

REVISED

VILLAGE OF GERMANTOWN
N112 W17001 MEQUON ROAD
GERMANTOWN, WI 53022

MEETING: **PUBLIC WORKS & HIGHWAY COMMITTEE**

DATE AND TIME: **WEDNESDAY, May 11th, 2022** ***6:00 P.M.***

LOCATION: **Germantown Village Hall Board Room**
N112 W17001 Mequon Road

NOTICE: Pursuant to the recommendations of the Centers for Disease Control and Prevention concerning the prevention of COVID-19 infections, any member of the body and/or citizen may also attend the meeting virtually through the WebEx platform, Meeting #: 2559 772 4146 Password: pgXK9326PPt which can be accessed by phone at 408-418-9388 or by logging on

at: <https://villageofgermantown.my.webex.com/villageofgermantown.my/j.php?MTID=m8f3eb2cbb785bffc223bfd5e0e0c92f5>

Citizens not wishing to attend the meeting personally or virtually may submit any public comments by sending an email to comments@germantownwi.gov by 4 pm on the day of the meeting so that it can be provided to the members of the body for their consideration.

- I. **CALL TO ORDER:** This meeting has been given public notice in accordance with Wisconsin Statutes, Section 19.83 and 19.84 in such form that will apprise the general public and news media of subject matter that is intended for consideration and action.
- II. **ROLL CALL:** Chairman Kaminski, Trustees Hudson, R. Miller, and Neureuther
- III. **APPROVAL OF MINUTES:** March 1st, March 7th and April 4th, 2022
- IV. **PUBLIC COMMENT:** Please be advised per State Statute Section 19.84(2), information will be received from the public. It is the policy of this municipality that there be a three minute time period, per person, with time extensions per the Chief Presiding Officer's discretion; be further advised that there may be limited discussion on the information received, however, NO ACTION will be taken under public comments.
- V. **UNFINISHED BUSINESS:**
 - A. Intersection of Concord Road and Nigbor Drive
- VI. **NEW BUSINESS:**
 - A. **Meter Installation Update.**
 - B. 5-year Capital Improvement Program – Parks & Recreation.
 - C. Annual MS4 Permit.
 - D. Buckthorn Presentation – Director Ratayczak.
 - E. Fire Station Roof Replacement.
 - F. Fire Station Exterior Painting.
 - G. Library Fire Suppression Main-line Replacement.

- H. 2022 Emerald Ash Borer Treatment.
- I. Wisconsin DOT Salt Contract.
- J. Budget amendment Wastewater Truck.
- K. Construction Manager for New Department of Public Works Facility.

VII. PROJECTS UPDATE:

VIII. NEXT MEETING DATE: Set June Meeting date at 6pm

IX. ANNOUNCEMENTS:

X. ADJOURNMENT

UPON REASONABLE NOTICE, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service please contact the Village Clerk at (262)250-4740 at least 2 days prior to the meeting.

*** Notice is given that a majority of the Village Board may attend this meeting to gather information about an agenda item over which they have decision making responsibility. This may constitute a meeting of the Village Board per State ex rel. Badke v. Greendale Village Board, even though the Village Board will not take formal action at this meeting.

PUBLIC WORKS & HIGHWAY COMMITTEE MEETING MINUTES

March 1, 2022

Village Hall Board Room

CALL: Chairman Kaminski called the meeting to order at 6:00 pm.

ROLL CALL: In attendance were Chairman Kaminski, Trustee Members R. Miller, Hudson and Neureuther. Also present were Administrator Kreklow, Dir. Ratayczak, Wastewater Superintendent Zimmerman, Public Works Superintendent Anderson, Clerk Treasurer Braunschweig and Administrative Assistant Remich.

APPROVAL OF MINUTES: MOTION R. Miller/Hudson to approve the Minutes of February 1st, 2022. Motion carried unanimously.

PUBLIC COMMENT: None

A: Consideration of Eliminating or Modifying the Summer Sewer Credit

Superintendent Zimmerman is presenting for discussion: The Wastewater Utility has provided a summer sewer credit to residential customers for a very long time as spelled out in Ch.13.37 of the Village code. It is calculated based off the following formula: $Q4 + Q1 * 1.15 / 2$ and is billed the lesser amount of the actual read or the formula computation. This is a very time consuming and arduous task for staff to compute and is the number one complaint generator during these two billing cycles. A review of a random sample of 100 customers who received credits for Q2, Q3, or both show a loss of revenue of 54.86%. These revenue losses are significant and capturing this lost revenue would help maintain the solvency of the Wastewater Utility and allow for no rate increases for the foreseeable future. Simple logic and looking into one's own usage of water during the summer, would indicate higher consumption due to more frequent bathing, and more consumption for bodily needs that far exceed the additional 15% being captured. The MMSD bills the Village based on formulary flow as follows: 49 gallons per capita (2.49) per day. For Germantown that equals 122.01 gallons per day or 11,132 gallons per quarter. Often our volumetric credit is less than the 11,132 gallons being charged by MMSD. A survey of communities in SE Wisconsin indicates that a vast majority of them don't offer a summer sewer credit. But do offer the option of installing an irrigation or sprinkling meter.

It is staff's recommendation to have an honest discussion about the summer sewer credit with the PWHC and forward on to the Village Board a recommendation that is equitable for both the Utility and the rate payers to be in full effect by Q1 of 2023 with the implementation of the Tyler Munis billing system. Items for consideration and/or action are as follows:

- Elimination of the summer sewer credit for Q2 beginning in 2022. And to modify Chapter 13.37 of the Village Code to use the following formula to calculate Q3 credit: $Q1 + Q2 / 2 * 1.25$. Minimum calculated average to receive credit 11,000 gallons.
- If no elimination, increase percentage of capture to 25-35% and increase minimum calculated volume to 11,000 gallons.
- Modify Chapter 13.37 of the Village Code to read: Sewer volume charges for metered residential customers are based on actual metered water flows for the first, second and fourth calendar quarters. The third calendar quarter's sewer volume charge (summer quarter) is based on the actual metered water flow for said quarter, or the calculated average of the three previous quarters, using whichever is less. A minimum calculated average of 11,000 gallons is required for the average to be used for the third quarter. This credit will be given automatically to all residential customers.
- Elimination of summer average completely by the start of 2023. And have the option for deduct meter.
- Modification to Chapter 13.37 of the Village Code to allow for the installation of an irrigation/sprinkler deduct meter for accuracy and equity for all parties. Residential customers who have extensive outdoor water usage in early spring, late summer or fall may wish to install a sewer-deduct meter at their cost to measure "non-sewer" usage. Once the deduct meter is installed and inspected, sewer volume charges will be based on the consumption from the primary meter less the consumption from the deduct meter. The charge for the additional meter is established by the current rate sheet for the Water Utility at \$5.00/Qtr.

Public Works Highway Committee Meeting Minutes**Discussion Followed:**

Utility Invoicing is the first thing being set up in the new accounting program, so we need to get this issue resolved before then. Most customers do not use water heavily in Q2 - April, May and June. The summer sewer credit has been happening for a very long time and we are only one of two communities that give the credit for 2 quarters. This credit is automatic, last quarter the system crashed and every invoice had to be calculated by hand. Trustee Millers concern is that this comes on the heels of a water increase. We are in the process of data conversion now for utility billing and will run the last 2 quarters thru a test phase. Wait for the change until 2023 then deal with eliminating the credit in its entirety? Most municipalities are encouraging customers to put in the deduct water meter. Another thought is that we could waive the install charges for the deduct meter for the first year. 2nd quarter of 2022 will still have to be hand calculated.

MOTION R.Miller/Kaminski Motion to recommend the elimination of the summer sewer credit for Q2 beginning in 2022 and to modify Chapter 13.37 of the Village Code to use the following formula to calculate Q3 credit: $Q1+Q2/2*1.15$ and raise the minimum calculated average to receive credit to 11,000 gallons and another motion was made to keep this on unfinished business to continue the dialog regarding Q3 and 2023, these items should be separated out and put on the agenda at a future meeting. Motion is unanimous. Not on VB consent agenda.

B: Fire Station Insulation Project

Superintendent Anderson stated that in 2019 the fire suppression main line pipe at the Fire Station was replaced due to microbial induced corrosion. When the work was complete the blown insulation was matted down reducing the “R” value. As part of the 2022 budget staff included \$13,000 in non-borrowed capital to install additional insulation. Staff solicited pricing from three area insulation contractors and the results are listed below.

Wisconsin Home Improvement:	\$9,773.68
Builder’s Insulation:	\$11,293.00
Insulation Specialists:	No proposal submitted.

MOTION Hudson/Neureuther to recommend contracting with Wisconsin Home Improvement to reinstall attic insulation at the Fire Station in an amount not to exceed \$9,773.68. Motion carried unanimously.

C: Spring Tree Planting

Supt. Anderson stated that each year trees around the village are removed for various reasons including vehicle & storm damage and disease. The village currently has 550 “vacant” planting sites within known areas on our GIS layer. As part of the 2022 budget, tree planting is planned into the general fund street tree maintenance line item. This year’s project will replace 61 trees in various areas around the village including: along roadways, around village buildings and in the parks. Staff has solicited pricing from area contractors and the results are listed below. If the street tree maintenance account trends well throughout the year, we could look to complete a smaller fall tree planting contract if the conditions are favorable. Trees come with a 1-year guarantee.

Property Solutions Contracting:	\$18,120.00
Century Landscape:	\$29,019.00
Wendland Nursery:	\$31,304.00
Johnson’s Nursery:	\$32,284.05

MOTION Neureuther/R.Miller to recommend using Property Solutions Contracting to complete the spring 2022 tree planting project in an amount not to exceed: \$18,120. Motion carried unanimously.

D: Parks Tractor Loader Purchase

Supt. Anderson stated as part of the 2022 Parks Department capital budget, \$45,000 was added for the replacement of a small tractor loader. The loader currently owned by the village is being replaced because it’s beyond its useful service life. Staff solicited pricing from three area vendors and the results are listed below.

Public Works Highway Committee Meeting Minutes

John P. Lochen Company:	\$42,950
Service Motor Company:	\$43,593
Bill's Power Center:	\$45,084

MOTION R.Miller/Hudson to recommend the purchase of a Kubota LX series tractor loader from John P. Lochen Company in an amount not to exceed \$42,950. Motion carried unanimously.

E: Village Labor & Equipment Rates 2022

Director Ratayczak stated that the Village may be requested for personnel or equipment to assist in a project, staff typically prepares a list of rates to be charged for labor and equipment. For 2022 staff is recommending a 3.5% rate increase for labor and a 3% rate increase for equipment.

MOTION R.Miller/Neureuther to recommend that the Committee forward the 2022 Labor & Equipment Rates on to the Village Board with a positive recommendation for approval. Motion carried unanimously.

F: Payment to Wisconsin Department of Transportation

Director Ratayczak stated the WIDOT Project for the construction of a round-about at the intersection of STH 145 (Fond du Lac Ave) and Donges Bay Rd. was designed and managed by the WIDOT and it included a Village of Germantown paid portion to extend sanitary sewer and water main to a point past the road project limits. This was a 2017-2018 project. With further investigation it was found that the amount on the invoice was the closeout determinations made by the WIDOT for the actual work completed billable to the Village of Germantown. Work that was invoiced to the Village during the project was accounted to either the Wastewater or Water Utility for payment by the Village.

MOTION R.Miller/Neureuther to recommend the approval of payment to the WDOT in the amount of \$61,511.70 and forward on to the Village Board with a positive recommendation for payment. Motion carried unanimously.

G: Intersection of Concord Road and Nigbor Drive

Director Ratayczak stated at the January 17, 2022, Village Board meeting the Engineering Department was assigned to investigate and report back on the need to modify the current 2-way stop to a 4-way stop at the intersection of Concord Rd and Nigbor Dr. The Engineering Department was to report back to the PWHC within 60 days of the January 17, 2022 Village Board meeting. To date the Department of Engineering and the Street Department have worked in unison to install the speed limit and car volume detection equipment on Concord Rd and contracted with a Traffic Engineer Consultant to analyze the need for a 4-way stop. The Village equipment records the traffic volume, speed, and time of day for each vehicle that travels past the equipment in both directions.

Traffic Analysis and Design, Inc (TADI) was contracted to review the data collected from the Village equipment. In addition, TADI will perform a traffic turning movement investigation to give a more comprehensive analysis of traffic movement. At the end of data collection TADI will submit a Memorandum Report with their findings and recommendations for a 4-way stop intersection. TADI's Report is due by March 15, 2022.

Discussion Followed. Committee will analyze all data after March 15, 2022 and discuss variables. This should be brought back to Public Works Committee at that time and they would like the TADI engineer to attend the meeting to relay his findings. Trustee Jan Miller has been following this issue and should also be invited.

H: 5-year Capital Improvement Program

Director Ratayczak stated the 5-Year CIP was completed, with final revisions, in December 2022. It was presented as a DRAFT to the Committee of the Whole on October 13, 2021, during 2022 Budget Review. The 5-year CIP included input from all Departments represented in the CIP. Also included was the inspection of 26 buildings, salt dome and 10 misc. structures/public amenities (splash pad, concession, and shelters) from which maintenance cost

Public Works Highway Committee Meeting Minutes

estimates and timing of maintenance were determined. The inspections were performed by structural engineers and architects from GRAEF. The 5-Year CIP will be evaluated and updated in the fall of each year, which will include adding the next year.

Park and Recreation questions... Director Standridge should be in the discussion about that portion at the next meeting.

MOTION Neureuther/R.Miller to bring this discussion back at the next PWHC meeting so the Park & Rec portion can be clarified. Motion carried unanimously.

I: Discussion – Holy Hill Road Reconstruction

Director Ratayczak reported that plans for the reconstruction of Holy Hill Road started with the conception of TID #8 and was included in the TID #8 Financial Plan. Although the original plan only included reconstruction as a 4-lane road from approximately “B” Street to the east boundary of the Briggs & Stratton Building and from this point to Goldendale Rd as a 2-lane roadway. This plan was altered by two things: First being an unplanned increase in the success of TID #8 and Second the Traffic Analysis Report that called for the increased traffic lanes due to the number of buildings being constructed in TID #8.

Highlights of the Final Design is a 4-lane divided roadway (18-foot median) with a 10’ concrete mixed-use path on the southside and a 6’ sidewalk on the north side – keeping walkway connections in mind, streetlights in the median and traffic lights at Goldendale Rd. In addition, planned but not constructed at this time are future intersections for a frontage road at “B” street north and a frontage road to the south at the self-storage driveway. Storm water outfalls into the storm water pond that is located on the Capstone-41 Development.

As a reminder the Village of Germantown received a \$1 million Grant from the State of Wisconsin to be used towards the reconstruction of Holy Hill Rd. Discussion Followed

PROJECT UPDATES: Reviewed and discussed.

NEXT MEETING DATE: Next meeting was set for Wednesday, April 6th, 2022 at 6pm.

ANNOUNCEMENTS: None

ADJOURNMENT: Chairman Kaminski adjourned the meeting at 7:23pm

Deb Remich

Department of Public Works

Administrative Assistant

PUBLIC WORKS & HIGHWAY COMMITTEE SPECIAL MEETING MINUTES

March 7th, 2022

Village Hall Board Room

CALL: Chairman Kaminski called the special meeting to order at 6:45 pm.

ROLL CALL: In attendance were Chairman Kaminski, Trustee Members Miller, Hudson and Neureuther, Dir. Ratayczak and Clerk Treasurer Braunschweig.

PUBLIC COMMENT: None

A: Contract for Holy Hill Reconstruction Project

Director Ratayczak described that the Holy Hill Road Reconstruction Project was advertised for bids which were received and read on March 2, 2022. Five (5) bidders responded to the advertisement all with qualified and accepted bids. The bids received are as follows:

- Michels Road & Stone, Inc; \$4,149,898.85
- Vinton Construction; \$4,180,814.55
- Buteyn-Peterson Construction; \$4,181,091.50
- Musson Bros., Inc; \$4,647,067.43
- Super Western, Inc; \$4,888,699.74

The engineer's estimate was \$4,300,000.00.

Staff and the Villages Engineering Consultant, raSmith, have reviewed the bids and recommends the contract be awarded to Michels Road & Stone, Inc.

MOTION; R.Miller/Hudson to recommend awarding the contract to Michels Road & Stone, Inc. in the amount of \$4,149,898.85 as well as a 5% contingency or \$207,450.00 to be included, making the total amount for award \$4,357,348.85. Motion carried unanimously.

ADJOURNMENT: Chairman Kaminski adjourned the special meeting at 6:50pm

SPECIAL PUBLIC WORKS & HIGHWAY COMMITTEE ~~SPECIAL~~ MEETING MINUTES

April 4th, 2022

Village Hall Board Room

CALL: Chairman Kaminski called the special meeting to order at 6:37 pm

ROLL CALL: In attendance were Chairman Kaminski, Trustee Members Miller, Hudson and Neureuther, Dir. Ratayczak and Clerk Treasurer Braunschweig.

PUBLIC COMMENT: None

A. Contract for 2022 Annual Road Improvement Project

Director Ratayczak stated that the 2022 Annual Road Construction Project was advertised for bids which were received and read on March 17, 2022. Three (3) bidders responded to the advertisement all with qualified and accepted bids. The bids received are as follows:

<u>CONTRACTOR</u>	<u>BASE</u>	<u>ALT.</u>	<u>TOTAL</u>
• Wolf Paving, Inc	\$1,139,501.20	\$329,426.20	\$1,468,927.40
• Payne & Dolan, Inc	\$1,144,375.10	\$342,865.00	\$1,487,240.10
• Stark Pavement Corp.	\$1,260,426.35	\$320,292.05	\$1,580,718.40

Staff has reviewed the bids and recommends the contract be awarded to Wolf Paving, Inc. in the amount of \$1,468,927.40.

MOTION: (Neureuther/Hudson) to recommend awarding the contract to Wolf Paving, Inc. in the amount of \$1,468,927. Motion carried unanimously.

B. Contract for Mequon Road Street Lighting Project

Director Ratayczak stated that the Mequon Road Street Lighting Project was advertised for bids which were received and read on March 17, 2022. Three (3) bidders responded to the advertisement all with qualified and accepted bids. The bids received are as follows:

<u>CONTRACTOR</u>	<u>BID</u>
• Wil-Surge Electric, Inc.	\$298,874.34
• MP Systems	\$351,236.60
• Outdoor Lighting Const. Co., Inc.	\$399,600.48

Staff has reviewed the bids and recommends the contract be awarded to Wil-Surge Electric, Inc. in the amount of \$298,874.34.

MOTION: (Hudson/R.Miller) to recommend awarding the contract to Wil-Surge Electric, Inc. in the amount of \$298,874.34. Motion carried unanimously.

C. PP/II CCTV Private Laterals

Director Ratayczak stated that the PP/II CCTV Private Laterals project was advertised for bids which were received and read on March 17, 2022. One (1) bidder responded to the advertisement with a qualified bid. The bid received is as follows:

CONTRACTOR**BID**

- National Power Rodding Corp. \$634,000.00

Staff has reviewed the bid and recommends the PWHC reject the bid submitted by National Power Rodding Corp. in the amount of \$634,000.00

MOTION: (R.Miller/Hudson) to recommend awarding the bid from National Power Rodding Corp. in the amount of \$634,000.00. Motion unanimously opposed.

NEXT MEETING DATE: Next meeting was set for Wednesday, May 11th, 2022 at 6pm.

ADJOURNMENT: Chairman Kaminski adjourned the special meeting at 6:44 pm

**BUSINESS OF THE PUBLIC WORKS & HIGHWAYS COMMITTEE
GERMANTOWN, WI**

MEETING DATE: May 11, 2022

AGENDA ITEM: Old Business

ITEM TITLE: Intersection of Concord Rd & Nigbor Dr.

