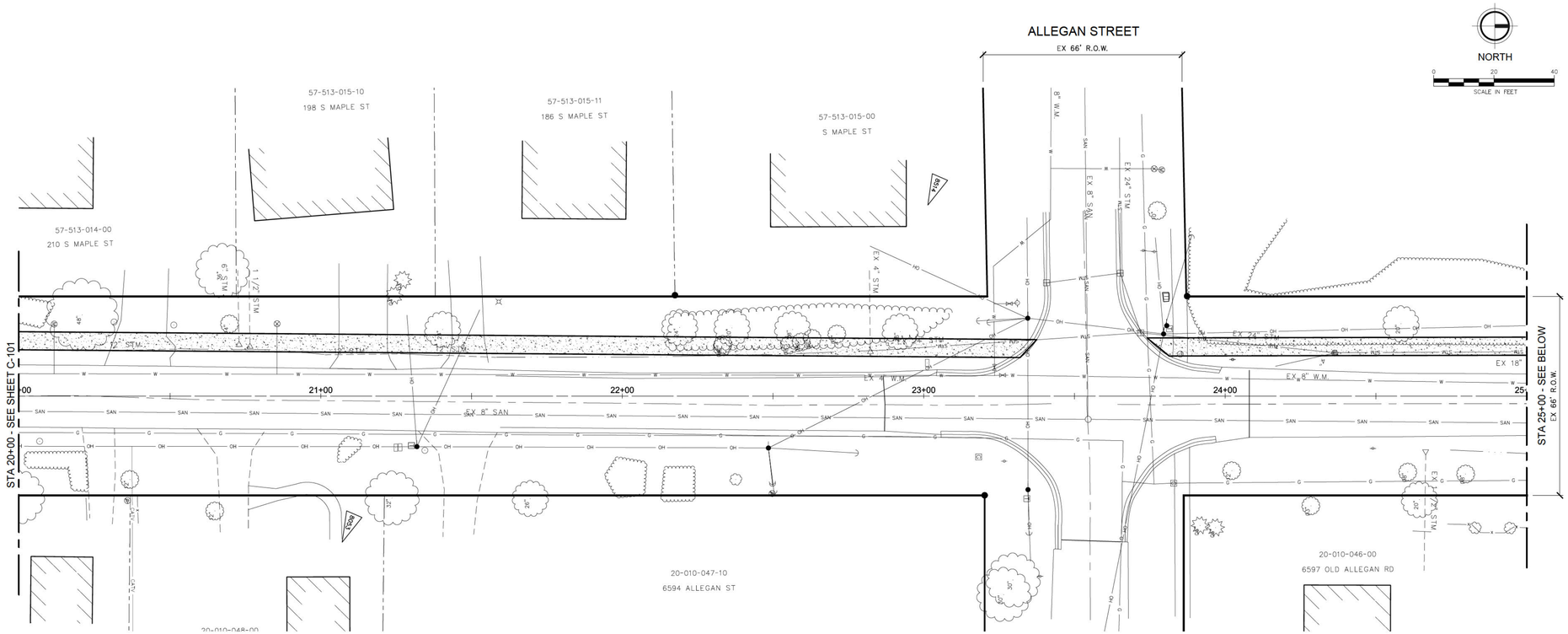
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EXISTING FEATURES LEGEND

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	CURB STOP & BOX		PED CROSSING SIGNAL		TELEPHONE
	WELL		YARD LIGHT		ELECTRIC
	WATER MANHOLE		SIGN		GAS
	WATER METER		MAILBOX		OVERHEAD LINES
	SOIL BORING		POST		GUARDRAIL
	MONITORING WELL		FOUND CONC. MONUMENT		FENCE
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MAPLE STREET

MAPLE STREET EXISTING

DESIGN TEAM:	PROJ MNGR: PMT DESIGNED BY: DRAWN BY: AAG CHECK BY:

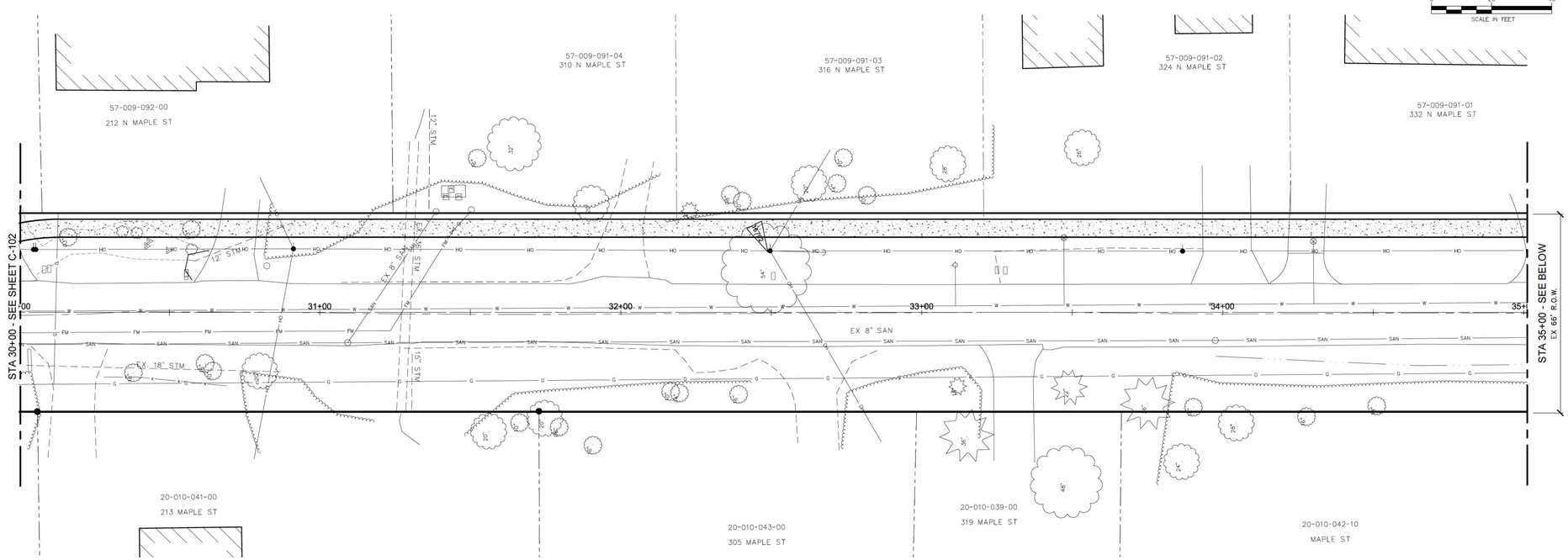
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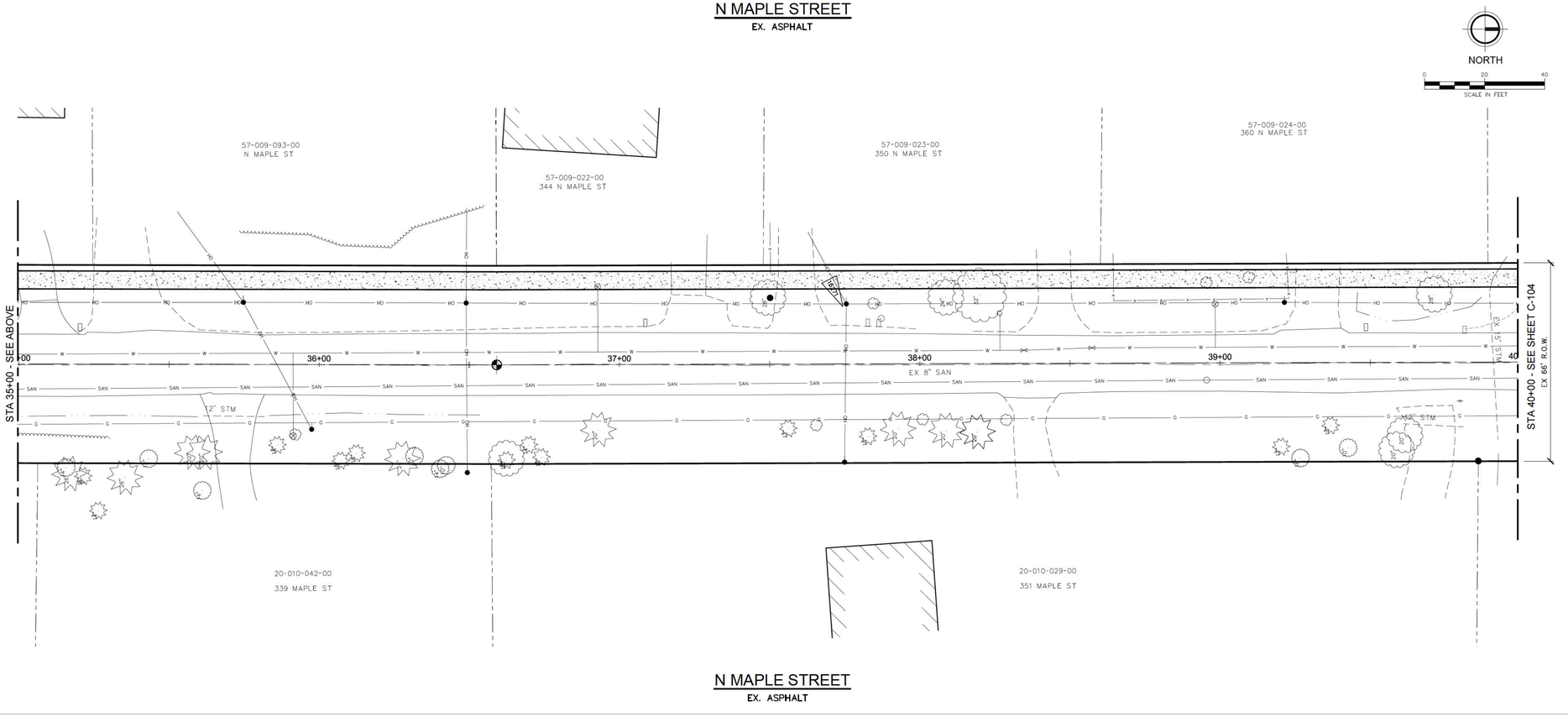
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MAPLE STREET

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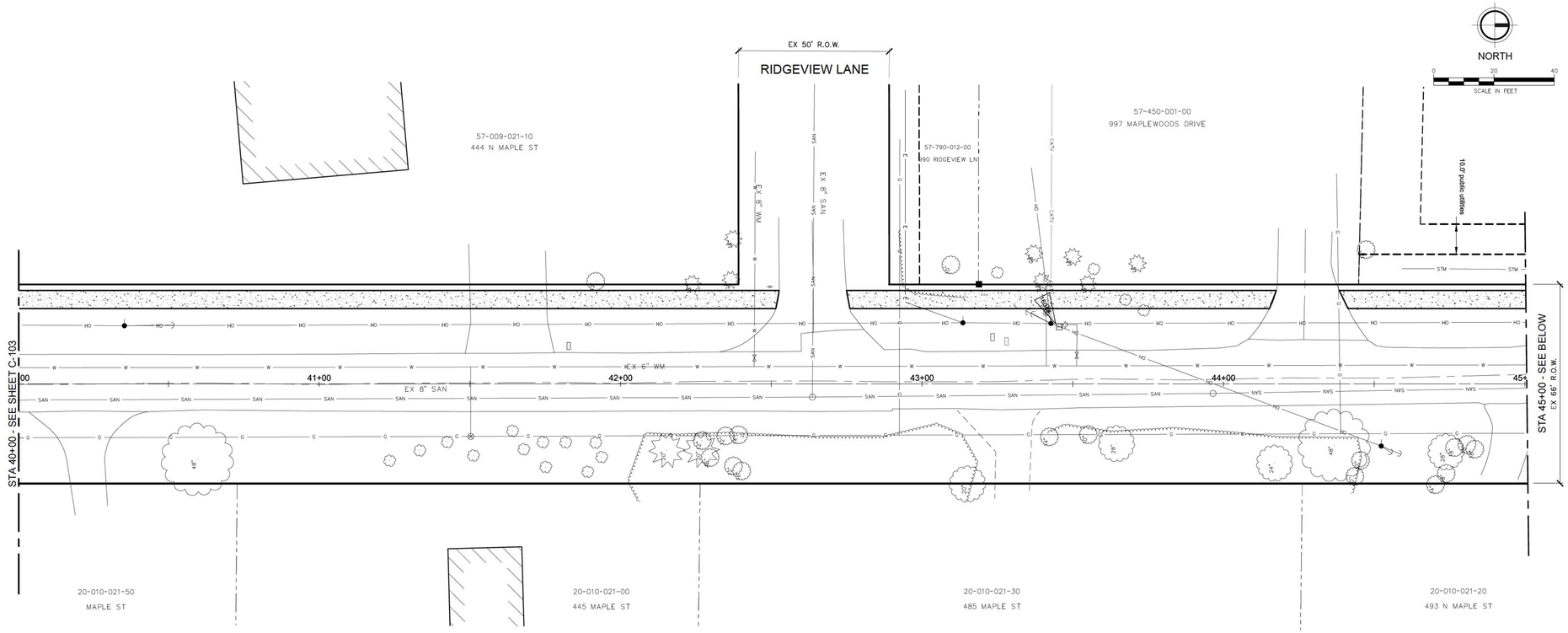
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	MANHOLE		ELECTRICAL MANHOLE		WATERMAIN
	SANITARY CLEANOUT		ELECTRICAL HANDHOLE		SANITARY SEWER
	RD. CATCH BASIN		POWER POLE		STORM SEWER
	SQ. CATCH BASIN		LIGHT POLE		CULVERT (12" AND UNDER)
	FIRE HYDRANT		GUY POLE		CULVERT (24" AND UP)
	WATER VALVE		GUY ANCHOR		CABLE T.V.
	CURB STOP & BOX		PED CROSSING SIGNAL		TELEPHONE
	WELL		YARD LIGHT		ELECTRIC
	WATER MANHOLE		SIGN		GAS
	WATER METER		MAILBOX		OVERHEAD LINES
	SOIL BORING		POST		GUARDRAIL
	MONITORING WELL		FOUND CONC. MONUMENT		FENCE
			FOUND IRON ROD		WOODLINE
			SET IRON ROD		

NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.
2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005

REVISION:

CITY OF SAUGATUCK
SAUGATUCK
MAPLE STREET

MAPLE STREET EXISTING

DESIGN TEAM:	PROJ MNGR:	PMT
	DESIGNED BY:	
	DRAWN BY:	AAG
	CHECK BY:	

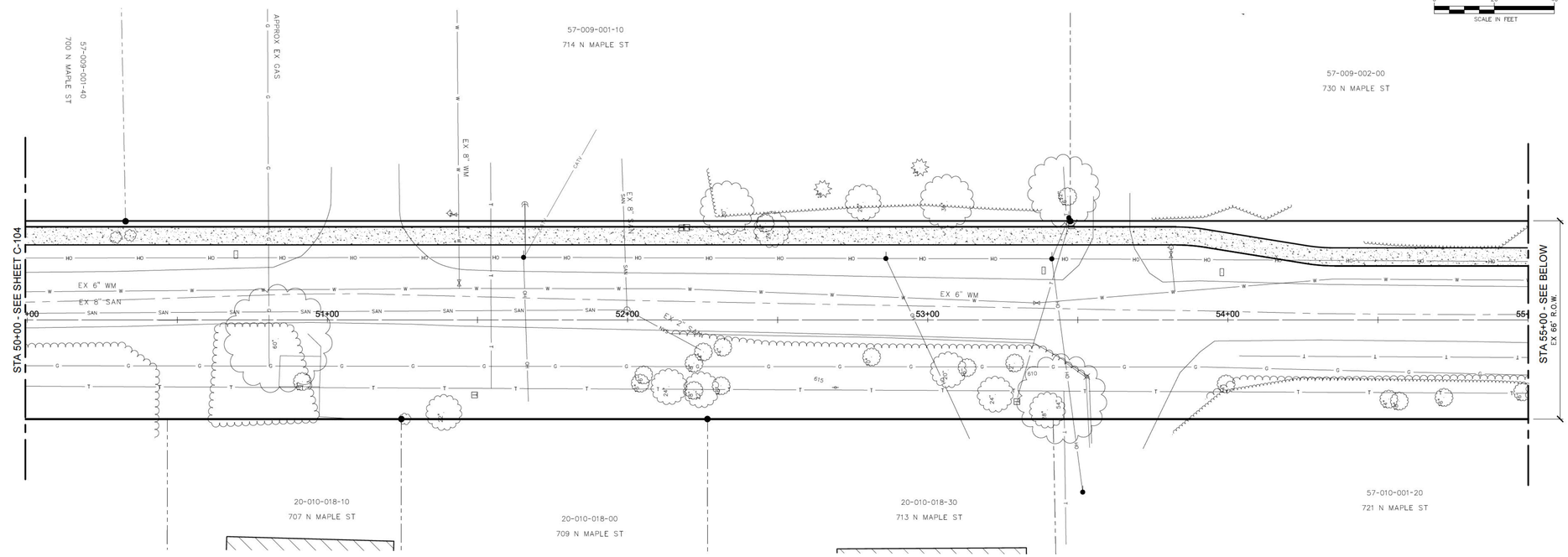
DRAWING INFORMATION:
859771 C104
091024 adam.gasiorek

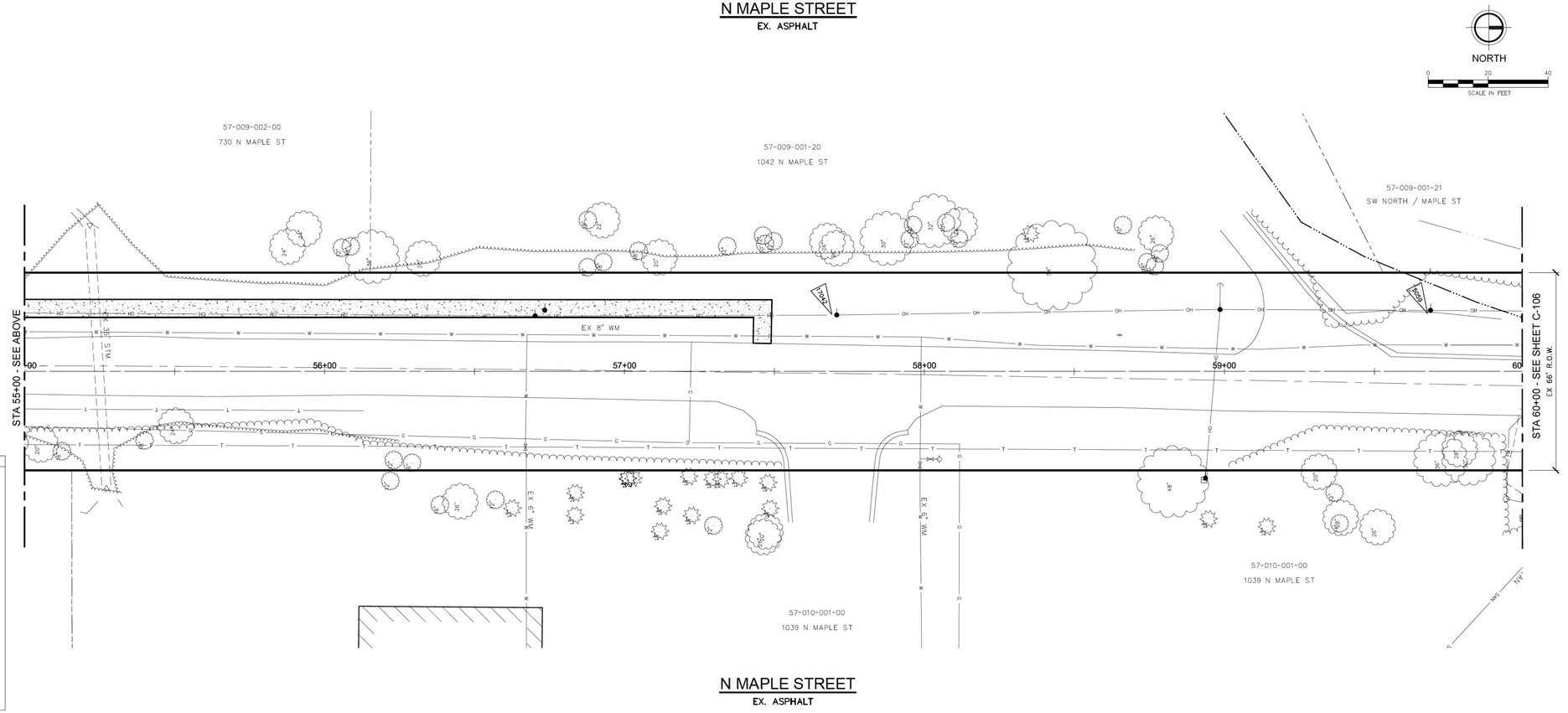
NOT FOR CONSTRUCTION

F&V PROJECT NO.

C-104

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EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TREE (DECIDUOUS)		CABLE BOX		SURVEY CONTROL POINT
	BUSH		TELEPHONE RISER	BM	BENCHMARK
	TREE (CONIFEROUS)		TELEPHONE MANHOLE		SECTION CORNER
	DEAD TREE		TELEPHONE HANDHOLE		BOUNDARY LINE
	STUMP		ELECTRICAL RISER		PROPERTY LINE
	MANHOLE		ELECTRICAL MANHOLE		WATERMAIN
	SANITARY CLEANOUT		ELECTRICAL HANDHOLE		SANITARY SEWER
	RD. CATCH BASIN		POWER POLE		STORM SEWER
	SQ. CATCH BASIN		LIGHT POLE		CULVERT [12" AND UNDER]
	FIRE HYDRANT		GUY POLE		CULVERT [24" AND UP]
	WATER VALVE		GUY ANCHOR		CABLE T.V.
	CURB STOP & BOX		PED CROSSING SIGNAL		TELEPHONE
	WELL		YARD LIGHT		ELECTRIC
	WATER MANHOLE		SIGN		GAS
	WATER METER		MAILBOX		OVERHEAD LINES
	SOIL BORING		POST		GUARDRAIL
	MONITORING WELL		FOUND CONC. MONUMENT		FENCE
			FOUND IRON ROD		WOODLINE
			SET IRON ROD		

NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.
2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005

REVISION:

CITY OF SAUGATUCK
SAUGATUCK
MAPLE STREET

MAPLE STREET EXISTING

DESIGN TEAM: | PROJ MNGR: PMT | DESIGNED BY: | DRAWN BY: AAG | CHECK BY:

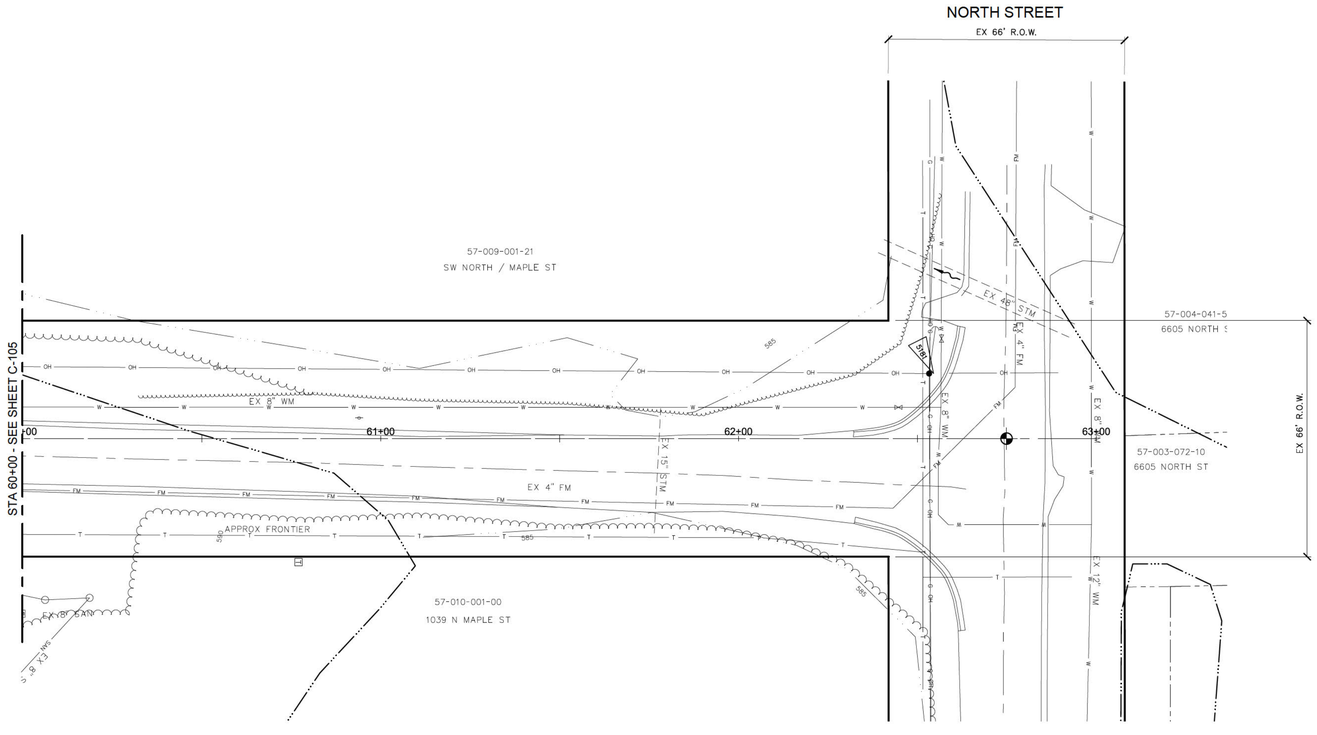
DRAWING INFORMATION:
859771 C105
091024 adam.gasiorek

NOT FOR CONSTRUCTION

F&V PROJECT NO.