SUBMITTED BY: Lawrence W Ratayczak, P.E., Public Works Director

SUMMARY EXPLANATION:

The request was raised by a resident petition to change the intersection of Concord Rd & Nigbor Dr from a two-stop sign controlled intersection to a 4-way stop sign controlled intersection. The engineering department along with the Street Department performed research on current traffic conditions. In addition, a Traffic Engineer Consultant (TADI) was hired to perform an analysis of the traffic flow, including speed and movements. The result of the analysis and the recommendation of TADI is that the intersection should remain as a two-way stop-controlled intersection.

ATTACHMENT: ORDINANCE____ RESOLUTION____ OTHER X

- TADI Report

RECOMMENDATION:

Staff recommends that the Public Works and Highway Committee follow the recommendation of the Traffic Engineer Consultant (TADI) and approve that the current two-way stop sign control of the Concord Rd & Nigbor Dr intersection remain.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

Intersection Traffic & Speed Study

March 24th, 2022

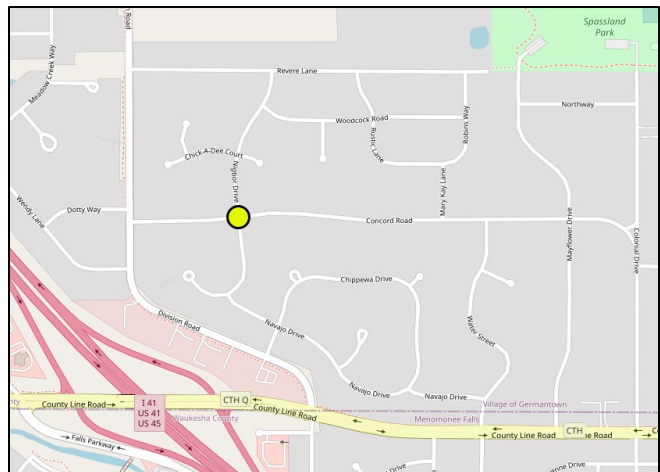


PROVIDING TRAFFIC ENGINEERING SOLUTIONS

To: Larry Ratayczak, P.E., Director of Public Works
From: John Campbell, P.E., RSP₂, TADI
Christian R. Sternke, P.E., RSP₂, TADI
Subject: Traffic Study – Concord Road & Nigbor Drive Intersection

PART A – INTRODUCTION

TADI was hired by the Village of Germantown to conduct a traffic study at the Concord Drive intersection with Nigbor Drive. The purpose of the safety study is two-fold. First, to review the traffic volumes and crash history at the intersection to determine if all-way stop control is warranted. Second, to identify potential speed-reduction and/or safety treatments for the intersection and Concord Road.

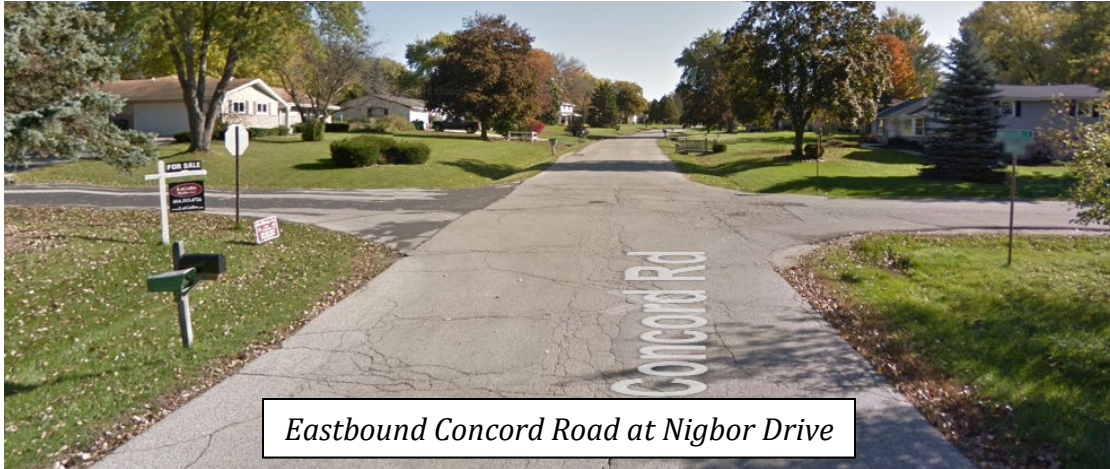


PART B – EXISTING CONDITIONS

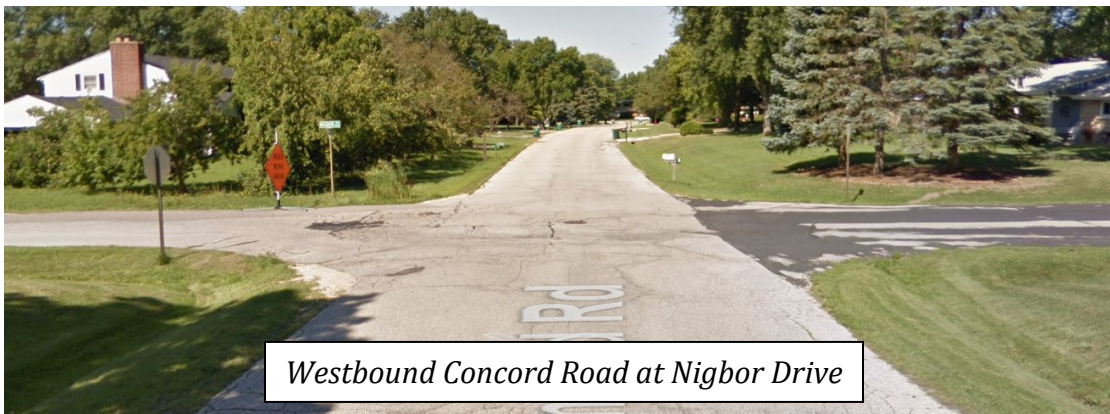
Concord Road is an undivided east/west two-lane residential street with a 24-foot width (shoulder to shoulder) and a posted speed limit of 25-mph. Based on the 13-hour traffic turning movement count conducted as part of this study, the estimated average annual daily traffic (AADT) along Concord Road is approximately 530 vehicles per day (vpd) east of Nigbor Drive and approximately 510-vpd west of Nigbor Drive.

Nigbor Drive is an undivided north/south two-lane residential street with a 24-foot width (shoulder to shoulder) and no posted speed limit. Based on the 13-hour traffic turning movement count conducted as part of this study, the estimated AADT along Nigbor Drive is approximately 260-vpd north of Concord Road and approximately 280-vpd south of Concord Road. Both approaches of Nigbor Drive are controlled by stop signs at the intersection with Concord Road.

The following page are photos of each approach to the intersection.



Eastbound Concord Road at Nigbor Drive



Westbound Concord Road at Nigbor Drive



Northbound Nigbor Drive at Concord Road



Southbound Nigbor Drive at Concord Road

Images Source: Google Maps StreetView, accessed 3/8/2022 and field photos (2/21/22)

PART C – DATA COLLECTION

TADI conducted a 13-hour traffic count from 6:00 AM to 7:00 PM at the study intersection on Monday, February 28th, 2022, and Tuesday, March 1st, 2022, which both had favorable weather conditions for the season. The weekday morning peak hour at the intersection was found to be 7:30 AM to 8:30 AM and the weekday evening peak hour was found to be 2:30 PM to 3:30 PM. The traffic counts have been included in the [Appendix A](#).

Speed data for the Concord Road corridor was obtained from the Village using a sign-mounted radar detection device. Westbound speed data was available for Tuesday, February 1st, 2022, through Thursday, February 3rd, 2022, while eastbound data was available from Tuesday, January 25th, 2022, through Thursday, February 24th, 2022. TADI tabulated data for the 9:00 AM to 3:00 PM for each available Tuesday, Wednesday, and Thursday in each direction and results are shown in the table below.

9:00-15:00	Total Vehicle	# of Speed Violations	% of Speed Violations	Average Speed (mph)	Max Speed (mph)	Min Speed (mph)	50%-ile Speed (mph)	85%-ile Speed (mph)
WB	185	136	74%	27	43	7	26	33
EB	1,027	626	61%	25	39	3	25	30

As shown in the table, the 50th and 85th percentile speeds for westbound Concord Road were ~26-mph and ~33-mph, respectively. The 50th and 85th percentile speeds for eastbound Concord Road were ~25-mph and ~30-mph, respectively. It was observed that approximately 74-percent of westbound drivers and 61-percent of eastbound drivers were driving faster than the 25-mph posted speed limit on Concord Road. Approximately 17-percent of westbound drivers and 4-percent of eastbound drivers were observed driving greater than 10-mph above the posted speed limit.

PART D – CRASH ANALYSIS

A review of the crash records indicated that two (2) crashes occurred at the Concord Road and Nigbor Drive intersection between January 1st, 2017, and December 31st, 2021. The intersection crash rate was calculated to be 1.37 crashes per million entering vehicle and the intersection averaged 0.4 crashes per year. One westbound/southbound right-angle crash was observed when a southbound driver failed to yield to the approaching westbound vehicle. The other crash was an eastbound run-off-the-road crash involving a speeding driver at 3 AM on New Year's Day in 2017. No injuries were reported in the two crashes.

A crash diagram is included in [Appendix B](#) of this study.

PART E – WARRANT ANALYSIS

The Federal Highway Administration's *Manual on Uniform Traffic Control Devices (MUTCD)* provides the following criteria for the installation of all-way stop control that should be considered (Section 2B.07):

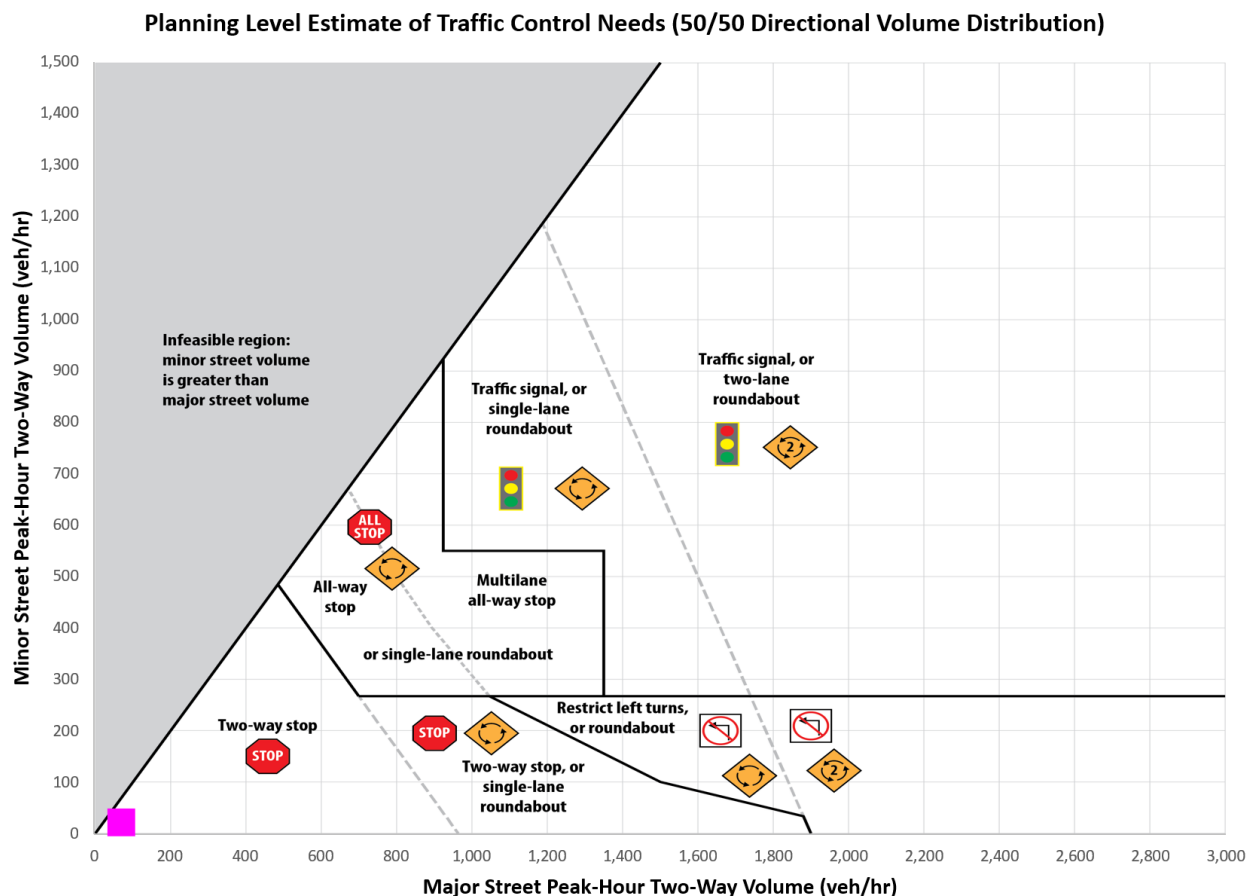
- All-way stop control is used where the volume of traffic on intersecting roads is approximately equal – *Concord Road volumes are ~2x higher than Nigbor Drive.*
- All-way stop control should be considered if five or more reported crashes within a 12-month period are susceptible to correction by an all-way stop (i.e., left-turn and angle crashes) (Criterion B). *This criterion is not met. There was only (1) such crash in the past five years.*

- All-way stop control should be considered when, for each of the same eight-hours, the average volume on the major street approaches (Concord Road) is greater than 300 vehicles per hour (Criterion C.1) and the average volume on the side street approaches (Nigbor Drive) is greater than 200 vehicles/pedestrians/bicycles per hour (Criterion C.2). *These criteria are not met for any hours. Traffic would have to increase by ~1,330% (14.3x) to meet the volume criteria for eight hours.*
- All-way stop control should be considered when Criteria B, C.1, and C.2 are not satisfied, but where they are all satisfied to 80% of the minimum values (i.e., four or more crashes, major street volume greater than 240 vph, and minor street volume greater than 160 vph) (Criterion D). *This criterion is not met for any hours.*

The completed all-way stop control warrant spreadsheet is included in [Appendix C](#).

Planning-Level Graphic

To provide some additional perspective about when various types of traffic are warranted, the volumes observed at Concord Road and Nigbor Drive were charted (pink square) on the graph below. The volumes at Concord Road and Nigbor Drive are substantially less than thresholds where other traffic controls, such as an all-way stop, would typically be considered.



Graph Source:

https://www.oregon.gov/ODOT/Planning/Documents/APMv2_Ch12.pdf

PART E – IMPACTS OF UNWARRANTED STOP SIGNS

Research has shown that installing stop signs when they are not warranted can lead to issues at the location of interest and even have potentially negative consequences community-wide. Below are excerpts from research sources discussing why stop signs are not used for speed control in situations where they are not warranted by traffic volumes.

City of Madison, WI – [Traffic Engineering Department](#)

“Numerous studies have shown that stop signs can lead to an increase in collisions as drivers ignore signs they think are inappropriate. Stop signs may also lead to an increase in fuel consumption, noise pollution, auto emissions, and force traffic onto other streets. Experience has shown that other measures are needed to maintain a safe situation. Parking restrictions, tree or hedge trimming, pavement markings and speed enforcement are often effective in reducing traffic collisions.

Stop signs are intended to assign the right of way at intersections. They do not control speeding. In fact, speed often increases as motorists try to make up for time lost at a stop sign.”

Iowa State Traffic and Safety Informational Series – [Frequently Asked Question #13](#)

“Many studies have shown that stop signs are not an effective means of controlling or reducing midblock speeds, and Section 2B.04 of the MUTCD specifically notes that stop signs should not be used for speed control. In fact, the overuse of stop signs may cause drivers to act carelessly in the presence of the stop signs that are installed. In stop sign observance studies, approximately half of all motorists typically come to a rolling stop and 25 percent do not stop at all. A study conducted by Beaubien (1989) also showed that placing stop signs along a street may actually increase the peak speed of vehicles because motorists tend to increase their speed between stop signs to regain the time “lost” at the stop signs. Moreover, stop signs can give pedestrians a false sense of safety if it is assumed that all vehicles will come to a complete stop at the proper location.”

City of Manitowoc – [Stop Sign Policy](#)

“Generally speaking, stop signs should only be considered for intersections when supported by adequate traffic counts. Studies have shown that placing stop signs at intersections where they are not justified decreases safety as motorists tend to roll through them without actually stopping, while the cross street traffic tends to pay less attention as they assume traffic will obey the stop sign and come to a complete stop.”

In summary, having drivers respect stop signs is crucial for traffic safety at the local, regional, and national levels. Installing stop signs that are unwarranted can cause unintended consequences ranging from careless driving to increased vehicle speeds between existing stop-controlled intersections.

PART F – CONCLUSIONS & RECOMMENDATIONS

A traffic and speed study of Concord Road and the intersection with Nigbor Drive was performed by TADI and documented in this memorandum. The conclusion of the study is that the existing two-way stop control is the appropriate traffic control for the intersection and that speeds along Concord Road are within a range consistent with a roadway with a 25-mph speed limit. Some drivers, however, were captured traveling at speeds as high as 43-mph. The traffic volumes and speed profile of Concord Road does not warrant engineering measures to force drivers to change their driving behavior (e.g., speed humps), but targeted enforcement and/or neighborhood yard signs could be used to convey the message to drivers to drive appropriate speeds for the neighborhood.

Regarding the traffic control of the intersection, all-way stop control was evaluated. All-way stop control warrants are not met by a substantial margin. Volumes entering the intersection would have to increase by ~1,330% (14.3x) to meet the warrants. Also, no notable crash patterns were observed at the intersection and the Manual of Uniform Traffic Control Devices indicates that stop signs should not be used to control speeds (see [link](#) for discussion). Therefore, it is recommended that the intersection maintain the existing two-way stop control.

The observed speeds on Concord Road indicate that average speeds are within 2-mph of the posted speed limit. Some drivers are driving faster than the posted 25-mph speed limit, but not many are driving greater than 10-mph above the posted speed limit. The 85th percentile speeds were observed as ~30-mph and ~33-mph in the eastbound and westbound directions, respectively. Concord Road is 24-feet wide (shoulder to shoulder) and narrow enough to convey the message to drivers that this is a neighborhood roadway. Therefore, no geometric modifications are recommended to the cross-section of Concord Road.

It is recommended for the village to investigate a “slow down” yard sign campaign for this neighborhood and any others that may have similar speeding complaints. In 2019, Dane County, Wisconsin, with AAA and American Family Insurance as sponsors, provided citizens “Thanks for Slowing Down!” yard signs free of charge. The Law Offices of Hupy and Abraham have an ongoing campaign where they are providing “Slow Down. Save Lives.” bumper stickers and yard signs to raise awareness on speeding. In addition, there are numerous websites that sell signs if citizens would rather purchase their own. An example is shown to the right.



If drivers along Concord Road, and any other neighborhood roads with speeding complaints, see signs lined up along the roadway, they may be encouraged to slow down and drive closer to the speed limit. Furthermore, targeted enforcement along Concord Road could help deter speeding and help reduce average speeds.

APPENDIX A

EXISTING TRAFFIC COUNTS

Count Basics		Version 2013.J4.1		Page 1 of 13	
Start Date:	Monday, February 28, 2022	Weekday		Schools in Session	
Total Number of Hours Counted: 13		Non-Holiday		No Special Events	

Intersection of: Nigbor Drive and Concord Road

Municipality	Village of Germantown		
County	Washington	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Nigbor Drive		
East Leg	Concord Road		
South Leg	Nigbor Drive		
West Leg	Concord Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
	Pre-school children	None	
	Elementary school age children	None	
	Visually impaired (white cane/helper dog)	None	
	Elderly/disabled (except wheelchairs)	None	
	Wheelchairs/electric scooters	None	
	Other (describe)	None	

Hrs Counted:		6:00 AM-7:00 PM	
1st Day of Count		Monday, February 28, 2022	Weather
AM Peak Period		Tuesday, March 1, 2022	Clear & Dry
Midday Peak Period		Tuesday, March 1, 2022	Clear & Dry
PM Peak Period		Monday, February 28, 2022	Clear & Dry
Calculated Peak Hours			
	AM	7:30-8:30am	MD 10:00-11:00am PM 2:30-3:30pm
Peak Hours Selected for Analysis			
	AM	7:30-8:30am	MD 10:00-11:00am PM 2:30-3:30pm
Daily/Seasonal Adjustment Group		(2) Urban Arterials & Collectors	
Count Expansion Group		(2) Urban Arterials & Collectors	
Daily/Seasonal Adjustment Factor		1.050	Count Expansion Factor 1.187
Company Name		TADI	Manual Adj. 1.000
Observers	AM Peak Period	Amy Scheuerlein	
	Midday Peak Period	Jane Fait	
	PM Peak Period	Emily Eissens	
Comments	2019 DOT Seasonal Factors		

OBSERVED HOUR VOLUMES 13

Nigbor Drive 207

TOTAL ENTERING VOLUME 633

Concord Road

Concord Road

Nigbor Drive 224

PED: 2

BIKE: 0

PED: 22

BIKE: 0

PED: 24

BIKE: 1

109

10

75

24

0

98

18

183

16

0

217

213

411

198

0

10

164

24

115

0

20

70

19

109

224

One-Hour Time Period Start Time	Motor Vehicle Volume
6:00 AM	46
7:00 AM	52
8:00 AM	82
9:00 AM	25
10:00 AM	51
11:00 AM	33
12:00 PM	32
1:00 PM	27
2:00 PM	66
3:00 PM	81
4:00 PM	56
5:00 PM	41
6:00 PM	41
7:00 PM	0
8:00 PM	0
9:00 PM	0

(For example, 6am represents volume from 6am to 7am)

The diagram illustrates the intersection of Nigbor Drive and Concord Road. It includes traffic volume data for each approach, a north arrow, and a table of expansion factors.

ESTIMATED 24 HOUR AADT

Concord Road

512

265 (Left Turn)

247 (Through/Right Turn)

0 (Right Turn)

12 (Through/Right Turn)

204 (Through/Right Turn)

30 (Left Turn)

12 (Through/Right Turn)

93 (Left Turn)

30 (Left Turn)

0 (Right Turn)

122 (Through/Right Turn)

136 (Through/Right Turn)

258 (Total Entering Volume)

279 (Total Entering Volume)

270 (Through/Right Turn)

22 (Left Turn)

228 (Through/Right Turn)

20 (Left Turn)

0 (Right Turn)

258 (Total Entering Volume)

528 (Total Entering Volume)

143 (Left Turn)

0 (Right Turn)

25 (Through/Right Turn)

87 (Through/Right Turn)

24 (Left Turn)

136 (Through/Right Turn)

279 (Total Entering Volume)

North

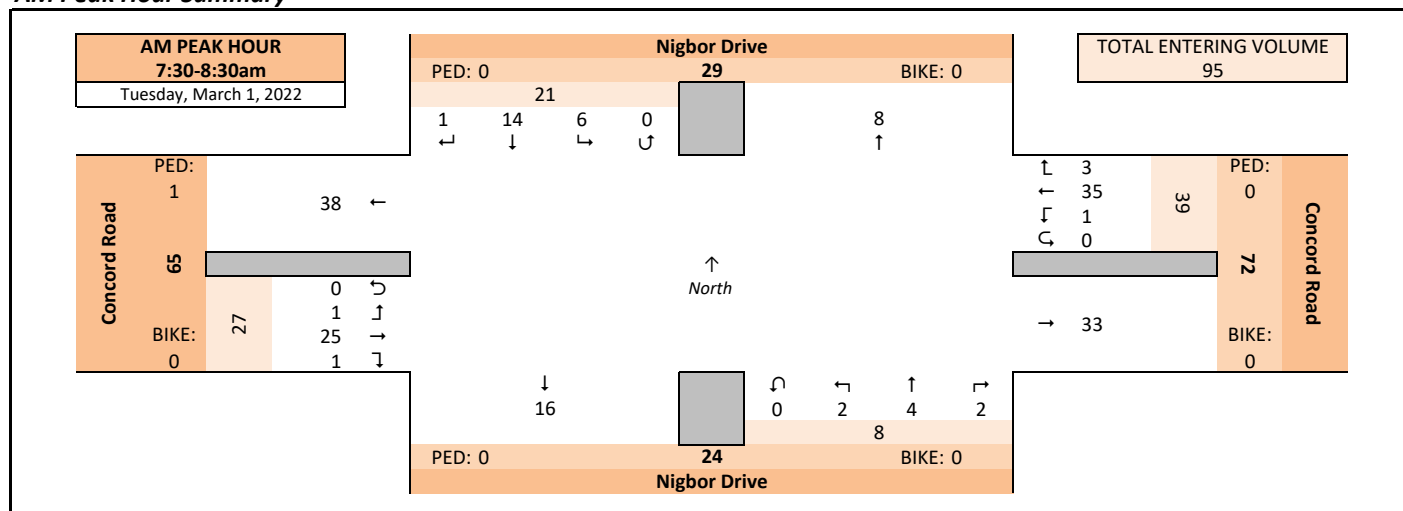
Daily/Seasonal Factor	1.050
Count Expansion Factor	1.187
Manual Adjustment Factor	1.000
Total 24 Hr Expansion Factor	1.246

Peak Hour Volume Graphical Summary

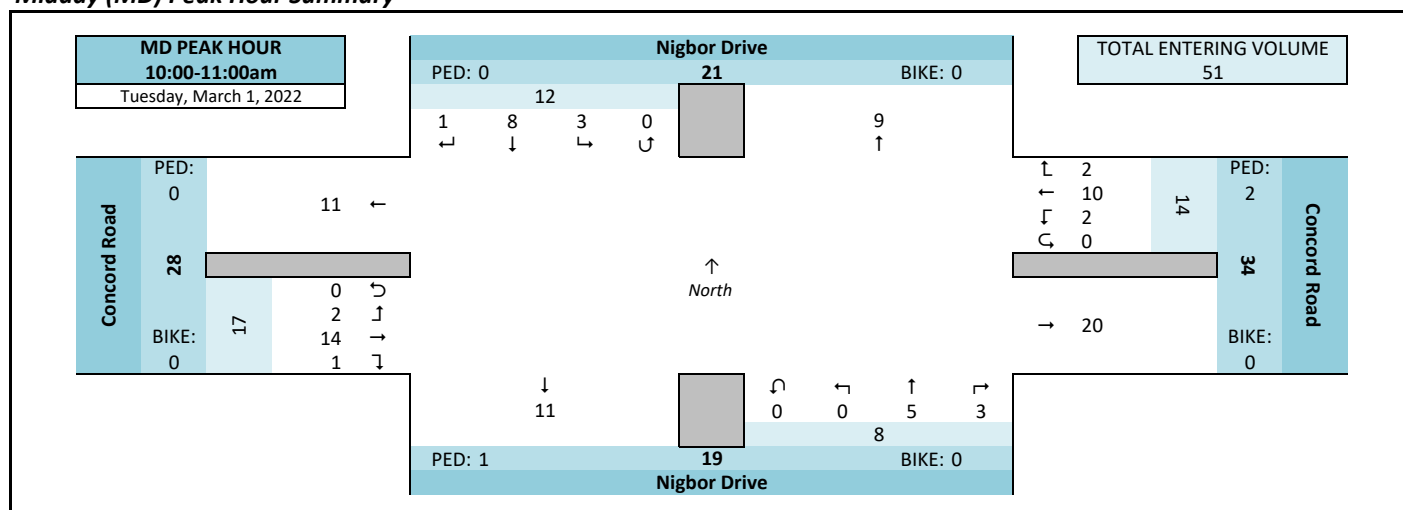
Count Basics			Page 2 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events

Nigbor Drive and Concord Road

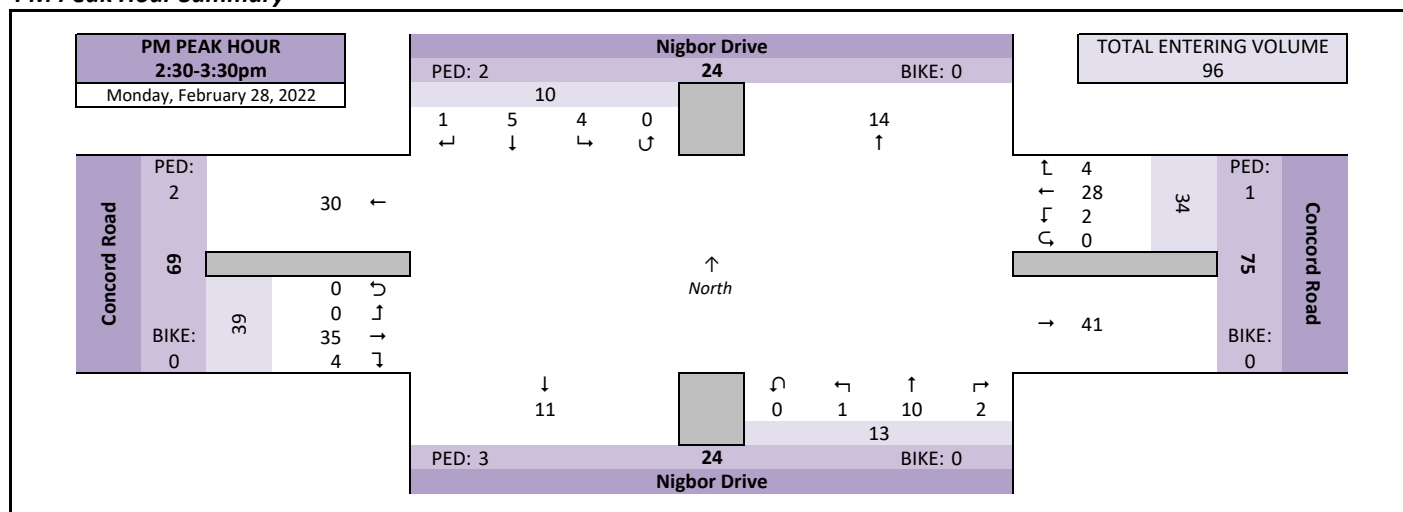
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



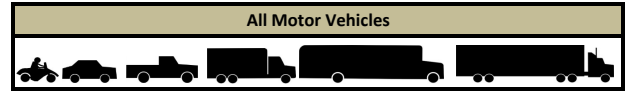
Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Peak Hour Volume Summary

Nigbor Drive and Concord Road

Peak Hour Volumes, Truck Percentages, and PHFs



Tuesday, March 1, 2022		From North					From East					From South					From West							
AM Peak Hour	AM Peak Hour	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road							
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals		
	7:30 AM	0	4	2	0	6	0	6	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1	13
	7:45 AM	0	2	1	0	3	1	6	0	0	7	0	1	1	0	2	0	3	0	0	0	3	15	
	8:00 AM	0	7	3	0	10	1	9	1	0	11	2	2	1	0	5	1	18	0	0	0	19	45	
	8:15 AM	1	1	0	0	2	1	14	0	0	15	0	1	0	0	1	0	3	1	0	0	4	22	
	Peak Hour Volume	1	14	6	0	21	3	35	1	0	39	2	4	2	0	8	1	25	1	0	0	27	95	
	Rounded Hourly Volume	0	15	5	0	20	5	35	0	0	40	0	5	0	0	5	0	25	0	0	0	25	90	
	% Single Unit Trucks	0.0	0.0	16.7	0.0	4.8	0.0	5.7	0.0	0.0	5.1	0.0	0.0	50.0	0.0	12.5	0.0	12.0	0.0	0.0	11.1	7.4		
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
% Trucks (Total)	0.0	0.0	16.7	0.0	4.8	0.0	5.7	0.0	0.0	5.1	0.0	0.0	50.0	0.0	12.5	0.0	12.0	0.0	0.0	11.1	7.4			
Peak Hour Factor (PHF)	0.25	0.50	0.50	0.00	0.52	0.75	0.62	0.25	0.00	0.65	0.25	0.50	0.50	0.00	0.40	0.25	0.35	0.25	0.00	0.36	0.53			

Tuesday, March 1, 2022		↓					←					↑					→						
		From North					From East					From South					From West						
Midday (MD) Peak Hour	MD Peak Hour	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road						
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	
	10:00 AM	0	2	0	0	2	1	0	2	0	3	0	0	0	0	0	0	0	4	1	0	5	10
	10:15 AM	1	1	2	0	4	0	4	0	0	4	1	0	0	0	1	1	2	1	0	4	13	
	10:30 AM	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	0	1	0	0	1	7	
	10:45 AM	0	5	1	0	6	1	2	0	0	3	2	3	0	0	5	0	7	0	0	7	21	
	Peak Hour Volume	1	8	3	0	12	2	10	2	0	14	3	5	0	0	8	1	14	2	0	17	51	
	Rounded Hourly Volume	0	10	5	0	15	0	10	0	0	10	5	5	0	0	10	0	15	0	0	15	50	
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	5.9	2.0	
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	5.9	2.0	
	Peak Hour Factor (PHF)	0.25	0.40	0.37	0.00	0.50	0.50	0.62	0.25	0.00	0.87	0.37	0.42	0.00	0.00	0.40	0.25	0.50	0.50	0.00	0.61	0.61	

Monday, February 28, 2022		From North					From East					From South					From West					Totals
PM Peak Hour		Nigbor Drive					Concord Road					Nigbor Drive					Concord Road					
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
PM Peak Hour	2:30 PM	0	1	1	0	2	0	3	1	0	4	1	2	1	0	4	1	6	0	0	7	17
	2:45 PM	1	4	1	0	6	0	4	0	0	4	0	1	0	0	1	2	17	0	0	19	30
	3:00 PM	0	0	1	0	1	0	3	1	0	4	0	1	0	0	1	0	5	0	0	5	11
	3:15 PM	0	0	1	0	1	4	18	0	0	22	1	6	0	0	7	1	7	0	0	8	38
	Peak Hour Volume	1	5	4	0	10	4	28	2	0	34	2	10	1	0	13	4	35	0	0	39	96
	Rounded Hourly Volume	0	5	5	0	10	5	30	0	0	35	0	10	0	0	10	5	35	0	0	40	95
	% Single Unit Trucks	100.0	0.0	0.0	0.0	10.0	25.0	10.7	0.0	0.0	11.8	50.0	10.0	0.0	0.0	15.4	0.0	8.6	0.0	0.0	7.7	10.4
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Trucks (Total)	100.0	0.0	0.0	0.0	10.0	25.0	10.7	0.0	0.0	11.8	50.0	10.0	0.0	0.0	15.4	0.0	8.6	0.0	0.0	7.7	10.4	
Peak Hour Factor (PHF)		0.25	0.31	1.00	0.00	0.42	0.25	0.39	0.50	0.00	0.39	0.50	0.42	0.25	0.00	0.46	0.50	0.51	0.00	0.00	0.51	0.63

Peak Hour Pedestrian and Bicyclist Volumes

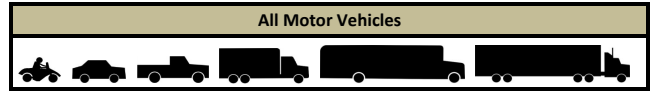
Pedestrians and Bicyclists		Crossing 			Crossing 			Crossing 			Crossing 			Total Ped & Bike Volume
 		North Approach 			East Approach 			South Approach 			West Approach 			
15-Minute Start Time		Nigbor Drive			Concord Road			Nigbor Drive			Concord Road			
		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	Total	0	0	0	0	0	0	0	0	0	1	0	1	
MD	10:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	2
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	0	0	0	0	0	0	1	0	1	0	0	0	1
	Total	0	0	0	2	0	2	1	0	1	0	0	0	3
PM	2:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
	2:45 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
	3:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
	3:15 PM	0	0	0	1	0	1	3	0	3	1	0	1	5
	Total	2	0	2	1	0	1	3	0	3	2	0	2	8

Intersection Traffic Volume Report

Count Basics			Page 4 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Hourly Volume Summary - Motor Vehicle Data

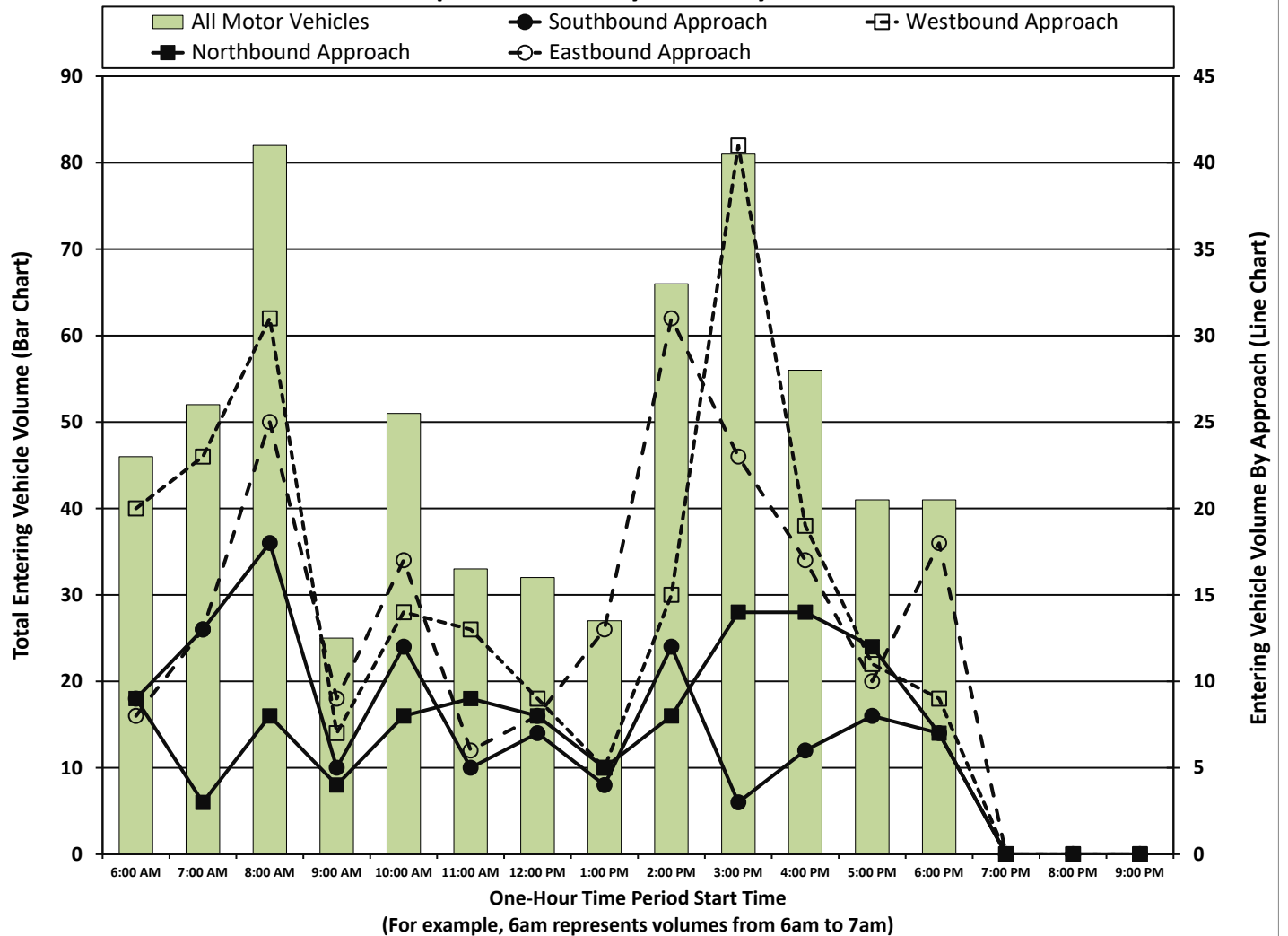
Nigbor Drive and Concord Road



One-Hour Motor Vehicle Data

One-Hour Time Period	Start Time	From North Nigbor Drive					From East Concord Road					From South Nigbor Drive					From West Concord Road					Total Vehicle Volume	Directional Volume Totals	
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
																							E/W	N/S
AM	6:00 AM	2	6	1	0	9	0	19	1	0	20	1	2	6	0	9	2	6	0	0	8	46	28	18
	7:00 AM	0	8	5	0	13	2	20	1	0	23	1	1	1	0	3	1	12	0	0	13	52	36	16
	8:00 AM	1	13	4	0	18	3	26	2	0	31	3	4	1	0	8	1	23	1	0	25	82	56	26
	9:00 AM	0	3	2	0	5	0	7	0	0	7	1	2	1	0	4	2	6	1	0	9	25	16	9
MD	10:00 AM	1	8	3	0	12	2	10	2	0	14	3	5	0	0	8	1	14	2	0	17	51	31	20
	11:00 AM	1	4	0	0	5	1	12	0	0	13	3	5	1	0	9	0	5	1	0	6	33	19	14
	12:00 PM	0	6	1	0	7	1	8	0	0	9	2	5	1	0	8	0	7	1	0	8	32	17	15
	1:00 PM	0	4	0	0	4	0	4	1	0	5	0	4	1	0	5	2	11	0	0	13	27	18	9
PM	2:00 PM	2	6	4	0	12	2	11	2	0	15	2	5	1	0	8	4	26	1	0	31	66	46	20
	3:00 PM	1	0	2	0	3	4	35	2	0	41	1	12	1	0	14	5	18	0	0	23	81	64	17
	4:00 PM	0	6	0	0	6	1	14	4	0	19	0	10	4	0	14	1	13	3	0	17	56	36	20
	5:00 PM	0	7	1	0	8	1	9	1	0	11	2	10	0	0	12	2	8	0	0	10	41	21	20
	6:00 PM	2	4	1	0	7	1	8	0	0	9	0	5	2	0	7	3	15	0	0	18	41	27	14
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	10	75	24	0	109	18	183	16	0	217	19	70	20	0	109	24	164	10	0	198	633	415	218