C-105

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N MAPLE STREET

EX. ASPHALT

NORTH

0 20 40

SCALE IN FEET

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TREE (DECIDUOUS)		CABLE BOX		SURVEY CONTROL POINT
	BUSH		TELEPHONE RISER	BM	BENCHMARK
	TREE (CONIFEROUS)		TELEPHONE MANHOLE		SECTION CORNER
	DEAD TREE		TELEPHONE HANDHOLE		BOUNDARY LINE
	STUMP		ELECTRICAL RISER		PROPERTY LINE
	MANHOLE		ELECTRICAL MANHOLE		WATERMAIN
	SANITARY CLEANOUT		ELECTRICAL HANDHOLE		SANITARY SEWER
	RD. CATCH BASIN		POWER POLE		STORM SEWER
	SQ. CATCH BASIN		LIGHT POLE		CULVERT (12" AND UNDER)
	FIRE HYDRANT		GUY POLE		CULVERT (24" AND UP)
	WATER VALVE		GUY ANCHOR		CABLE T.V.
	CURB STOP & BOX		PED CROSSING SIGNAL		TELEPHONE
	WELL		YARD LIGHT		ELECTRIC
	WATER MANHOLE		SIGN		GAS
	WATER METER		MAILBOX		OVERHEAD LINES
	SOIL BORING		POST		GUARDRAIL
	MONITORING WELL		FOUND CONC. MONUMENT		FENCE
			FOUND IRON ROD		WOODLINE
			SET IRON ROD		

NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

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REVISION:

CITY OF SAUGATUCK
SAUGATUCK
MAPLE STREET
MAPLE STREET EXISTING

DESIGN TEAM:	PROJ MNGR: PMT
	DESIGNED BY:
	DRAWN BY: AAG
	CHECK BY:

DRAWING INFORMATION:
859771_C106
091024 adam.gasiorek

NOT FOR CONSTRUCTION

F&V PROJECT NO:

C-106

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City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost

Maple Street Improvements- Blue Star Highway to S of North Street

Summary of Estimates

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 12/16/2024
By: PMT

Description: Summary of Estimates

Water Main Estimates	
Option	**Project Estimate**
Water Main Loop Replacement	$ 430,000
Water Main Replacement (City)	$ 835,000
Water Main Replacement (Township)	$ 835,000

Sanitary Sewer Estimate	
Option	**Project Estimate**
Sanitary Sewer Repairs (City)	$ 60,000
Sanitary Sewer Repairs (Township)	$ 60,000
Sanitary Sewer Extension	$ 130,000

Storm Water Estimates	
Option	**Project Estimate**
Seepage Repair	$ 40,000
Underground Detention	$ 120,000
Cross Culvert Replacement	$ 170,000
HMA Valley Gutter	$ 860,000
Concrete Curb and Gutter	$ 1,080,000

Pedestrian Facilities Estimates	
Option	**Project Estimate**
Widened HMA Shoulder	$ 120,000
5-foot Concrete Sidewalk	$ 1,070,000
6-foot HMA Path	$ 1,160,000

Road Rehabilitation Estimates	
Option	**Project Estimate**
Crush and Shape (City)	$ 1,005,000
Crush and Shape (Township)	$ 405,000
Full Road Reconstruction (City)	$ 1,420,000
Full Road Reconstruction (Township)	$ 410,000

DPW Paving Estimate	
Option	**Project Estimate**
DPW Paving	$ 170,000

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Water Main Replacement

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 12/16/2024
By: PMT

Description: Water Main Replacement along Maple Street, including water services along the road.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 60,475.00	$ 60,475.00
2	Remove Hydrant	Each	7	$ 1,500.00	$ 10,500.00
3	8" Watermain	Ft	4,450	$ 120.00	$ 534,000.00
4	6" Water Main	Ft	100	$ 110.00	$ 11,000.00
5	8" Valve & Box	Each	33	$ 2,750.00	$ 90,750.00
6	6" Valve & Box	Each	17	$ 2,100.00	$ 35,700.00
7	8"x8"x8" Tee	Each	6	$ 1,250.00	$ 7,500.00
8	8"x8"x6" Tee	Each	12	$ 1,200.00	$ 14,400.00
9	45 Deg Bend, 8 inch	Each	20	$ 700.00	$ 14,000.00
10	Fire Hydrant	Each	12	$ 6,000.00	$ 72,000.00
11	Connect to Existing Watermain	Each	8	$ 3,000.00	$ 24,000.00
12	Cut & Plug Existing Watermain	Each	8	$ 1,600.00	$ 12,800.00
13	1" Corporation, Curb Stop and Box (City side)	Each	31	$ 1,400.00	$ 43,400.00
14	1" Water Service (City side)	Ft	2,015	$ 55.00	$ 110,825.00
15	Water Service, Building Connection (City side)	Each	31	$ 1,200.00	$ 37,200.00
16	1" Corporation, Curb Stop and Box (Township side)	Each	31	$ 1,400.00	$ 43,400.00
17	1" Water Service (Township side)	Ft	2,015	$ 55.00	$ 110,825.00
18	Water Service, Building Connection (Township side)	Each	31	$ 1,200.00	$ 37,200.00

Subtotal Construction (Rounded):	$	1,270,000
Undeveloped Details & Contingencies (15%):	$	200,000
Engineering, Permitting, and Administration (15%):	$	200,000
Total Estimated Project Budget (Rounded):	**$**	**1,670,000**
Total Estimated Project Budget (City - 50%)	**$**	**835,000**
Total Estimated Project Budget (Township - 50%)	**$**	**835,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Water Main Loop Replacement

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Replacing water main loop behind the Saugatuck High School.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 15,500.00	$ 15,500.00
2	Clearing	Acre	1	$ 35,000.00	$ 35,000.00
3	12" Watermain, Directional Drill	Ft	900	$ 225.00	$ 202,500.00
4	12" Watermain	Ft	300	$ 135.00	$ 40,500.00
5	12" Valve & Box	Each	8	$ 3,250.00	$ 26,000.00
6	Connect to Existing Watermain	Each	3	$ 2,000.00	$ 6,000.00

Subtotal Construction (Rounded):	$	330,000
Undeveloped Details & Contingencies (15%):	$	50,000
Engineering, Permitting, and Administration (15%):	$	50,000
Total Estimated Project Budget (Rounded):	**$**	**430,000**

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City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Sanitary Sewer Repairs

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 12/16/2024
By: PMT

Description: Sanitary Sewer Repairs along Maple Street.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 3,600.00	$ 3,600.00
2	Sanitary Sewer Lining	Ft	300	$ 60.00	$ 18,000.00
3	Sanitary Frame & Cover Replacement & Adjustment	Each	14	$ 2,500.00	$ 35,000.00
4	Sanitary Chimney Repair	Each	6	$ 2,000.00	$ 12,000.00
5	Grout Sanitary Structure Joints	Each	7	$ 1,000.00	$ 7,000.00

Subtotal Construction (Rounded):	$	80,000
Undeveloped Details & Contingencies (15%):	$	20,000
Engineering, Permitting, and Administration (15%):	$	20,000
Total Estimated Project Budget (Rounded):	**$**	**120,000**
Total Estimated Project Budget (City - 50%)	**$**	**60,000**
Total Estimated Project Budget (Township - 50%)	**$**	**60,000**

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City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Sanitary Sewer Extension

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 12/16/2024
By: PMT

Description: Extend existing sanitary sewer to service #713, #721, #730, and #1042.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 4,122.50	$ 4,122.50
2	Sanitary Sewer, 8 inch	Ft	800	$ 80.00	$ 64,000.00
3	Sanitary Manhole, 48 inch	Ea	2	$ 4,500.00	$ 9,000.00
4	Sanitary Manhole Cover	Ea	2	$ 1,000.00	$ 2,000.00
5	8"x6" Wye	Ea	4	$ 300.00	$ 1,200.00
6	Sanitary Lateral, 6 inch	Ft	150	$ 35.00	$ 5,250.00
7	Sanitary Manhole Tap, 8 inch	Ea	1	$ 1,000.00	$ 1,000.00

Subtotal Construction (Rounded):	$	90,000
Undeveloped Details & Contingencies (15%):	$	20,000
Engineering, Permitting, and Administration (15%):	$	20,000
Total Estimated Project Budget (Rounded):	**$**	**130,000**

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City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Cross Culvert Replacement

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Replace 3 cross culvert across Maple Street.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 5,935.00	$ 5,935.00
2	Culvert, 72-inch	Ft	190	$ 400.00	$ 76,000.00
3	Culvert End Section, 72 inch	Ea	4	$ 7,500.00	$ 30,000.00
4	Culvert, 30-inch	Ft	50	$ 170.00	$ 8,500.00
5	Culvert End Section, 30 inch	Ea	2	$ 2,100.00	$ 4,200.00

Subtotal Construction (Rounded):	$	130,000
Undeveloped Details & Contingencies (15%):	$	20,000
Engineering, Permitting, and Administration (15%):	$	20,000
Total Estimated Project Budget (Rounded):	**$**	**170,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Underground Detention

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Installation of approximately 3,000 cft of storm water detention at Maple Street & Mason Street.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 3,750.00	$ 3,750.00
2	ADS Storm Water Detention	Cft	3,000	$ 25.00	$ 75,000.00

Subtotal Construction (Rounded):	$	80,000
Undeveloped Details & Contingencies (15%):	$	20,000
Engineering, Permitting, and Administration (15%):	$	20,000
Total Estimated Project Budget (Rounded):	**$**	**120,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Blue Star Hwy Seepage Repair

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Repair seepage issue at Maple Street and Blue Star Highway.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 511.25	$ 511.25
2	HMA Surface, Rem	Syd	75	$ 10.00	$ 750.00
3	Underdrain, 6 inch	Ft	85	$ 15.00	$ 1,275.00
4	Underdrain, End Section	Ea	2	$ 200.00	$ 400.00
5	Subbase	Cyd	25	$ 18.00	$ 450.00
6	8" Aggregate Base	Syd	75	$ 18.00	$ 1,350.00
7	Hand Patching	Ton	30	$ 200.00	$ 6,000.00

Subtotal Construction (Rounded):	$	20,000
Undeveloped Details & Contingencies (15%):	$	10,000
Engineering, Permitting, and Administration (15%):	$	10,000
Total Estimated Project Budget (Rounded):	**$**	**40,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street

HMA Valley Gutter

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Installing HMA Valley Gutter along Maple Street, including storm sewer and all related work.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 31,230.00	$ 31,230.00
2	Surface Restoration - Filling in existing ditching	Sta	50	$ 300.00	$ 15,000.00
3	Storm Sewer	Ft	3,750	$ 100.00	$ 375,000.00
4	Dr Structures	Ea	30	$ 4,500.00	$ 135,000.00
3	Subbase	Cyd	950	$ 18.00	$ 17,100.00
4	HMA, 13A	Ton	270	$ 110.00	$ 29,700.00
5	HMA Valley Gutter	Ft	8,800	$ 6.00	$ 52,800.00

Subtotal Construction (Rounded):	$	660,000
Undeveloped Details & Contingencies (15%):	$	100,000
Engineering, Permitting, and Administration (15%):	$	100,000
Total Estimated Project Budget (Rounded):	**$**	**860,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street

Concrete Curb & Gutter

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Installing concrete curb and gutter along Maple Street, including storm sewer and all related work.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 38,980.00	$ 38,980.00
2	Surface Restoration - Filling in existing ditching	Sta	50	$ 300.00	$ 15,000.00
3	Storm Sewer	Ft	3,750	$ 100.00	$ 375,000.00
4	Dr Structures	Ea	30	$ 4,500.00	$ 135,000.00
5	Subbase	Cyd	950	$ 18.00	$ 17,100.00
6	Curb and Gutter	Ft	9,500	$ 25.00	$ 237,500.00

Subtotal Construction (Rounded):	$	820,000
Undeveloped Details & Contingencies (15%):	$	130,000
Engineering, Permitting, and Administration (15%):	$	130,000
Total Estimated Project Budget (Rounded):	**$**	**1,080,000**

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City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street

Crush and Shape

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 12/16/2024
By: PMT

Description: West lane road reconstruct and east lane crush and shape, with 10' HMA lanes, 1' HMA shoulder, 4" of Asphalt and 2' gravel shoulders.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY (CITY ONLY NORTH OF 721 MAPLE)	QUANTITY (CITY ONLY - EAST LANE SOUTH OF 721 MAPLE)	QUANTITY (CITY/TOWNSHIP - WEST LANE SOUTH OF 721 MAPLE)	TOTAL QUANTITIES	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT (CITY ONLY)	ESTIMATED AMOUNT (CITY/TOWNSHIP)
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	0.14	0.43	0.43	1.00	$ 50,522.00	$ 28,797.54	$ 21,724.46
2	Pre-Construction Video Survey	LSum	0.14	0.43	0.43	1.00	$ 3,000.00	$ 1,710.00	$ 1,290.00
3	Traffic Control	LSum	0.14	0.43	0.43	1.00	$ 35,000.00	$ 19,950.00	$ 15,050.00
4	Tree Removal 37"+	Each	0	1	1	2	$ 4,000.00	$ 4,000.00	$ 4,000.00
5	HMA Base Crushing and Shaping	Syd	850	5,600	0	6,450	$ 4.00	$ 25,800.00	$ -
6	Remove HMA Pavement	Syd	850	0	5,800	6,650	$ 10.00	$ 8,500.00	$ 58,000.00
7	Remove HMA Driveway	Syd	275	425	325	1,025	$ 10.00	$ 7,000.00	$ 3,250.00
8	HMA Approach	Ton	50	80	60	190	$ 175.00	$ 22,750.00	$ 10,500.00
9	Approach, Cl I, 6 inch	Syd	275	425	325	1,025	$ 13.00	$ 9,100.00	$ 4,225.00
10	Approach, Cl II, 6 inch	Syd	0	740	340	1,080	$ 13.00	$ 9,620.00	$ 4,420.00
11	Remove Concrete Driveway	Syd	0	200	225	425	$ 15.00	$ 3,000.00	$ 3,375.00
12	Roadway Grading	Sta	0.65	0.00	21.00	21.65	$ 4,500.00	$ 2,925.00	$ 94,500.00
13	Shld Gravel, 4 inch	Syd	300	1,870	1,870	4,040	$ 8.00	$ 17,360.00	$ 14,960.00
14	Curb and Gutter	Ft	0	120	175	295	$ 35.00	$ 4,200.00	$ 6,125.00
15	HMA Valley Gutter	Ft	85	580	450	1,115	$ 6.00	$ 3,990.00	$ 2,700.00
16	Subbase	Cyd	280	0	2,000	2,280	$ 18.00	$ 5,040.00	$ 36,000.00
17	8" Aggregate Base	Syd	850	0	5,800	6,650	$ 18.00	$ 15,300.00	$ 104,400.00
18	HMA, 13A	Ton	390	1,400	1,500	3,290	$ 110.00	$ 196,900.00	$ 165,000.00
19	6" Nonreinforced Concrete Driveway	Syd	0	200	225	425	$ 60.00	$ 12,000.00	$ 13,500.00
20	Turf Establishment	Syd	700	2,150	2,150	5,000	$ 20.00	$ 57,000.00	$ 43,000.00

	CITY ONLY	CITY & TOWNSHIP 50%-50%
Subtotal Construction (Rounded):	$ 460,000	$ 610,000
Undeveloped Details & Contingencies (15%):	$ 70,000	$ 100,000
Engineering, Permitting, and Administration (15%):	$ 70,000	$ 100,000
Total Estimated Project Budget (Rounded):	**$ 600,000**	**$ 810,000**

Total Estimated Project Budget (CITY - Rounded): $ 1,005,000
Total Estimated Project Budget (TOWNSHIP - Rounded): $ 405,000

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street

Full Road Reconstruction

FLEIS&VANDENBRINK

DESIGN. BUILD. OPERATE.

Project: 859771
Date: 12/16/2024
By: PMT

Description: Full road reconstruction, with 10' HMA lanes, 1' HMA shoulder, 4" of Asphalt and 2' gravel shoulders.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY (CITY ONLY NORTH OF 721 MAPLE)	QUANTITY (CITY ONLY - EAST LANE SOUTH OF 721 MAPLE)	QUANTITY (CITY/TOWNSHIP - WEST LANE SOUTH OF 721 MAPLE)	TOTAL QUANTITIES	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT (CITY ONLY)	ESTIMATED AMOUNT (CITY/TOWNSHIP)
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	0.14	0.43	0.43	1.00	$ 65,498.00	$ 37,333.86	$ 28,164.14
2	Pre-Construction Video Survey	LSum	0.14	0.43	0.43	1.00	$ 3,000.00	$ 1,710.00	$ 1,290.00
3	Traffic Control	LSum	0.14	0.43	0.43	1.00	$ 35,000.00	$ 19,950.00	$ 15,050.00
4	Tree Removal 37"+	Each	0	1	1	2	$ 4,000.00	$ 4,000.00	$ 4,000.00
5	Remove HMA Pavement	Syd	1,700	5,600	5,800	13,100	$ 10.00	$ 73,000.00	$ 58,000.00
6	Remove HMA Driveway	Syd	275	425	325	1,025	$ 10.00	$ 7,000.00	$ 3,250.00
7	HMA Approach	Ton	50	80	60	190	$ 175.00	$ 22,750.00	$ 10,500.00
8	Approach, Cl I, 6 inch	Syd	275	425	325	1,025	$ 13.00	$ 9,100.00	$ 4,225.00
9	Approach, Cl II, 6 inch	Syd	0	740	340	1,080	$ 13.00	$ 9,620.00	$ 4,420.00
10	Remove Concrete Driveway	Syd	0	200	225	425	$ 15.00	$ 3,000.00	$ 3,375.00
11	Roadway Grading	Sta	0.65	21.00	21.00	42.65	$ 4,500.00	$ 97,425.00	$ 94,500.00
12	Shld Gravel, 4 inch	Syd	300	1,870	1,870	4,040	$ 8.00	$ 17,360.00	$ 14,960.00
13	Curb and Gutter	Ft	0	120	175	295	$ 35.00	$ 4,200.00	$ 6,125.00
14	HMA Valley Gutter	Ft	85	580	450	1,115	$ 6.00	$ 3,990.00	$ 2,700.00
15	Subbase	Cyd	570	2,000	2,000	4,570	$ 18.00	$ 46,260.00	$ 36,000.00
16	8" Aggregate Base	Syd	1,800	6,000	5,800	13,600	$ 18.00	$ 140,400.00	$ 104,400.00
17	HMA, 13A	Ton	390	1,400	1,500	3,290	$ 110.00	$ 196,900.00	$ 165,000.00
18	6" Nonreinforced Concrete Driveway	Syd	0	200	225	425	$ 60.00	$ 12,000.00	$ 13,500.00
19	Turf Establishment	Syd	700	2,150	2,150	5,000	$ 20.00	$ 57,000.00	$ 43,000.00

	CITY ONLY	CITY & TOWNSHIP 50%-50%
Subtotal Construction (Rounded):	$ 770,000	$ 620,000
Undeveloped Details & Contingencies (15%):	$ 120,000	$ 100,000
Engineering, Permitting, and Administration (15%):	$ 120,000	$ 100,000
Total Estimated Project Budget (Rounded):	**$ 1,010,000**	**$ 820,000**

Total Estimated Project Budget (CITY - Rounded): $ 1,420,000
Total Estimated Project Budget (TOWNSHIP - Rounded): $ 410,000

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Widened Shoulder

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Place additional 2' of HMA shoulder for a total of a 3' HMA shoulder. This will only be on the west side of Maple Street.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 3,337.50	$ 3,337.50
2	HMA Aggregate Base	Syd	1,400	$ 18.00	$ 25,200.00
3	Subbase	Cyd	475	$ 18.00	$ 8,550.00
4	HMA, 13A	Ton	300	$ 110.00	$ 33,000.00

Subtotal Construction (Rounded):	$	80,000
Undeveloped Details & Contingencies (15%):	$	20,000
Engineering, Permitting, and Administration (15%):	$	20,000
Total Estimated Project Budget (Rounded):	**$**	**120,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
5-Foot Concrete Sidewalk

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Installation of a 5-foot concrete sidewalk along the west side of Maple Street, including tree and landscaping removal and driveway culvert replacements

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 38,357.50	$ 38,357.50
2	Landscape Removal/Repair	LSum	1	$ 30,000.00	$ 30,000.00
3	Clearing	LSum	1	$ 25,000.00	$ 25,000.00
4	Tree Removal 6" to 18"	Each	23	$ 1,000.00	$ 23,000.00
5	Tree Removal 19" to 36"	Each	26	$ 2,000.00	$ 52,000.00
6	Tree Removal 37"+	Each	6	$ 4,000.00	$ 24,000.00
7	Ditching	Sta	4.50	$ 600.00	$ 2,700.00
8	4" Concrete Sidewalk	Sft	21,000	$ 7.00	$ 147,000.00
9	6" Concrete Sidewalk Ramp, ADA	Sft	1,500	$ 13.00	$ 19,500.00
10	Detectable Warning Surface	Ft	80	$ 80.00	$ 6,400.00
11	Subbase	Cyd	500	$ 18.00	$ 9,000.00
12	Retaining Wall	Sft	3,500	$ 100.00	$ 350,000.00
13	Fencing	Ft	700	$ 40.00	$ 28,000.00
14	Driveway Culvert Replacement	Ft	630	$ 65.00	$ 40,950.00
15	Culvert End Section	Each	16	$ 600.00	$ 9,600.00

Subtotal Construction (Rounded):	$	810,000
Undeveloped Details & Contingencies (15%):	$	130,000
Engineering, Permitting, and Administration (15%):	$	130,000
Total Estimated Project Budget (Rounded):	**$**	**1,070,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
6-Foot HMA Path

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Installation of a 6-foot HMA Path along the west side of Maple Street, including tree and landscaping removal and driveway culvert replacements

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 41,723.75	$ 41,723.75
2	Landscape Removal/Repair	LSum	1	$ 30,000.00	$ 30,000.00
3	Clearing	LSum	1	$ 25,000.00	$ 25,000.00
4	Tree Removal 6" to 18"	Each	23	$ 1,000.00	$ 23,000.00
5	Tree Removal 19" to 36"	Each	26	$ 2,000.00	$ 52,000.00
6	Tree Removal 37"+	Each	6	$ 4,000.00	$ 24,000.00
7	Ditching	Sta	4.50	$ 600.00	$ 2,700.00
8	Shared-Use Path, Grading	Ft	5,000	$ 20.00	$ 100,000.00
9	HMA shared use Path (3")	Ton	425	$ 125.00	$ 53,125.00
10	Aggregate Base	Syd	3,300	$ 18.00	$ 59,400.00
11	Subbase	Cyd	600	$ 18.00	$ 10,800.00
12	Detectable Warning Surface	Ft	80	$ 80.00	$ 6,400.00
13	6" Concrete Sidewalk Ramp, ADA	Sft	1,500	$ 13.00	$ 19,500.00
14	Retaining Wall	Sft	3,500	$ 100.00	$ 350,000.00
15	Fencing	Ft	700	$ 40.00	$ 28,000.00
16	Driveway Culvert Replacement	Ft	630	$ 65.00	$ 40,950.00
17	Culvert End Section	Each	16	$ 600.00	$ 9,600.00

Subtotal Construction (Rounded):	$	880,000
Undeveloped Details & Contingencies (15%):	$	140,000
Engineering, Permitting, and Administration (15%):	$	140,000
Total Estimated Project Budget (Rounded):	**$**	**1,160,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

City of Saugatuck

Engineer's Pre-Design Estimate of Project Cost**

Maple Street Improvements- Blue Star Highway to S of North Street
Resurfacing DPW Parking Lot

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project: 859771
Date: 10/31/2024
By: PMT

Description: Crushing and shaping and resurfacing the DPW parking lot. Assume 4" Asphalt.

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	ESTIMATE UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds, and Insurances, Max. 5%	LSum	1	$ 5,970.00	$ 5,970.00
2	HMA Base Crushing and Shaping	Syd	3,600	$ 4.00	$ 14,400.00
4	HMA, 13A	Ton	900	$ 110.00	$ 99,000.00
5	Turf Establishment	Syd	300	$ 20.00	$ 6,000.00

Subtotal Construction (Rounded):	$	130,000
Undeveloped Details & Contingencies (15%):	$	20,000
Engineering, Permitting, and Administration (15%):	$	20,000
Total Estimated Project Budget (Rounded):	**$**	**170,000**

***The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.*

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

November 22, 2022

Via Email: ryan@saugatuckcity.com

Ryan Heise, City Manager
City of Saugatuck
102 Butler Street
Saugatuck, MI 49453

RE: Maple Street Drainage Study

Dear Ryan,

As requested, we have studied the drainage in the area of Maple Street & Mason Street. The City was approached by residents in that area expressing concerns that roadway improvements in that area resulted in increased erosive forces downstream from the City's storm sewer outlet at the northwest corner of Mason and Maple Street. We offer the following:

Regional Drainage

Stormwater runoff from Saugatuck Township in the area bounded by Maple Street, Old Allegan Road and Blue Star Highway (Saugatuck Christian Reformed Church and several businesses and residences) crosses Maple Street through a culvert near the wastewater pump station located on the west side of Maple Street approximately 300 feet north of Mason Street. Water discharged from that culvert flows through the ravine along the east side of Saugatuck High School and discharges into Goshorn Creek in the Mildred A. Peterson Nature Preserve area. Portions of Goshorn Creek are under the jurisdiction of the Allegan County Drain Commissioner. Ultimately, Goshorn Creek flows under Simonson Drive and Holland Street into the Kalamazoo River. A copy of a figure recently prepared by the Allegan County Drain Commissioner depicting watershed boundaries and proposed drains in the area is attached for reference.

The stream begins as an open swale at the northwest corner of Maple and Mason Streets. According to plans from sanitary sewer construction in the area, the stream has existed since at least 1977, and it appears the stream and swale are part of a natural drainage course that existed prior to the development of the area. The swale flows northwest around 208 Maple Street and discharges into the main tributary located in the ravine northwest of 212 Maple Street. Tributary areas for the stream include the west half of Maple Street from north of State Street to just north of Mason Street, Allegan Street from Elizabeth Street to Maple Street, Pleasant Street within approximately 500 feet of Allegan Street and Mason Street from Takken Street to Maple Street (including Taylor Street from Allegan Street to Mason Street). The City completed drainage improvements in each of these areas over the past 15 years, which may have had a cumulative impact on the stream. While stormwater improvements improve the capacity and efficiency of stormwater conveyance, increased efficiency of the upstream conveyance systems can reduce the "time of concentration", resulting in increased peak flow responses.

2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005
www.fveng.com

It is also important to note that higher intensity/short duration storm events experienced over the past several years may be a contributing factor for stormwater and erosion concerns expressed by residents. The Great Lakes region is experiencing more frequent localized high intensity/short duration storms. Larger quantities of rainfall exceed the capacity of stormwater systems designed convey rainfall based on historical meteorological data that does not include recent weather patterns. The situation is compounded as soils do not have adequate time to infiltrate stormwater, further increasing runoff volumes.

Overview of Drainage Areas

Following is a summary of each recent drainage improvement project within the drainage district:

- **Pleasant Street:** In 2008, the City improved Pleasant Street, and the area between the curve near 648/703 Pleasant Street and Allegan Street is within the tributary area of this study. As is the case with the other projects that followed, the Pleasant Street improvements project was completed in part as a response to drainage concerns from residents. Prior to the project, Pleasant Street had ineffective ditching and undersized storm sewer, which caused standing water in the area during and after rain events. The project included replacement of the storm sewer and construction of concrete curbing. The project did not alter the drainage area or significantly increase the acreage that contributes to stormwater flows at the Maple & Mason Street outfall. However, the improvements did improve the efficiency of the City's stormwater conveyance system.

- **Allegan Street:** In 2009, the City improved Allegan Street from Elizabeth Street to Maple Street. Prior to that project, Allegan Street was a ditched road with drive culverts and basic storm sewer. Similar to Pleasant Street, improvements included concrete curb and gutter and storm sewer replacement to bring the roadway in line with other City streets. Again, the project didn't alter the drainage area significantly, however storm sewer is more efficient than open ditches in transporting storm water and doesn't allow opportunity for infiltration and evaporation like an open ditch.

- **Mason Street:** In 2011, the City resurfaced Mason Street with storm sewer replacement at the Takken Street and Maple Street intersections and the additional of asphalt curbing. The portion of Mason Street west of Takken has a storm sewer outlet on the northwest corner of Takken Street. The outlet at Mason & Maple carries water from Takken, Taylor and the portion of Mason Street east of Takken. As with concrete curbing, the asphalt curbing is more efficient in conveying storm water to the Maple Street intersection than ditching alone.

- **Maple Street:** In 2014, the City enclosed the open ditch on the west side of Maple Street between Allegan Street and Mason Street. The ditch line was fairly steep, deep and overgrown and required ongoing maintenance for erosion issues, possibly in part due to the upstream improvements on Pleasant and Allegan Street discussed above. In this case, the road was not curbed, but a shallower swale was constructed above the storm sewer with a series of catch basins. This has less of an impact than curbing would have had, but the storm sewer is more efficient in transporting the water from those upstream areas.

Google Street View still has areas of the October 2007 photography available – screen captures showing conditions before and after drainage and roadway improvements are attached.

Mitigation Alternatives

Based on our review of the areas in question and discussions with City staff, Allegan County Drain Commissioner (ACDC), Michigan Department of Environment, Great Lakes & Energy

(EGLE), property owners and others, we have identified the following potential mitigation alternatives:

- **Provide Property-Specific Detention/Retention:** The drainage area contributing to the Maple & Mason Street outfall consists of entirely single family residential with lots on the order of 0.5 acres or less. The relatively small lot sizes and lack of undeveloped property available is not necessarily conducive to site-specific detention/retention measures, however detention/retention at the source is a concept recommended by EGLE staff. A variety of options are available, some of which include:
  - Collecting runoff from gutters in rain barrels to be used for watering plants, lawns, etc. during drier times.
  - Directing runoff from the property to rain gardens – shallow depressions or swales with native plantings. These can have the added benefit of providing habitat for wildlife, like butterflies, that a well-drained and mowed lawn area does not. Rain gardens can work well if they are designed properly, but require maintenance to function correctly.
  - Construction of dry wells or cisterns that can be used like a rain barrel or incorporate an open bottom to help recharge groundwater.

  The advantage of property-specific detention/retention is the relatively low capital cost. There are approximately 40 parcels in the drainage area. The City could consider providing rain barrels or monetary incentive to the property owner and/or implement changes within the public right of way directly. For the purposes of comparing alternatives, $1,000 per parcel in City funding would be a project cost of approximately $40,000. The main disadvantage of this option is the degree of benefit depends heavily on engagement of the property owners, which will require educational efforts. There are a number of resources the City could draw on to assist with education. Another drawback is that level of engagement could change over time as properties change ownership.

- **Re-Establish Ditching:** This is anticipated to be an unpopular option, given that problems associated with ditching were a primary driver of the various drainage improvement projects. This option would also be costly, as it would involve removal of curbing, grading ditches, new drive approaches and culverts and modifications to the storm sewer system. One area that would be conducive to this option would be Mason Street. Instead of removing the asphalt curbing for the entire length between Takken and Maple, a series of spillways could be constructed to strategically allow water to exit the road surface prior to Maple Street and discharge into new or re-established ditching. The cost for constructing spillways and ditches is estimated to be on the order of $25,000, portions of which could potentially be completed by the Department of Public Works.

- **Redirect Wet Weather Flow:** This option would involve constructing additional storm sewer along Maple Street north approximately 300 feet to the culvert that crosses under Maple Street from the Township. In this alternative, a flow diversion structure would be constructed at the existing outlet at Mason Street to allow normal flow to continue but direct higher flows to the north, where the creek channel is better defined and is anticipated to have more capacity for conveying the additional stormwater flows. One drawback of this option is that the diversion structure would need periodic maintenance to function properly. Another drawback is that this is essentially “moving the problem”, albeit from a more sensitive area to a potentially less sensitive area. The water eventually ends up following the same course once the two streams converge to the northwest of 212 Maple Street. The ACDC is in the process of establishing this watercourse as Blue Star Highway Drain within the Township (upstream/east of Maple Street). In our discussion with ACDC, it appears there may be opportunity to partner and provide stormwater detention for the area, however that likely involves relinquishing control over the direction of the project. The estimated cost for the diversion structure

and sewer to redirect the flow is $101,000, including undeveloped details, engineering, permitting and contingencies. Costs for regional detention would depend on the amount and participation level of the Drain Commissioner.

This alternative could be enhanced by providing “inline detention” within the storm sewer itself. An oversized pipe would be used with an additional control structure prior to discharging into the culvert. The estimated cost for redirecting the flow with inline detention is $196,000.

- **Enclose the Open Channel:** This alternative would involve extending the City’s storm sewer system beyond the area of erosion concern, enclosing a portion of the open channel. This option would require acquiring an easement from the property owner at 208 Maple. The benefit of this option is its relatively low cost, which is estimated to be $74,000. This alternative has several disadvantages. First, like the prior option, drain enclosure could be simply moving the problem area downstream (again, from a more sensitive area to a less sensitive one). Second, enclosing an open stream could be challenging from a permitting standpoint, as it removes habitat and other benefits of the natural environment. Finally, this is not a desirable alternative to the property owner that would need to grant an easement, primarily due to the loss of trees and natural character of the area. Given the disadvantages, this alternative is likely not viable.

- **Extend the Public Stormwater System:** The area of concern is located on private property (208 Maple Street). This alternative would involve acquiring an easement to incorporate a section of the open channel area into the public system to avoid the concern of making improvements on private property. As an extension of the public system, the City could install sheet pile, stone armoring, geotextile bank stabilization and/or spur dikes (stone features configured to direct water away from areas of erosion). This could also have permitting challenges, but likely less than enclosing the drain. We would recommend a budget of $124,000 for this option, depending on the type and limits of the work.

- **Construct a Regional Detention Basin:** While the area has limited open space to provide stormwater detention within the City Limits, Saugatuck Christian Reformed Church owns the property on the southeast corner of Maple and Mason Street (within the Township but adjacent to the City). Based on our preliminary survey work, it appears to be possible to develop that area into a detention basin, either by diverting the Maple Street storm sewer or constructing a control structure at the current outlet to back water up into that area. We have had a preliminary conversation with the property owner, who is coincidentally in the process of listing portions of the property for sale. We estimate the cost of this option to be $152,000 plus the cost of property acquisition (easement or outright purchase), which could be as much as $300,000, depending on market conditions and opportunities for shared use/development.

  One other consideration is wetlands. While the area is not identified on the EGLE wetland mapping available online, that mapping does not show smaller isolated wetland areas. If the area is identified as wetland, it still may be possible to utilize for detention (wetlands are very effective for treating stormwater) but will involve permitting from EGLE. If the City decides to pursue this option, we recommend conducting an on-site pre-application meeting with EGLE to determine what activities could be permitted and/or what mitigation measures may be required. Cost of wetland mitigation is not included in the estimate as further evaluation of the property would be required to determine the extent and requirements of mitigation measures, if required.

  This may be another opportunity to partner (and share costs) with the ACDC, as this area receives storm water from the east ditch line of Maple Street and other areas

outside the City. Again, that likely involves relinquishing control over the direction of the project.

- **Construction Underground Detention:** This alternative would involve the construction of underground stormwater detention at or near the intersection of Mason and Maple Street within the City Limits. This is a fairly high-cost option that is often reserved for situations where space is limited, which is the case in this area of the City. Underground chambers would be constructed and surrounded by coarse stone to allow for infiltration to occur. The size of the chambers required is based on the soil permeability, drainage area and other factors. The estimated cost for underground detention of a volume large enough to reduce peak flows is $381,000, heavily dependent on-site constraints.

Table 1 – Summary of Mitigation Alternatives

Alternative	Estimated Cost
Provide Property-Specific Detention/Retention	$40,000 (depending on level of engagement)
Re-Establish Ditching	$25,000 (Mason Street only)
Redirect Wet Weather Flow	$101,000
Redirect Wet Weather Flow with Inline Detention	$196,000
Enclose the Open Channel	$74,000 (likely not viable)
Extend the Public Stormwater System	$124,000
Construct a Regional Detention Basin	$152,000 (plus property acquisition and potentially wetland mitigation)
Construct Underground Detention	$381,000

Estimated costs are in 2023 dollars and should be adjusted for inflation, depending on the timeframe for construction. They are provided for comparative and budgeting purposes only and should be refined throughout the design process. Detailed cost estimates are attached for reference.

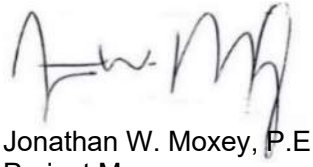
Conclusion

In summary, drainage and roadway improvements completed in the drainage area may have had a cumulative impact on the downstream watershed and stormwater conveyance. However, more frequent high intensity/short duration storms may also contribute to higher peak stormwater flows and increased erosive forces. Conversely, several of the alternatives discussed above could be combined and/or phased in to have a cumulative mitigation benefit. The City could take an incremental approach. One such approach would be to focus on property owner education with property-specific detention/retention and spillways/re-ditching on Mason Street in the short term and regional or underground detention in the long term if the benefits of the short-term steps are not adequate.

We appreciate the opportunity to assist you with this study and look forward to helping with implementation of any of the options identified. In the meantime, please feel free to contact me with any questions.

Sincerely,

FLEIS & VANDENBRINK



Jonathan W. Moxey, P.E.
Project Manager

Enclosures

- Comparison Photography
- ACDC Watersheds Map
- Parcel Map of Study Area
- Approximate Tributary Area Map
- Schematics of Mitigation Measures
- Cost Estimates

CITY OF SAUGATUCK – MAPLE STREET DRAINAGE STUDY
COMPARISON PHOTOGRAPHY (COURTESY GOOGLE STREETVIEW)



Pleasant Street looking southwest from Allegan Street (October 2007)



Pleasant Street looking southwest from Allegan Street (September 2019)

CITY OF SAUGATUCK – MAPLE STREET DRAINAGE STUDY
COMPARISON PHOTOGRAPHY (COURTESY GOOGLE STREETVIEW)



Pleasant Street looking northwest toward Allegan Street (October 2007)



Pleasant Street looking northwest toward Allegan Street (September 2019)

CITY OF SAUGATUCK – MAPLE STREET DRAINAGE STUDY
COMPARISON PHOTOGRAPHY (COURTESY GOOGLE STREETVIEW)



Allegan Street at Takken Street looking east (October 2007)



Allegan Street at Takken Street looking east (August 2018)

CITY OF SAUGATUCK – MAPLE STREET DRAINAGE STUDY
COMPARISON PHOTOGRAPHY (COURTESY GOOGLE STREETVIEW)



Allegan Street at Taylor Street looking east (October 2007)



Allegan Street at Taylor Street looking east (August 2018)

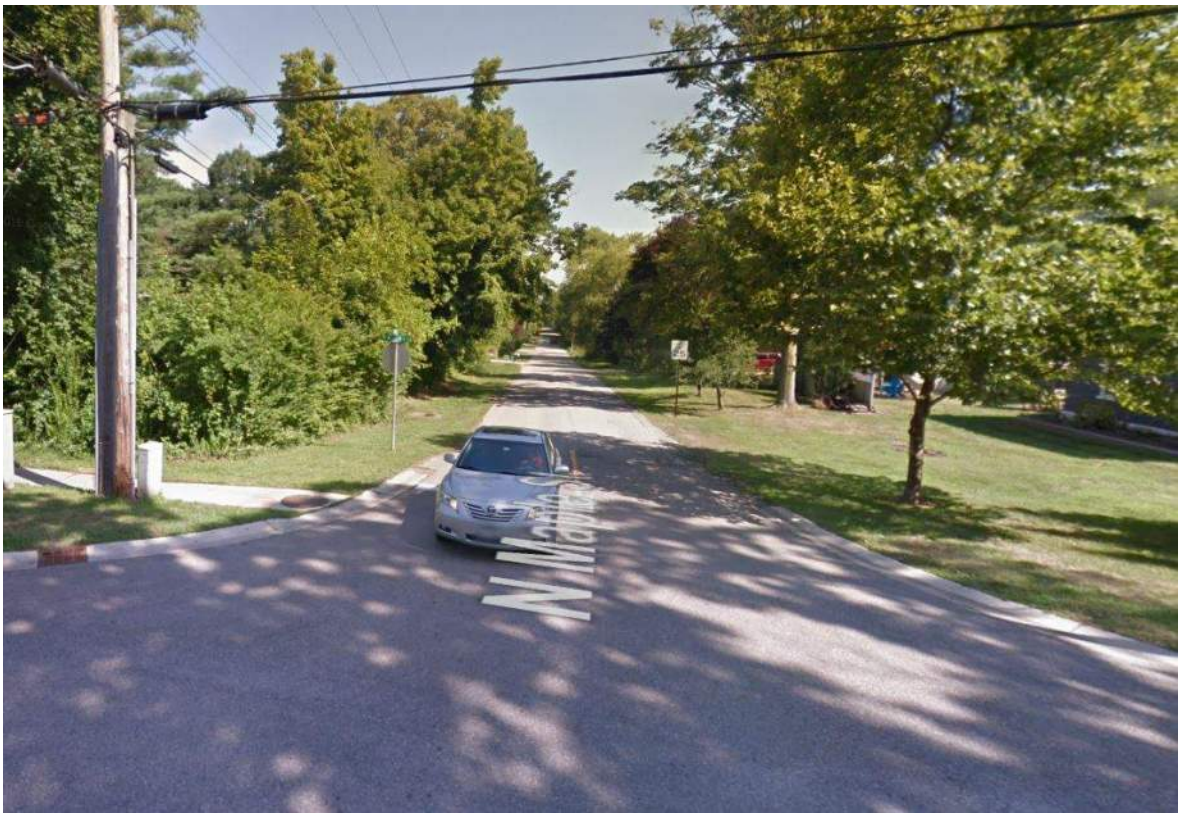


Mason Street looking east from Taylor Street (October 2007)

CITY OF SAUGATUCK – MAPLE STREET DRAINAGE STUDY
COMPARISON PHOTOGRAPHY (COURTESY GOOGLE STREETVIEW)



Maple Street looking north from Allegan Street (October 2007)



Maple Street looking north from Allegan Street (August 2018)

CITY OF SAUGATUCK – MAPLE STREET DRAINAGE STUDY
COMPARISON PHOTOGRAPHY (COURTESY GOOGLE STREETVIEW)



Maple Street at Mason Street looking north (October 2007)

Goshorn Creek/Golf Drain
North of Impoundment
Area is 1820.41 ac

Goshorn Creek/Golf Drain Watershed

Goshorn Creek Impoundment
(City of Saugatuck)
Only "Red" watershed contributes;
"Green" and "Yellow" watersheds
discharge downstream

Mill Impoundment
(Private)

Goshorn Creek Confluence
Watershed (146.70 ac)

Per MDOT - all road side ditches
along I-196 drains south to the
Kalamazoo River

Proposed Blue Star
Highway Drain
Drainage District/
Watershed (102.69 ac).

West side of Maple Street
drains north and does
not cross Maple

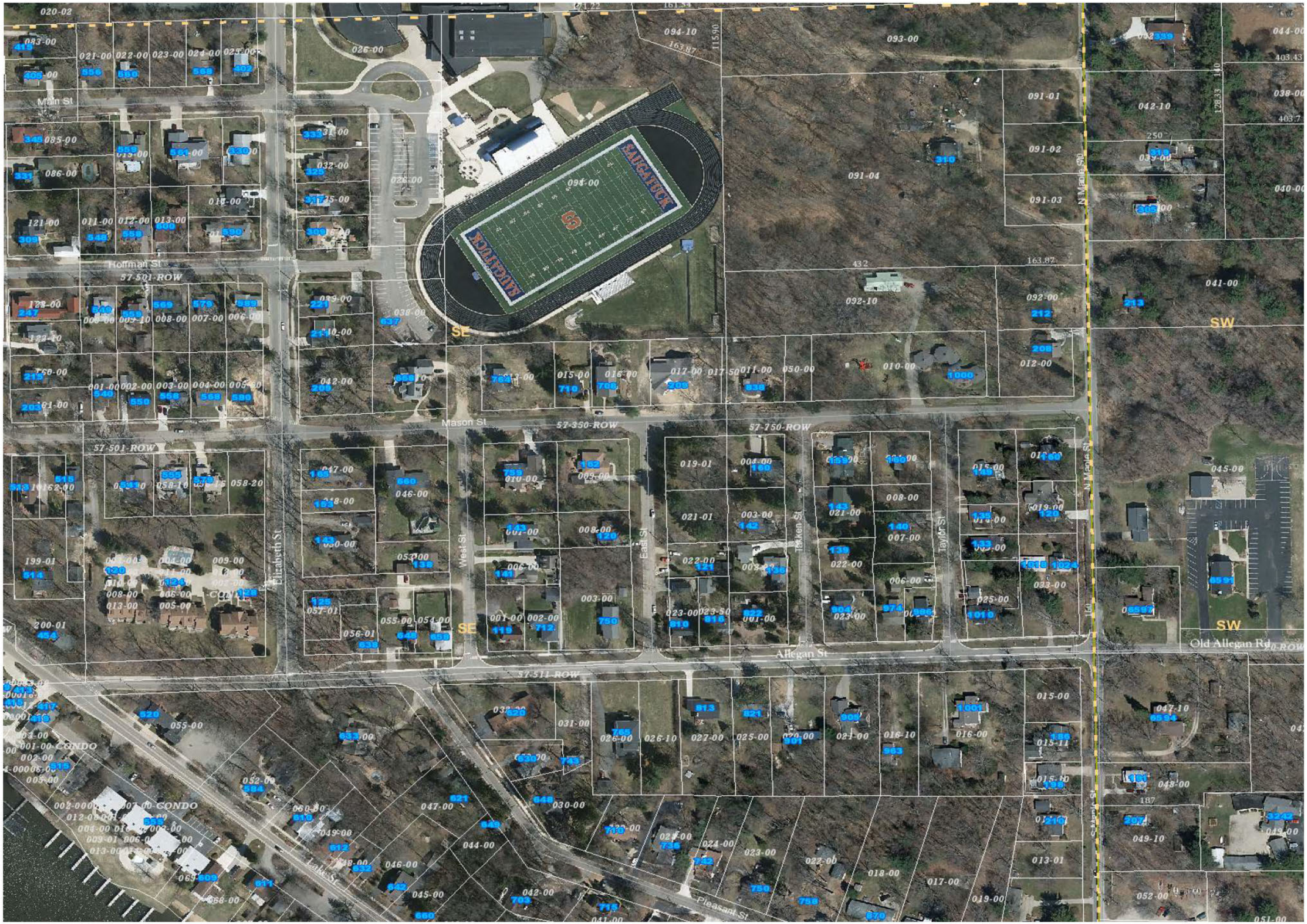
LEGEND

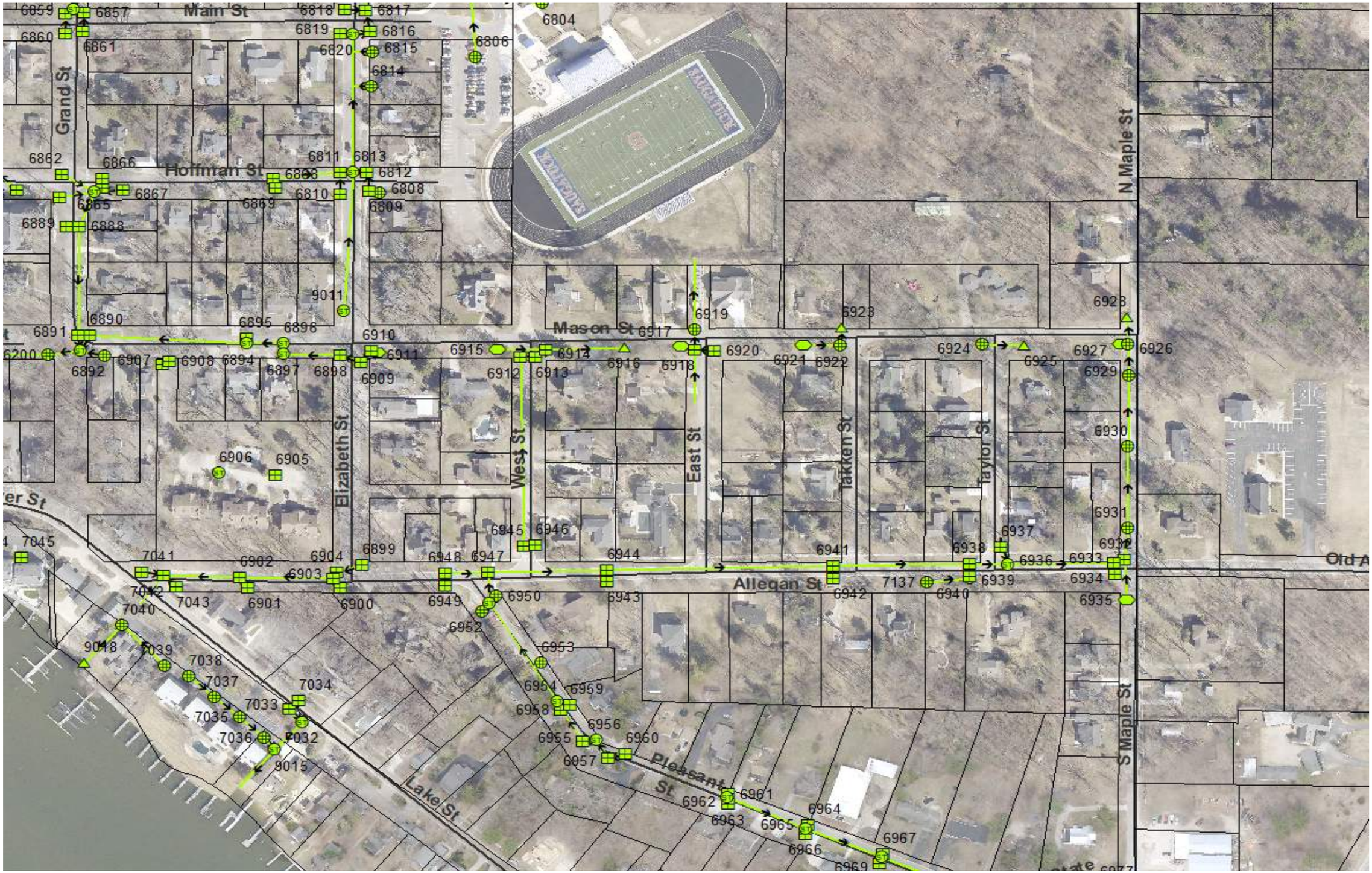
- PROP. BLUE STAR HIGHWAY DRAINAGE DISTRICT (WATERSHED)
- GOSHORN CREEK CONFLUENCE WATERSHED
- GOSHORN CREEK/GOLF DRAIN WATERSHED
- PROP. BLUE STAR HIGHWAY DRAIN
- COUNTY DRAINS
- OTHER WATERCOURSES
- RIVERS

340 170 0 340 680
1 " = 700 '

ALLEGAN COUNTY DRAIN COMMISSIONER
SAUGATUCK TOWNSHIP, CITY OF SAUGATUCK, AND LAKETOWN TOWNSHIP
PROPOSED BLUE STAR HIGHWAY DRAIN AND NEIGHBORING WATERSHEDS
Prein&Newhof
2220358

J:\GIS_Client\Algn-ADMIN-CO_Pro\2220358_ACDC_BlueStarDrain\Blue Star Drain.mxd - timmer - 5/2/2022 11:12:02 AM

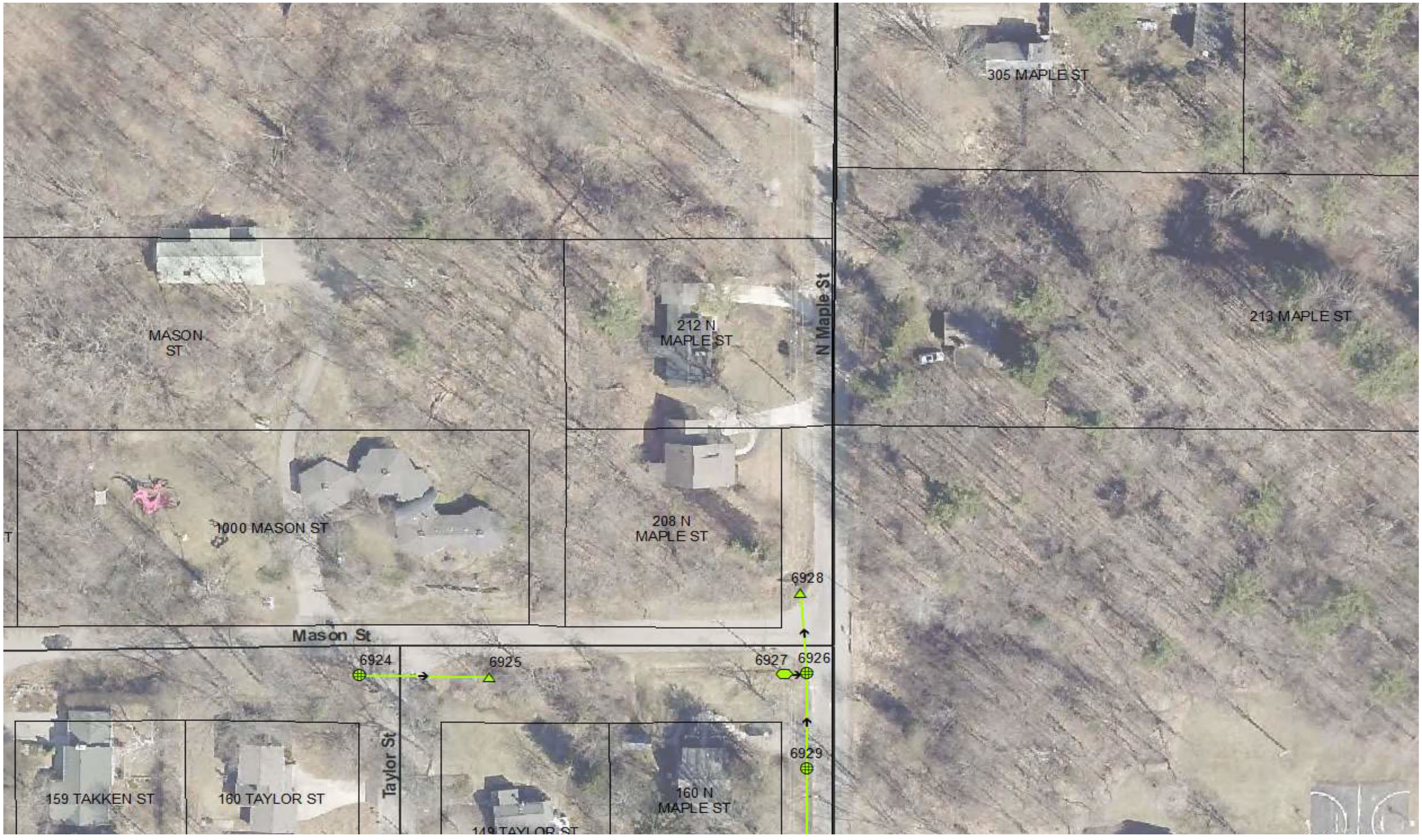

Main St
Hoffman St
57-501-ROW
Mason St
57-350-ROW
57-750-ROW
Allegan St
57-511-ROW
Elizabeth St
West St
East St
Takken St
Taylor St
N Maple St
Old Allegan Rd
Pleasant St
Lake St
SE
SW
094-00
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208 N
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N Maple St
6928
18" Reinforced Concrete
Mason St


208 N
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N Maple St
6928
18" Reinforced Concrete
Mason St


305 MAPLE ST
213 MAPLE ST
MASON ST
212 N MAPLE ST
N Maple St
1000 MASON ST
208 N MAPLE ST
6928
Mason St
6924
6925
6927
6926
6929
159 TAKKEN ST
160 TAYLOR ST
Taylor St
160 N MAPLE ST

208 N
MAPLE ST
N Maple St
6928
18" Reinforced Concrete
Mason St
6927
6926
21" Reinforced Concrete

City of Saugatuck
Maple Street Drainage Study
Engineer's Pre-Design Estimate of Probable Project Cost

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project No.: 3187-30
By: JWM
Date: 11/22/2022

Scope: Redirect wet weather flow north to existing culvert under Maple Street near lift station property.

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds & Insurances (10%)	LSUM	1	$ 6,700.00	$ 6,700.00
2	Temporary Traffic Control	LSUM	1	$ 8,000.00	$ 8,000.00
3	Soil Erosion and Sedimentation Control	LSUM	1	$ 1,000.00	$ 1,000.00
4	HMA Surface, Rem	Syd	250	$ 5.00	$ 1,250.00
5	Outlet Control Structure	Ea	1	$ 10,000.00	$ 10,000.00
6	Storm Sewer, 18 inch	Ft	250	$ 80.00	$ 20,000.00
7	Storm Manhole, 5-foot dia	Ea	1	$ 5,000.00	$ 5,000.00
8	Connect to Ex Storm Sewer	Ea	2	$ 1,000.00	$ 2,000.00
9	Riprap, Heavy	Syd	15	$ 100.00	$ 1,500.00
10	Subbase, CIP	Cyd	100	$ 20.00	$ 2,000.00
11	Aggregate Base, 8 inch	Syd	250	$ 15.00	$ 3,750.00
12	HMA, 13A	Ton	50	$ 200.00	$ 10,000.00
13	Turf Restoration	Syd	250	$ 10.00	$ 2,500.00

Estimated Construction Costs (Rounded):	$ 74,000.00
Undeveloped Details & Contingencies (15%):	$ 12,000.00
Est. Design & Construction Engineering, Permitting & Admin (20%):	$ 15,000.00
Total Estimated Project Cost:	**$ 101,000.00**

The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.

City of Saugatuck
Maple Street Drainage Study
Engineer's Pre-Design Estimate of Probable Project Cost

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project No.: 3187-30
By: JWM
Date: 11/22/2022

Scope: Redirect wet weather flow north to existing culvert under Maple Street near lift station property with inline detention.