Graphical Summary of Hourly Volumes

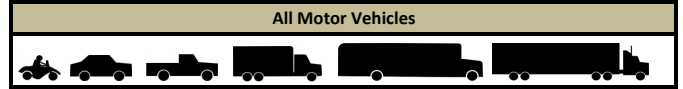


Intersection Traffic Volume Report

Count Basics			Page 5 of 13	
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session	
Total Number of Hours Counted:	13	Non-Holiday	No Special Events	

15-Minute Motor Vehicle Data

Nigbor Drive and Concord Road



15-Minute Motor Vehicle Data

15-Minute Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					15-Min Totals	Hourly Sum	PHF	
	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	46	0.50
	6:15 AM	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	4	64	0.70
	6:30 AM	1	3	0	0	4	0	9	1	0	10	0	0	3	0	3	0	1	0	0	1	18	65	0.71
	6:45 AM	1	1	1	0	3	0	9	0	0	9	0	2	3	0	5	2	4	0	0	6	23	60	0.65
	7:00 AM	0	1	2	0	3	1	6	1	0	8	0	0	0	0	0	0	8	0	0	8	19	52	0.68
	7:15 AM	0	1	0	0	1	0	2	0	0	2	1	0	0	0	1	1	0	0	0	1	5	78	0.43
	7:30 AM	0	4	2	0	6	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	13	95	0.53
	7:45 AM	0	2	1	0	3	1	6	0	0	7	0	1	1	0	2	0	3	0	0	3	15	92	0.51
	8:00 AM	0	7	3	0	10	1	9	1	0	11	2	2	1	0	5	1	18	0	0	19	45	82	0.46
	8:15 AM	1	1	0	0	2	1	14	0	0	15	0	1	0	0	1	0	3	1	0	4	22	43	0.49
Midday Peak Period	8:30 AM	0	4	0	0	4	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	10	29	0.73
	8:45 AM	0	1	1	0	2	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	5	24	0.75
	9:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	2	0	0	3	6	25	0.78
	9:15 AM	0	0	2	0	2	0	1	0	0	1	0	1	0	0	1	1	2	1	0	4	8	29	0.73
	9:30 AM	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	5	34	0.65
	9:45 AM	0	2	0	0	2	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1	6	36	0.69
	10:00 AM	0	2	0	0	2	1	0	2	0	3	0	0	0	0	0	0	4	1	0	5	10	51	0.61
	10:15 AM	1	1	2	0	4	0	4	0	0	4	1	0	0	0	1	1	2	1	0	4	13	48	0.57
	10:30 AM	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	0	1	0	0	1	7	47	0.56
	10:45 AM	0	5	1	0	6	1	2	0	0	3	2	3	0	0	5	0	7	0	0	7	21	44	0.52
PM Peak Period	11:00 AM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	7	33	0.69
	11:15 AM	0	2	0	0	2	0	4	0	0	4	2	2	0	0	4	0	1	1	0	2	12	37	0.77
	11:30 AM	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4	28	0.64
	11:45 AM	0	0	0	0	0	1	4	0	0	5	1	1	1	0	3	0	2	0	0	2	10	30	0.68
	12:00 PM	0	3	0	0	3	0	2	0	0	2	0	3	0	0	3	0	3	0	0	3	11	32	0.67
	12:15 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	3	29	0.60
	12:30 PM	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	1	1	0	2	6	31	0.65
	12:45 PM	0	1	1	0	2	1	3	0	0	4	2	1	0	0	3	0	3	0	0	3	12	31	0.65
	1:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	1	4	0	0	5	8	27	0.84
	1:15 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	5	26	0.81
1:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	3	0	0	3	6	33	0.69	
1:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	1	3	0	0	4	8	44	0.65	
2:00 PM	0	1	1	0	2	1	1	0	0	2	1	1	0	0	2	0	1	0	0	1	7	66	0.55	
2:15 PM	1	0	1	0	2	1	3	1	0	5	0	1	0	0	1	1	2	1	0	4	12	70	0.58	
2:30 PM	0	1	1	0	2	0	3	1	0	4	1	2	1	0	4	1	6	0	0	7	17	96	0.63	
2:45 PM	1	4	1	0	6	0	4	0	0	4	0	1	0	0	1	2	17	0	0	19	30	93	0.61	
3:00 PM	0	0	1	0	1	0	3	1	0	4	0	1	0	0	1	0	5	0	0	5	11	81	0.53	
3:15 PM	0	0	1	0	1	4	18	0	0	22	1	6	0	0	7	1	7	0	0	8	38	80	0.53	
3:30 PM	1	0	0	0	1	0	8	1	0	9	0	0	1	0	1	2	1	0	0	3	14	60	0.83	
3:45 PM	0	0	0	0	0	0	6	0	0	6	0	5	0	0	5	2	5	0	0	7	18	60	0.83	
4:00 PM	0	1	0	0	1	0	4	0	0	4	0	2	1	0	3	0	2	0	0	2	10	56	0.78	
4:15 PM	0	1	0	0	1	0	1	0	0	1	0	4	1	0	5	1	8	2	0	11	18	55	0.76	
4:30 PM	0	3	0	0	3	0	7	1	0	8	0	3	0	0	3	0	0	0	0	0	14	49	0.88	
4:45 PM	0	1	0	0	1	1	2	3	0	6	0	1	2	0	3	0	3	1	0	4	14	49	0.88	
5:00 PM	0	1	1	0	2	1	2	0	0	3	1	1	0	0	2	2	0	0	0	2	9	41	0.73	
5:15 PM	0	4	0	0	4	0	2	1	0	3	1	2	0	0	3	0	2	0	0	2	12	45	0.80	
5:30 PM	0	1	0	0	1	0	5	0	0	5	0	4	0	0	4	0	4	0	0	4	14	42	0.75	
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	2	0	0	2	6	35	0.67	
6:00 PM	0	1	1	0	2	0	2	0	0	2	0	3	1	0	4	1	4	0	0	5	13	41	0.79	
6:15 PM	1	0	0	0	1	1	1	0	0	2	0	1	0	0	1	0	5	0	0	5	9			
6:30 PM	0	0	0	0	0	0	3	0	0	3	0	1	1	0	2	0	2	0	0	2	7			
6:45 PM	1	3	0	0	4	0	2	0	0	2	0	0	0	0	0	2	4	0	0	6	12			
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		10	75	24	0	109	18	183	16	0	217	19	70	20	0	109	24	164	10	0	198	633		

Peak Hour All Vehicle Volume Summary

Intersection Traffic Volume Report

Count Basics			Page 6 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Automobile Data

Nigbor Drive and Concord Road



15-Minute Automobile Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum		
	Nigbor Drive						Concord Road					Nigbor Drive					Concord Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total					
AM Peak Period	6:00 AM	0		0		0	0		1		0	0		1	0		0		0		0	0		1	45
	6:15 AM	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	4	62		
	6:30 AM	1	3	0	0	4	0	9	1	0	10	0	0	3	0	3	0	1	0	0	1	18	62		
	6:45 AM	1	1	1	0	3	0	9	0	0	9	0	1	3	0	4	2	4	0	0	6	22	57		
	7:00 AM	0	1	2	0	3	1	6	1	0	8	0	0	0	0	0	0	7	0	0	7	18	48		
	7:15 AM	0	1	0	0	1	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	4	72		
	7:30 AM	0	4	2	0	6	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	13	88		
	7:45 AM	0	2	0	0	2	1	6	0	0	7	0	1	0	0	1	0	3	0	0	3	13	85		
	8:00 AM	0	7	3	0	10	1	9	1	0	11	2	2	1	0	5	1	15	0	0	16	42	77		
	8:15 AM	1	1	0	0	2	1	12	0	0	13	0	1	0	0	1	0	3	1	0	4	20	40		
8:30 AM	0	4	0	0	4	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	10	28			
8:45 AM	0	1	1	0	2	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	5	23			
9:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	1	0	0	2	5	24			
9:15 AM	0	0	2	0	2	0	1	0	0	1	0	1	0	0	1	1	2	1	0	4	8	29			
9:30 AM	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	5	34			
9:45 AM	0	2	0	0	2	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1	6	36			
Midday Peak Period	10:00 AM	0	2	0	0	2	1	0	2	0	3	0	0	0	0	0	0	4	1	0	5	10	50		
	10:15 AM	1	1	2	0	4	0	4	0	0	4	1	0	0	0	1	1	2	1	0	4	13	47		
	10:30 AM	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	0	1	0	0	1	7	45		
	10:45 AM	0	5	1	0	6	1	2	0	0	3	2	3	0	0	5	0	6	0	0	6	20	42		
	11:00 AM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	7	31		
	11:15 AM	0	2	0	0	2	0	3	0	0	3	2	2	0	0	4	0	1	1	0	2	11	35		
	11:30 AM	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4	27		
	11:45 AM	0	0	0	0	0	0	4	0	0	4	1	1	1	0	3	0	2	0	0	2	9	28		
	12:00 PM	0	3	0	0	3	0	2	0	0	2	0	3	0	0	3	0	3	0	0	3	11	31		
	12:15 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	3	28		
	12:30 PM	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	5	30		
	12:45 PM	0	1	1	0	2	1	3	0	0	4	2	1	0	0	3	0	3	0	0	3	12	31		
	1:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	1	4	0	0	5	8	27		
	1:15 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	5	26		
	1:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	3	0	0	3	6	33		
	1:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	1	3	0	0	4	8	42		
PM Peak Period	2:00 PM	0	1	1	0	2	1	1	0	0	2	1	1	0	0	2	0	1	0	0	1	7	63		
	2:15 PM	1	0	1	0	2	1	3	1	0	5	0	1	0	0	1	1	2	1	0	4	12	67		
	2:30 PM	0	1	1	0	2	0	2	1	0	3	0	2	1	0	3	1	6	0	0	7	15	86		
	2:45 PM	0	4	1	0	5	0	4	0	0	4	0	1	0	0	1	2	17	0	0	19	29	84		
	3:00 PM	0	0	1	0	1	0	3	1	0	4	0	1	0	0	1	0	5	0	0	5	11	71		
	3:15 PM	0	0	1	0	1	3	16	0	0	19	1	5	0	0	6	1	4	0	0	5	31	70		
	3:30 PM	1	0	0	0	1	0	8	1	0	9	0	0	1	0	1	1	1	0	0	2	13	57		
	3:45 PM	0	0	0	0	0	0	5	0	0	5	0	5	0	0	5	1	5	0	0	6	16	57		
	4:00 PM	0	1	0	0	1	0	4	0	0	4	0	2	1	0	3	0	2	0	0	2	10	55		
	4:15 PM	0	1	0	0	1	0	1	0	0	1	0	4	1	0	5	1	8	2	0	11	18	53		
	4:30 PM	0	3	0	0	3	0	7	0	0	7	0	3	0	0	3	0	0	0	0	0	13	47		
	4:45 PM	0	1	0	0	1	1	2	3	0	6	0	1	2	0	3	0	3	1	0	4	14	48		
	5:00 PM	0	0	1	0	1	1	2	0	0	3	1	1	0	0	2	2	0	0	0	2	8	40		
	5:15 PM	0	4	0	0	4	0	2	1	0	3	1	2	0	0	3	0	2	0	0	2	12	45		
	5:30 PM	0	1	0	0	1	0	5	0	0	5	0	4	0	0	4	0	4	0	0	4	14	42		
	5:45 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	2	0	0	2	6	35		
	6:00 PM	0	1	1	0	2	0	2	0	0	2	0	3	1	0	4	1	4	0	0	5	13	41		
	6:15 PM	1	0	0	0	1	1	1	0	0	2	0	1	0	0	1	0	5	0	0	5	9			
	6:30 PM	0	0	0	0	0	0	3	0	0	3	0	1	1	0	2	0	2	0	0	2	7			
	6:45 PM	1	3	0	0	4	0	2	0	0	2	0	0	0	0	0	2	4	0	0	6	12			
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Totals	9	74	23	0	106	16	176	15	0	207	18	68	19	0	105	21	155	9	0	0	185	603			

Peak Hour Automobile Volume Summary

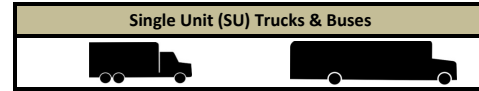
Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:30 AM	1	14	5	0	20	3	33	1	0	37	2	4	1	0	7	1	22	1	0	24	88
AM 10:00 AM	1	8	3	0	12	2	10	2	0	14	3	5	0	0	8	1	13	2	0	16	50
PM 2:30 PM	0	5	4	0	9	3	25	2	0	30	1	9	1	0	11	4	32	0	0	36	86

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Nigbor Drive and Concord Road

Count Basics			Page 7 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum
	Nigbor Drive						Concord Road					Nigbor Drive					Concord Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	3
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	6
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	7:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	7
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	5
	8:15 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	3
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	11:15 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	11:45 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	2:30 PM	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	2	10
	2:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	3:15 PM	0	0	0	0	0	0	1	2	0	3	0	1	0	0	1	0	3	0	0	3	7	10
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	3
	3:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	1	2	3
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		1	1	1	0	3	2	7	1	0	10	1	2	1	0	4	3	9	1	0	13	30	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

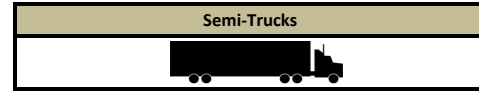
Hourly Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume
	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:30 AM	0	0	1	0	1	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	7
MD 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
PM 2:30 PM	1	0	0	0	1	1	3	0	0	4	1	1	0	0	2	0	3	0	0	3	8

Intersection Traffic Volume Report

Count Basics			Page 8 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Semi-Truck Data

Nigbor Drive and Concord Road



15-Minute Semi-Truck Data

15-Minute Time Period Start Time	From North							From East					From South					From West					15-Min Totals	Hourly Sum
	Nigbor Drive							Concord Road					Nigbor Drive					Concord Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume
	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MD 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM 2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Intersection Traffic Volume Report

Count Basics			Page 9 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Nigbor Drive and Concord Road



15-Minute Heavy Vehicle Data

15-Minute Time Period Start Time	From North							From East					From South					From West					15-Min Totals	Hourly Sum
	Nigbor Drive							Concord Road					Nigbor Drive					Concord Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	3	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	6	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
	7:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	7
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	5	
	8:15 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	3	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	11:15 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	11:45 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	2:30 PM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1	0	0	0	0	0	2	10	
	2:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
	3:15 PM	0	0	0	0	0	1	2	0	3	0	1	0	0	0	1	0	3	0	0	3	7	10	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	3	
	3:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	1	2	3	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	4:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	2	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		1	1	1	0	3	2	7	1	0	10	1	2	1	0	4	3	9	1	0	13	30		

Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume
	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:30 AM	0	0	1	0	1	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	7
MD 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
PM 2:30 PM	1	0	0	0	1	1	3	0	0	4	1	1	0	0	2	0	3	0	0	3	10

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Nigbor Drive and Concord Road

Count Basics			Page 10 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

%	Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)		
%		%	

15-Minute Heavy Vehicle Percentages

15-Minute Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent	
	Nigbor Drive					Concord Road					Nigbor Drive					Concord Road							
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	12.5	5.3	7.7	
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	20.0	7.7	
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	
	7:45 AM	0.0	0.0	100.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	50.0	0.0	0.0	0.0	0.0	13.3	7.6	
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	15.8	6.7	6.1	
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	7.0
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	
9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	33.3	16.7	4.0		
9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	10:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	14.3	4.8	4.5	
	11:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	
	11:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	
	11:45 AM	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	6.7	
	12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	50.0	16.7	
	12:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	
PM Peak Period	2:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	
	2:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	25.0	100.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	11.8	
	2:45 PM	100.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	9.7	
	3:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	
	3:15 PM	0.0	0.0	0.0	0.0	0.0	25.0	11.1	0.0	0.0	13.6	0.0	16.7	0.0	0.0	14.3	0.0	42.9	0.0	0.0	37.5	18.4	
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	33.3	7.1	5.0	
	3:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	14.3	11.1	
	4:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	
	4:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	
	4:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	4.1	
	4:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
	5:00 PM	0.0	100.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	2.4	
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9:00.																							

Intersection Traffic Volume Report

Count Basics			Page 11 of 13
Start Date:	Monday, February 28, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Pedestrian and Bicyclist Data

Nigbor Drive and Concord Road



15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period Start Time		Crossing 			Crossing 			Crossing 			Crossing 			15-Min Totals	Hourly Sum	
		North Approach			East Approach			South Approach			West Approach					
		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total			
AM Peak Period																
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	3	3	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
9:30 AM	0	0	0	1	0	1	1	0	1	0	0	0	2	4	4	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Midday Peak Period																
10:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	2	3	3	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
10:45 AM	0	0	0	0	0	0	1	0	1	0	0	0	1	2	2	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
11:15 AM	0	0	0	0	0	0	1	0	1	0	0	0	1	1	1	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
12:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	1	3	3	
12:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	3	3	
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	2	2	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
1:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	4	4	
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
1:45 PM	0	0	0	2	0	2	0	0	0	0	0	0	2	4	4	
PM Peak Period																
2:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	3	3	
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	8	8	
2:45 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	12	12	
3:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	11	11	
3:15 PM	0	0	0	1	0	1	3	0	3	1	0	1	5	11	11	
3:30 PM	0	0	0	2	0	2	2	0	2	1	0	1	5	6	6	
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	22	22	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	24	24	
4:30 PM	0	0	0	2	0	2	1	0	1	1	0	1	4	27	27	
4:45 PM	0	0	0	7	0	7	6	1	7	3	0	3	17	24	24	
5:00 PM	0	0	0	1	0	1	1	0	1	1	0	1	3	7	7	
5:15 PM	0	0	0	1	0	1	2	0	2	0	0	0	3	9	9	
5:30 PM	0	0	0	0	0	0	1	0	1	0	0	0	1	8	8	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	
6:00 PM	0	0	0	0	0	0	2	0	2	3	0	3	5	7	7	
6:15 PM	0	0	0	0	0	0	2	0	2	0	0	0	2			
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		2	0	2	22	0	22	24	1	25	15	0	15	64		

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementary School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

APPENDIX B

CRASH DIAGRAM & STATISTICS



LEGEND

→ Moving Vehicle	⚡ Traffic Signal	↗ Angle (Right Angle)	↔ Head-On
↔ Backing Vehicle	⚡ Stop/Yield Sign	↖ Angle (Left Turn)	↔ Rear-End
--- Pedestrian	Ⓣ Tree	↘ Angle (Right Turn)	⚡ Out of Control
--- Bicyclist	Ⓢ Fixed Object	↔ Sideswipe-Same	↗ Overtake
🚗 Parked Vehicle	Ⓝ Non-Fixed Object	↔ Sideswipe-Opposite	⚡ Overturn

= CRASH FREQUENCY (if > 1 NON-PED/BIKE)

LABEL, DATE OF CRASH, TIME, SEVERITY, ROAD CONDITIONS, LIGHT, ALCOHOL, DRUGS, SPEED-RELATED, NOTES ABOUT CRASH

Note: Deer Crashes Not Included

CRASH SEVERITY DEFINITIONS

K-Inj = Fatal Crash
A-Inj = Suspected Serious Injury Crash
B-Inj = Suspected Minor Injury Crash
C-Inj = Possible Injury Crash
 = No Apparent Injury Crash



CRASH STATISTICS	
2	0 Fatal Crash (K)
Crashes	0 Suspected Serious (Type A)
	0 Suspected Minor (Type B)
	0 Possible (Type C)
	2 No Apparent Injury
2.19	Crashes Per Million Entering Vehicles

HIGHLIGHTED CRASHES	
*Economic Loss = \$684k (KA), \$217 (B), \$123k (C), \$10.8k (PDO)	
🟡	> \$1,000,000 in economic loss*
🟠	> \$500,000 in economic loss*
🟢	Pedestrian or bicyclist struck by vehicle

CRASH HISTORY (2017-2021) CONCORD ROAD & NIGBOR DRIVE GERMANTOWN, WISCONSIN

APPENDIX C

ALL-WAY STOP CONTROLL WARRANT ANALYSIS

ASWC Warrant Criteria

MUTCD **No**

WisDOT **Yes**

1,

MUTCD

Met? Criteria

No A. Is a signal justified? **No**

No B. # of crashes in a 12 month period that can be corrected by multi-way stop control: **1**

No C. Minimum Volumes

1. Major road approach volume (total of both) at least 300 vph for min 8 hours?

2. Combined ped, bike, and veh volume on minor approach (total of both) at least 200 units per hour for the same 8 hours as criteria C-1?