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds & Insurances (10%)	LSUM	1	$ 13,100.00	$ 13,100.00
2	Temporary Traffic Control	LSUM	1	$ 8,000.00	$ 8,000.00
3	Soil Erosion and Sedimentation Control	LSUM	1	$ 1,000.00	$ 1,000.00
4	HMA Surface, Rem	Syd	250	$ 5.00	$ 1,250.00
5	Outlet Control Structure	Ea	2	$ 15,000.00	$ 30,000.00
6	Storm Sewer, 18 inch	Ft	50	$ 80.00	$ 4,000.00
7	Storm Sewer, 60 inch	Ft	200	$ 300.00	$ 60,000.00
8	Storm Manhole, 5-foot dia	Ea	1	$ 5,000.00	$ 5,000.00
9	Connect to Ex Storm Sewer	Ea	2	$ 1,000.00	$ 2,000.00
10	Riprap, Heavy	Syd	15	$ 100.00	$ 1,500.00
11	Subbase, CIP	Cyd	100	$ 20.00	$ 2,000.00
12	Aggregate Base, 8 inch	Syd	250	$ 15.00	$ 3,750.00
13	HMA, 13A	Ton	50	$ 200.00	$ 10,000.00
14	Turf Restoration	Syd	250	$ 10.00	$ 2,500.00

Estimated Construction Costs (Rounded):	$ 145,000.00
Undeveloped Details & Contingencies (15%):	$ 22,000.00
Est. Design & Construction Engineering, Permitting & Admin (20%):	$ 29,000.00
Total Estimated Project Cost:	**$ 196,000.00**

The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.

City of Saugatuck
Maple Street Drainage Study
Engineer's Pre-Design Estimate of Probable Project Cost

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project No.: 3187-30
By: JWM
Date: 11/22/2022

Scope: Enclose existing open drainage course to a point beyond the area of concern.

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds & Insurances (10%)	LSUM	1	$ 4,900.00	$ 4,900.00
2	Temporary Traffic Control	LSUM	1	$ 6,000.00	$ 6,000.00
3	Soil Erosion and Sedimentation Control	LSUM	1	$ 2,500.00	$ 2,500.00
4	Clearing and Tree Removal	LSUM	1	$ 10,000.00	$ 10,000.00
5	HMA Surface, Rem	Syd	100	$ 5.00	$ 500.00
6	Storm Sewer, 18 inch	Ft	150	$ 80.00	$ 12,000.00
7	Storm Manhole, 5-foot dia	Ea	1	$ 5,000.00	$ 5,000.00
8	Riprap, Heavy	Syd	25	$ 100.00	$ 2,500.00
9	Subbase, CIP	Cyd	40	$ 20.00	$ 800.00
10	Aggregate Base, 8 inch	Syd	100	$ 15.00	$ 1,500.00
11	HMA, 13A	Ton	20	$ 200.00	$ 4,000.00
12	Turf Restoration	Syd	400	$ 10.00	$ 4,000.00
				Estimated Construction Costs (Rounded):	$ 54,000.00
				Undeveloped Details & Contingencies (15%):	$ 9,000.00
				Est. Design & Construction Engineering, Permitting & Admin (20%):	$ 11,000.00
				Total Estimated Project Cost:	**$ 74,000.00**

The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.

City of Saugatuck
Maple Street Drainage Study
Engineer's Pre-Design Estimate of Probable Project Cost

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project No.: 3187-30
By: JWM
Date: 11/22/2022

Scope: Extend public system into open drainage course beyond the area of concern and stabilize bank.

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds & Insurances (10%)	LSUM	1	$ 8,300.00	$ 8,300.00
2	Temporary Traffic Control	LSUM	1	$ 6,000.00	$ 6,000.00
3	Soil Erosion and Sedimentation Control	LSUM	1	$ 2,500.00	$ 2,500.00
4	Clearing and Tree Removal	LSUM	1	$ 10,000.00	$ 10,000.00
5	Steel Sheet Piling	Sft	1,000	$ 50.00	$ 50,000.00
6	Riprap, Heavy	Syd	100	$ 100.00	$ 10,000.00
7	Turf Restoration	Syd	400	$ 10.00	$ 4,000.00
				Estimated Construction Costs (Rounded):	$ 91,000.00
				Undeveloped Details & Contingencies (15%):	$ 14,000.00
				Est. Design & Construction Engineering, Permitting & Admin (20%):	$ 19,000.00
				Total Estimated Project Cost:	**$ 124,000.00**

The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.

City of Saugatuck
Maple Street Drainage Study
Engineer's Pre-Design Estimate of Probable Project Cost

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project No.: 3187-30
By: JWM
Date: 11/22/2022

Scope: Construct a detention basin near the intersection of Maple Street and Mason Street (does not include property acquisition cost).

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds & Insurances (10%)	LSUM	1	$ 10,100.00	$ 10,100.00
2	Temporary Traffic Control	LSUM	1	$ 10,000.00	$ 10,000.00
3	Soil Erosion and Sedimentation Control	LSUM	1	$ 2,500.00	$ 2,500.00
4	HMA Surface, Rem	Syd	300	$ 5.00	$ 1,500.00
5	Clearing and Tree Removal	LSUM	1	$ 10,000.00	$ 10,000.00
6	Outlet Control Structure	Ea	1	$ 10,000.00	$ 10,000.00
7	Storm Manhole, 5-foot dia	Ea	2	$ 5,000.00	$ 10,000.00
8	Storm Sewer, 18 inch	Ft	100	$ 80.00	$ 8,000.00
9	Connect to Ex Storm Sewer	Ea	3	$ 1,000.00	$ 3,000.00
10	Detention Basin Grading	LSUM	1	$ 15,000.00	$ 15,000.00
11	Subbase, CIP	Cyd	100	$ 20.00	$ 2,000.00
12	Aggregate Base, 8 inch	Syd	300	$ 15.00	$ 4,500.00
13	HMA, 13A	Ton	60	$ 200.00	$ 12,000.00
14	Riprap, Heavy	Syd	25	$ 100.00	$ 2,500.00
15	Turf Restoration	Syd	1,000	$ 10.00	$ 10,000.00
				Estimated Construction Costs (Rounded):	$ 112,000.00
				Undeveloped Details & Contingencies (15%):	$ 17,000.00
				Est. Design & Construction Engineering, Permitting & Admin (20%):	$ 23,000.00
				Total Estimated Project Cost:	**$ 152,000.00**

The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.

City of Saugatuck
Maple Street Drainage Study
Engineer's Pre-Design Estimate of Probable Project Cost

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

Project No.: 3187-30
By: JWM
Date: 11/22/2022

Scope: Construct underground detention near the intersection of Maple Street and Mason Street (within the right of way).

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED AMOUNT
1	General Conditions, Bonds & Insurances (10%)	LSUM	1	$ 25,500.00	$ 25,500.00
2	Temporary Traffic Control	LSUM	1	$ 10,000.00	$ 10,000.00
3	Soil Erosion and Sedimentation Control	LSUM	1	$ 2,500.00	$ 2,500.00
4	HMA Surface, Rem	Syd	500	$ 5.00	$ 2,500.00
5	Outlet Control Structure	Ea	1	$ 10,000.00	$ 10,000.00
6	Underground Detention	Cft	12,000	$ 15.00	$ 180,000.00
7	Storm Manhole, 5-foot dia	Ea	2	$ 5,000.00	$ 10,000.00
8	Storm Sewer, 18 inch	Ft	20	$ 80.00	$ 1,600.00
9	Connect to Ex Storm Sewer	Ea	2	$ 1,000.00	$ 2,000.00
10	Subbase, CIP	Cyd	200	$ 20.00	$ 4,000.00
11	Aggregate Base, 8 inch	Syd	500	$ 15.00	$ 7,500.00
12	HMA, 13A	Ton	100	$ 200.00	$ 20,000.00
13	Riprap, Heavy	Syd	15	$ 100.00	$ 1,500.00
14	Turf Restoration	Syd	300	$ 10.00	$ 3,000.00

Estimated Construction Costs (Rounded):	$ 281,000.00
Undeveloped Details & Contingencies (15%):	$ 43,000.00
Est. Design & Construction Engineering, Permitting & Admin (20%):	$ 57,000.00
Total Estimated Project Cost:	**$ 381,000.00**

The Design Professional has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing. Bid prices may vary significantly based on these factors and market conditions at time of bid.

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Marc Compton

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] Email *: [redacted]

My Property Specific Comments:

We are on Ridgeview and this will indirectly affect us, however we would support any financial assessment on our street for sidewalks

General Project Comments:

- This would really improve safe walkability and knit our community closer.
- I favor concrete sidewalks. They will hold up better under the intense foilage and tree roots.

Thank you for attending and taking the time to provide feedback!

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Steve Lauer

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] *: [redacted]

*optional fields

My Property Specific Comments:

no direct effect to my property

General Project Comments:

approved of plan to improve Maple St. It is much needed.

Thank you for attending and taking the time to provide feedback!

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Chad DuPont

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone: [redacted] Email *: [redacted]

*optional fields

My Property Specific Comments:

- please abandon water line and easement on our property
- path along road that goes around some landscaping to save it would be great
-

General Project Comments:

- please build a path/sidewalk!
- more lighting

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: BRIAN ELMORE

Address: [redacted]

Year-Round Resident/Seasonal Resident: SEASONAL

[redacted] *Email*: [redacted]

*optional fields

My Property Specific Comments:

ACCESSIBILITY TO DOWNTOWN FOR PEDESTRIANS FROM RIDGEVIEW AND THE OTHER STREETS OFF MAPLE

General Project Comments:

SIDEWALK (ONE-SIDE IS FINE), STREET LIGHTING FOR SAFETY.

PRESERVATION OF NATURE, TREES, CHARACTER

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: David Isljamovski

Address: [redacted] N [redacted] Map [redacted]

Year-Round Resident/Seasonal Resident: Full time

Phone *: [redacted] Email *: [redacted]

My Property Specific Comments:

- landscaping in right of way
- would love a winding path vs. straight sidewalk
- abandon original city water lines on our property

General Project Comments:

- Thank you for listening to us and studying for a pedestrian path.
- add more street lighting

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Vicki Rosenberg

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone * : _____ Email * : [redacted]

[redacted]

My Property Specific Comments:

General Project Comments:

Thanks for providing this Q&A Session. for Saugatuck City Council - Please Notify Me by email of any related public meetings.

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Hughes

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone*: [redacted] Email*: _____

*optional fields

My Property Specific Comments:

1) Room for our guests to park along our shoulder

2) New water service

General Project Comments:

We would love a sidewalk!!

...and more lighting

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: MARK KIMBLE

Address: [redacted]

Year-Round Resident/Seasonal Resident: YR

[redacted]

*optional fields

My Property Specific Comments:

General Project Comments:

Need separated bike/pedestrian path
This would provide access for kids to/from school

Thank you for attending and taking the time to provide feedback!

F&V

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Nancy Kimble

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone * [redacted] Email * : [redacted]

*optional fields

My Property Specific Comments:

General Project Comments:

Please build a separated non-motorized trail. School children use this route to get to school. A wide shoulder is not ~~safe~~ safe enough. Cars are simply too close to pedestrians using a wide shoulder. Anything worth doing, ~~is~~ is worth doing well.

Thank you for attending and taking the time to provide feedback!

Also, people will park on a widened shoulder, blocking pedestrian access.

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Cathy Brockington

Address: [redacted]

Year-Round Resident/Seasonal Resident: YES

Phone *: [redacted] Email *: [redacted]

*optional fields

My Property Specific Comments:

I drive on Maple Street every day, since I live on Singapore Drive. Maple St. has become a suburban street as more and more houses are built. We need at least one sidewalk and wider shoulders for bikes.

Restore the Moores Creek channel in the gully

*Better drains at North & Maple for rain & snow runoff.

General Project Comments:

Installing speed "bumps" along the entire length would slow down the traffic. During the "detour" time, it was a constant battle to keep people at 25 mph. A new smooth road will turn Maple St into a race track again.

KEEP THE GIANT OAK as long as it is healthy

Thank you for attending and taking the time to provide feedback!

slow down traffic.

Put power lines underground - Save trees.

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Peter DeMeulemeester

Address [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted]

My Property Specific Comments:

Would like fence and trees to remain in right of way - Espically near the ravine

General Project Comments:

We definatly need a pedestrian walkway to safely get to old Allegan Sidewalk

Thank you for attending and taking the time to provide feedback!

F&V

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: DOUGLAS TOBIT

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] Email *: [redacted]

*optional fields

My Property Specific Comments:

WOULD LIKE THE TREES TO REMAIN IN THE RIGHT OF WAY & IN RAVINE

General Project Comments:

SIDEWALK OR SHOULDER CLOSE TO ROAD ON CITY SIDE OF STREET

Thank you for attending and taking the time to provide feedback!

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: JOHN MYERS

Address: [redacted]

Year-Round Resident/Seasonal Resident: YEAR ROUND

Phone [redacted]

*optional fields

My Property Specific Comments:

General Project Comments:

Thank you for attending and taking the time to provide feedback!

F&V

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: BARNES

Address: [redacted]

Year-Round Resident/Seasonal Resident: YEAR RND

Phone * [redacted] ail * : [redacted]

al fields

My Property Specific Comments:

SIDEWALK PLEASE
PLANTS PROJECTED

General Project Comments:

Thank you for attending and taking the time to provide feedback!

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS
DATE: SEPTEMBER 17, 2024

Name: Wendy Colsen

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: _____ Email * [redacted]

My Property Specific Comments:

- Please reduce any run off with detention basin to help with the erosion issue impacting my property. (Corner of Maple & Mason where it empties into the creek.)
- I've got a parking space in the right of way.

General Project Comments:

- Not a huge fan of a sidewalk since my office is in front, but understand the need for making it safe.

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Scott Fallick

Address: [redacted]

Year-Round Resident/Seasonal Resident: Year round

Phone [redacted] ail *: [redacted]

*optional fields

My Property Specific Comments:

We Live in Maple Woods Condos.

General Project Comments:

thank you for the Meeting

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Nicole Graves

Address: [redacted]

Year-Round Resident / Seasonal Resident: _____

Phone *: _____ Email * [redacted]

*optional fields

My Property Specific Comments:

General Project Comments:

We both walk/run on Maple daily and would welcome a sidewalk. We have 2 children that will soon be at the Middle School and think a sidewalk is a necessity for all of the children off Maple to safely get to school.

Thank you for attending and taking the time to provide feedback!

F&V

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Betsy Muir

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone: [redacted] Email: [redacted]

My Property Specific Comments:

Prefer no sidewalks on city side. Would like to see shoulders.

Very poor drainage at the storm sewer behind our mailbox.

General Project Comments:

Please widen the shoulders.

Thank you for attending and taking the time to provide feedback!

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Ian Muir

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted]

*optional fields

My Property Specific Comments:

Shoulders are in poor shape/drainage issues during heavy rain/snowmelt.
Placement of mail boxes?
No sidewalk on the west side of the street would be our preference.

General Project Comments:

Need to slow traffic on Maple!

Thank you for attending and taking the time to provide feedback!

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: PATRICIA DIEPENHORST

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] Email *: _____

*optional fields

My Property Specific Comments:

I'm not connected to City water and sewer will I have to connect?

General Project Comments:

Thank you for attending and taking the time to provide feedback!

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Karen Wentworth

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] * [redacted]

My Property Specific Comments:

a sidewalk would destroy all the landscaping we have planted and decorated to our property. Several large trees are at the front of yard.

General Project Comments:

a sidewalk is not needed on the township side. a wider shoulder on road is all that is necessary that far away from town. Concentrate in town w/ sidewalks

Thank you for attending and taking the time to provide feedback!

F&V

City of Saugatuck
EST 1868

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: BRIAN DEAN

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone [redacted] ail * [redacted]

*optional fields

My Property Specific Comments:

General Project Comments:

- Need sidewalks! We go for walks 2-3 times per week.
- Needs to go from Allegan St. All the way to North St.

Thank you for attending and taking the time to provide feedback!

F&V

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: William Donahue

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] Email *: [redacted]

*lds

My Property Specific Comments:

- No specific property concerns.
- In favor of adding A sidewalk, either city or township side.

General Project Comments:

1) Thrilled the City is looking to replace Maple Street, horrible condition.
2) Would be in favor of adding A sidewalk. No safe place to walk on Maple Street
3) Also, in favor of adding A bike lane.
4) Traffic speed continues to be of great concern

Thank you for attending and taking the time to provide feedback!

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Gary Gorecki

Addres[redacted]

Year-Round Resident/Seasonal Resident: Resident

Phone *:[redacted] il *:[redacted]

optional fields

My Property Specific Comments:

Definite need for something, walking is a real safety concern. Widened shoulder is the minimum.

General Project Comments:

Thank you for attending and taking the time to provide feedback!

FEEDBACK FORM

PROJECT: MAPLE STREET IMPROVEMENTS

DATE: SEPTEMBER 17, 2024

Name: Terry Van Dis

Address: [redacted]

Year-Round Resident/Seasonal Resident: _____

Phone *: [redacted] Email *: [redacted]

My Property Specific Comments:

- FIX DRAINAGE

General Project Comments:

- FIX DRAINAGE
- NO SIDEWALK
- WIDEN WITH SHOULDER

Thank you for attending and taking the time to provide feedback!

City Council Agenda Item Report

FROM: Scott Herbert – Public Works Superintendent

MEETING DATE: January 22, 2025

SUBJECT: Sea Wall & Concrete Repairs

DESCRIPTION:
The following six locations in the city, primarily along the boardwalk, require repairs to sea walls and/or concrete structures. Each site presents unique needs, which have been addressed in the attached proposal from Fleis & Vandenbrink Engineering. To ensure competitive pricing, we are presenting the work as a bundled project. Below are the locations that need attention:

- **Francis Street/Water Street Street-End**
- **Wicks Park Sidewalk/Sea Wall**
- **Coghlin Park Sidewalk/Sea Wall**
- **Griffith Street/Hoffman Street Stairs**
- **Spear Street/Water Street Boat Launch**
- **Chain Ferry Landings**

Public Works recommends proceeding with Fleis & Vandenbrink's proposal for design and bidding assistance.

BUDGET ACTION REQUIRED:
N/A

COMMITTEE/COMMISSION REVIEW:
N/A

LEGAL REVIEW:
N/A

SAMPLE MOTION:
Motion to approve the proposal submitted by Fleis & Vandenbrink to assist the City with design engineering and bidding assistance for sea wall and concrete repairs in the amount of $17,200.

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

January 20, 2025

Via Email: scott@saugatuckcity.com

Scott Herbert
City of Saugatuck
102 Butler Street
Saugatuck, MI 49453

RE: Sea Wall and Concrete Repairs
Proposal for Design Engineering & Bidding Assistance

Dear Scott,

We understand that you are interested in developing a bid package to solicit bids for repairs and improvements at several sea wall locations along the Kalamazoo River and some related work. The locations we reviewed with you are as follows:

- Francis Street, Water Street to Kalamazoo River: Concrete sidewalk along the City's steel sheet pile sea wall has been settling for several years. Adjacent private sidewalk on the north and south side of the right of way has been undermined. There appear to be several sections of storm sewer concerns between Water Street and the outlet through the sea wall. Repairs include storm sewer replacement (plugging the end of the pipe to control water), concrete sidewalk replacement, asphalt patching and related work. We anticipate installing new anchors between the sea wall and sidewalk to mitigate future settlement. The project will also involve coordination with the adjacent property owners on cost sharing opportunities.
- Wicks Park: A corner of the City's steel sheet pile sea wall has pulled apart, causing cracking and settlement of the sidewalk along the wall. Repairs include sea wall tie back retrofitting, re-welding the steel cap, sidewalk replacement, anchor replacement and related work.
- Coghlin Park: The City DPW repaired a section of settled sidewalk along the eastern portion of the sea wall several years ago. The western portion is showing similar cracking and settlement, approximately between the west right of way line of Griffith Street and the gazebo area. The repair will be similar as the prior project and will include sidewalk replacement, wall backfill with stone and fabric and replacement of wall anchors.
- Griffith & Hoffman Street: The City has concrete stairs at the intersection of Griffith and Hoffman Street that are connected to sidewalks in the area. The concrete is deteriorating, however, replacing the structures with sidewalks that meet current Americans with Disabilities Act guidelines is impractical due to the topography of the area. Repairs are proposed, until such time as a larger project can be implemented to make those upgrades. Repair work includes patching of concrete stair treads and replacement of approximately 3 railing columns on the southeast corner.

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Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005
www.fvgrng.com

- Spear Street Boat Launch: The City's curb and gutter on the northwest corner of Water Street and Spear Street ends at a deteriorated concrete swale. Proposed work includes replacing the concrete swale with an extension of the gutter pan and landscaping/cleanup of the area between the curb line and the right of way line around the Star of Saugatuck and boat launch signage. The project is also anticipated to include requesting an additional cobra head style light from Consumers Energy on the pole in the southwest corner to better light the area.
- Chain Ferry Landing: Steel and timber framing for the landing area of the chain ferry is deteriorated. The project is anticipated to include repair or replacement of deteriorated members to restore structural capacity and functionality. Bid documents will identify those materials that can potentially be salvaged and reinstalled and those which are to be replaced.

Based on our understanding of the project, we propose the following Scope of Services to assist you:

Scope of Services

Design Phase

- Meet with City staff to review project scope and schedule and refine the scope of repairs.
- Obtain basic topographic survey and field measurements of the various project areas to supplement information already available from related projects.
- Coordinate with adjacent property owners and Consumers Energy for related work, as appropriate.
- Develop preliminary plans for the repairs. We anticipate a site plan for each location with details and cross sections to describe the repair work needed.
- Develop preliminary project specifications.
- Review preliminary plans and specifications with City staff and finalize based on comments received.
- Based on the nature and scope of the project, we do not anticipate soil erosion or other permits will be required for this project.

Bidding Phase

- Prepare and submit the advertisement for bids. Contact potential bidders directly and place the advertisement with plan rooms.
- Assemble bidding documents and distribute electronic (PDF) copies to plan rooms. Bid documents will also be available for review on our website.
- Issue electronic bid documents to prospective bidders.
- Answer bidder questions and provide supplemental information, if necessary.
- Conduct a public bid opening to be held at City Hall.
- Tabulate and review the bids received, evaluate references and provide a Recommendation of Award to the City.

Anticipated Schedule

The locations in question are heavily used during the summer months. As such, we anticipate bidding the project in early spring for construction prior to the busier summer months or in fall of 2025, depending on the City's desired timeframe and timing for authorization.

Engineering Budget

We propose to complete the Scope of Services outlined above for the following lump sum fees:

Phase	Budget
Design	$ 14,800
Bidding	$ 2,400
Total Proposed Fee	**$ 17,200**

We anticipate the City will realize economy of scale savings by incorporating the six locations with similar scope of work into a single bid package, however, if the City elects to proceed with only certain locations, our design fees would be approximately proportional to the number of locations.

We will prepare a proposal for construction phase services once the schedule for the project and desired level of engineering oversight have been determined.

We appreciate your consideration of this proposal. Authorization to proceed with the work can be given by returning a copy of this proposal, signed below as indicated. In the meantime, please feel free to contact us with any questions.

Sincerely,

FLEIS & VANDENBRINK

Jonathan W. Moxey, P.E.
Project Manager

Cc: Ryan Cummins, City Manager

WORK AUTHORIZATION

Fleis & VandenBrink is hereby authorized to proceed with the Scope of Services presented in this proposal in accordance with the existing Professional Services Agreement for General Consultation dated November 13, 2018.

_____ _____

By Date

City Council Agenda Item Report

FROM: Ryan Cummins, City Manager

MEETING DATE: January 22, 2025

SUBJECT: Mt. Baldhead Bathroom Plans

DESCRIPTION:

The restrooms at Mt. Baldhead are in significant need of replacement. City Council listed restroom repairs as a desirable priority for the fiscal year. This work is also on the City's capital improvement plan.

In May, the City Council reviewed and discussed recommended renderings from the Parks and Public Works Committee and approved an engineering services proposal to replace the restrooms.

The new restroom building will be located in approximately the same footprint as the existing building.

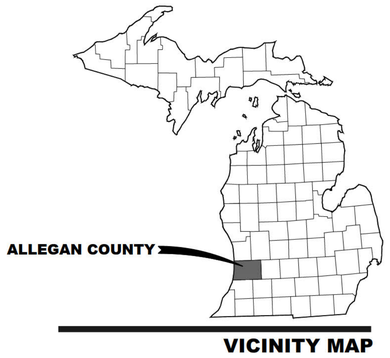
The City Engineer will be at your meeting to provide an update.

LEGAL REVIEW:

The City Attorney will be at your meeting to answer any questions you may have.

SAMPLE MOTION:

N/A. Workshop item.



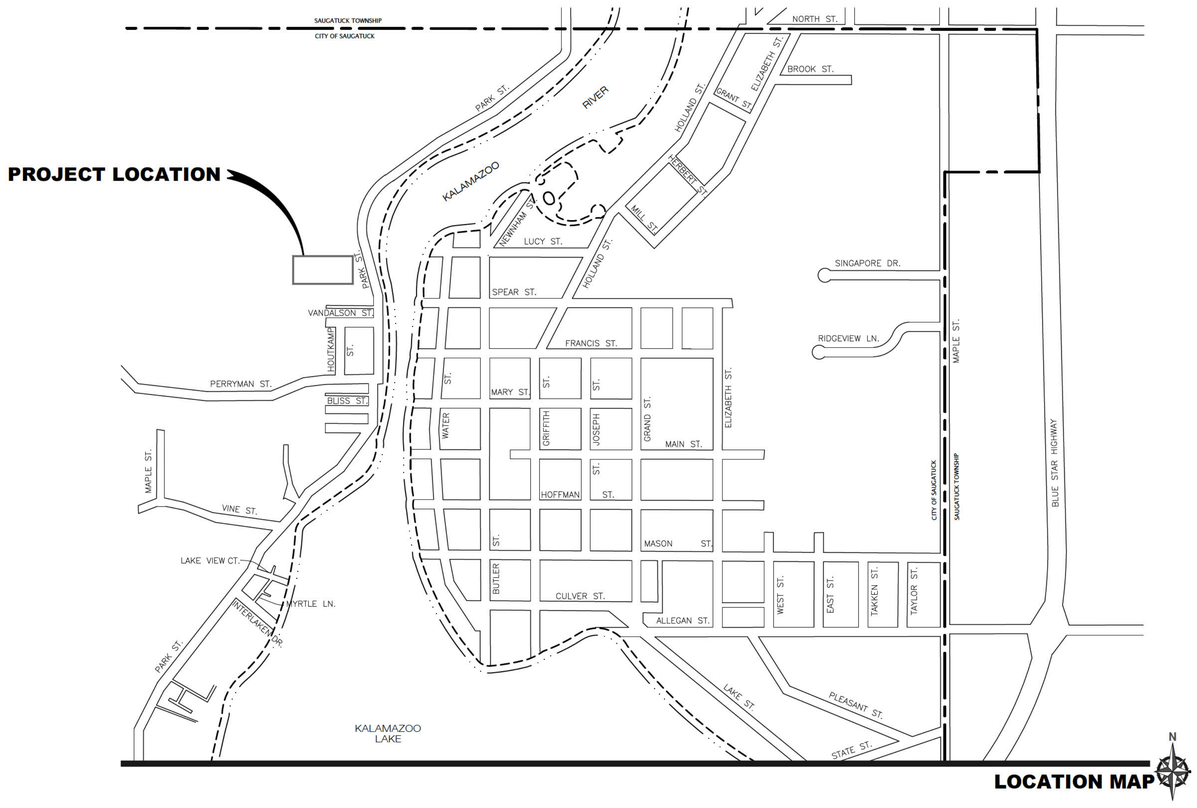
VICINITY MAP

CITY OF SAUGATUCK
ALLEGAN COUNTY, MICHIGAN

MT. BALDHEAD RESTROOM REPLACEMENT
DECEMBER 2024

INDEX OF DRAWINGS

DESCRIPTION	SHEET NO.
COVER SHEET	G-001
EXISTING CONDITIONS & REMOVALS PLAN	C-101
SITE LAYOUT & UTILITY PLAN	C-102
DETAILS	C-501
ARCHITECTURAL/STRUCTURAL PLANS	A-101
EXTERIOR ELEVATIONS	A-201
BUILDING SECTIONS	A-301
BUILDING SECTIONS	A-302
INTERIOR ELEVATIONS & DETAILS	A-401
TYPICAL DOOR & WINDOW DETAILS	A-501
TYPICAL MASONRY & STRUCTURAL DETAILS	A-502
RESTROOM BUILDING MECHANICAL/ELECTRICAL	ME101



LOCATION MAP

Know what's **below.** **Call** before you dig.

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DESIGN. BUILD. OPERATE.

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CITY OF SAUGATUCK
ALLEGAN COUNTY, MICHIGAN
MT. BALDHEAD RESTROOM REPLACEMENT

DECEMBER 2024
F&V PROJECT NO.
860451

G-001

M:\Proj\859001-861000\860451 Saugatuck Mt Baldhead Restroom\Cad\Plns\860451_2001.dwg — plotted on 12/26/2024 10:00 AM



REMOVALS LEGEND

- BUILDING REMOVAL
- CONCRETE REMOVAL
- ASPHALT REMOVAL
- LINEAR REMOVAL

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	TREE (DECIDUOUS)		CABLE BOX		WATER SPIGOT
	BUSH		TELEPHONE RISER		SURVEY CONTROL POINT
	TREE (CONIFEROUS)		TELEPHONE MANHOLE	BM#1	BENCHMARK
	DEAD TREE		TELEPHONE HANDHOLE		SECTION CORNER
	STUMP		ELECTRICAL RISER		BOUNDARY LINE
	MANHOLE		ELECTRICAL MANHOLE		PROPERTY LINE
	SANITARY CLEANOUT		ELECTRICAL HANDHOLE	W	WATERMAIN
	RD. CATCH BASIN		POWER POLE	SAN	SANITARY SEWER
	SQ. CATCH BASIN		LIGHT POLE	STM	STORM SEWER
	CULVERT END		GUY POLE		CULVERT (21" AND UNDER)
	FIRE HYDRANT		GUY ANCHOR		CULVERT (24" AND UP)
	WATER VALVE		PED CROSSING SIGNAL	CATV	CABLE T.V.
	CURB STOP & BOX		YARD LIGHT	T	TELEPHONE
	WELL		SIGN	E	ELECTRIC
	WATER MANHOLE		GRILL	G	GAS
	WATER METER		POST	OH	OVERHEAD LINES
B#	SOIL BORING		FOUND CONC. MONUMENT		GUARDRAIL
	MONITORING WELL		FOUND IRON ROD	X	FENCE
	GAS VALVE		SET IRON ROD		WOODLINE
	GAS RISER				BUSH/HEDGE ROW
					RIGHT OF WAY
				W	WATER SERVICE

NOTE: ALL ITEMS LISTED ON THE LEGEND MAY NOT BE PRESENT ON DRAWING.

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F: 616.977.1005

REVISION:

CITY OF SAUGATUCK
ALLEGAN COUNTY, MICHIGAN
MT. BALDHEAD RESTROOM REPLACEMENT
EXISTING CONDITIONS & REMOVALS PLAN

DESIGN TEAM:	PROJ MNGR: JWM DESIGNED BY: JWM DRAWN BY: ASH CHECK BY:

DRAWING INFORMATION:
860451 C101
122624 peted

DECEMBER 2024

F&V PROJECT NO.
860451

C-101

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BM #2 EL. 596.65'
FOUND RAILROAD SPIKE IN SOUTHWEST SIDE OF UTILITY POLE
(NAVD88 VIA KEM-TEC 01/25/2023 GPS OBSV)

NORTH
0 10 20
SCALE IN FEET

EX 16" W.M.
SAN
32.0'
51.3'
GAZEBO
BUILDING
HEIGHT = 19.00'
171.30'
S 25°09'55" W
EX 8" SAN
EX 10" W.M.
WALL
645 640 635 630 625 620 615 610 605 600 595 590 597
ELECTRIC METER LOCATED ON POWER POLE
EX. PHONE PEDESTAL TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION
SANITARY MANHOLE
RIM=597.64'
INV. 12" PVC, N=588.04
INV. 12" PVC, S=587.94"
KALAMAZOO RIVER
PROPOSED RESTROOM BUILDING SEE ARCH DRAWINGS
599.90 FG
NEW WATER METER IN METER PIT (METER PROVIDED BY OWNER & INSTALLED BY CONTRACTOR)
CONNECT TO EXISTING WATER SERVICE (OR REPLACE TO THE MAIN IF REQ'D.)
1" WATER SERVICE
INSTALL SILT FENCE ALONG LIMITS OF EXCAVATION TO LIMIT DUNE DISTURBANCE. PROVIDE TEMPORARY SHORING AS REQ'D.
RESTROOM BUILDING FF: 600.00'
RESTORE PARKING AREA WITH GRAVEL SURFACE AS REQ'D.
PARK STREET (ASPHALT ROAD)
EX 10" W.M.
N20°03'53"E
100.16'
12.7'
5'
SALVAGE & REINSTALL SPLIT-RAIL FENCING
N04°34'09"E
88.07'
PROVIDE SANITARY CLEANOUT AS DIRECTED BY ENGINEER
6" SANITARY LATERAL
NEW ASPHALT AS REQ'D. (SEE SHT C-101)
GRAVEL
EXPLORATORY DIGGING CONNECT TO EXISTING SANITARY LATERAL OR MAIN FROM PROPOSED BUILDING
IF AN EX. CURB STOP CANNOT BE LOCATED, FIELD LOCATE EX. CORP STOP & TEMPORARILY SHUT OFF TO FACILITATE WATER SERVICE WORK.
P.O.B.
C/L OF PROPOSED 10' UTILITY EASEMENT
EX. GAS
PARK ST. R.O.W. (APPROX.)
CITY OWNED PARCEL (APPROX.)
S 11°05'15" E
66.15'
BM #1

PROPOSED GRADING LEGEND:

SURVEY CONTROL POINT		LEACH BASIN	
BENCHMARK	BM #1	FLARED END SECTION	
GRADE BREAK			
916	PROPOSED MINOR CONTOUR		
915	PROPOSED MAJOR CONTOUR		
914.00 FG	PROPOSED SPOT GRADE	FL	FLOWLINE GRADE
BC	BACK OF CURB GRADE	MX	MATCH EXISTING ELEVATION
BIT	BITUMINOUS GRADE	RIM	STRUCTURE RIM ELEVATION
CON	CONCRETE GRADE	SW	SIDEWALK GRADE
EP	EDGE OF PAVEMENT GRADE	TW	TOP OF WALK GRADE

PROPOSED LEGEND:

- CURB STOP & BOX
- METER / PIT
- SANITARY CLEANOUT
- SANITARY LATERAL
- WATER SERVICE
- SIDEWALK CONCRETE

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REVISION:

CITY OF SAUGATUCK
ALLEGAN COUNTY, MICHIGAN
MT. BALDHEAD RESTROOM REPLACEMENT
SITE LAYOUT & UTILITY PLAN

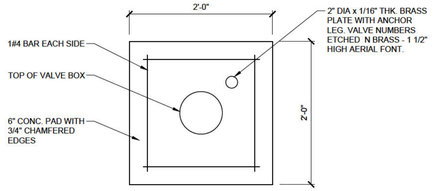
DESIGN TEAM:	PROJ MNGR: JWM DESIGNED BY: JWM DRAWN BY: ARH CHECK BY:

DRAWING INFORMATION:
860451 C102
122624 peted

DECEMBER 2024
F&V PROJECT NO.
860451

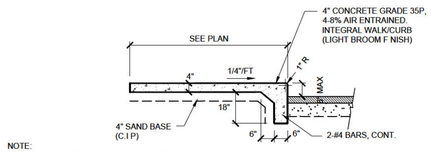
C-102

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VALVE BOX PAD

NOT TO SCALE

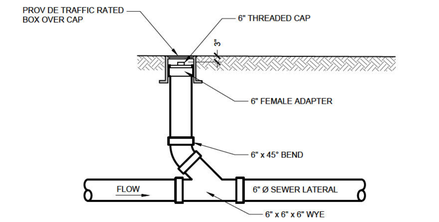


NOTE:
1) PROVIDE 3/8" EXPANSION JOINT WHERE WALK MEETS BU LDING OR RETAINING WALL.

2) PROVIDE CONTROL JO NTS AT 8' O/C

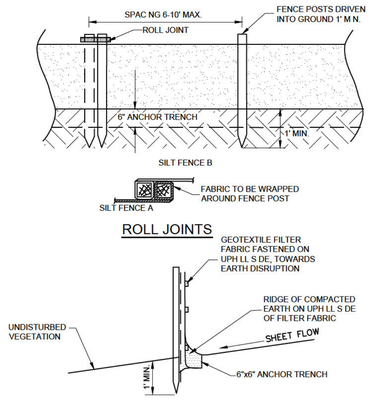
INTEGRAL CONCRETE SIDEWALK

NOT TO SCALE



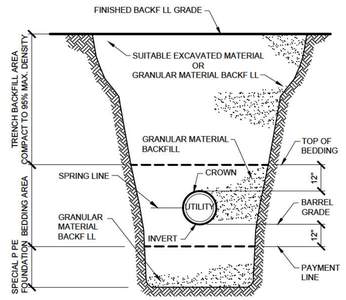
SANITARY LATERAL CLEAN OUT DETAIL

NOT TO SCALE

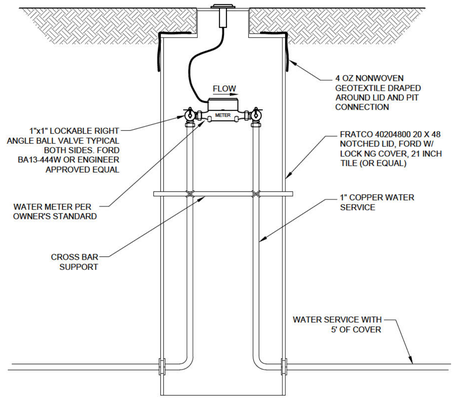


ROLL JOINTS

SILT FENCE



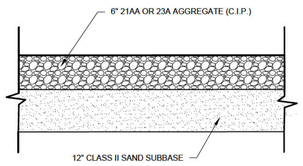
UTILITY TRENCHING, EXCAVATING AND BACKFILLING TERMINOLOGY



ELEVATION

WATER METER PIT DETAIL

NOT TO SCALE



AGGREGATE PARKING - 6 INCH SECTION

NOT TO SCALE

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F: 616.977.1005

REVISION:

CITY OF SAUGATUCK
ALLEGAN COUNTY, MICHIGAN
MT. BALDHEAD RESTROOM REPLACEMENT
DETAILS

DESIGN TEAM:
PROJ MNGR: JWM
DESIGNED BY: JWM
DRAWN BY: ARH
CHECK BY:

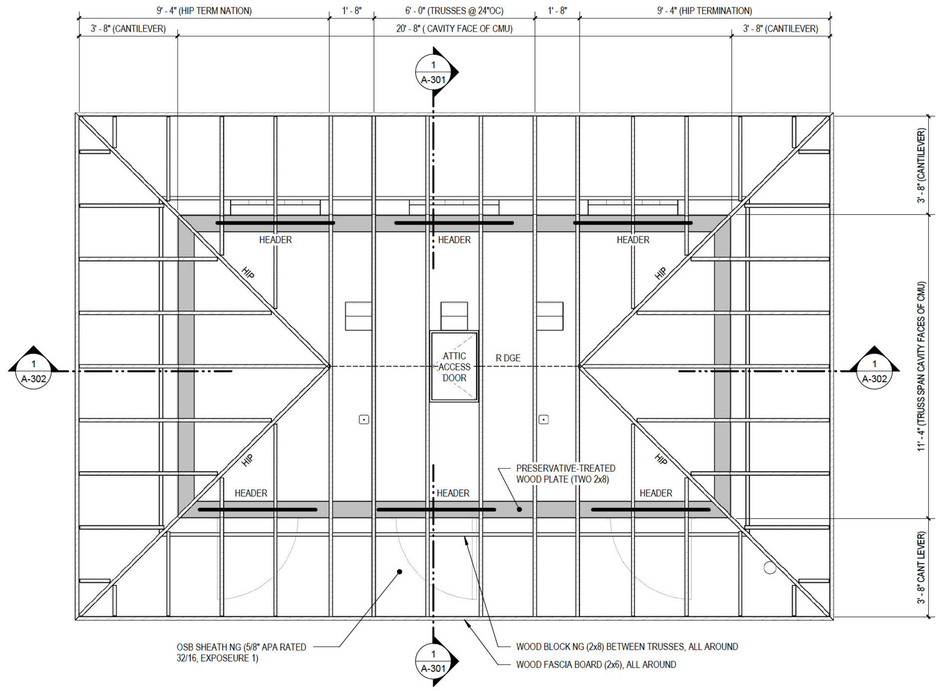
DRAWING INFORMATION:
860451 C501
122624 peted

DECEMBER 2024

F&V PROJECT NO.
860451

C-501

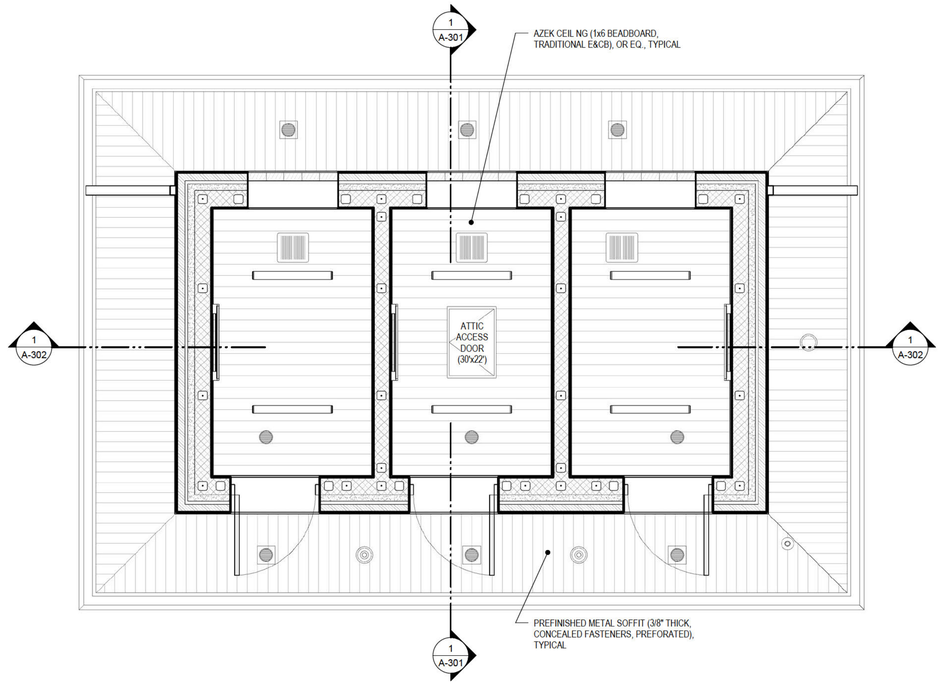
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RESTROOM BUILDING - FRAMING PLAN

0 1" 2" 3" 3/8" = 1 -0"

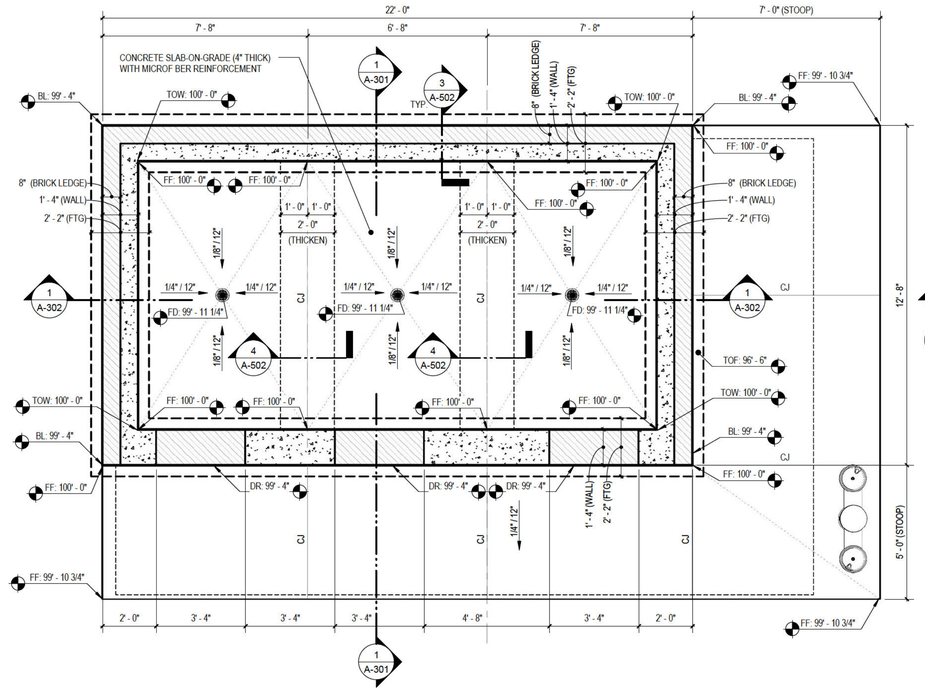
NORTH



RESTROOM BUILDING - CEILING PLAN

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"

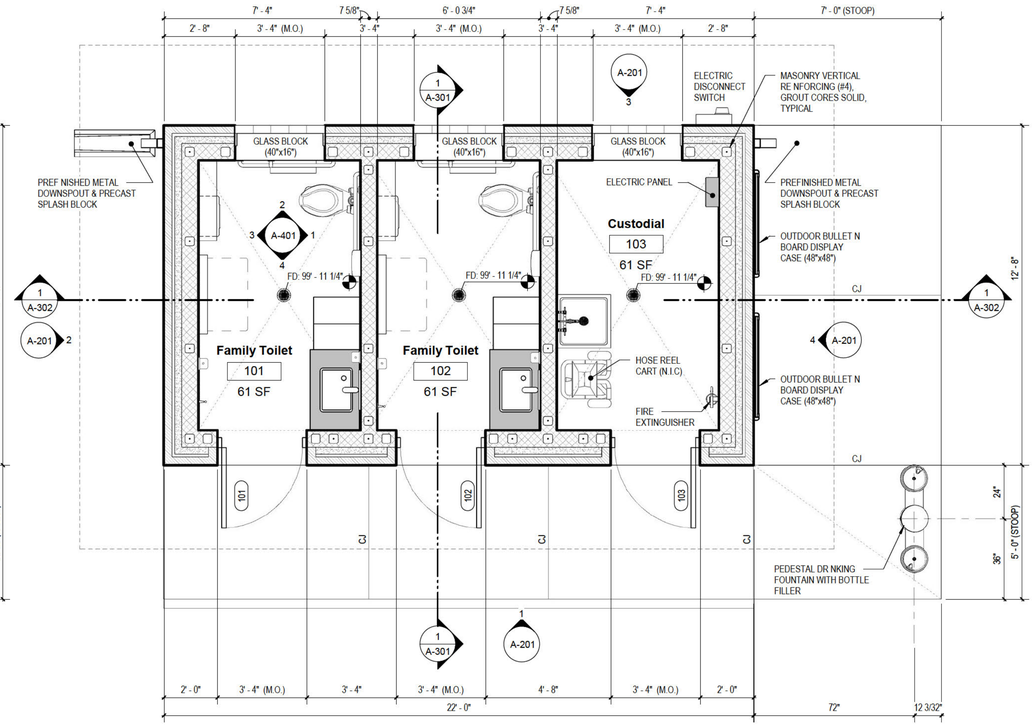
NORTH



RESTROOM BUILDING - FOUNDATION PLAN

0 1" 2" 3" 3/8" = 1 -0"

NORTH



RESTROOM BUILDING - FLOOR PLAN

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"

NORTH

ARCHITECTURAL FF: 100'-0" = CIVIL FF: 600.00'

CODE SUMMARY

APPLICABLE CODES:

- BUILD NG CODE: 2015 MICHIGAN BUILD NG CODE
- ACCESS BILITY CODE: 2015 MICHIGAN BU LDING CODE ICC/ANSI A.117.1 2009
- MECHANICAL CODE: 2015 MICHIGAN MECHANICAL CODE
- PLUMB NG CODE: 2015 MICHIGAN PLUMB NG CODE
- ELECTRICAL CODE: 2017 NEC
- ENERGY CODE: 2015 MICHIGAN ENERGY CODE (ASHRAE 90.1-2013)

BUILDING INFORMATION:

- NEW RESTROOM BU LD NG.
- OCCUPANCY USE: **U** (UTILITY)
- CONSTRUCTION TYPE: VB
  1. WALLS: LOAD-BEAR NG MASONRY
  2. ROOF: MANUFACTURED WOOD TRUSSES
- AREA: 280 SF (RESTROOM)
- OCCUPANCY LOADS:
  1. FAM LY TOILET 101: 1 OCCUPANT
  2. FAM LY TOILET 102: 1 OCCUPANT
  3. CUSTODIAL 103: 1 OCCUPANT

STRUCTURAL DESIGN LOADS

Design Roof Dead Loads:

Load Type	Load
Roofing	1.0 PSF
Roof Deck	2.5 PSF
Framing	3.0 PSF
Ceiling	2.2 PSF
Lights	1.0 PSF
Misc Mech	7.0 PSF
Total	16.7 PSF

Design Live Loads:

Location	Load
Ground Snow Load	50 PSF
Snow Exposure Factor	1.0
Snow Load Importance	1.0
Thermal Factor	1.0
Roof Collateral Load	20 PSF
$Wind_{ult}$	115 MPH Exposure D, Importance = 1.15
Building Category	II
Int. Pressure Coeff.	± 0.18
Components / Cladding Wall: per code, Roof: per code	
Seismic Risk Category	II

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT
ARCHITECTURAL/STRUCTURAL PLANS

DESIGN EAM | PRO MINOR VM | DESIGNED BY: DAG | DRAWN BY: DAG | CHECK BY: SMB 12/31/2024

DRAWING INFORMATION: 860450 Saugatuck Mt Baldhead Restrooms.rvt

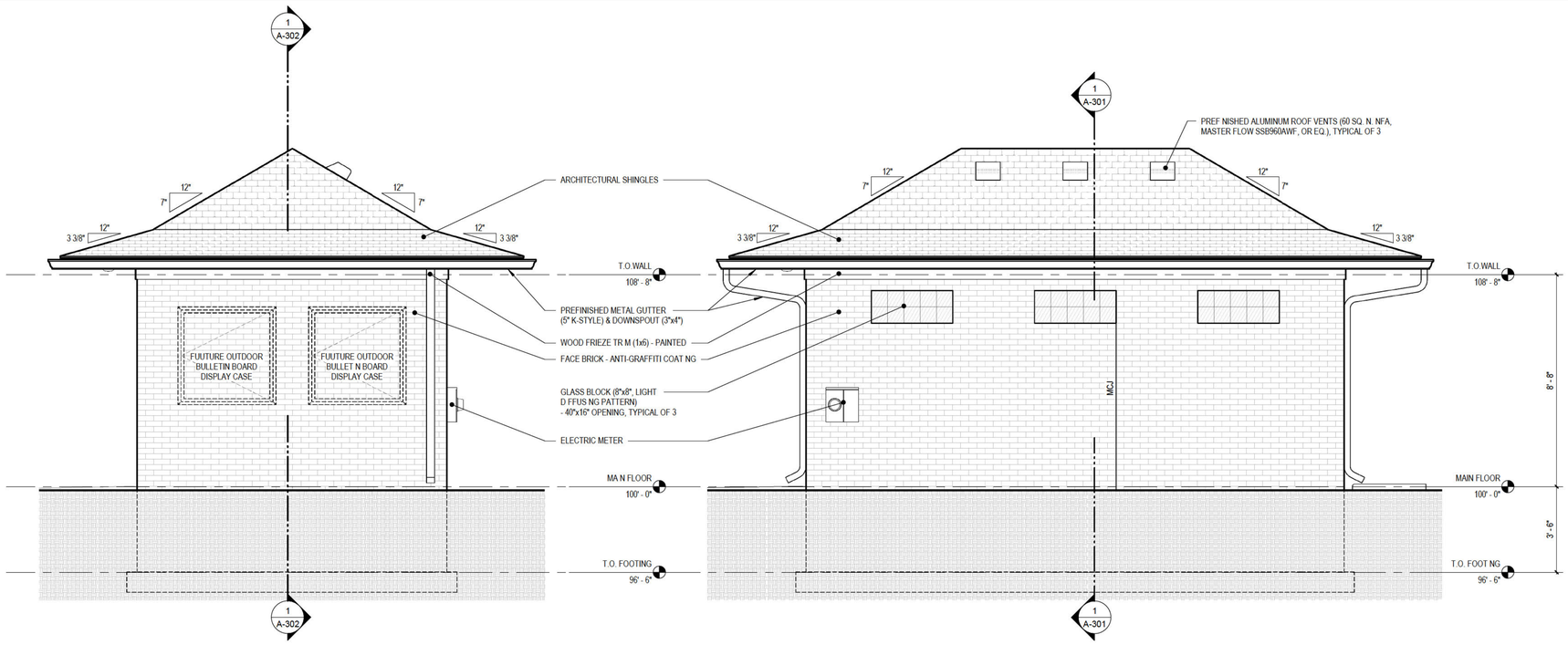
JANUARY 2025

F&V PROJECT NO. 860451

A-101

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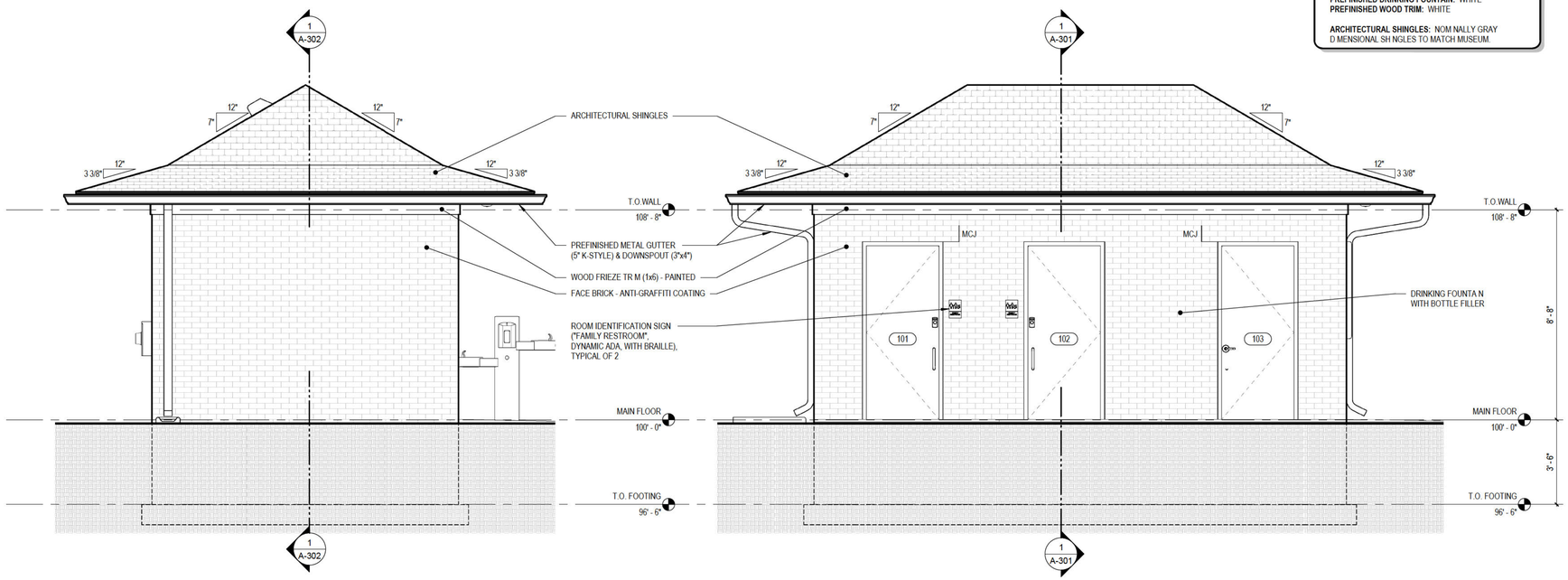


4 RESTROOM BUILDING - RIGHT ELEVATION

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"

3 RESTROOM BUILDING - BACK ELEVATION

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"



2 RESTROOM BUILDING - LEFT ELEVATION

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"

1 RESTROOM BUILDING - FRONT ELEVATION

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"

COLOR/MATERIAL SELECTIONS

COLOR/MATERIAL SELECTIONS TO NOMINALLY MATCH THE EXISTING PUMP HOUSE MUSEUM (ACROSS PARKING LOT FROM BUILDING SITE).