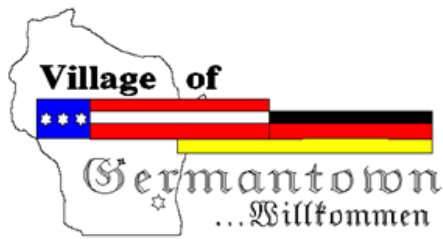
3. If the 85th percentile speed on the major road exceeds 40 mph, may use 70% of the values in C-1 and C-2

Major Street 85th percentile mph: **33**

Time Period	From	To	Major Road: Both App.	Minor Road: Both App. (VPH)	C-1	C-2	Both Met?	D (80%)		Both Met?
1	6:00	7:00	28	18	No	No	No	No	No	No
2	7:00	8:00	36	16	No	No	No	No	No	No
3	8:00	9:00	56	26	No	No	No	No	No	No
4	9:00	10:00	16	9	No	No	No	No	No	No
5	10:00	11:00	31	20	No	No	No	No	No	No
6	11:00	12:00	19	14	No	No	No	No	No	No
7	12:00	13:00	17	15	No	No	No	No	No	No
8	13:00	14:00	18	9	No	No	No	No	No	No
9	14:00	15:00	46	20	No	No	No	No	No	No
10	15:00	16:00	64	17	No	No	No	No	No	No
11	16:00	17:00	36	20	No	No	No	No	No	No
12	17:00	18:00	21	20	No	No	No	No	No	No
13	18:00	19:00	27	14	No	No	No	No	No	No
14	19:00	20:00								
15	20:00	21:00								
16	21:00	22:00								

No D. Use when previous criteria have not been met:

If 80% minimum values of Criteria B, C-1, and C-2 (C-3 excluded) are satisfied, warrant is met.



Re: **DISCONNECTION NOTICE**

Name***

Address****

Dear Utility customer

A letter was sent to your residence (attached) in early March of this year explaining the need to replace the water meter that services this property along with the process and reasons why. The Village of Germantown through PMI (Professional Meter Inc.) has mailed three separate install cards requesting you to call them for an appointment.

Per PSC code 185.37(2) (e, f) (h) We request you IMMEDIATELY CALL PMI at 1-855-215-5122 between the hours of 7am-6:30pm Mon-Thurs or 7am-5:30pm Friday or 8am-1pm Saturday to make an appointment AND CALL OUR UTILITY OFFICE at 262-250-4703 between the hours of 8am-4:00pm M-F to get removed off the disconnection list. You will have a 10-day grace period to comply and to avoid the inconvenience of service interruption or additional charges for reconnection and overbilling on your water bill due to the meter not being able to be read.

The disconnection will be held off for 21days IF there is serious illness in the home.

“This will help enable the occupant to produce from a licensed Wisconsin physician's a required statement or notice from a public health, social services, or law enforcement official which identifies the medical or protective services emergency and specifies the period of time during which disconnection shall aggravate the circumstances”.

A property owner may also appeal the shut off to the Public Service Commission at 1-608-266-5481 or online at

[PSC Log A Complaint \(wi.gov\)](https://www.wisconsin.gov/psc/log-a-complaint)

Thank you for your compliance.

Germantown Water Utility

**BUSINESS OF THE PUBLIC WORKS & HIGHWAYS COMMITTEE
GERMANTOWN, WI**

MEETING DATE: May 11, 2022

AGENDA ITEM: New Business

ITEM TITLE: 5-Year Capital Improvement Program-Park & Rec

SUBMITTED BY: Lawrence W Ratayczak, P.E., Public Works Director

SUMMARY EXPLANATION:

At the March 1, 2022 PWHC meeting the Committee requested an explanation of two entries 1) Land Acquisition-Community Park-\$1,000,000 & 2) Community Park Master Plan & Phase 1 Development-\$2,000,000 in the Park & Recreation planning budget for 2023. My investigation of these two values revealed that they were prematurely entered into the 5-Year CIP and should have waited for the Comprehensive Outdoor Recreation Plan (CORP) to be finalized and approved. With CORP being approved recently Park & Recreations will reevaluate the needs based on the approved plan and look to a future year to enter values into the 5-Year CIP Plan.

ATTACHMENT: ORDINANCE_____ RESOLUTION_____ OTHER X

- 5-Year CIP (amended)

RECOMMENDATION:

Staff presented for information and discussion no action required.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

Village of Germantown
SUMMARY OF C.I.P. EXPENDITURES
by Department

Department- Project Category	2022	2023	2024	2025	2026	Total Cost
Data Processing						
New Financial Management Software	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000
	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ 300,000
Police Department						
Patrol Squads (24 total in Fleet/replace 2/yr; add 2%/yr)	\$ 100,000	\$ 102,000	\$ 104,040	\$ 106,120	\$ 108,240	\$ 520,400
ProPhoenix Upgrade	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ 35,000
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Police Department Campus						
Design (in 2025 into 2026)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building (estimate build 2027/2028 @ \$17 mil)	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ 750,000
Replace Handguns (New \$24,000 - sell existing(30%) = \$16,800)	\$ -	\$ 16,800	\$ -	\$ -	\$ -	\$ 16,800
	\$ 135,000	\$ 118,800	\$ 104,040	\$ 856,120	\$ 108,240	\$ 1,322,200
Fire Department						
Equipment Replacement						
Replace Pumper Truck (#1764; yr mnfr 2012) replace in 2032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Replace Tender Truck (#1790; yr mnfr 1995)	\$ -	\$ -	\$ 450,000	\$ -	\$ -	\$ 450,000
Replace SCBA's and Bottle Replacement	\$ 275,000	\$ -	\$ -	\$ -	\$ -	\$ 275,000
Replace Ambulance (#1753; yr mnfr 2011)	\$ -	\$ -	\$ -	\$ -	\$ 315,000	\$ 315,000
Replace Ambulance (#1751; yrr mnfr 2021) replace in 2031	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Replace Staff Vehicle (#1785; yr mnfr 2013)	\$ 85,000	\$ -	\$ -	\$ -	\$ -	\$ 85,000
Replace Pumper Truck (#1762; yr mnfr 2015) replace in 2035	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Replace Ladder Truck (#1771; yr mnfr 2001) replace in 2028	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Replace Ambulance (#1752; yr mnfr 2022) replace in 2034	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Replace Staff Vehicle (#1741; yr mnfr 2016)	\$ -	\$ -	\$ -	\$ 85,000	\$ -	\$ 85,000
Add UTV	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 60,000
	\$ 420,000	\$ -	\$ 450,000	\$ 85,000	\$ 315,000	\$ 1,270,000
Library						
Design Second Floor Addition	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 300,000
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 300,000
Street & Highway						
Single Axle Patrol Truck	\$ 190,000	\$ 410,000	\$ -	\$ 210,000	\$ 420,000	\$ 1,230,000
Bucket Truck	\$ 190,000	\$ -	\$ -	\$ -	\$ -	\$ 190,000
Pick-up w/ Plow Package	\$ 45,000	\$ -	\$ -	\$ -	\$ 50,000	\$ 95,000
Tractor Loader Parks	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ 45,000
F-450 Truck Body	\$ -	\$ 20,000	\$ -	\$ -	\$ -	\$ 20,000
Asphalt Paving (Annual Road Program)	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 7,500,000
Mequon Road Lighting	\$ 176,000	\$ -	\$ -	\$ -	\$ -	\$ 176,000
Zero Turn Mower (2)	\$ -	\$ 32,000	\$ -	\$ -	\$ 35,000	\$ 67,000
Pick-up/w liftgate	\$ -	\$ 40,000	\$ 45,000	\$ 45,000	\$ -	\$ 130,000
Tandem Patrol Truck with First Response	\$ -	\$ -	\$ 290,000	\$ -	\$ -	\$ 290,000
Compact loader/Skid loader	\$ -	\$ -	\$ 80,000	\$ -	\$ -	\$ 80,000
Road Paint sprayer	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ 5,000
Ditch Mower Tractor	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000
MV/Trackless	\$ -	\$ -	\$ -	\$ 190,000	\$ -	\$ 190,000
Air compressor/ pull behind	\$ -	\$ -	\$ -	\$ -	\$ 25,000	\$ 25,000
	\$ 2,146,000	\$ 2,002,000	\$ 1,920,000	\$ 2,095,000	\$ 2,030,000	\$ 10,193,000
Wastewater Utility (Wastewater typically does not borrow)						
Relining & Manhole Maint sewer lines	\$ 80,000	\$ 70,000	\$ 70,000	\$ 70,000	\$ 70,000	\$ 360,000
CIPP waterway crossings	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 1,000,000
Epoxy encapsulation of wet wells @ Main St & Old Farm Lifts	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ 100,000
Flowminutor Main Street Lift Replacement	\$ 85,000	\$ -	\$ -	\$ -	\$ -	\$ 85,000
Truck (552) 2005 Jet Vac Replacement	\$ 30,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 170,000
Joint Meter Replacement	\$ 200,000	\$ -	\$ -	\$ -	\$ -	\$ 200,000
Control Upgrade - Lift 3	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ 15,000
OHV and Trailer	\$ 28,000	\$ -	\$ -	\$ -	\$ -	\$ 28,000
Lift 2 Sanitary Sewer Relay (Concord to Pilgrim)(Built 1965, Rehab 1988)	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ 500,000
Lift 2 Sanitary Sewer Relay (Sumac to Concord)	\$ -	\$ 225,000	\$ -	\$ -	\$ -	\$ 225,000
Flowminutor Old Farm	\$ -	\$ 95,000	\$ -	\$ -	\$ -	\$ 95,000
Truck (555) 2009 GMC 2500 4X4 liftgate Replacement	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 45,000
Construction of Storage Garage & Office	\$ -	\$ -	\$ 600,000	\$ -	\$ -	\$ 600,000
Field Mobile Work Stations	\$ -	\$ -	\$ 3,500	\$ -	\$ -	\$ 3,500
Telemetry Equipment	\$ -	\$ -	\$ -	\$ 25,000	\$ -	\$ 25,000
Truck (553) 2001 GMC G3500 Hi cube w/CCTV Equipment	\$ -	\$ -	\$ -	\$ 110,000	\$ -	\$ 110,000
Electric Pumping Equipment	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000
	\$ 638,000	\$ 1,270,000	\$ 908,500	\$ 440,000	\$ 805,000	\$ 4,061,500

Water Utility

Equipment Replacement	\$ 390,000	\$ 12,000	\$ -	\$ 45,000	\$ -	\$ 447,000
Vehicle Replacement	\$ 71,000	\$ 85,000	\$ 35,000	\$ -	\$ 100,000	\$ 291,000
Well and Pump Service	\$ 255,000	\$ 125,000	\$ 125,000	\$ -	\$ 210,000	\$ 715,000
Hydrants	\$ 180,000	\$ -	\$ -	\$ -	\$ -	\$ 180,000
Tower Painting	\$ -	\$ 650,000	\$ 450,000	\$ -	\$ -	\$ 1,100,000
Well Replacement	\$ -	\$ 70,000	\$ 35,000	\$ 35,000	\$ -	\$ 140,000
Antenna Replacment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Main Relay	\$ 30,000	\$ 1,603,140	\$ 404,140	\$ 366,960	\$ 381,040	\$ 2,785,280
	\$ 926,000	\$ 2,545,140	\$ 1,049,140	\$ 446,960	\$ 691,040	\$ 5,658,280

Recycling Center

Wheel Loader	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ 225,000
	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ 225,000

Parks and Recreation

Village-Wide Trail/Pathway Network Plan	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 30,000
Land Acquisition – Community Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dheinsville Park Festhalle – Bird Netting System	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ 35,000
Kinderberg Park – resurface tennis courts	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Ball Diamon Renovations	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ 60,000
Kinderberg Park Playground	\$ -	\$ 225,000	\$ -	\$ -	\$ -	\$ 225,000
Community Park Master Plan & Phase 1 Development	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Trail/Pathway System Implementation (4 annual Phases)	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 400,000
Firemen's Park – parking area by Gehl's Pavilion/new park shelter	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ 75,000
Community Park Development – Phase 2 Development	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ 750,000
Community Splashpad & All-Inclusive Playground	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000
Community Park Development – Phase 3 Development	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000
Friedenfeld Park Master & Design Development Plans	\$ -	\$ -	\$ -	\$ 30,000	\$ -	\$ 30,000
Friedenfeld Park Utilities & Restroom/shelter Building	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000
	\$ 125,000	\$ 430,000	\$ 1,850,000	\$ 630,000	\$ 1,600,000	\$ 4,635,000

Engineering

Village Owned Pond Survey and Restoration	\$ -	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 80,000
Lannon Rd & Maple Rd Intersection Improvements (if HSIP funded)	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ 80,000
Intermodel/sidewalk Connectivity program	\$ 10,000	\$ -	\$ 50,000	\$ -	\$ -	\$ 60,000
Purchase Land for Century Lane Road Reconstruction	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ 80,000
Woodlannd Dr. Area (rurual road areas) Drainage Improvements	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 40,000
Easement through SE corner Goldendale Rd/Holy Hill Rd for sanitary sewer to serve NE corner of same intersection	\$ -	\$ 350,000	\$ -	\$ -	\$ -	\$ 350,000
Layout/Design future frontage Road	\$ -	\$ 125,000	\$ -	\$ -	\$ -	\$ 125,000
	\$ 130,000	\$ 450,000	\$ 195,000	\$ 20,000	\$ 20,000	\$ 815,000

Buildings

Historical Bell Museum	\$ -	\$ 13,700	\$ -	\$ 3,500	\$ 11,114	\$ 28,314
Historical Wolf Haus	\$ -	\$ 95,447	\$ 19,000	\$ -	\$ 4,860	\$ 119,307
Fire Station #2 (Roof Replace & Exterior Painting)	\$ 95,000	\$ 260,348	\$ 1,860	\$ 660	\$ 333,148	\$ 691,016
Survive Alive House	\$ -	\$ 84,606	\$ 1,603	\$ -	\$ 898	\$ 87,107
Spasland Shelter	\$ -	\$ 33,323	\$ 1,728	\$ -	\$ 55,385	\$ 90,436
Kinderberg Shelter	\$ -	\$ 23,281	\$ 725	\$ -	\$ 31,279	\$ 55,285
Kinderberg Splash Pad	\$ -	\$ 45,000	\$ 225,000	\$ -	\$ -	\$ 270,000
Recreation Building (Old Fire House #1)	\$ -	\$ 78,148	\$ -	\$ -	\$ 215,345	\$ 293,493
Firemens Park Restroom	\$ -	\$ 52,935	\$ -	\$ -	\$ 640	\$ 53,575
Firemans Park Shelter (Old)	\$ -	\$ 29,040	\$ -	\$ -	\$ 15,433	\$ 44,473
Fire Company Building	\$ -	\$ 77,228	\$ 727	\$ -	\$ 112,635	\$ 190,590
Senior Center	\$ -	\$ 79,046	\$ 75,100	\$ -	\$ 22,682	\$ 176,828
Village Hall	\$ -	\$ 58,591	\$ 37,684	\$ -	\$ 424,224	\$ 520,499
Library (Fire Suppression Nitrogen Generator)	\$ 120,000	\$ 199,505	\$ 675	\$ -	\$ 377,366	\$ 697,546
Police Department	\$ -	\$ 84,463	\$ 6,750	\$ 154,675	\$ 116,065	\$ 361,953
Police Annex	\$ -	\$ 19,127	\$ 12,300	\$ -	\$ 125,345	\$ 156,772
	\$ 215,000	\$ 1,233,788	\$ 383,152	\$ 158,835	\$ 1,846,419	\$ 3,837,194

TOTAL

	\$ 5,260,000	\$ 8,049,728	\$ 6,859,832	\$ 4,731,915	\$ 7,715,699	\$ 32,617,174
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**BUSINESS OF THE PUBLIC WORKS & HIGHWAY COMMITTEE
GERMANTOWN, WI**

MEETING DATE: February 6, 2018

AGENDA ITEM: New Business

ITEM TITLE: WPDES (MS4 Annual Report) & MMSD Ch. 13 Annual Report

SUBMITTED BY: Lawrence W Ratayczak, P.E.; Director of Public Works

SUMMARY EXPLANATION:

The Village's Wisconsin Pollutant Discharge Elimination System (WPDES) Municipal Separate Storm Sewer System (MS4) Permit #WI-S065404-1 and the MMSD's Chapter 13 Rule, both require the Village to submit an annual report to both the Wisconsin DNR and the MMSD. Section III.H of the Permit requires that the Village's governing body review and acknowledge that it has been appraised of the Report's contents. The Report's summary (which excludes appendices) is provided to the Committee members for review.

ATTACHMENTS:

- WPDES and MMSD Ch. 13 2016 Annual Reports

RECOMMENDATION:

Recommend to the Village Board to authorize the Village President to sign the Report and to approve submittal to the Wisconsin DNR and to the MMSD.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

Submittal of Annual Reports and Other Compliance Documents for Municipal Separate Storm Sewer System (MS4) Permits

NOTE: Missing or incomplete fields are highlighted at the bottom of each page. You may save, close and return to your draft permit as often as necessary to complete your application. After 120 days your draft is deleted.