BRICK: BELDEN BRICK GLEN-GREY CUSHWA OR EQ.
MORTAR: NOMINALLY RED TO MATCH MUSEUM.

PREFINISHED GUTTER & DOWNSPOUTS: WHITE
PREFINISHED METAL TRIM: WHITE
PREFINISHED METAL SOFFITS: WHITE
PREFINISHED DOORS & FRAMES: WHITE
PREFINISHED DRINKING FOUNTAIN: WHITE
PREFINISHED WOOD TRIM: WHITE

ARCHITECTURAL SHINGLES: NOM NALLY GRAY D MENSIONAL SH NGLES TO MATCH MUSEUM.

ARCHITECTURAL FF: 100'-0" = CIVIL FF: 600.00'

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT
EXTERIOR ELEVATIONS

DESIGN: EAM | PRO. MNGR: VM | DESIGNED BY: DAG | DRAWN BY: DAG | CHECK BY: SMB 12/31/2024

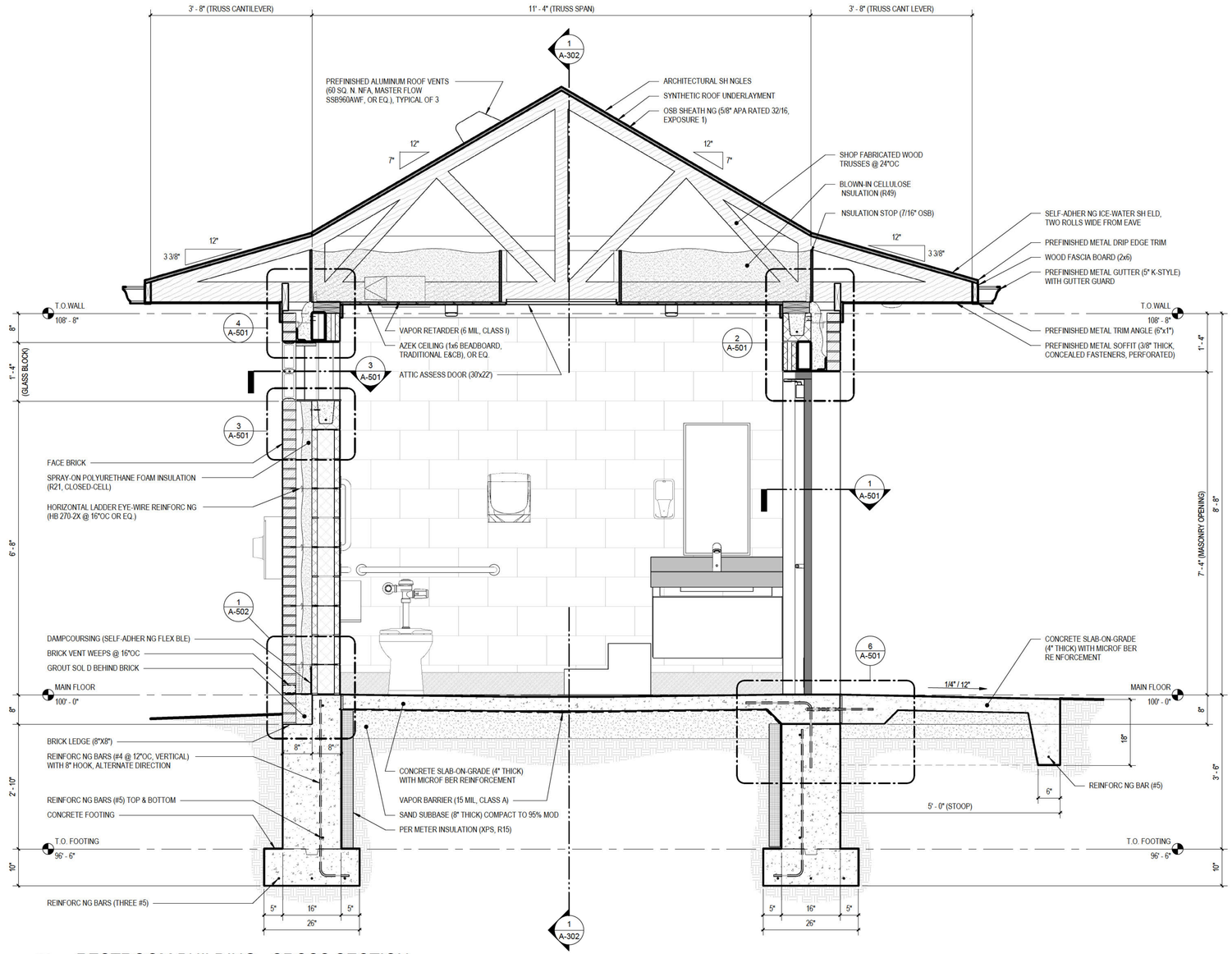
DRAWING INFORMATION: 860450 Saugatuck Mt Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO. 860451

A-201

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1 RESTROOM BUILDING - CROSS SECTION

3/4" = 1'-0"

0' 1' 2' 3' 4'

ARCHITECTURAL FF: 100'-0" = CIVIL FF: 600.00'

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT

BUILDING SECTIONS

DESIGN EAM:	PRO MNGR: YM
	DESIGNED BY: DAG
	DRAWN BY: DAG
	CHECK BY: SMB 12/31/2024

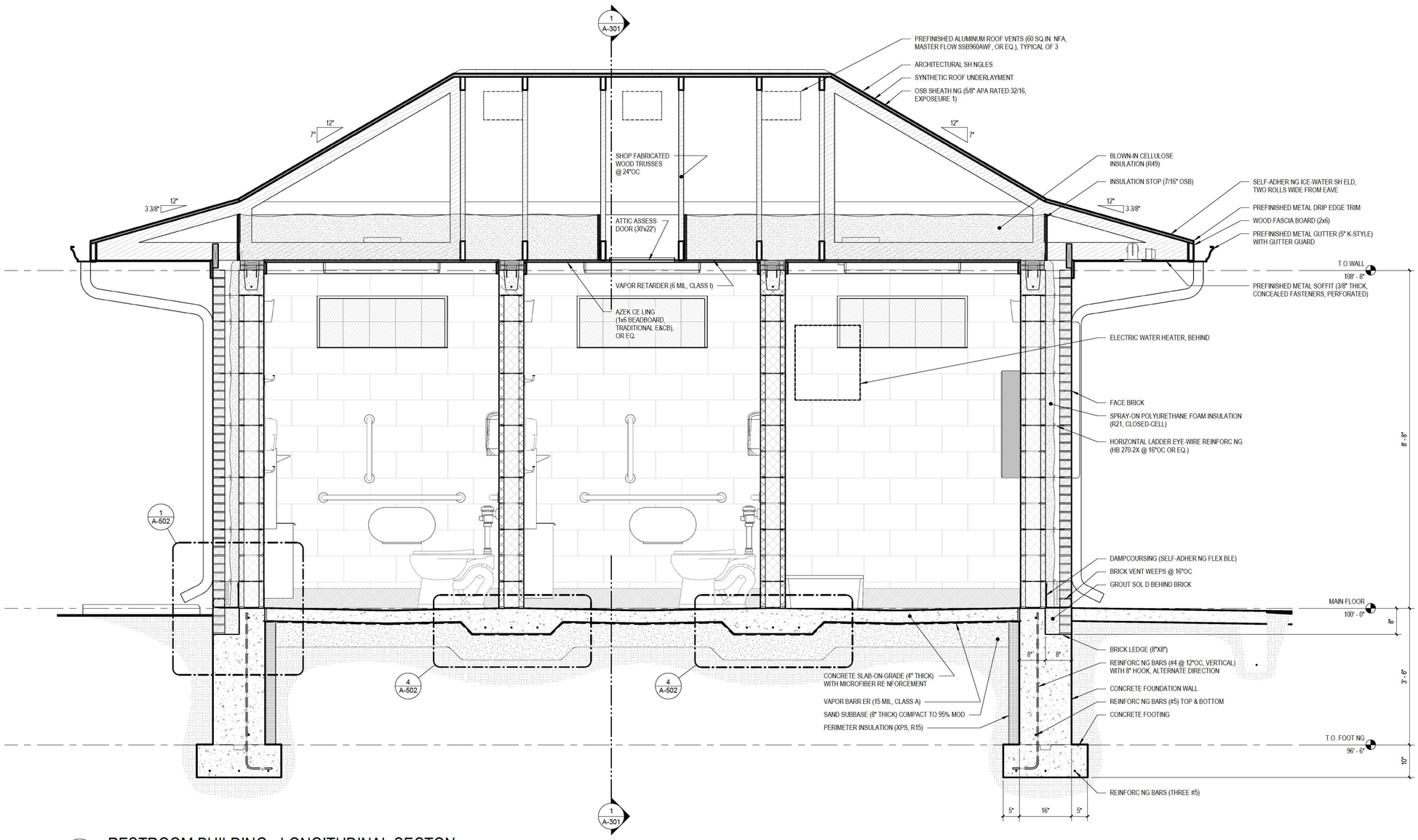
DRAWING INFORMATION:
860450 Saugatuck Mt Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO.
860451

A-301

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1 RESTROOM BUILDING - LONGITUDINAL SECTON

3/4" = 1'-0"

0' 1' 2' 3' 4'

ARCHITECTURAL FF: 100'-0" = CIVIL FF: 600.00'

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT

BUILDING SECTIONS

DESIGN: EAK	PRO. MNGR: VM
	DESIGNED BY: DAG
	DRAWN BY: DAG

CHECK BY:
SMB 12/31/2024

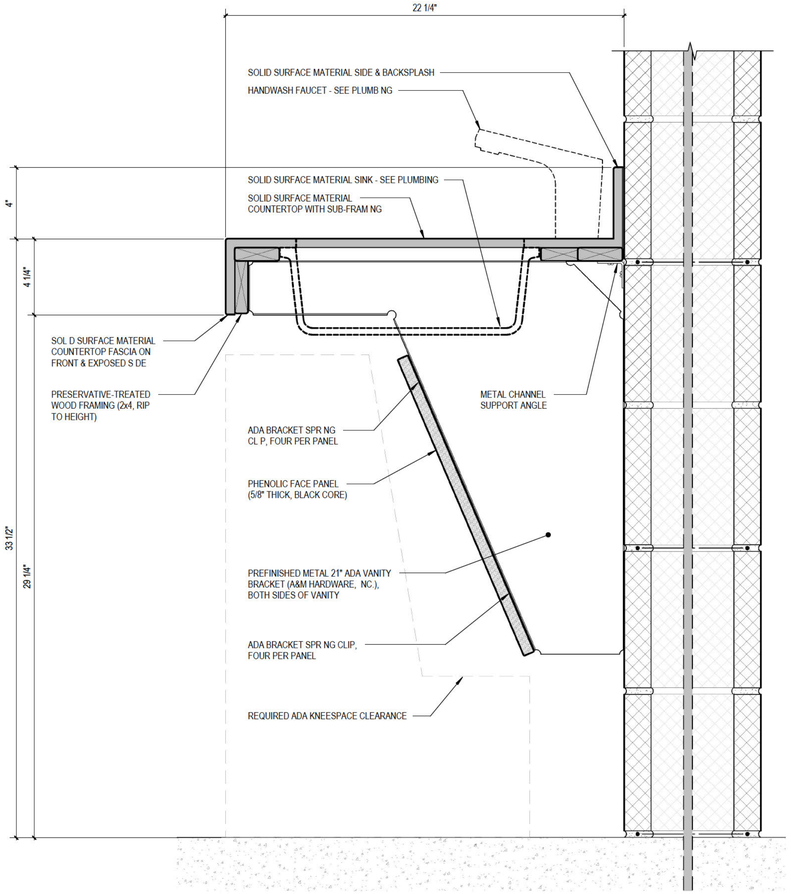
DRAWING INFORMATION:
860450 Saugatuck Mt Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO.
860451

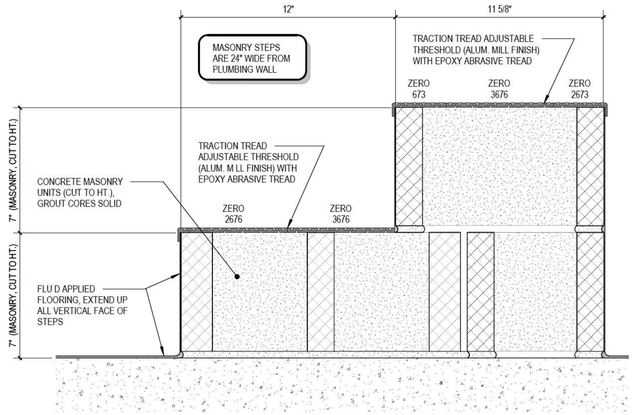
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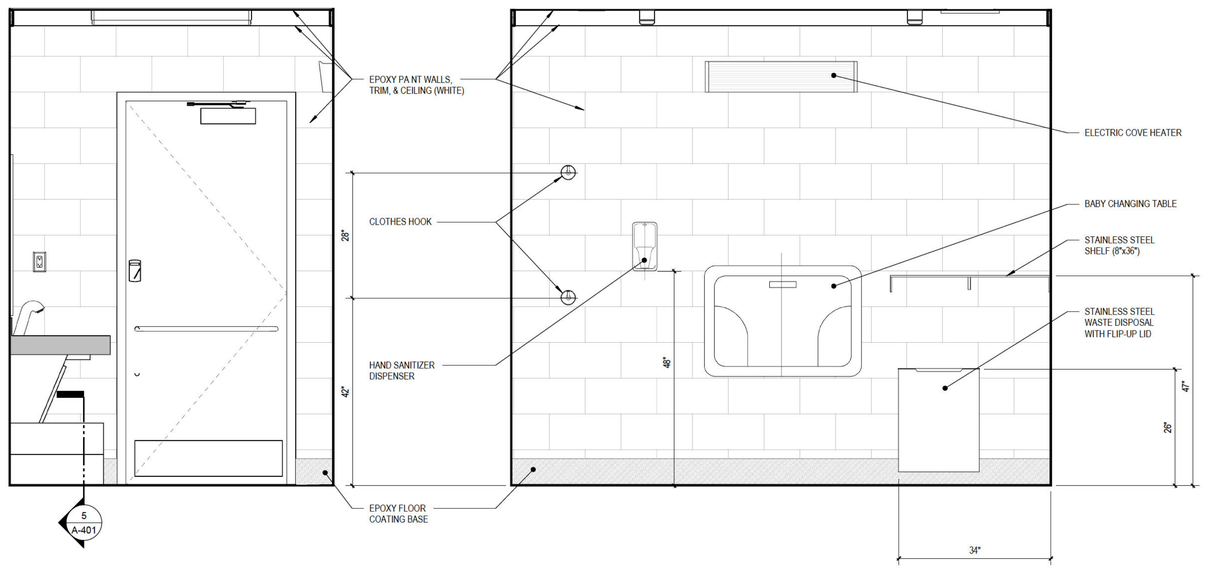
6 TOILET - LAVATORY COUNTER

3" = 1'-0"



5 RESTROOM STEPS - SECTION

3" = 1'-0"

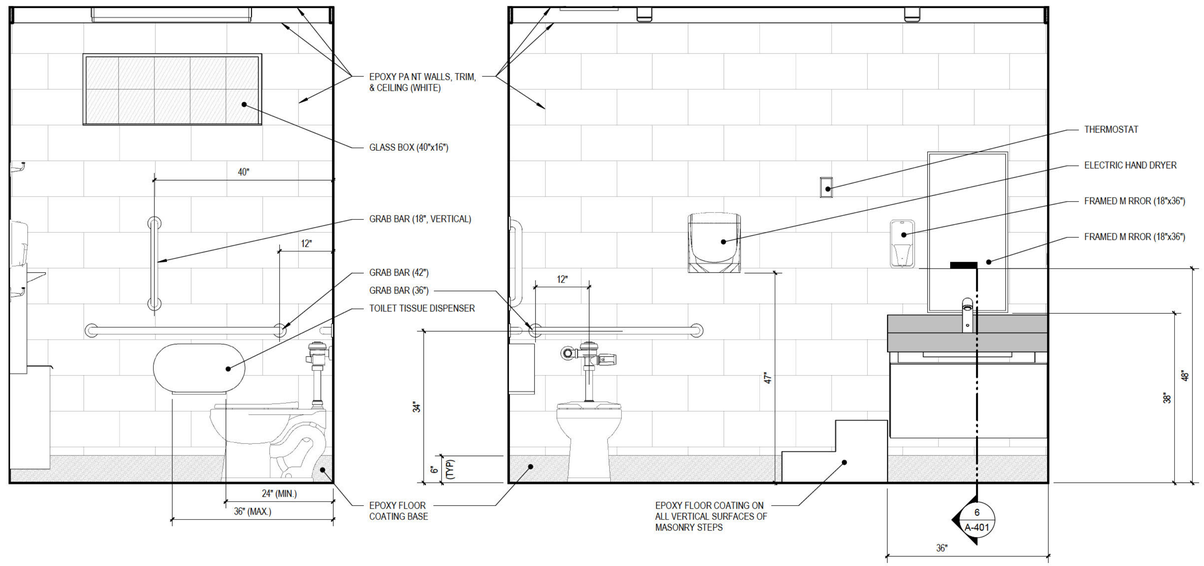


4 FRONT WALL ELEVATION

3/4" = 1'-0"

3 ACCESSORY WALL ELEVATION

3/4" = 1'-0"



2 BACK WALL ELEVATION

3/4" = 1'-0"

1 PLUMBING WALL ELEVATION

3/4" = 1'-0"

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT
INTERIOR ELEVATIONS & DETAILS

DESIGN EAM	PRO MNGR. VW
DESIGNED BY:	DAG
DRAWN BY:	DAG

CHECK BY:
SMB 12/31/2024

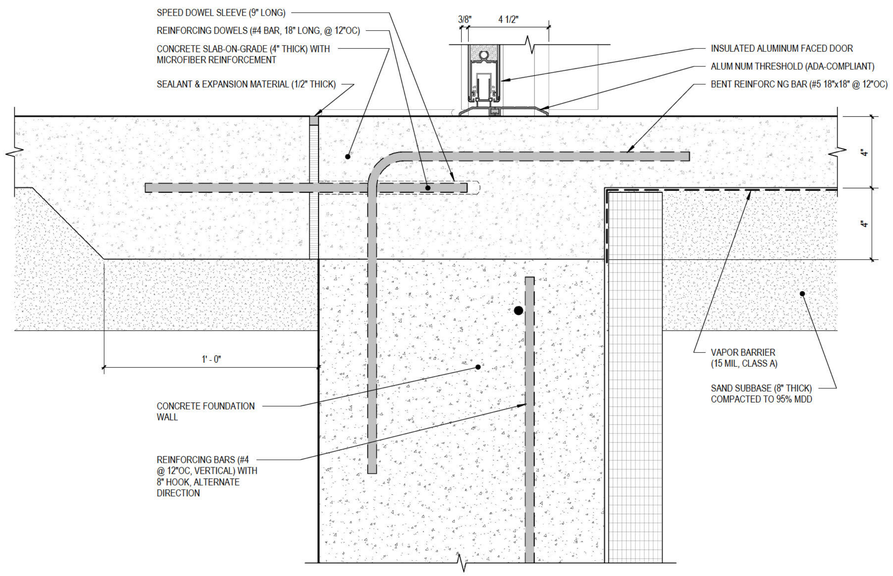
DRAWING INFORMATION:
860450 Saugatuck MI Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO.
860451

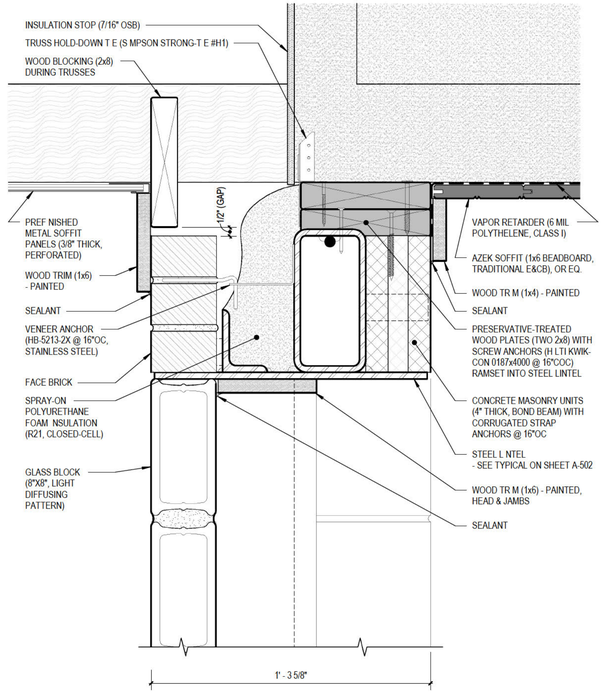
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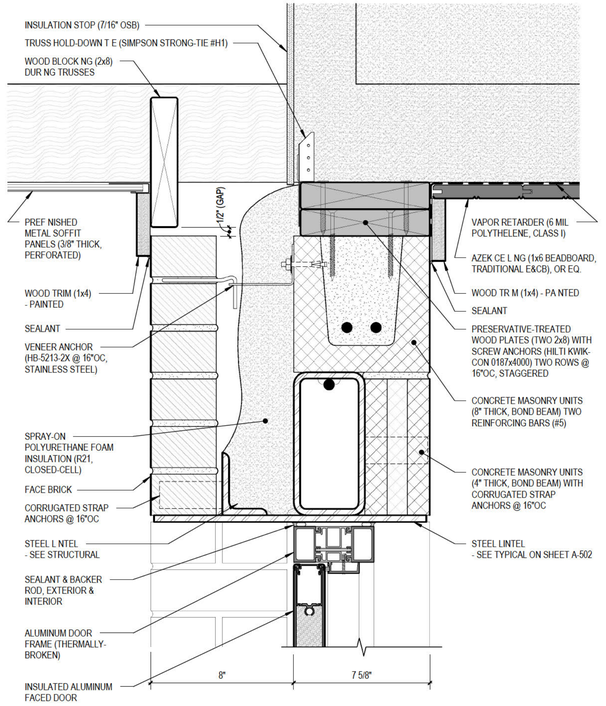
6 TYPICAL DOOR THRESHOLD

0 3" 6" 9" 1' — 3" = 1'-0"



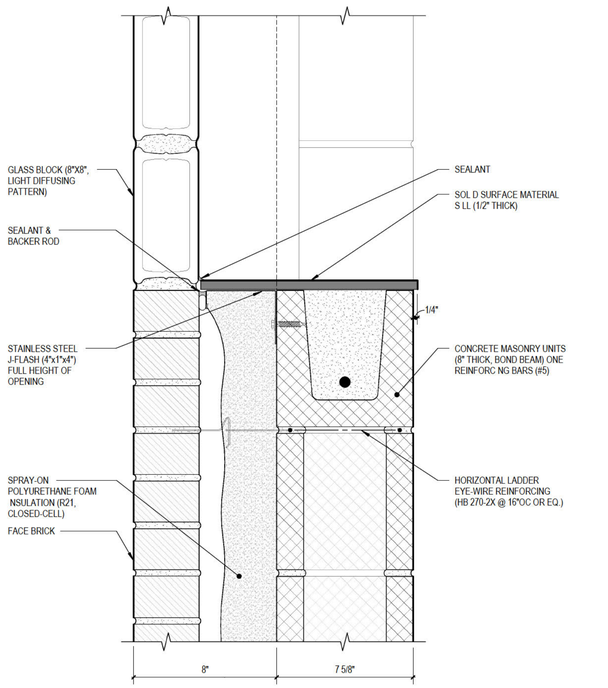
4 TYPICAL GLASS BLOCK HEAD

0 3" 6" 9" 1' — 3" = 1'-0"



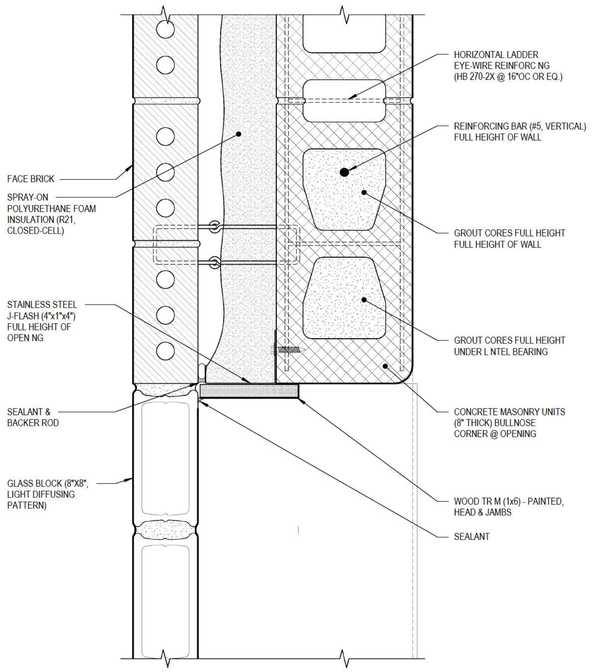
2 TYPICAL DOOR HEAD

0 3" 6" 9" 1' — 3" = 1'-0"



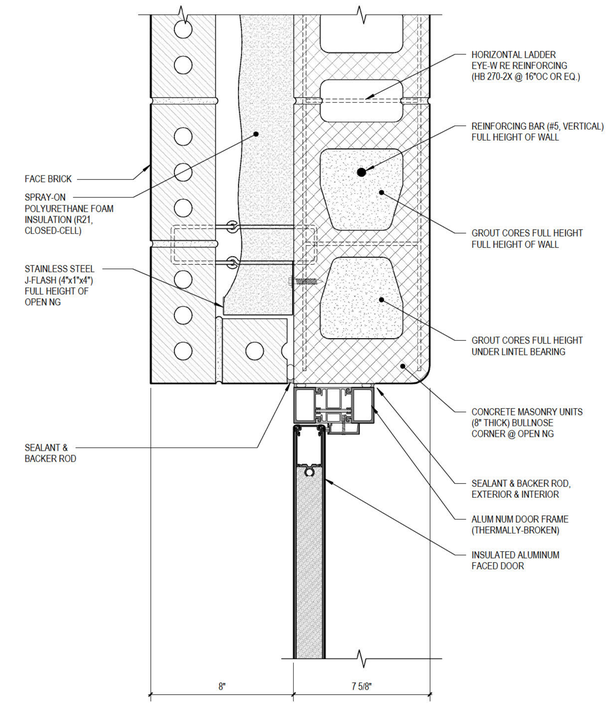
5 TYPICAL GLASS BLOCK SILL

0 3" 6" 9" 1' — 3" = 1'-0"



3 TYPICAL GLASS BLOCK JAMB

0 3" 6" 9" 1' — 3" = 1'-0"



1 TYPICAL DOOR JAMB

0 3" 6" 9" 1' — 3" = 1'-0"

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT
TYPICAL DOOR & WINDOW DETAILS

DESIGN: EAM | PRO: MINOR: VM | DESIGNED BY: DAG | DRAWN BY: DAG | CHECK BY: SMB 12/31/2024

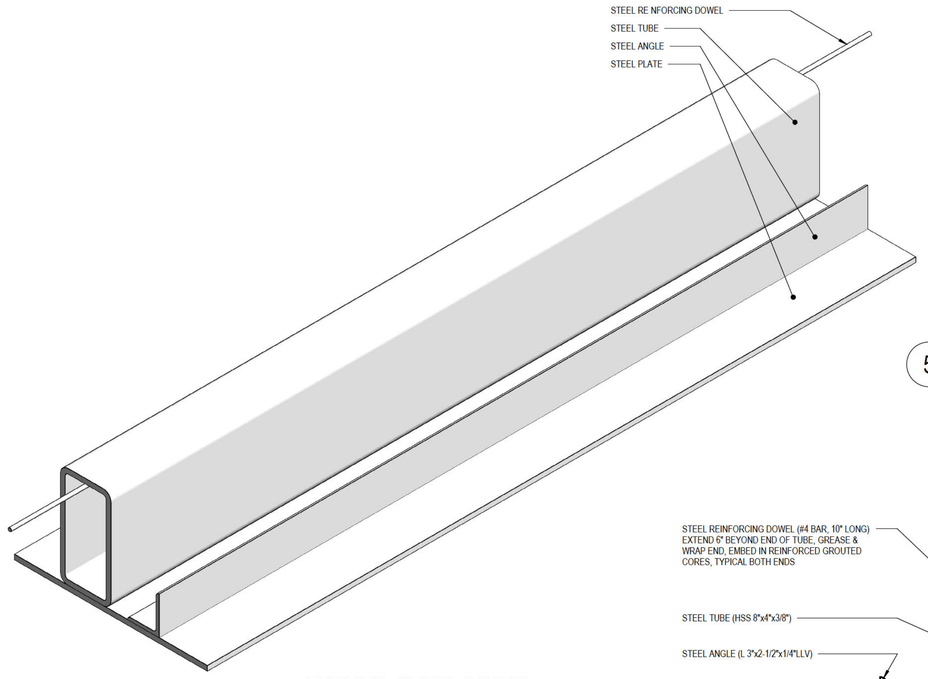
DRAWING INFORMATION: 860450 Saugatuck Mt Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO. 860451

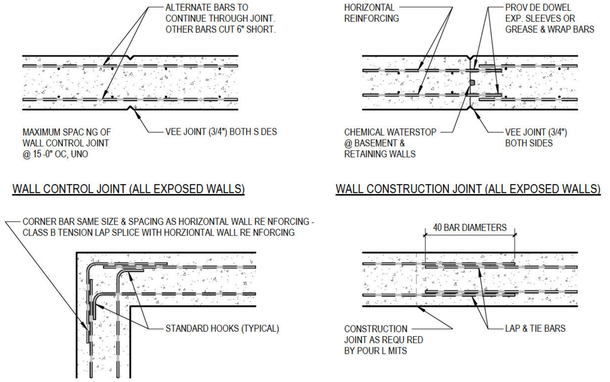
A-501

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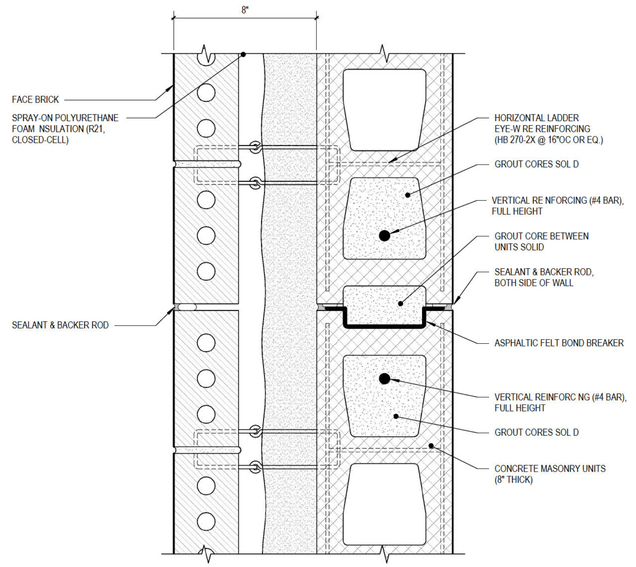
TYPICAL STEEL LINTEL

0 3" 6" 9" 1'



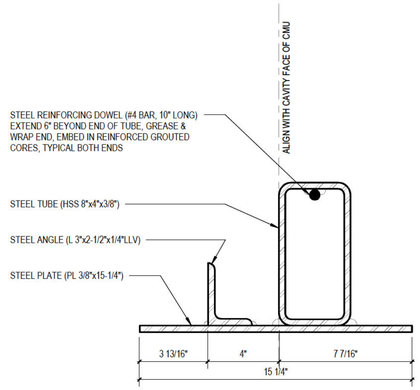
5 TYPICAL FOUNDATION WALL REINF. & JOINTS

0' 1' 2' 3' 4' 3/4" = 1'-0"



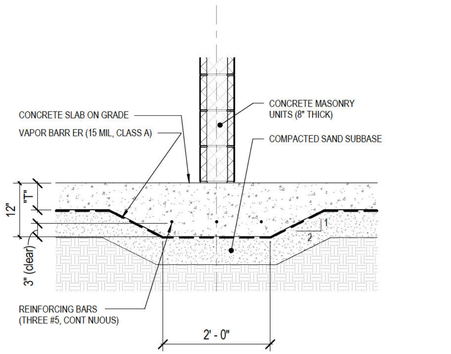
2 TYPICAL MASONRY CONTROL JOINT

0 3" 6" 9" 1' 3" = 1'-0"



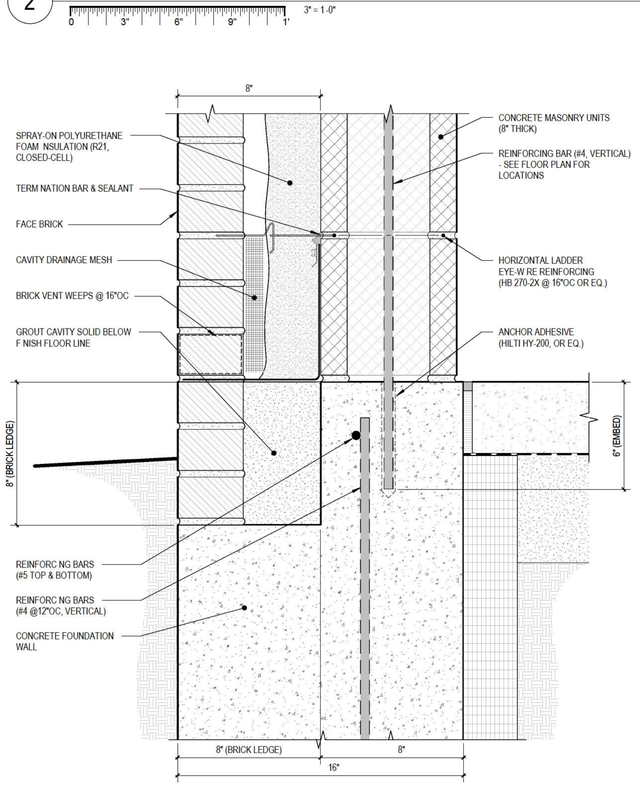
7 TYPICAL STEEL LINTEL

0 3" 6" 9" 1' 3" = 1'-0"



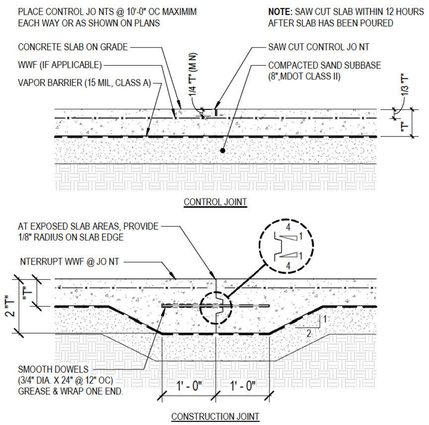
4 TYPICAL THCKEN SLAB

0' 1' 2' 3' 4' 3/4" = 1'-0"



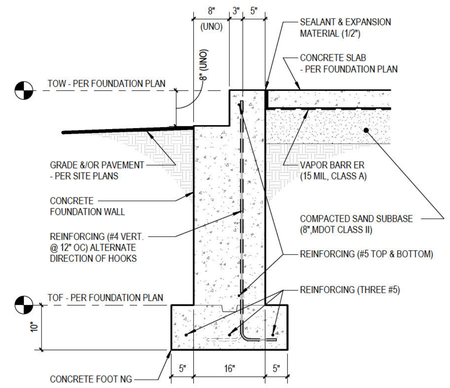
1 TYPICAL BASE OF WALL

0 3" 6" 9" 1' 3" = 1'-0"



6 TYPICAL SLAB ON GRADE

0' 1' 2' 3' 4' 3/4" = 1'-0"



3 TYPICAL FOUNDATION WALL

0' 1' 2' 3' 4' 3/4" = 1'-0"

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REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT
TYPICAL MASONRY & STRUCTURAL DETAILS

DESIGN EAM | PRO MINOR: VM | DESIGNED BY: DAG | DRAWN BY: DAG | CHECK BY: SMB 12/31/2024

DRAWING INFORMATION: 860450 Saugatuck Mt Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO. 860451

A-502

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Panel Load Sheet	
Project:	Saugatuck Mt. Baldhead Park Restrooms
Date:	Jan-25
Panel ID	PNL

Voltage:	120/240 Volt 1-phase 3-wire
Main Break	200/2
Main Lugs:	200 Amp
Mounting:	Surface
Location:	per Drawings

NEW SQUARE D NQ NEMA 1 PANEL

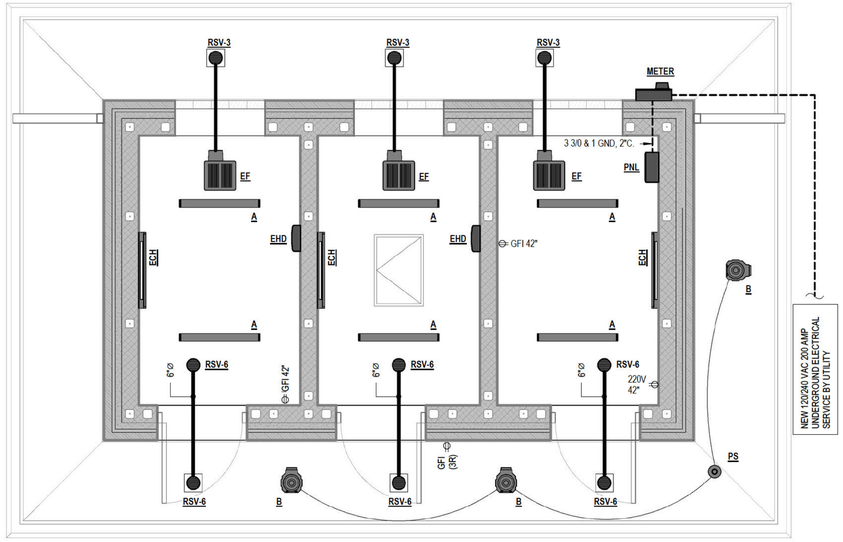
	Volt Amps							Volt Amps				
Ckt#	Lighting	Recpt's	Motors	Other	Description	Ckt. Brkr.	Ckt. Brkr.	Description	Other	Motors	Recpt's	Lighting	Ckt. #
1	0	720	0	0	Receptacles	20/1	30/2	Water Heater	2000	0	0	0	2
3	177	0	0	0	Building Lights	15/1							4
5	0	0	950	0	Electric Hand Dryer (South)	20/1	20/1	Cove Heaters	1680	0	0	0	6
7	0	0	950	0	Electric Hand Dryer (North)	20/1	20/1	Exhaust Fans	0	414	0	0	8
9	0	0	4800	0	240V Receptacle	20/2		Space	0	0	0	0	10
11								Space	0	0	0	0	12
13	0	0	0	0	Space			Space	0	0	0	0	14
15	0	0	0	0	Space			Space	0	0	0	0	16
17	0	0	0	0	Space			Space	0	0	0	0	18
19	0	0	0	0	Space			Space	0	0	0	0	20
21	0	0	0	0	Space			Space	0	0	0	0	22
23	0	0	0	0	Space			Space	0	0	0	0	24
TOTAL	177	720	6700	0					3680	414	0	0	TOTAL

Total Load (KVA): 11.7

Amps: 48.9

Short Circuit Rating: 10,000A ASC

TOTALS	3680	7114	720	177
CONT. LOAD MULTIPLERS	1	1	1	1.25
LOAD TOTALS	3680	7114	720	221



RESTROOM BUILDING - MECHANICAL/ELECTRICAL PLAN

0 1" 2" 3" 3/8" = 1'-0"

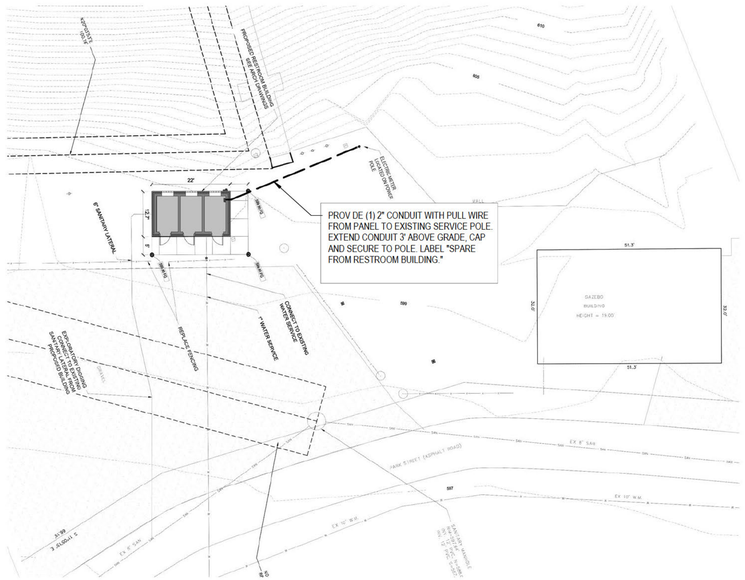
NORTH

Mechanical & Electrical Legend

A	LED strip light fixture with integral motion sensor (surface mounted): Lithonia CSS-L48-4000L-SFR7CSS; or Architect approved equivalent.
B	LED downlight fixture (recessed): Lithonia LDN6-30/07-L06-WR-LSS-TRW-MVOLT-GZ10; or Architect approved equivalent.
ECH	Electric cove heater: King Electric KCV1206 (White), 560w, 4.7A, 120V with thermostat KCVT-1L; or Architect approved equivalent.
EF	Exhaust fan: Broan-NuTone 671 (70 CFM,120V, 1.15 amp); or Architect approved equivalent, continuously operating.
EHD	Electric hand dryer: World Dryer VERDEdri Q-973A2 (120 VAC, 15 amp, 950 watts, dedicated circuit); or Architect approved equivalent.
PNL	Service entrance rated electric panel: 200 AMP, 120/240 VAC, 1-phase, 24-space, surface mounted.
PS	Photocontrol sensor: Dark To Light DSW124; or Architect approved equivalent.
RSV-3	Soffit vent (3"Ø) with insect screen: Active Ventilation RSV-3-WT; or Architect approved equivalent. Attach vents to sheathing, & cut finish soffit board around opening.
RSV-6	Soffit vent (6"Ø) with insect screen: Active Ventilation RSV-6-WT; or Architect approved equivalent. Attach vents to sheathing, & cut finish soffit board around opening.
GFI	Ground fault interrupter receptacle. Mounting height in inches, floor to centerline of receptacle.
GFI (R3)	Ground fault interrupter receptacle with NEMA 3R in use cover. Mounting @ 16" AFF to bottom.
220V 42"	220V (20A) receptacle with NEMA 3R. Mounting @ 42" AFF to bottom. Coord. configuration with Owner.

Conduit & Wire Schedule

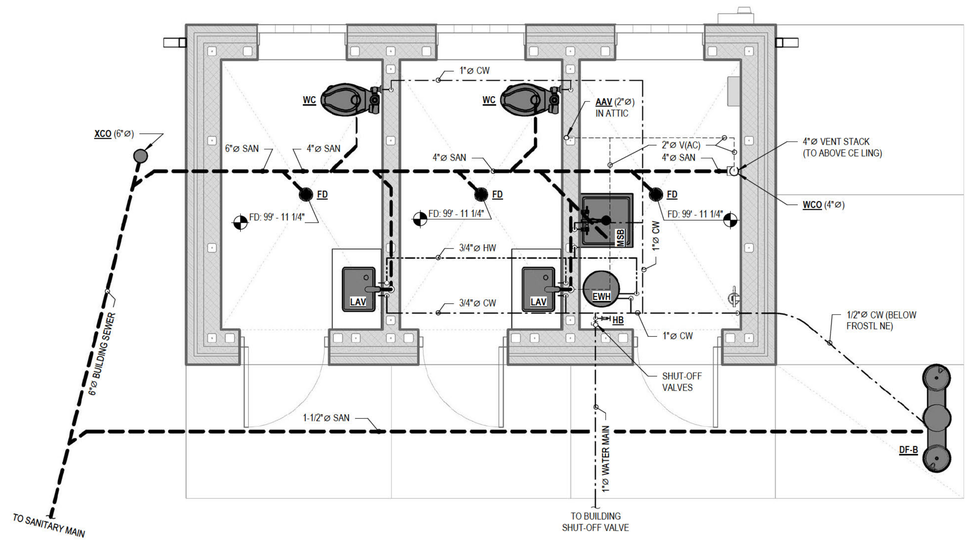
Circuit Size	Wires	Ground	Conduit
15A	2# 14	1 #14	1/2"
20A	2# 12	1 #12	1/2"
30A	2# 10	1 #10	1/2"



ELECTRICAL SITE PLAN

0 20' 40' 60' 1" = 20'-0"

NORTH



RESTROOM BUILDING - PLUMBING PLAN

0 1' 2' 3' 4' 5' 6' 7' 8' 3/8" = 1'-0"

NORTH

Minimum Size Connection

Fixture	San.	HW	CW	Vent
Water Closet (Flush Valve)	4"	-	1"	2"
Lavatory	1-1/2"	1/2"	1/2"	1-1/4"
Drinking Fountain	1-1/2"	-	1/2"	-
Mop Service Basin	3"	3/4"	3/4"	1-1/2"
Floor Drain	2"	-	-	1-1/2"
Electric Water Heater	-	-	3/4"	-
Hose Bib	-	-	3/4"	-

Plumbing Legend

AAV	Air admittance valve: Oatey Sure-Vent (2" dia.); or Architect approved equivalent. Mount @ 18" above Truss Bearing.
CO	Floor clean out: Jay R. Smith 4151LS-U, or equivalent by Josam, MIFAB, Tyler Pipe, Zurn. Size same as connected drainage pipe, U.N.O.
CT	Stainless steel cleaning table (custom fabrication): pre-rinse sprayer T&S Brass B-133-LB, or Architect approved equivalent. Zurn Z8741-SS-17 basket strainer.
DF-B	Dual height drink fountain with bottle filler: Murdock Mfg. #GYQ84, with freeze-resistant options; or Architect approved equivalent.
ECH	Electric Cove Heater: King Electric KCV1206 (White), 560w, 4.7A, 120V with thermostat K1021/102; or Architect approved equivalent.
EF	Exhaust fan: Broan-NuTone 671 (70 CFM,120V, 1.15 amp); or Architect approved equivalent.
EWH	Electric water heater: Rheem PRO10 1 RH POU (240V, 2000w); or Architect approved equivalent. Mount bottom @ 54" AFF.
FD	Floor drain (2" dia. outlet): Jay R. Smith 2005-AHP06NB; or Architect approved equivalent, with barrier trap seal device.
HB	Mild climate anti-siphon sillcock: Jay R. Smith 5673; or Architect approved equivalent.
LAV	Solid surface lavatory: Corian 8256 (accessible) with metering faucet (Chicago Faucet 807-665PSHABCP), mixing valve (Chicago Faucet EVR-13KJKABNF), & fittings; or Architect approved equivalent.
MSB	Mop sink basin: Fait MSB 2424 with faucet (American Standard 8354.112) & fittings; or Architect approved equivalent.
WC	Floor mounted water closet with dual-flush manual flush valve (1.1/1.6 GPF): Kohler Highcliff Ultra K96057 with Sloan WES 111; or Architect approved equivalent (seat height in compliance with ADA accessibility requirements).

FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.
2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1005

Bids & Construction 01/2025 JVM 1

REVISION:

CITY OF SAUGATUCK
MOUNT BALDHEAD PARK
RESTROOM BUILDING REPLACEMENT
RESTROOM BUILDING MECHANICAL/ELECTRICAL

DESIGN: EAM	PRO. MNGR: VM
DESIGNED BY: DAG	DRAWN BY: DAG

CHECK BY: SMB 12/31/2024

DRAWING INFORMATION: 860450 Saugatuck Mt Baldhead Restrooms.rvt

JANUARY 2025

F&V PROJECT NO. 860451

ME101

M:\Projt\60001-90\10000\860451 Saugatuck Mt Baldhead Restroom\CadRevit\860451 Saugatuck Mt Baldhead Restrooms.rvt

1/13/2025 3:29:07 PM

City Council Agenda Item Report

FROM: Ryan Cummins, City Manager

MEETING DATE: January 22, 2025

SUBJECT: Renaming Old Airport Property

DESCRIPTION:

This spring, with donated dollars, the Outdoor Discovery Center will be completing the parking lot, trail work, platform, and signage for the Old Airport Property.

As this property is opened up to the public, Council should consider whether a name change for the property is appropriate. Options to develop a new name for the property could include any one or combination of the following:

- Staff recommendations.
- Request to Parks and Public Works Committee for a recommendation.
- City Council brainstorming.

City Council will make the final decision on any name change. Staff seeks Council feedback on your desire to rename the property and process to be used.

LEGAL REVIEW:

Legal will be at your meeting to answer any questions you may have.

SAMPLE MOTION:

N/A. Workshop item at this time.

Date: December 20, 2024

To: Saugatuck Township c/o Lynee Wells

3461 Blue Star Highway

P.O. Box 100

Saugatuck, Michigan 49453

From: Nate Bosch, LLA, LEED AP

ODC Network

RE: Outdoor Discovery Center – Former Saugatuck Airport Improvements

About the ODC Network
ODC Network is a non-profit organization committed to connecting communities to the outdoors through conservation and education. We prioritize creating experiences in nature for people of all ages, working with public schools, community organizations, governments, non-profit organizations, and private institutions to create a unique model for education. A specific component of this mission is through conservation and constructing facilities that offer access to the outdoors.

Objectives
The overall objective is to activate this public land for community use. Improvements / updates to the site include renovating the existing aggregate parking area to create clarity for visitors, a new trailhead sign for interpretation and wayfinding, invasive species removal, trail clearing and improvements, and a small deck lookout.

Structures
A small deck platform will be constructed as part of the improvements. The likely size will be approximately 20x20'. The location is shown on the plan sheets.

Timetable
The ODC Network anticipates construction beginning in early spring of 2025, with completion anticipated in late spring, 2025.

Contact Information
Nate Bosch
nate@outdoordiscovery.org



Notes:

10.10.2024 - OWNER REVIEW

AIRPORT TRAIL SYSTEM

63RD STREET, SAUGATUCK MICHIGAN

OVERALL
SITE PLAN

Scale: 1" = 200'

Date: 10/10/2024

Drawn By: NATE B

L1.0



Notes:

10.10.2024 - OWNER REVIEW

AIRPORT TRAIL SYSTEM

63RD STREET, SAUGATUCK MICHIGAN

PARKING AREA
SITE PLAN

Scale: 1" = 20'

Date: 10/10/2024

Drawn By: NATE B

L1.1

City Council Agenda Item Report

FROM: Luke Thompson, Director of Planning/Zoning

MEETING DATE: October 23, 2024

SUBJECT: Hardscaping in Right of Way Request – 560 Mill Street

DESCRIPTION:

In September of 2024, staff received a retroactive right of way application for the installation of existing hardscaping on Simonson Dr. They have submitted the attached request to allow the decorative hardscaping such as a water fountain and sprinklers on site to remain but have agreed to remove the stone wall which runs along Simonson Dr. The owner estimates that the existing hardscaping is situated within 20ft of the Southeast property line (Exhibit A).

Recently, a neighboring property had a retroactive request for hardscaping denied. There are some key differences between the properties such as the encroachment of Mill St onto the applicant's property. However, due to the length of time the encroachment has been in place, the City likely has equitable title and the property owners could be viewed as similarly situated.

The City's new hardscaping policy prohibits decorative concrete, boulders, permanent planter pots and fountains from being constructed in the right of way. However, the new ordinance states City Council "may issue a permit for a use prohibited under the Policy that has been installed or constructed prior to the implementation of this Section."

Permit applications shall be assessed by the City Council based upon the following criteria:

(1) The proposed cost of installation;

(2) The potential risk of harm associated with such installation, including, but not limited to potential for the installation to encroach on the motorway, break, malfunction, and cause harm to pedestrians and motorists;

(2) The ease and cost of removal of the installation;

(4) Whether the installation aligns with the surrounding area and provides an aesthetic benefit to the community;

(5) Whether the installation pre-exists the passage of this Ordinance;

(6) The proposed size of the installation, including height and width;

(7) The material of the installation (i.e. plant matter, wood, brick, mulch, and plaster); and

(8) Review, comment, and recommendations of City staff and departments.

The City Engineer reviewed and noted the following if Council were inclined to approve the request:

- The hardscaping should be pulled back, not necessarily to the property line, but at least enough to allow for parallel parking along the Simonson Street frontage away from Mill Street and better clear vision at the intersection.
- Any approval should come with a requirement to keep bushes, shrubs and other visual obstructions (individual trees can probably be exempted, based on the nature of the intersection) trimmed down below a driver's eye. 3.5 feet is commonly used for sight distance analyses, so I would suggest 3 feet as the maximum height for bushes, shrubs and other visual obstructions in the clear vision area here.

LEGAL REVIEW:

The City Attorney has reviewed and will be available at your meeting to answer any questions you may have.

SAMPLE MOTIONS:

Workshop item at this time. Motion will be drafted based on Council feedback at the workshop.

Exhibit A


60 Simonson Dr
57-051-001-21
57-051-001-20
20 ft
57-051-001-22
60 Mill St

ROW Permit Fee: $150
Temp ROW Permit Fee: $75
Street Cut/Curb Cut Escrow Deposit: $3000
Installation Bond/Escrow: Superintendent Discretion
ROW Permit – Council Review: $250

RIGHT OF WAY PERMIT APPLICATION

Applicant Information	
Name: Tim Tamer	Business or Organization: Tammy Veere [redacted]
Address: 560 Mill street	Phone: [redacted]
E-mail: [redacted]	
Contractor:	

Project Information	
Request Type (select all that apply):	☐ Street Cut ☐ Curb Cut ☐ Boring ☐ Stormwater Connection ☐ Sidewalk Closure ☐ Sidewalk Removal/Replacement ☐ Installation ☒ ~~Temporary~~ Encroachment
Project Location: 560 Mill St	
Description of Work/Project/Installation:	
Lease of land on Simonson in trade of road enchroachment of 9 feet	
on Mill street. Owner to remove stone curb along the Simonson side	
Cost of Installation:	
Safety Measures:	
Start Date: September 2, 2024	End Date: ~~December 30, 2024~~ 100 yr.

Checklist	
Attachments (select all that apply):	☑ Survey, Site Plan and/or Drawing ☐ Traffic Control Plan ☐ Certificate of Insurance naming City of Saugatuck as additional insured

Attestation

By signing this application, I understand and agree to all of the following:

- The statements made in this application and submitted plans are true, and if found not to be true, any permit that may be issued may be void.
- To comply with the conditions and regulations provided with any permit that may be issued.
- This application shall be deemed an agreement by the applicant to promptly complete the work permitted, observe all pertinent laws and regulations of the City in connection therewith, repair all damage done to the street surface and installations on, over or within the street, including trees, and protect and save harmless the City from all damages or actions at law that may arise or may be brought on account of injury to persons or property resulting from the work done under the permit or in connection therewith.
- To indemnify and save harmless the City against all damages or actions at law that may arise or be brought by reason of the excavation or structure being under, over, in or upon the street, or being unfastened, out of repair or defective during the ownership or control.
- An issued permit may be revoked by the City Council if there is a failure to abide by the conditions set forth in the permit or maintain the installation. A permit is automatically revoked if the installation causes or inflicts unreasonable harm on persons or property.
- Encroachments and obstructions in the street may be removed and excavations refilled, and the expense of the removal or refilling charged to the abutting landowner when made or permitted by him or her or suffered to remain by him or her otherwise than in accordance with the terms and conditions of the City of Saugatuck Code of Ordinances.
- All applicable sections of the City of Saugatuck Code of Ordinances and all other applicable laws, ordinances and regulations will be complied with.
- This is a permit application (not a permit) and a permit, if issued, does not include any representation or conveyance of rights in any other statute, building code, fire code, deed restriction or other property rights.