Form 3400-224(R8/2021)

Reporting Information :

Will you be completing the Annual Report or other submittal type? ☒ Annual Report ☐ Other

Project Name: 2021 Annual Report

County: Washington

Municipality: Germantown, Village

Permit Number: S065404

Facility Number: 31267

Reporting Year: 2021

Is this submittal also satisfying an Urban Nonpoint Source Grant funded deliverable? ☐ Yes ☒ No

Required Attachments and Supplemental Information

Please complete the contents of each tab to submit your MS4 permit compliance document. The information included in this checklist is necessary for a complete submittal. A complete and detailed submittal will help us review about your MS4 permit document. To help us make a decision in the shortest amount of time possible, the following information must be submitted:

Annual Report

- Review related web site and instructions for Municipal storm water permit eReporting [Exit Form]
- Complete all required fields on the annual report form and upload required attachments
- Attach the following other supporting documents as appropriate using the attachments tab above
 - Public Education and Outreach Annual Report Summary
 - Public Involvement and Participation Annual Report Summary
 - Illicit Discharge Detection and Elimination Annual Report Summary
 - Construction Site Pollution Control Annual Report Summary
 - Post-Construction Storm Water Management Annual Report Summary
 - Pollution Prevention Annual Report Summary
 - Leaf and Yard Waste Management
 - Municipal Facility (BMP) Inspection Report
 - Municipal Property SWPPP
 - Municipally Property Inspection Report
 - Winter Road Maintenance
 - Storm Sewer Map Annual Report Attachment
 - Storm Water Quality Management Annual Report Attachment
 - TMDL Attachment
 - Storm Water Consortium/Group Report

- Municipal Cooperation Attachment
- Other Annual Report Attachment
- Attach the following permit compliance documents as appropriate using the attachments tab above
 - Storm Water Management Program
 - Public Education and Outreach Program
 - Public Involvement and Participation Program
 - Illicit Discharge Detection and Elimination Program
 - Construction Site Pollutant Control Program
 - Post-Construction Storm Water Management Program
 - Pollution Prevention Program
 - Municipal Storm Water Management Facility (BMP) Inventory
 - Municipal Storm Water Management Facility (BMP) Inspection and Maintenance Plan
 - Total Maximum Daily Load documents (**If applicable, see permit for due dates.*)
 - TMDL Mapping*
 - TMDL Modeling*
 - TMDL Implementation Plan*
 - Fecal Coliform Screening Parameter *
 - Fecal Coliform Inventory and Map (*S050075-03 general permittees Appendix B B.5.2 – document due to the department by March 31, 2022*)
 - Fecal Coliform Source Elimination Plan (*S050075-03 general permittees Appendix B - document due to the department by October 31, 2023*)
- Sign and Submit form

Municipal Contact Information- Complete

Notice: Pursuant to s. NR 216.07(8), Wis. Adm. Code, an owner or operator of a Municipal Separate Storm Sewer System (MS4) is required to submit an annual report to the Department of Natural Resources (Department) by March 31 of each year to report on activities for the previous calendar year ("reporting year"). This form is being provided by the Department for the user's convenience for reporting on activities undertaken in each reporting year of the permit term. Personal information collected will be used for administrative purposes and may be provided to the extent required by Wisconsin's Open Records Law [ss. 19.31-19.39, Wis. Stats.].

Note: Compliance items must be submitted using the Attachments tab.

Municipality Information

Name of Municipality Germantown, Village

Facility ID # or (FIN): 31267

Updated Information: ☐ Check to update mailing address information

Mailing Address: N112 W17001 Mequon Rd

Mailing Address 2:

City: Germantown

State: Wisconsin

Zip Code: 53022 XXXXX or XXXXX-XXXX

Primary Municipal Contact Person (Authorized Representative for MS4 Permit)

The "Authorized Representative" or "Authorized Municipal Contact" includes the municipal official that was charged with compliance and oversight of the permit conditions, and has signature authority for submitting permit documents to the Department (i.e., Mayor, Municipal Administrator, Director of Public Works, City Engineer).

☐ Select to **create new** primary contact

First Name: Lawrence

Last Name: Ratayczak

☒ Select to **update** current contact information

Title: Dir Public Works

Mailing Address: N112W17001 Mequon Road

Mailing Address 2:

City: Germantown

State: WI

Zip Code: 53022 XXXXX or XXXXX-XXXX

Phone Number: 262-250-4721 Ext: XXX-XXX-XXXX

Email: lratayczak@germantownwi.gov

Additional Contacts Information (Optional)

☐ I&E Program

☒ IDDE Program

Individual with responsibility for:
(Check all that apply)

- ☐ IDDE Response Procedure Manual
- ☐ Municipal-wide Water Quality Plan
- ☐ Ordinances
- ☐ Pollution Prevention Program
- ☐ Post-Construction Program
- ☐ Winter roadway maintenance

First Name: Eli

Last Name: Brulla

Title: Civil Engineer

Mailing Address: N112W17001 Mequon Road

Mailing Address 2:

City: Germantown

State: WI

Zip Code: 53022 xxxxx or xxxxx-xxxx

Phone Number: 262-250-4724 Ext: xxx-xxx-xxxx

Email: ebrulla@germantownwi.gov

Individual with responsibility for:
(Check all that apply)

- ☒ I&E Program
- ☐ IDDE Program
- ☐ IDDE Response Procedure Manual
- ☐ Municipal-wide Water Quality Plan
- ☐ Ordinances
- ☐ Pollution Prevention Program
- ☐ Post-Construction Program
- ☐ Winter roadway maintenance

First Name: Jacob

Last Name: Fincher

Title: Executive Director

Mailing Address: 600 E Greenfield Ave

Mailing Address 2:

City: Milwaukee

State: WI

Zip Code: 53204 xxxxx or xxxxx-xxxx

Phone Number: 262-716-2211 Ext: xxx-xxx-xxxx

Email: fincher@swwtwater.org

1. Does the municipality rely on another entity to satisfy some of the permit requirements?

☒ Yes ☐ No

- ☒ Public Education and Outreach Southeastern Wisconsin Watersheds Trust, Inc.
- ☒ Public Involvement and Participation Southeastern Wisconsin Watersheds Trust, Inc.
- ☐ Illicit Discharge Detection and Elimination
- ☐ Construction Site Pollutant Control
- ☐ Post-Construction Storm Water Management
- ☐ Pollution Prevention

2. Has there been any changes to the municipality's participation in group efforts towards permit compliances (i.e., the municipality has added or dropped consortium membership)?

☐ Yes ☒ No

Minimum Control Measures- Section 1 : Complete**1. Public Education and Outreach**

a. Complete the following information on Public Education and Outreach Activities related to storm water. Select the Delivery Mechanism that best describes how the topics were conveyed to your population. Use the Add Event to add additional entries.

Event Start Date	4/1/2021		
Project/Event Name	Respect Our Waters Website		
Delivery Mechanism	<u>Website</u>		*Active
Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
☒ Illicit discharge detection and elimination ☒ Household hazardous waste disposal/pet waste management/vehicle washing ☒ Yard waste management/pesticide and fertilizer application ☐ Stream and shoreline management ☒ Residential infiltration ☒ Construction sites and post-construction storm water management ☒ Pollution prevention ☒ Green infrastructure/low impact development ☐ Other: General Watershed & Stormwaer Educ...	☒ General Public ☐ Public Employees ☒ Residents ☒ Businesses ☒ Contractors ☒ Developers ☐ Industries ☐ Other	101 +	☒ Yes ☐ No

Event Start Date	4/1/2021		
Project/Event Name	Watershed Wednesday Social Media Campaign		
Delivery Mechanism	<u>Social media post</u>		*Active
Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
☒ Illicit discharge detection and elimination ☒ Household hazardous waste disposal/pet waste management/vehicle washing ☒ Yard waste management/pesticide and fertilizer application ☐ Stream and shoreline management ☒ Residential infiltration ☐ Construction sites and post-construction storm water management ☐ Pollution prevention ☐ Green infrastructure/low impact development ☒ Other: General Watershed & Stormwaer Educ...	☒ General Public ☐ Public Employees ☒ Residents ☐ Businesses ☐ Contractors ☐ Developers ☐ Industries ☐ Other	101 +	☒ Yes ☐ No

Event Start Date	4/1/2021
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Project/Event Name	Direct Mailer		
Delivery Mechanism	<u>Distribution of print media</u>		* Active
Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
☒ Illicit discharge detection and elimination ☐ Household hazardous waste disposal/pet waste management/vehicle washing ☒ Yard waste management/pesticide and fertilizer application ☐ Stream and shoreline management ☐ Residential infiltration ☐ Construction sites and post-construction storm water management ☐ Pollution prevention ☐ Green infrastructure/low impact development ☒ Other: Ice & Snow Control	☒ General Public ☐ Public Employees ☒ Residents ☐ Businesses ☐ Contractors ☐ Developers ☐ Industries ☐ Other	101 +	☒ Yes ☐ No

Event Start Date	4/1/2021		
Project/Event Name	Respect Our Waters Tabling Activities		
Delivery Mechanism	<u>Informational booth*</u>		* Active
Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
☒ Illicit discharge detection and elimination ☒ Household hazardous waste disposal/pet waste management/vehicle washing ☒ Yard waste management/pesticide and fertilizer application ☐ Stream and shoreline management ☒ Residential infiltration ☐ Construction sites and post-construction storm water management ☐ Pollution prevention ☐ Green infrastructure/low impact development ☐ Other:	☒ General Public ☐ Public Employees ☒ Residents ☐ Businesses ☐ Contractors ☐ Developers ☐ Industries ☐ Other	101 +	☒ Yes ☐ No

Event Start Date	4/1/2021		
Project/Event Name	Clean Rivers, Clean Lake Conference		
Delivery Mechanism	<u>Targeted group training*</u>		* Active
Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
☐ Illicit discharge detection and elimination ☐ Household hazardous waste disposal/pet waste management/vehicle washing ☐ Yard waste management/pesticide and fertilizer application ☐ Stream and shoreline management	☐ General Public ☒ Public Employees ☐ Residents ☐ Businesses ☐ Contractors	11-50	☒ Yes ☐ No

☐ Residential infiltration ☐ Construction sites and post-construction storm water management ☒ Pollution prevention ☒ Green infrastructure/low impact development ☐ Other:	☐ Developers ☐ Industries ☒ Other		
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b. Brief explanation on Public Education and Outreach reporting. *Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See attachment for more information regarding activities performed with our Sweet Water partnership.

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 2 : Complete

2. Public Involvement and Participation

a. Permit Activities. Complete the following information on Public Involvement and Participation Activities related to storm water. Select the Delivery Mechanism that best describes how the permit activities were conveyed to your population. Use the Add Event to add additional entries.

Event Start Date	4/1/2021		
Project/Event Name	Village of Germantown Website		
Delivery Mechanism	<u>Website</u>		
Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
☐ MS4 Annual Report ☐ Storm Water Management Program ☒ Storm Water related ordinance ☐ Other:	☒ General Public ☐ Public Employees ☒ Residents ☐ Businesses ☐ Contractors ☐ Developers ☐ Industries ☐ Other	Select...	☐ Yes ☒ No

b. Volunteer Activities. Complete the following information on Public Involvement and Participation Activities related to storm water. Select the Delivery Mechanism that best describes how volunteer activities were conveyed to your population. Use the Add Event to add additional entries.

Event Start Date	4/1/2021	☐ NA (Individual Permittee).	
Project/Event Name	Adopt Your Drain Program		
Delivery Mechanism	<u>Other hands-on event</u>		
Topics Covered	Target Audience	Estimated People	Regional Effort

		Reached (Optional)	(Optional)
Volunteer Opportunity	☒ General Public ☐ Public Employees ☒ Residents ☐ Businesses ☐ Contractors ☐ Developers ☐ Industries ☐ Other	Select...	☒ Yes ☐ No

c. Brief explanation on Public Involvement and Participation reporting. *Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See attachment for more information on the Adopt Your Drain program.

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 3 : Complete

3. Illicit Discharge Detection and Elimination

a. How many total outfalls does the municipality have?	20	☐ Unsure
b. How many outfalls did the municipality evaluate as part of their routine ongoing field screening program?	16	☐ Unsure
c. From the municipality's routine screening, how many were confirmed illicit discharges?	0	☐ Unsure
d. How many illicit discharge complaints did the municipality receive?	0	☐ Unsure
e. From the complaints received, how many were confirmed illicit discharges?	0	☐ Unsure
f. How many of the identified illicit discharges did the municipality eliminate in the reporting year (from both routine screening and complaints)?	0	☐ Unsure

(If the sum of 3.c. and 3.e. does not equal 3.f., please explain below.)

g. How many of the following enforcement mechanisms did the municipality use to enforce its illicit discharge ordinance? Check all that apply and enter the number of each used in the reporting year.

☐ Verbal Warning

☐ Written Warning (including email)

☐ Notice of Violation 0

☐ Civil Penalty/ Citation 0

Additional Information:

h. Brief explanation on Illicit Discharge Detection and Elimination reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to*

250 characters and/or attach supplemental information on the attachments page.

We did not enforce any IDDE measures due to a lack of necessity/no illicit discharges identified.

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 4 : Complete

4. Construction Site Pollutant Control

- a. How many total construction sites with one acre or more of land disturbing construction activity were active at any point in the reporting year? 13 ☐ Unsure
- b. How many construction sites with one acre or more of land disturbing construction activity did the municipality issue permits for in the reporting year? 13 ☐ Unsure
- c. How many erosion control inspections did the municipality complete in the reporting year (at sites with one acre or more of land disturbing construction activity)? 13 ☐ Unsure
- d. What types of enforcement actions does the municipality have available to compel compliance with the regulatory mechanism? Check all that apply and enter the number of each used in the reporting year. ☐ Unsure
- | | |
|---|---|
| ☐ No Authority | |
| ☒ Verbal Warning | 6 |
| ☒ Written Warning (including email) | 4 |
| ☒ Notice of Violation | 0 |
| ☒ Civil Penalty/ Citation | 0 |
| ☒ Stop Work Order | 0 |
| ☐ Forfeiture of Deposit | |
| ☐ Other - Describe below | |
- e. Brief explanation on Construction Site Pollutant Control reporting . *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 5 : Complete

5. Post-Construction Storm Water Management

- a. How many sites with new structural storm water management facilities* have received local approval ? 5 ☐ Unsure

*Engineered and constructed systems that are designed to provide storm water quality control such as wet detention ponds, constructed wetlands, infiltration basins, grassed swales, permeable pavement, catch basin sumps, etc.

b. Does the permittee have procedures for inspecting and maintaining private storm water facilities? ☐ Yes ☒ No ☐ Unsure

c. If Yes, how many privately owned storm water management facilities were inspected in the reporting year ? ☐ Unsure
Inspections completed by private landowners should be included in the reported number.

d. What types of enforcement actions does the municipality have available to compel compliance with the regulatory mechanism? Check all that apply and enter the number of each used in the reporting year. ☐ Unsure

☐ No Authority

☒ Verbal Warning 0

☒ Written Warning (including email) 0

☒ Notice of Violation 0

☒ Civil Penalty/ Citation 0

☒ Forfeiture of Deposit 0

☒ Complete Maintenance 0

☒ Bill Responsible Party 0

☐ Other - Describe below

e. Brief explanation on Post-Construction Storm Water Management reporting . *If marked 'Unsure' on any questions above, justify your reasoning. Limit your response to 250 characters and/or attach supplemental information on the attachments page.*

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 6 : Complete

6. Pollution Prevention

Storm Water Management Facility Inspections ☐ Not Applicable

a. Enter the total number of municipally owned or operated structural storm water management facilities ? 22 ☐ Unsure

b. How many new municipally owned storm water management facilities were installed in the reporting year ? 0 ☐ Unsure

c. How many municipally owned storm water management facilities were inspected in the reporting year? 0 ☐ Unsure

d. What elements are looked at during inspections (250 character limit)?

Trash & Debris, Rodent Holes, Insects, Poisonous Plants, Vegetation, Excessive

Sediment, Structures, Damaged Liner, Erosion, Settlement, Piping

e. How many of these facilities required maintenance? ☐ Unsure

- f. Brief explanation on Storm Water Management Facility inspection reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

Public Works Yards & Other Municipally Owned Properties (SWPPP Plan Review) ☐ Not Applicable

- g. How many municipal properties require a SWPPP? 1 ☐ Unsure
- h. How many inspections of municipal properties have been conducted in the reporting year? 4 ☐ Unsure
- i. Have amendments to the SWPPPs been made?
☐ Yes ☒ No ☐ Unsure
- j. If yes, describe what changes have been made. Limit response to 250 characters and/or attach supplemental information on the attachment page:
- k. Brief explanation on Storm Water Pollution Prevention Plan reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

Collection Services - Street Sweeping / Cleaning Program ☐ Not Applicable

- l. Did the municipality conduct street sweeping/cleaning during the reporting year?
☒ Yes ☐ No ☐ Unsure
- m. If known, how many tons of material was removed? 481 ☐ Unsure
- n. Does the municipality have a low hazard exemption for this material? ☐ Yes ☐ No
- o. If street cleaning is identified as a storm water best management practice in the pollutant loading analysis, was street cleaning completed at the assumed frequency?
☐ Yes - Explain frequency _____
☐ No - Explain _____
☒ Not Applicable

Collection Services - Catch Basin Sump Cleaning Program ☐ Not Applicable

- p. Did the municipality conduct catch basin sump cleaning during the reporting year?
☒ Yes ☐ No ☐ Unsure
- q. How many catch basin sumps were cleaned in the reporting year? 35 ☐ Unsure
- r. If known, how many tons of material was collected? ☒ Unsure
- s. Does the municipality have a low hazard exemption for this material? ☐ Yes ☐ No

- t. If catch basin sump cleaning is identified as a storm water best management practice in the pollutant loading analysis, was cleaning completed at the assumed frequency?
- ☐ Yes- Explain frequency _____
- ☐ No - Explain _____
- ☒ Not Applicable

Collection Services - Leaf Collection Program ☒ Not Applicable

Winter Road Management ☐ Not Applicable

*Note: We are requesting information that goes beyond the reporting year, answer the best you can.

- aa. How many lane-miles of roadway is the municipality responsible for doing snow and ice control? 300 ☐ Unsure

- ab. Provide amount of de-icing products used by month last winter season?

Solids (tons) (ex. sand, or salt-sand)

Product	Oct	Nov	Dec	Jan	Feb	Mar
<u>Salt</u>	0	0	494	1018	805	6

Liquids (gallons) (ex. brine)

	Oct	Nov	Dec	Jan	Feb	Mar
<u>Brine</u>	0	0	1000	3500	1600	0

- ac. Was salt applying machinery calibrated in the reporting year? ☒ Yes ☐ No ☐ Unsure
- ad. Have municipal personnel attended salt reduction strategy training in the reporting year? ☒ Yes ☐ No ☐ Unsure

Training Date	Training Name	# Attendance
2/24/2021	Smart Winter Maintenance	

- ae. Brief explanation on Winter Road Management reporting. If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page

Training overview of the operation and maintenance of the equipment the Village utilizes.

Internal (Staff) Education & Communication

- af. Has training or education been held for municipal or other personnel involved in implementing each of the pollution prevention program elements? ☒ Yes ☐ No ☐ Unsure

If yes, describe what training was provided (250 character limit):

An inspector came in to discuss IDDE testing techniques, equipment, and proper reporting.

When: June

How many attended: 2

- ag. Describe how the municipality has kept the following local officials and municipal staff aware of the municipal storm water discharge permit programs and its requirements.

Elected Officials

Notified through committee processes

Municipal Officials

Part of annual discussion around MS4 permitting matters.

Appropriate Staff (such as operators, Department heads, and those that interact with public)

Department heads and relevant personnel are involved in the verification of MS4 permit related items annually.

- ah. Brief explanation on Internal Education reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See attachment for additional internal activities performed in partnership with Sweet Water.

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 7 : Complete

7. Storm Sewer System Map

- a. Did the municipality update their storm sewer map this year?

☒ Yes ☐ No ☐ Unsure

If yes, check the areas the map items that got updated or changed:

☐ Storm water treatment facilities

☐ Storm pipes

☐ Vegetated swales

☐ Outfalls

☒ Other - Describe below

Storm water detention ponds

- b. Brief explanation on Storm Sewer System Map reporting. *If you marked Unsure for an question for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

Final Evaluation - Complete**Fiscal Analysis**

Complete the fiscal analysis table provided below. For municipalities that do not break out funding into permit program elements, please enter the monetary amount to your best estimate of what funding may be going towards these programs.