Applicant Signature: Timothy J Tanner	Date: 08-30-2024

ADDITIONAL INFORMATION

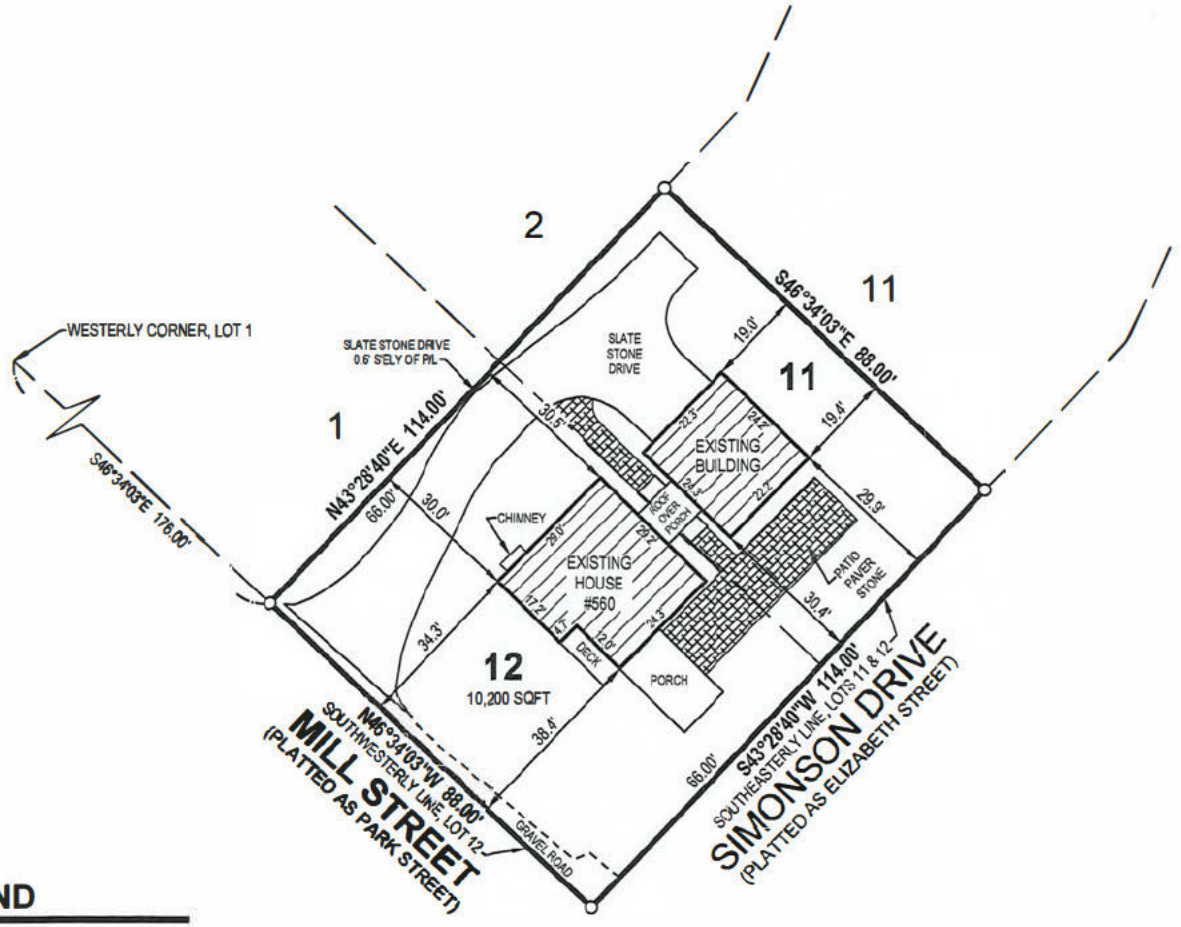
Street Cuts
Each street cut shall be at the applicant's expense with no cost to the City of Saugatuck. An escrow deposit for engineer monitoring and inspection costs shall be submitted in accordance with the City fee schedule. The unused remainder of the escrow deposit will be returned. If the deposit does not cover all costs and expenses of the City, the deficit shall be paid by the applicant. One week prior to initiating the work, contact the City's engineering firm (Fleis & Vandenbrink) via the contact information listed below to schedule the necessary inspections for your project.

Jon Moxey
Fleis & Vandenbrink
jmoxey@fveng.com
O: 616.977.1000 | D: 616.588.1925 | C: 616.262.8717

Curb Cuts
Curb cuts may require engineer inspection and monitoring. If monitoring and inspection is required, an escrow deposit will be required. No single curb cut shall exceed 25 feet, nor be less than ten feet at the street line nor less than eight feet at the outside sidewalk line. The minimum distance between any curb cut and a public crosswalk shall be five feet. The minimum distance between curb cuts, except those serving residential property, shall be 25 feet. The maximum number of lineal feet of sidewalk driveway crossings permitted for any lot, parcel of land, business or enterprise shall be 45% of the total abutting street frontage up to and including 200 lineal feet of street frontage plus 20% of the lineal feet of street frontage in excess of 200 feet. The necessary adjustments to utility poles, light standards, fire hydrants, catch basins, street or railway signs, signals or other public improvements or installations shall be accomplished without cost to the City. Driveways over sidewalk lines shall be of concrete at least six inches thick. Driveway aprons between the sidewalk and the street shall be of concrete six inches thick.

Temporary Encroachments
Items such as dumpsters and trailers must be visible to motorists and pedestrians by means of reflectors, cones, and/or barricades. They must be placed so as to not impede access to a fire hydrant or block or impair traffic flow in the street or a motorists' line of sight.

Miss Dig
The permittee must comply with the requirements of PA 53 of 1974, as amended. CALL MISS DIG AT 811 or (800) 482-7171 AT LEAST THREE (3) FULL WORKING DAYS, BUT NOT MORE THAN TWENTY-ONE (21) CALENDAR DAYS, BEFORE YOU START WORK. The permittee assumes all responsibility for damage to or interruption of underground utilities.



LEGEND

O Iron - Found

Existing Building

We hereby certify that we have examined the premises herein described, that the improvements are located entirely thereon as shown and that they do not encroach except as shown hereon.

This survey was made from the legal description shown above. The description should be compared with the Abstract of Title or Title Policy for accuracy, easements and exceptions.

DESCRIPTION

Land Situated in the State of Michigan, County of Allegan, City of Saugatuck.

Lots 11 and 12, Block 1, Bandies Addition, according to the recorded plat in Liber 2 of Plats, Page 16, Allegan County Records, described as: Beginning at a point on the Southwesterly line of Lot 12, distant South 46 degrees 34 minutes 03 seconds East 176.00 feet from the Westerly corner of Lot 1 and proceeding thence North 43 degrees 28 minutes 40 seconds East 114.00 feet; thence South 46 degrees 34 minutes 03 seconds East 88.00 feet; thence South 43 degrees 28 minutes 40 seconds West 114.00 feet along the Southeasterly line of Lots 11 and 12; thence North 46 degrees 34 minutes 03 seconds West 88.00 feet along the Southwesterly line of Lot 12 to the point of beginning.

(Chicago Title, Commitment No. 031185213RTA, dated August 4, 2022)

SCHEDULE B - SECTION II NOTES

No survey matters to depict.

STATE OF MICHIGAN
Scott A Hendges
License No. 4001047953
LICENSED PROFESSIONAL SURVEYOR

By: Scott A. Hendges

Scott A. Hendges Licensed Professional Surveyor No. 4001047953

SCALE: 1" = 30' 0' 15' 30' NORTH

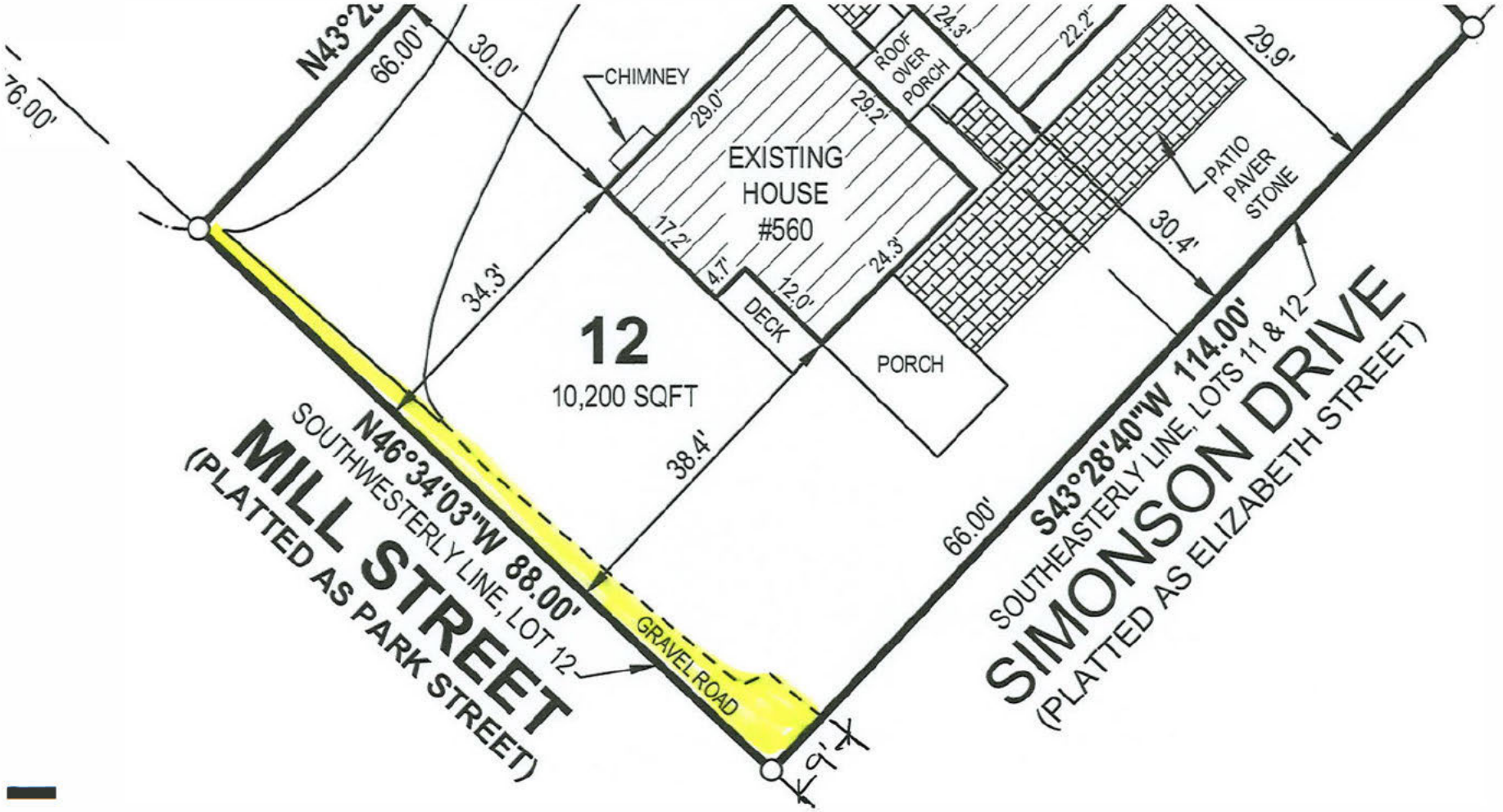
Beacon Sotheby's International Realty
Chad Van Horn
233 Butler Street
P.O. Box 217
Saugatuck, MI 49453

560 Mill Street

DRAWN BY: JR DATE: 8.17.22 PRJ #: 22201317
REV. BY: REV. DATE:
REV.:
1 OF 1

NEDERVELD
www.nederveld.com • 800.222.1868
Holland
347 Hoover Blvd.
Holland, MI 49423
Ann Arbor, Chicago, Columbus, Grand Rapids, Indianapolis

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N43°2
16.00'
66.00'
30.0'
CHIMNEY
29.0'
29.2'
ROOF OVER PORCH
24.3'
22.2'
29.9'
EXISTING HOUSE #560
PATIO PAVER STONE
17.2'
4.7'
12.0'
24.3'
30.4'
34.3'
12
10,200 SQFT
DECK
PORCH
38.4'
66.00'
N46°34'03"W 88.00'
SOUTHWESTERLY LINE, LOT 12
MILL STREET
(PLATTED AS PARK STREET)
GRAVEL ROAD
9'±
S43°28'40"W 114.00'
SOUTHEASTERLY LINE, LOTS 11 & 12
SIMONSON DRIVE
(PLATTED AS ELIZABETH STREET)

ding



1st Year 2009



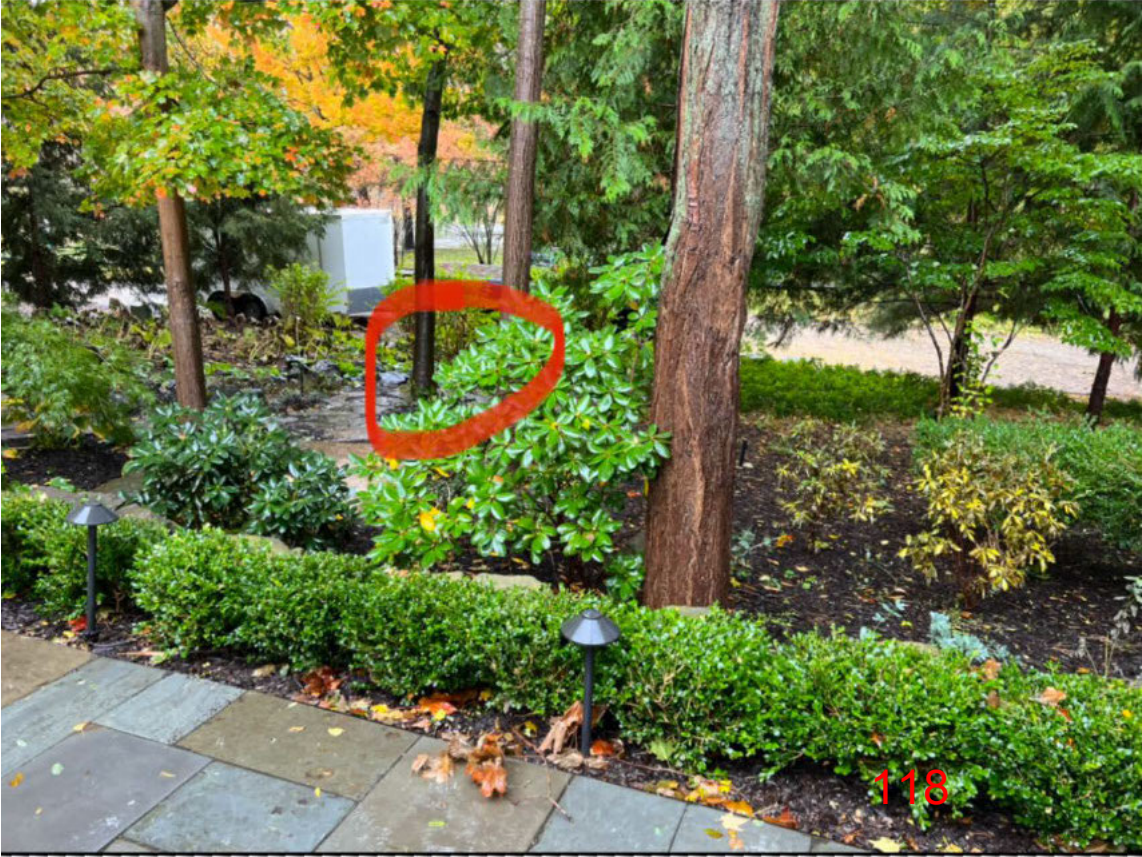

Mill St
560 MILL ST
57-051-ROW
Mill St
Simonson Dr
Goshorn Creek
Remove? Hedgerow
Mill St
Simonson Dr
SPEAR ST
Goshorn Creek
Goshorn Creek
Simonson Dr
Goshorn Creek
2024 GIS MAP


90KR92
Remove?
8-29-24


Remove?
8 29 2024

2004 Same


117


118


119


120


121




123


124


125

HOUSE

GARAGE

DECK

AC

TURF

TURF AREA

PORCH

31'

TURF AREA

TURF AREA

2-3' DEEP

12'

30'

EXISTING WALL

MILL STREET

SIMONSON DRIVE







Ryan Cummins

From: wend[redacted]
Sent: Sunday, January 19, 2025 2:59 PM
To: Ryan Cummins; Holly Anderson; llstanton@saugatuckcity.com; Joe Clark; Russ Gardner; Chris Peterson; Scott Dean; Gregory Muncey
Cc: Brandon Simon; Meyer, Christian; Scott Herbert; Jon Moxey
Subject: Background Information for Voting on Maple Street Project

Caution: This email originated from outside of the organization. DO NOT click on links or open attachments unless you recognize the sender and know the content is safe.

Hi everyone,

Before you vote on whether or not to include drainage repairs on the Maple Street project, please review the background of the drainage and erosion problem at the corner of Maple and Mason Streets, and also access the photos and videos of a current rain event on the Dropbox link below.

I was hoping the recent repairs to the drainage along the side streets abutting Mason Street would help, but unfortunately, they have not.

I invite the new members of the council and the new city manager to walk my property at 208 N. Maple Street in order to get a feel for the true extent of the problem. Those who have already walked the property are welcome to see it again.

The Dropbox link below gives you access to a few photos and videos of current rain events in progress for a clearer picture of the problem. PLEASE, AT THE VERY LEAST, WATCH THE VIDEOS. Your city email addresses will be linked to the access.

https://www.dropbox.com/scl/fo/qzon6mvpb81lr62ajkgv0/ABSHqHeSKcoSBGPSKlQpWcE?rlkey=m5zslq6cgoy6hdoov2q1ujr4n&st=4a503e5v&dl=0

To assist in your decision, included is a summary and rough timeline of the issue.

Summary of the Problem

To summarize, as a result of streetscape modifications over the past years along Maple and Mason Streets (including adding a lip to the edge of the road to direct the runoff to the spillway on the corner by my house and filling in drainage ditches) the amount of water and the velocity at which it flows during heavy rainstorms has increased significantly in the stream alongside my house.

With the increase in volume and velocity of the runoff, coupled with the removal of natural features that contain run off and slowly drain water, the water is completely undercutting the bank on which my house

sits and the other side as well. I've had to remove trees on the other side of the bank, so they don't fall on the house when the soil disappears under the roots. You'll notice the large tree on a 45 degree angle along Mason Street that has been impacted by the erosion.

A lip that was added to Mason Street removed the natural water shedding process, and instead created a rush of water down both sides of the street and into the drain area on the corner of Maple Street and Mason Street. Natural water shedding was further interrupted when a storm sewer was installed in the ditches along Maple Street and directed to the base of the spillway, again at the corner of Maple Street and Mason Street.

This enormous influx of water during heavy downpours comes from the top of the Mason Street hill, a couple of side streets along Mason Street, and Maple Street (from Allegan Street to Mason Street). This collection of water rushes at such a force that it's undercutting the stream bank on both sides and putting my house in jeopardy either from the bank collapsing under my porch or trees falling on the other side.

I sought help from Kirk Harrier in 2019 to help find a solution. Over the past years the city has altered the drain and spillway on the corners of Maple Street and Mason Street, installed rip rap at the drain entrance, and most recently completed some changes to the side streets along Mason Street. At my own expense, I have installed rip rap on a section of the bank closest to my house and gutters, cut down trees, and also hired an engineer and lawyer to help.

Though this was a start to help mitigate the problem, I was told by Janelle Hohm from EGLE, "The most effective way to deal with this situation is to address the problem at the source. Streambank stabilization is just a 'band aid' if the stream has flashy flows that are not controlled."

I thought the most recent street work was going to be the magic bullet, but unfortunately the erosion continues despite the "fixes." Thankfully, we had a dry year.

With the upcoming discussion and vote regarding Maple Street construction, I would like to appeal to the City Council to include drainage solutions to finally put an end to the erosion problem.

Again, I appreciate the time and effort the city has put in to help me fix this problem. Please vote to continue working toward a solution to the problem. I look forward to working together to find a solution.

Thank you,

Wendy Colsen

TIMELINE (2002-2025)

(*Information received from F&V via former city manager)

2002 – Built house. Did <u>not</u> alter course of stream at all to accommodate. Builders worked with EGLE (DEQ or DNR at that time) regarding permitting.

***2009/2010** – City improved Allegan Street, including replacement of the culvert under Allegan on the west side of Maple Street (15317-C1&3).

***2011** – City improved Mason Street from Elizabeth to Maple, including adding asphalt valley gutter between Takken and Maple and replacement of the culvert under Mason on the west side of Maple (3187-C1).

***2014** – the City installed storm sewer beneath the ditch on the west side of Maple Street between Allegan and Mason to replace the drive culverts (814890-C7).

2014 - 2018 – Noticed higher waters during heavy rainstorms. Began seeing problems with erosion. Kept an eye on it. In the meantime, the DPW dumped asphalt on the edge of the street near the spillway, also changing the course of the run off and subsequently, the stream.

***2018** – City repaired an inlet section on the south side of Mason Street near Takken that had settled (831450-C3).

March 2019 – Continued to notice more issues with erosion and saw it was a bigger issue than just the spillway.

May 2019 – Noticed more issues with erosion. Contacted Kirk Harrier to have him take a look at the problem. He stated this was not an Allegan County drain and sent drain atlas map.

Contacted EGLE for assistance too.

May 31, 2019 – Met with Kirk Harrier. He said the city would remedy the asphalt and drain issue on the city property, but that the erosion on my property was my issue because they didn't want to set a precedence.

July, 2019 – Work was done by DPW to try to fix the washout.

April, 2020 – Erosion was worsening. Began contacting companies to help shore up erosion where house sits on bank. Receive quotes. Hard to get anyone to help because of lake levels and pandemic.

May 18, 2020 – Contacted Kirk again. Sent videos and pictures of increasing erosion. I ask for a meeting.

May 28, 2020 – Received information from EGLE about shoreline permit applications.

June, 2020 – Continued getting bids from companies.

Mid June, 2020 – Finally meet with Kirk regarding the issue again. City would have DPW work on drain and install riprap.

September, 2020 – Rip rap installed, south side drain lowered, elevation of spillway altered.

I start contacting engineers to get input. Three of them do not want to help because they're afraid of taking on projects that might lose them favor with the city. Two never return my phone calls.

End of November, 2020 – I contracted with a company to install rip rap along the bank where my house sits, apply for permit waiver from the county, and submit the permit form for EGLE.

December, 2020 – The bank is stabilized on my side.

2021

April, 2021 – Riprap is sinking near the spillway. I contact Ryan Heise to give him the background and see if we can get a resolution to the problem. He suggests I contact the City Council.

May, 2021 – City Council members conduct site visit.

EGLE puts me in touch with new contact, Janelle Hohm, who passes along watershed grant information. I pass that information along to the city.

2022 – City conducts study, I also hire engineer to conduct study.

My engineer's note to mention at the meeting:

As noted in the report attached to this meeting's agenda, there have been a number of road improvement projects conducted within the drainage area that flows to the property in question. While all of these projects addressed ongoing issues of their own, it appears that each improvement has likely had the unfortunate side effect of increasing the volume and velocity of water that reaches Ms. Colsen's property contributing to the bank erosion.

To help offset this, the attached engineering report has provided multiple potential solutions. Of these solutions, it is my opinion that a detention system is the only appropriate measure to offset the increased erosive water present on site without simply pushing the erosion to a neighboring property owner.

January 9, 2023

Taken from the meeting minutes:

Maple Street Erosion Concern: City Engineer Jon Moxey from Fleis & Vandenbrink presented his study of the drainage in the area of Maple Street & Mason Street. He presented eight mitigation alternatives and a cost analysis of each.

No Vote, discussion only.

February 7, 2023

Email from city engineer:

Hi Wendy,
I've been working with Scott on spillways and ditching for Mason Street. He is in the process of getting quotes. We are at the mercy of the asphalt plans opening for this (usually mid-April) but hope to get it implemented this spring. At the same time, we're hoping to add some larger stone at the outlet area to create some additional pooling and help slow things down that way as well.
Hope this helps!
Jon

February 28, 2023

Included in packet for 2-8-23 meeting

Ryan Heise, City Manager City of Saugatuck
102 Butler Street Saugatuck, MI 49453

RE: 2023 Street Improvements – Design & Bidding Phase Proposal

Dear Ryan,

As part of the recent capital improvements planning process, high priority road improvements were identified on several streets that do not have urgent sanitary sewer or water main/service needs. These road improvements can thus be implemented in 2023, not being connected to potential outside funding for utility work. The scope of work identified includes limited drainage improvements with crushing, shaping and resurfacing the asphalt pavement on the following streets:

- *West Street, from Allegan Street to Mason Street*
- *East Street, from Allegan Street to Mason Street*
- *Takken Street, from Allegan Street to Mason Street*
- *Taylor Street, from Allegan Street to Mason Street*

The project would also include drainage modifications on Mason Street between Takken Street and Maple Street, which would be an initial step to address the erosion issues occurring downstream of the City's stormwater outlet on the northwest corner of Maple and Mason. We anticipate those improvements would include constructing a series of asphalt spillways to allow water off the road prior to (west of) Maple Street and ditching improvements along Mason Street. These improvements would be expected to slow the rate of flow that reaches the area of concern and potentially redirect some of it to bypass that area completely.

April 6, 2023

Received note that city will be installing more rip rap the following week. As of 1-19-2025, the rip rap has completely sunk and shifted due to the volume and velocity of the run off.

June 7, 2023

City workshop meeting. Minutes are unavailable online.

August 30, 2023

City begins construction on street repairs.

My rock retaining wall begins to shift.

As per my phone conversation with city engineer explaining new construction:

There will be a new storm sewer installed on East (which will discharge along Mason), Takken (which will discharge along the North side of Mason), and Taylor (which will discharge along Mason). Corner of Taylor and Mason will take the discharge up to Takken.

All will have leach basins to slowly discharge. Storm surges may overload. No guarantee.

April/May 26, 2024

Construction is complete. Gutter silt covers are removed.

Spring/Summer/Fall 2024

Maple Street construction is under discussion for possible drainage remediation.

I'm not seeing significant changes to water volume and velocity (see videos)

January, 2025

City will discuss drainage options for Maple Street project.

Dear City Council Members,

On Friday, January 3rd, after cleaning our rental, we checked our mailbox and found a mailing from the City of Saugatuck. It was a letter about the recent Caps on STR's and reminding owners to check their permits. We scanned the QR code and found our property number. To our great anxiety, our permit was expiring January 4th. The office was already closed and we emailed Luke Thompson right away. We also left a phone message, and Luke returned our call that Tuesday. We explained the situation and were told that there was not much he could do. Luke was very respectful and asked us if we had received an email from the village. After speaking with him I searched for City of Saugatuck to check this, and nothing came up about our property. I searched again for Luke's name, and did find an email that had been sent in August.

We have had our rental since 2015. We have met every deadline, passed every fire inspection, asked our neighbors every season if there were any issues, which there were none. We are teachers and have enjoyed spending the summer in the cottage and renting it out to repeat guests when we are not there. At this point we have close to 30 families booked for the next year, my wife is a super host, most are repeat guests, some attending weddings, some doing business in the area, and others just enjoying Saugatuck as we do.

Yes, this was an oversight on our part and it was our responsibility to not miss the deadline. During COVID, when our permit was coming up for renewal, we called several times and were told not to worry at this time. Due to the circumstances, inspections were backed up. With the new caps, we realize that the situation has changed immensely. We are human. Humans are not perfect. We have taken great pride in maintaining an awesome place for our guests to stay. We have a plethora of pamphlets relating to local businesses left for our guests. We refer them to restaurants, entertainment and shops downtown. We have even had an article written about our cottage in Gather & Go Travel – Where to Stay in Saugatuck? 8 Amazing Areas. (11/21/24)

https://gatherandgotravel.com/saugatuck-family-friendly-lodging/

In closing, this is our Hail Mary. Pardons, passes and warnings are given daily in our society. We are hoping that we could be forgiven for this oversight and there is some way we could continue the renewal of our license. We really appreciate your time and consideration in this matter.

Respectfully,

Tim and Tracey Leffler

[redacted] Saugatuck