Annual Expenditure Reporting Year	Budget Reporting Year	Budget Upcoming Year	Source of Funds
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Element: Public Education and Outreach

8000	8000	12000	<u>General revenue fund</u>
------	------	-------	-----------------------------

Element: Public Involvement and Participation

0	0	0	<u>Other</u>
---	---	---	--------------

Element: Illicit Discharge Detection and Elimination

140	0	0	<u>General revenue fund</u>
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Element: Construction Site Pollutant Control

0	0	0	<u>Permit fee and/or deposit/escrow</u>
---	---	---	---

Element: Post-Construction Storm Water Management

0	0	0	<u>Other</u>
---	---	---	--------------

Element: Pollution Prevention

0	0	0	<u>Other</u>
---	---	---	--------------

Other (describe)

Select...

Please provide a justification for a "0" entered in the Fiscal Analysis. *Limit response to 250 characters.*

Public Involvement: See Public Education, IDDE: Monies drawn from a general supplies fund, All Else: Unclear from budgeted breakdown or not specifically budgeted. May use general funds if needed.

Water Quality

a: Were there any known water quality improvements in the receiving waters to which the municipality's storm sewer system directly discharges to?

☐ Yes ☐ No ☒ Unsure If Yes, explain below:

b: Were there any known water quality degradation in the receiving waters to which the municipality's storm sewer system directly discharges to?

2024(R8/2021)

Additional Attachments and Supplemental Information

MS4 program information for inclusion in the Annual Report may be attached on here. Use Additional Attachments to add multiple documents.

Required Attachments (15 MB per file limit) - [Help reduce file size and trouble shoot file uploads](#)

To replace an existing file, use the 'Click here to attach file ' link or press the to delete an item.

Storm Sewer System Map

[StormPondsCADMap.pdf](#)

File Attachment

Other Supporting Documents

EO

[Germantown SweetWaterProgramsEducationPlan.pdf](#)

File Attachment

SWGroupReport

[Germantown2021IEReport.pdf](#)

File Attachment

To remove items, use your cursor to hover over the attachment section. When the drop down arrow appears, select remove item)

Permit Compliance Documents

DDE Program

[IDDEform2021.xlsx](#)

File Attachment

DDE Program

[IDDEenforcementflowchart.pdf](#)

File Attachment

To remove items, use your cursor to hover over the attachment section. When the drop down arrow appears, select remove item)

Sign and Submit Your Application

Steps to Complete the signature process

1. Read and Accept the Terms and Conditions
2. Press the Submit and Send to the DNR button

NOTE: For security purposes all email correspondence will be sent to the address you used when registering your WAMS ID. This may be a different email than that provided in the application. For information on your WAMS account click [HERE](#).

Terms and Conditions

Certification: I hereby certify that I am an authorized representative of the municipality covered under Germantown, Village MS4 Permit for which this annual report or other compliance document is being submitted, and that the information contained in this submittal and all attachments were gathered and prepared under my direction or supervision. Based on my inquiry of the person or persons under my direction or supervision involved in the preparation of this document, to the best of my knowledge, the information is true, accurate, and complete. I further certify that the municipality's governing body or delegated representatives have reviewed or been apprised of the contents of this annual report. I understand that Wisconsin law provides severe penalties for submitting false information.

Signee (must check current role prior to accepting terms and conditions)

- ☒ Authorized municipal contact using WAMS ID.
- ☐ Delegation of Signature Authority (Form 3400-220) for agent signing on the behalf of the authorized municipal contact.
- ☐ Agent seeking to share this item with authorized municipal contact (authorized municipal contact must get WAMS id and complete signature).

Name: Lawrence Ratayczak

Title: Director of Public Works

Authorized Signature.

☒ I accept the above terms and conditions.

Signed by : i:0#.f|wamsmembership|vgermantown on 2022-03-31T12:39:01

You have already signed and submitted this application to the DNR. Please [contact the Wisconsin DNR](#) for assistance.

After providing the final authorized signature, the system will send an email to the authorized party and any agents. This email will include a copy to the final read only version of this application.

**BUSINESS OF THE PUBLIC WORKS & HIGHWAYS COMMITTEE
GERMANTOWN, WI**

MEETING DATE: May 11, 2022

AGENDA ITEM: New Business

ITEM TITLE: Buckthorn Presentation

SUBMITTED BY: Lawrence W Ratayczak, P.E., Public Works Director

SUMMARY EXPLANATION:

The PWHC requested at the December 8, 2022, meeting for staff to research and present what Buckthorn is and how the residents can dispose of harvested plant material.

Buckthorn is an invasive plant species which means it is a plant that is not native to this area. Common Buckthorn is native to Eurasia and was introduced to North America in the 1880's as an ornamental plant, it reached Wisconsin in approximately 1849 where it was planted in hedgerows. People were unaware of the fact that it would become one of the most detrimental invasive species found in the state. Its abundant fruit is dispersed by birds and it spreads rapidly, replacing native vegetation and lowering species diversity.

In Germantown there are areas where the Buckthorn plant is predominant and residents are in search of how to dispose of harvested plants. In addition, the Village of Germantown has decided to not accept harvested Buckthorn material at certain times of the year due to the contamination of wood mulch produced and distributed by the Villages Recycle Yard. It is difficult to separate Buckthorn from other wood material accepted by the Village that is ground to wood chips and distributed to residents and others for mulch. If mulch were to be contaminated with Buckthorn berries (seeds) the distribution of mulch would spread Buckthorn seed throughout the Village and areas outside of the Village.

The Village of Germantown has researched what other Municipalities do to handle Buckthorn harvested by residents and the results are listed below:

City of Brookfield- accepts buckthorn, mulches and distributes

West Bend-buckthorn is accepted and placed into their organic waste pile and used by local farmers.
Not chipped for mulch

Richfield-buckthorn is accepted, mulched and distributed to residents

Jackson- attempted contact

Kewaskum-buckthorn accepted and distributed

Sussex-buckthorn accepted with all yard waste, no mulching performed, all yard waste is sold to Waste Management who in turn breaks it down and forms it into pellets for home heating.

Mequon-attempted contact

Theinsville-attempted contact

Currently, the Village of Germantown does not collect buckthorn during the spring and fall roadside brush collection. And limits the acceptance of Buckthorn at the Villages Recycle Yard during the time frame of mid-May through mid-August. A large sign is posted in clear view at the Recycling Center indicating if we are or are not currently accepting it. The Village strongly encourages cooperation from residents to follow these rules to prevent the continued spread of Buckthorn throughout the community.

Village staff has confirmed that Waste Management at Orchard Hill Landfill will accept buckthorn (preferably in clear plastic bags but not required) from residents of Germantown, at a cost of \$0.16 per pound or a minimum fee of \$10.00 per visit

ATTACHMENT: ORDINANCE _____ RESOLUTION _____ OTHER X

- Buckthorn information

RECOMMENDATION:

Staff is seeking direction in the form of a motion from the Public Works and Highway Committee related to collection and disposal of Buckthorn harvested by residents of Germantown.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.



Brendon Panke and Mark Renz

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The *Management of Invasive Plants in Wisconsin* series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness. For more information, go to: fyi.uwex.edu/weedsci/category/invasive-plants-of-wisconsin.

A3924-02

Common buckthorn (*Rhamnus cathartica*)

Glossy buckthorn (*Frangula alnus*)

Buckthorn is an understory shrub or small tree 10–25' tall. Both species grow in shrub or tree form and possess prominent leaf scars in the winter. A cut branch exposes yellow sapwood and orange heartwood. **Common buckthorn** has brown to silver bark that is shiny when young and dark grey to black and scaly when mature. Buds are found in pairs at the end of branches, are covered in dark scales, and resemble a hoof. Twigs often end in stout thorns. **Glossy buckthorn** has gray to brown lenticels and lacks thorns. Buds lack scales, are hairy, and are found at the end of branches.

Legal classification in Wisconsin:

Restricted, including all cultivars except 'Asplenifolia' and 'Fineline' (Ron Williams).

Leaves: Ovate or elliptical, with prominent veins curving toward tip. Stay green late into fall. **Common buckthorn** has mostly opposite leaves, 1–2.5" long, with tiny teeth. **Glossy buckthorn** has mostly alternate leaves, 2–3" long, with entire margins, a glossy upper surface, and dull underside that can be hairy.

Flowers: Small and clustered where the leaf attaches to the stem (leaf axil). **Common buckthorn** has fragrant, greenish-yellow, four-petaled flowers that bloom from late spring. **Glossy buckthorn** has small, pale-yellow, five-petaled flowers that bloom from spring to first frost.

Fruits and seeds: Both species have abundant clusters of round, 0.25" diameter fruit. **Common buckthorn** is dioecious; thus only female trees have black fruit. **Glossy buckthorn** is monoecious and produces red fruit that turn to black when ripe.

Roots: Extensive fibrous root system extending from a woody crown.

Similar species: Alder buckthorn (*R. alnifolia*; native) is < 3' tall with thornless twigs. Lance-leafed buckthorn (*R. lanceolata*; native) is less than 6' tall, found in wet areas and on dry limestone slopes, and has alternate leaves, 2–6" long, gradually tapering to a point at the tip. Carolina buckthorn (*R. caroliniana*; native), found in the southern Midwest, is 10–30' tall with toothed, mostly alternate leaves, 2–3" long.

Ecological threat:

- **Common buckthorn** invades the understory of southern oak, oak-beech, maple, and riparian woods. It also invades prairies, savannas, hedgerows, pastures, old fields, roadsides, and rocky sites.
- **Glossy buckthorn** invades wetter sites with more organic soils than *R. cathartica*. Invades alder thickets, calcareous fens, wetlands, heath-oak woods, pine woods, spruce woods, pastures, fencerows, roadsides, slopes of ravines, wet prairies, marshes, sedge meadows, sphagnum bogs, and tamarack swamps.

- Both buckthorns are characterized by prolific reproduction by seed, long-distance dispersal ability, wide habitat tolerance, and high levels of phenotypic plasticity (i.e., adjusting physical appearance to maximize productivity across environmental conditions).
- Both leaf out very early and retain leaves late into the growing season, providing a longer growing season than native plants.

Non-chemical control

Removal

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Plants ≤ 0.4 " diameter are easily pulled from moist soil. Larger diameters (0.5–1.5") can be dug or pulled. To prevent resprouting, remove above-ground growth and root crown. Dig before plant produces seeds.

Mowing

Effectiveness in season: 70–90%
Season after treatment: < 50%

Mowing removes above-ground growth of established plants and prevents additional seed production, but rarely kills plants. Established plants persist after mowing for many years. If possible, mow in the winter to avoid damaging desirable vegetation and compacting soil. If mowed material is mulched on the soil surface, it can reduce seedling recruitment. Pairing mowing with another technique, such as foliar spray of herbicide, increases effectiveness. Cutting before seed is produced in summer and again after the plant has resprouted in fall will reduce vigor of resprouts the following year, but will not kill plants. If seeds are present when removed, avoid movement off of the site unless material can be transported without spreading fruit to other locations.

Prescribed burning

Effectiveness in season: 50–70%
Season after treatment: < 50%

Spring burns can kill germinating seedlings and suppress above-ground growth of established plants, depending on fire intensity. After the fire, established plants will resprout; this management method is not recommended unless integrated with other techniques. Burning stimulates seedling germination, but 5–6 years of repeated burning will reduce buckthorn seedbank. A five-second application of flame with a propane torch around the stem will kill plants ≤ 2 " diameter.

Manipulation of the environment

Effectiveness in season: < 50%
Season after treatment: < 50%

Underplanting with a vigorous, shade-tolerant woody species, such as sugar maple, competes with buckthorn plants. This reduces the light level in the forest, reduces productivity of established buckthorn, and prevents seedling germination.

Chemical control

Pre-emergence

Apply herbicide directly to soil. These products will only damage plants that germinate after the herbicide has been applied. They will not damage established plants. Use lower rates on areas where less dense populations are expected and higher rates on areas where denser populations are expected.

napropamide*

Effectiveness in season: 70–90%
Season after treatment: < 50%

Common name: Devrinol 50-DF
Rate: 1.8–7.1 lb/A (0.9–3.6 lb a.i./A)

Timing: Apply prior to germination of seedlings. While spring applications will maximize control, fall or winter applications may also suppress seedlings, depending upon environmental conditions.

Remarks: Reduced efficacy can be expected if < 0.6 " of rainfall occurs within 2–3 days of application.

Caution: Do not apply directly to water or to areas where surface water is present. Do not apply more than once a year. Avoid using napropamide in areas where soils are composed of more than 10% organic matter. Napropamide remains in the soil for up to a year, depending on application. Maintenance of a vegetative buffer strip is required between the areas napropamide is applied and surface water features or sensitive terrestrial habitats. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

pendimethalin*

Effectiveness in season: 70–90%
Season after treatment: < 50%

Common name: Pendulum Aquacap
Rate: 90 fl oz/A (2.7 lb a.i./A)

Timing: Apply prior to germination of seedlings. While spring applications will maximize control, fall or winter applications may also suppress seedlings, depending upon environmental conditions.

Remarks: Reduced efficacy can be expected if < 0.5 " of rainfall occurs within 30 days of application.

Caution: Do not apply directly to water or to areas where surface water is present. Do not exceed applications of 67 fl oz/A on home lawns, parks, schools, and playgrounds. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.

*Active ingredient (a.i.)

Foliar

Apply directly to individual plants or broadcast across an infested area. Broadcasted foliar applications are typically the most cost-effective treatment in dense infestations. Use lower rates on smaller plants and less dense populations and higher rates on larger plants and denser populations.

glyphosate*

Effectiveness in season: 50–70%

Season after treatment: < 50%

Common name: Roundup

Rate:

broadcast: 1.7–3.7 lb a.e./A

spot: For a 3 lb a.e./gal product:

1.0–2.0% (0.03–0.06 lb a.e./gal)

Timing: Apply when target species is actively growing and fully leafed out.

Remarks: A wick application of a 33–75% solution (1.49–3.38 lb a.e./gal) of the product is effective on shorter plants that are taller than desirable species.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since glyphosate is not selective. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

triclopyr*

Effectiveness in season: 90–100%

Season after treatment: 90–100%

Common name: Garlon

Rate:

broadcast: 128–256 fl oz/A

(4.0–8.0 lb a.e./A)

spot: 1.0–2.0% (0.04–0.08 lb a.e./gal)

Timing: Apply when target species is actively growing and fully leafed out.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.



*Active ingredient (a.i.)

Cut stump

Cut a stem of a plant near the base and apply herbicide to the cut surface that remains rooted in the ground. Apply as soon as possible after cutting, but no later than one hour after cutting. Do not use this method if there is heavy sap flow or snow covers the cut surface. Use lower rates on smaller plants and higher rates on larger plants.

glyphosate*

Effectiveness in season: 90–100%
Season after treatment: 50–70%

Common name: Roundup

Rate: For a 3 lb a.e./gal product:
 20–50% (0.6–1.5 lb a.e./gal)

Timing: Apply any time of year.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since glyphosate is not selective. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

imazapyr*

Effectiveness in season: 90–100%
Season after treatment: 70–90%

Common name: Stalker

Rate: 6.0–9.0% in oil (0.1–0.2 lb a.e./gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since imazapyr is not selective and can remain in the soil for several months to more than a year, depending on application rate. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

picloram*

Effectiveness in season: 90–100%
Season after treatment: 50–70%

Common name: Tordon K

Some products containing picloram are restricted-use in Wisconsin.

Rate: 50–100% (1.0–2.0 lb a.e./gal)

Timing: Apply any time of year.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in the soil for more than one year, depending on application rate, and has the potential to contaminate surface runoff water during this timeframe. Maintenance of a vegetative buffer strip is recommended between the areas picloram is applied and surface water features. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

triclopyr*

Effectiveness in season: 90–100%
Season after treatment: 90–100%

Common name: Garlon

Rate: 20–30% in oil (0.8–1.2 lb a.e./ gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.



Hack-and-squirt

Using a hand axe, make cuts every 3–4" around the trunk 6–18" above the ground. Apply the herbicide solution into the cut area. Do not use this method if there is heavy sap flow. Use lower rates on smaller plants and higher rates on larger plants.

glyphosate*

Effectiveness in season: 50–70%
Season after treatment: 50–70%

Common name: Roundup

Rate: For a 3 lb a.e./gal product: 50–100%
 (1.5–3.0 lb a.e./gal)

Timing: Apply any time of year.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since glyphosate is not selective. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

imazapyr*

Effectiveness in season: 50–70%
Season after treatment: 70–90%

Common name: Stalker

Rate: 6.0–9.0% in oil (0.1–0.2 lb a.e./gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since imazapyr is not selective and can remain in the soil for several months to more than a year, depending on application rate. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

picloram*

Effectiveness in season: 50–70%
Season after treatment: 70–90%

Common name: Tordon K

Some products containing picloram are restricted-use in Wisconsin.

Rate: 50% (1.0 lb a.e./gal)

Timing: Apply any time of year, except during drought conditions.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in the soil for more than one year, depending on application rate, and has the potential to contaminate surface runoff water during this timeframe. Maintenance of a vegetative buffer strip is recommended between the areas picloram is applied and surface water features. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.

picloram + 2,4-D*

Effectiveness in season: 50–70%
Season after treatment: 70–90%

Common name: Pathway

Some products containing picloram are restricted-use in Wisconsin.

Rate: 100% (picloram: 3% + 2,4-D: 11.2%)

Timing: Apply any time of year.

Caution: Do not apply directly to water or to areas where surface water is present. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Remains in the soil for more than one year, depending on application rate, and has the potential to contaminate surface runoff water during this timeframe. Maintenance of a vegetative buffer strip is recommended between the areas this product is applied and surface water features. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants. Do not compost treated plants since herbicide can persist through composting process.



Basal bark

Apply herbicide in a ring around the entire stem. Applications should be made at least 6" wide (6–18") to the base of a woody stem. Ideal for stems ≤ 6" in diameter. Use lower rates on smaller plants and higher rates on larger plants.

imazapyr*

Effectiveness in season: 50–70%
Season after treatment: 90–100%

Common name: Stalker

Rate: 6–12% in oil (0.1–0.25 lb a.e./gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Applications can result in bare ground since imazapyr is not selective and can remain in the soil for several months to more than a year, depending on application rate. Overspray or drift to desirable plants should be avoided, since even minute quantities of the spray may cause severe injury to plants.

triclopyr*

Effectiveness in season: 50–70%
Season after treatment: 90–100%

Common name: Garlon

Rate: 1.0–5.0% in oil (0.04–0.2 lb a.e./gal)

Timing: Apply any time of year.

Remarks: Products containing this active ingredient can have different instructions for mixing. Labels will recommend mixing the product in a water- or oil-based carrier (e.g., basal bark oil). Consult the label to determine the appropriate carrier.

Caution: Use product labeled for aquatic use if potential exists for solution to contact surface waters. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Overspray or drift to desirable plants should be avoided since even minute quantities of the spray may cause severe injury to plants.



Herbicide information is based on label rates and reports by researchers and land managers. Products known to provide effective control or in common use are included. Those that do not provide sufficient control or lack information for effectiveness on target species have been omitted.

References to pesticide products in this publication are for your convenience and not an endorsement of one product instead of a similar product. You are responsible for using pesticides in accordance with the label directions. *Read the label before any application.*

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COMMON BUCKTHORN IDENTIFICATION/ACCEPTANCE

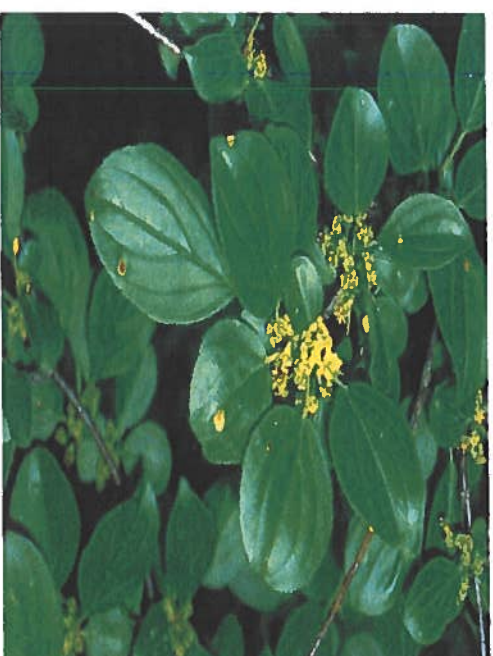
YES



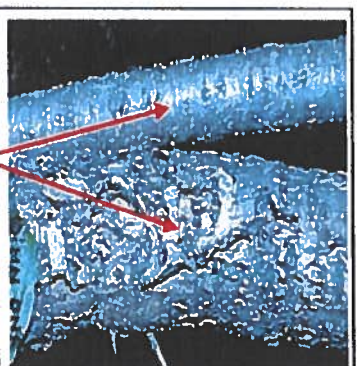
YES - NO BERRIES JUST LEAVES



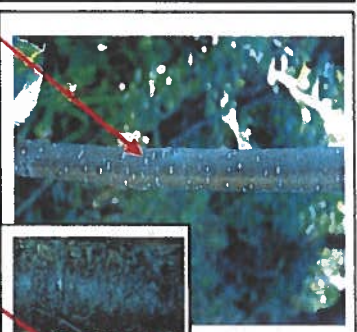
YES - ALL BERRIES ARE GREEN



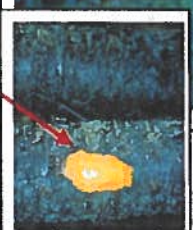
YES - FLOWER STAGE



Bark is gray and changes with age. Young trees or smaller branches have smooth to slightly flakey bark and older trees and large branches have very flakey bark



Smaller saplings or twigs are mostly gray and smooth with small raised white cork like bumps



Cut bark exposes yellow sapwood and orange heartwood

BARK IDENTIFICATION

NO



NO - BERRIES CHANGING FROM GREEN TO PURPLE



NO - RED TO PURPLE/BLACK



NO - BERRIES ARE BLACK - MATURE



NO - BERRIES ARE BLACK - MATURE/WINTER

**BUSINESS OF THE PUBLIC WORKS COMMITTEE & VILLAGE BOARD
GERMANTOWN, WI**

MEETING DATE: May 11th, 2022

AGENDA ITEM: New Business

ITEM TITLE: Fire Station Roof Replacement Project

SUBMITTED BY: Scott Anderson: Highway, Parks, Building & Grounds Superintendent

SUMMARY EXPLANATION:

As part of the 2022 Building & Grounds capital budget, 70,000.00 was allocated for the replacement of the roof at the Edison Drive fire station. Staff has dealt with minor roof leaks and ice damming over the last couple of years, making minor repairs as needed. The roofing materials in general are 22 years old and showing signs of deterioration. We also have known plywood issues in several areas. The specifications call for plywood replacement as needed, a limited lifetime warranty shingle and ice and water shield around the perimeter, in all valleys, and new flashing around all roof protrusions. Staff has solicited pricing from several area contractors and the results are listed below.

Integrity Roofing: 56,950.00

Murphy's Exterior Construction: 66,316.67

J&B Construction: 71,410.00

ATTACHMENT: ORDINANCE _____ RESOLUTION _____ OTHER _____

RECOMMENDATION:

Staff recommends contracting with Integrity Roofing to complete the roofing project. Staff is requesting \$63,000.00 which is the project cost plus 10%. The contingency would cover plywood costs and any unforeseen problems should they arise. The contingency would be billed on an as needed basis. If approved, funding shall be allocated from Buildings & Grounds capital account: 40-519-570-8222.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

**BUSINESS OF THE PUBLIC WORKS COMMITTEE & VILLAGE BOARD
GERMANTOWN, WI**

MEETING DATE: May 11th, 2022

AGENDA ITEM: New Business

ITEM TITLE: Fire Station Exterior Painting Project.

SUBMITTED BY: Scott Anderson: Highway, Parks, Building & Grounds Superintendent

SUMMARY EXPLANATION:

As part of the 2022 Building & Grounds capital budget, 25,000.00 was allocated for the exterior painting at the Edison Drive fire station. The building was constructed in 2000 and the exterior has not yet been painted. Painting the exterior will provide aesthetic value, while also protecting the exterior EFIS and trim. Staff has solicited pricing from several area contractors and the results are listed below.

MACORP Painting: \$25,286.00

Hess Sweitzer Painting LLC: \$25,725.00

Service Painting Corporation: \$47,000.00

ATTACHMENT: ORDINANCE____ RESOLUTION____ OTHER____

RECOMMENDATION:

Staff recommends contracting with MACORP Painting in an amount not to exceed \$25,286.00. If approved, funding shall be allocated from Buildings & Grounds capital account: 40-519-570-8222.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

**BUSINESS OF THE PUBLIC WORKS COMMITTEE & VILLAGE BOARD
GERMANTOWN, WI**

MEETING DATE: May 11th, 2022

AGENDA ITEM: New Business

ITEM TITLE: Library Fire Suppression Main Line Replacement Project.

SUBMITTED BY: Scott Anderson: Highway, Parks, Building & Grounds Superintendent

SUMMARY EXPLANATION:

As part of the 2022 Buildings & Grounds capital budget, \$120,000.00 was allocated to replace the dry fire suppression mainline piping at the library. To date \$9338.00 has been spent on material for DPW staff to construct a temporary working platform, which took place during the winter months. Microbial induced corrosion has affected several of our dry fire suppression systems already and piping replacement has already taken place at two other village buildings. When dealing with this issue at the Village Hall and Fire Station, staff could walk the attic and find the problematic area, and a temporary repair could be made, keeping the system “airtight”. The dry fire suppression system at the library is mostly confined to the attic which has obvious height constraints that limit the ability to find and repair a leak. If the corrosion is left unattended, progression will cause a larger air leak leading the system to “trip” and fill with water which will in turn create an unnecessary water leak. If this takes place at the library, the system will have to remain “off” leaving the building without fire protection, which puts the building at an unnecessary risk should there be a fire. History has shown us what happens as the corrosion problem progresses which is why staff is being proactive rather than reactive when it comes to the library and dealing with the building constraints. The plan is to replace all schedule10 main-line dry fire protection piping and add a nitrogen generator. All other branch piping in the system is schedule40 and with the addition of the nitrogen generator there would be an expectation of preservation. The nitrogen generator will produce and fill the system with nitrogen, a condition in which the corrosion can not survive thereby extending the life of the new main line and existing pipe that remains. Staff has solicited pricing from several area contractors and the results are listed below.

US Fire Protection: \$83,260.00

Ahern Fire Protection: \$91,930.00

Mared Mechanical: Did not submit proposal.

ATTACHMENT: ORDINANCE _____ RESOLUTION _____ OTHER _____

RECOMMENDATION:

Staff recommends contracting with US Fire Protection in an amount not to exceed \$91,586.00, which is the proposed amount plus a 10% contingency. If approved, funding shall be allocated from Buildings & Grounds capital account: 40-519-570-8251.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

**BUSINESS OF THE PUBLIC WORKS COMMITTEE & VILLAGE BOARD
GERMANTOWN, WI**

MEETING DATE: May 11th, 2022

AGENDA ITEM: New Business

ITEM TITLE: 2022 Emerald Ash Borer Treatment Project

SUBMITTED BY: Scott Anderson Highways, Parks, Buildings & Grounds Superintendent

SUMMARY EXPLANATION:

Each year, the village conducts Emerald Ash Borer treatment with the intent to maintain a select number of Ash trees throughout the village. Each tree selected is treated on a bi-annual basis as recommended to maintain the trees health and longevity. During the 2022 budget process, Emerald Ash Borer treatment was factored in the general fund street tree maintenance line item. The project will treat approximately 72 Ash trees in various areas around the village. The project areas include: along roadways, around village buildings and parks. Staff has solicited pricing from area contractors and the results are listed below.

Crawford Tree & Landscape:	\$4,309.76
M&M Tree Care:	\$4,724.16
First Choice Tree Care:	\$4,921.00
Buckley Tree Service:	\$10,101.00

ATTACHMENT: ORDINANCE_____ RESOLUTION_____ OTHER_____

RECOMMENDATION:

Staff recommends using Crawford Tree & Landscape to complete the annual Emerald Ash Borer treatment project in an amount not to exceed: \$4,309.76. If approved, funds shall be allocated from the non-borrowed street tree maintenance account: 10-553-530-5290.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

**BUSINESS OF THE PUBLIC WORKS COMMITTEE & VILLAGE BOARD
GERMANTOWN, WI**

MEETING DATE: May 11th, 2022

AGENDA ITEM: New Business

ITEM TITLE: Wisconsin DOT Salt Bid 2022-2023

SUBMITTED BY: Scott Anderson Highways, Parks, Buildings & Grounds Superintendent

SUMMARY EXPLANATION:

Staff recently made a commitment that the village remain part of the WisDOT Salt Bid Process for 2022-2023 winter season. Staff will purchase up to 1920 tons of salt in 2023. The cost per ton is not yet available. Currently the Village has approximately 3100 tons of salt on hand. The Village used approximately 1,750 ton of salt this past winter season. Attached is a breakdown of the salt usage for the past 21 seasons. Staff is requesting the financial commitment to remain part of the WisDOT Bid Process.

ATTACHMENT: ORDINANCE _____ RESOLUTION _____ OTHER x

RECOMMENDATION:

Staff recommends remaining part of the WisDOT bid process.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

SALT PURCHASING INFO

YEAR	SALT	# OF OPERATIONS
21-22	1763	39
20-21	2322	43
19-20	2500	34
18-19	3,205	42
17-18	3,130	39
16-17	2,875	34
15-16	2,756	33
14-15	2,185	44
13-14	3,258	67
12-13	3,467	53
11-12	2,127	42
10-11	3,430	57
9-10	2,045	38
8-9	3,332	53
7-8	3,432	79
6-7	3,304	52
5-6	3,093	46
4-5	2,475	45
3-4	1,659	32
2-3	2,138	39
1-2	1,744	25

AVERAGE SALT USE	2,700 TONS
Average use multiplied by 1.5	4,100 TONS

SALT ON HAND end of 21 - 22 Season	3100 TONS
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SALT ORDERED FOR 22 - 23	0 Ton Early Fill
	1600 Ton Seasonal Fill
	320 Ton Vendor Reserve

Estimated cost per ton \$85.50	2023 Budget (est.) \$164,160.00 (salt only)
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**BUSINESS OF THE PUBLIC WORKS & HIGHWAYS COMMITTEE
GERMANTOWN, WI**

MEETING DATE: May 11, 2022

AGENDA ITEM: New Business

ITEM TITLE: Budget Amendment Wastewater Truck

SUBMITTED BY: Timothy Zimmerman – Wastewater Superintendent

SUMMARY EXPLANATION:

At the January 2022 PWHC, Committee approved the carryover and expenditure of the unused 2021 dollars for the truck replacement for the amount not to exceed \$55,000. We were informed this morning from Ewald (state bid dealership) that GM has a 14.5% increase for 2023. The 14.5% increase exceeds the budget amount by \$6,000.00 not including in-house upfit of toolboxes and emergency lighting. Trade in appraisal has not been completed since no order has been placed. It is expected that the trade in value will be between \$5,000 and \$8,000, and would offset the majority, if not all, of the 14.5% increase.

ATTACHMENT: ORDINANCE_____ RESOLUTION_____ OTHER

RECOMMENDATION:

It is staff's recommendation to approve a budget amendment for the amount not to exceed \$6,000 for the above referenced truck and forward the same onto the Village Board. The additional \$6,000 will be added to the 2021 carryover amount approved in January. The trade-in allowance at the time of purchase will be used to offset the amended amount and complete the setup of the vehicle. Funds for the requested transfer will be added to 60-180-185-3730 Transportation Equipment.

COMMITTEE ACTION:

Proper parliamentary procedure to deny a request is to have a motion made in the affirmative and by voting NAY would deny the request if a majority vote.

**BUSINESS OF THE PUBLIC WORKS & HIGHWAYS COMMITTEE
GERMANTOWN, WI**

MEETING DATE: May 11, 2022

AGENDA ITEM: New Business

ITEM TITLE: Approval to Contract for Construction Management Services__for the New Public Works Building

SUBMITTED BY: Lawrence Ratayczak, P.E.- Director of Public Works

SUMMARY EXPLANATION:

With the Final design of the Public Works Department Building nearing completion the selection of a Construction Management Services consultant is the next step prior to bidding the project. To this end Village staff have looked at the two ways to manage the construction end of the project without utilizing engineering staff. Construction Management can be performed in two approaches; 1) construction management can self-perform the various trades and sublet what they do not perform and 2) construction management does not self-perform any trade work and competitively bids all trades in the attempt to achieve the lowest cost. In addition, it is the legal opinion that the best way to meet the State Bid Law requirements is to competitively bid all trades. For this reason, staff selected a Request for Professional Services contract which required "No self-performing" of any work by the construction manager.

The decision to use this process greatly limited the number of bidders for the Request for Professional Construction Management Services since most construction management firms self-perform a majority of the work. To this end the Village received one response from Moore Construction Services in the amount of:

Construction Phase Fee:	\$2.25% (@ est. bldg. cost of \$28 mil = \$630,000.00)
General Conditions:	\$603,451.00

It is important to be under contract soon since the expected delay to obtain materials is growing longer and the Construction Management Service consultant would be the firm placing the orders for materials.

Moore Construction Services in recent projects is completing work for the City of New Berlin for a new DPW facility and has completed the renovation of the JC Penny's building for Amazon. Harwood Engineers was contacted and gave Moore a very good reference having performed several projects involving Moore Construction.

ATTACHMENT: ORDINANCE____RESOLUTION____ OTHER __XX__

Proposal

RECOMMENDATION:

Staff recommends that the Public Works and Highway Committee approve the Village entering into a contract with Moore Construction Services in the amount of 2.25% for Construction Phase Fee and \$603,451.00 for General Conditions and forward with a positive recommendation to the Village Board for approval.



YOUR CONSTRUCTION PARTNER



THE VILLAGE OF GERMANTOWN: DEPARTMENT OF PUBLIC WORKS

DESIGN/BUILD | CONSTRUCTION MANAGEMENT | GENERAL CONSTRUCTION



YOUR CONSTRUCTION PARTNER

May 2, 2022

The Village of Germantown
Department of Public Works
Village Hall;

Attn: Lawrence Ratayczak, Director
N112 W17001 Mequon Road
Germantown, WI 53022

Dear Larry,

Thank you for the opportunity to submit a formal Proposal for The Village of Germantown Department of Public Works project. Moore Construction Services prides itself on being a trusted **PARTNER** collaborating with The Village of Germantown, Graef USA, and the rest of the project team to bring your project to life.

We pledge personal involvement from our Company's ownership and have specifically selected Austin Moore, Project Manager, and Jason Biver, Project Superintendent, based on their previous experience with projects of this nature. We are confident in our ability to seamlessly collaborate in order to exceed your expectations.

Our mission to *Positively Impact Lives* is achieved through our values of reliability, commitment, and results. In short, our mission is to enable our customers to accomplish their mission.

Sincerely,

MOORE CONSTRUCTION SERVICES

A handwritten signature in black ink that reads "Michael J. Moore". The signature is fluid and cursive, with the first name "Michael" and last name "Moore" clearly legible.

Michael J. Moore
President

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SECTION 1: FIRM DESCRIPTION

FIRM DESCRIPTION:

Moore Construction Services was founded by Mike Moore in 2007. After co-founding another construction firm in 1985, Mike formed Moore Construction Services predicated on the core values of **Commitment, Reliability, and Results.**

Mike's 38 years of experience gives him in-depth knowledge of the entire construction process, from preliminary budgeting to project close out. The firm has managed over \$700 million of Educational, Financial, Commercial, Healthcare, Institutional and Industrial projects.

FIRM PROFILE:

SIZE: \$60M annually

ORGANIZATION: Established in 2007

LEGAL STATUS: Limited Liability Company

PROFESSIONAL REGISTRATION 1106821

SIMILAR PROJECTS:



DPW, City of New Berlin



Copart, Inc., Cottage Grove



Amazon, DML6, Wauwatosa



Five Star Fabricating, Inc, Twin Lakes



Copart, Inc., Milwaukee



Water Utilities, City of New Berlin

2: STAFF EXPERIENCE & QUALIFICATIONS



YOUR CONSTRUCTION PARTNER



MICHAEL J. MOORE

PRESIDENT

EXPERIENCE

After a successful career in construction that has spanned nearly three decades, Mike founded Moore Construction Services in 2007. His business acumen and commitment to exceptional project delivery has helped fuel the company's growth over the past ten years, earning multiple designations as one of the fastest growing companies in the region. Clients credit Mike's strong project management skills and abilities, his no nonsense approach to customer service, and his ability to assemble and organize highly efficient teams, as his primary keys to success. Most importantly, he commits to a true partnership approach on each and every project which supports the company mission to positively impact lives. This commitment has earned him a strong reputation in the industry for achieving high quality results.

Mike's role as President of Moore Construction Services is to manage and mentor all team members while ensuring the client's goals are kept top of mind and achieved. With more than \$600 million worth of commercial projects under his belt and experience in building a strong and successful business operation, Mike is a leader who achieves project success.

EDUCATION & AWARDS

University of Wisconsin-Stout, 1984

Bachelor of Science, Industrial Technology, Concentration in Building Construction

President Award, 2015 *Menomonee Falls Chamber of Commerce*

Captain of Industry, 2017, *Menomonee Falls Chamber of Commerce*

Future 50 Fastest Growing Company, 2017, 2018, 2019, *MMAC COSBE*

Fastest Growing Firm, 2018, 2019, *Milwaukee Business Journal*

Newsmakers of the Year, 2019, *The Daily Reporter*

Business Owner of the Year, 2019, *The Daily Reporter*

PROFESSIONAL AFFILIATIONS

University of Wisconsin - Stout

Industry Advisory - STEM College/Construction Program 2018-19 Board Chair

Menomonee Falls Chamber of Commerce, 2013 President

Metropolitan Milwaukee Assoc. of Commerce, CEO Roundtable Facilitator

Catholic Memorial High School Building, Committee Chair

Menomonee Falls Chamber of Commerce, CEO Roundtable Facilitator

Froedtert Menomonee Falls Hospital, Foundation Board Member

NOTABLE PROJECTS

COMMERCIAL PROJECTS

Ally's Bistro & Ally's Powerhouse
Beyond Vision
Cubic Designs
Entrust Manufacturing
Five Star Manufacturing
Glenroy, Inc.
Kohn Law
Lake Country School District
Yerkes Observatory
Metal Era
Moore Corporate Office
Northwest Funeral Chapel
Server Products, Inc.
Standard Electric Supply
Tailored Label Products

INSTITUTIONAL PROJECTS

Carroll University
Catholic Memorial High School
Crossroads Community Church
Fox Point Lutheran
Hartford City Hall & Police Station
Holy Apostles Adoration Chapel
Kewaskum Public Library
Menomonee Falls School District
New Berlin Utilities
New Berlin Historical Museum
New Berlin DPW
New Berlin Activity and Recreation Center
St. Dominic Church and Gym
St. Paul Lutheran Church
Waukesha School District
Wauwatosa Ave. United Church

MULTI-FAMILY/SENIOR LIVING PROJECTS

Arrabelle Apartments
Drexel Ridge Apartments Phase II
Orchard Hills
Granary Apartments
Cedar Community; Cedar Bay West & Cedar Ridge Duplexes



TOM SMITH, LEED AP

EXECUTIVE VICE PRESIDENT

EXPERIENCE

Tom is a highly-respected construction industry executive with 40+ years of project management experience in a variety of building types of all sizes and complexities. His forte is the ability to engage early on a project so he can establish a strong foundation by accurately estimating, budgeting and scheduling the project in real time. Once these preconstruction activities are complete and the goals for the project are established, Tom oversees the project managers and other team members to ensure they carry out all construction activities in a first-class manner. His guidance, knowledge and support enhance the entire building process and give owners the assurance that a successful outcome will be achieved.

Tom's core areas of expertise include commercial office, industrial, healthcare, multi-family housing, senior living and hospitality/retail. In these areas, he managed over \$600 million worth of construction on hundreds of projects.

EDUCATION & TRAINING

University of Wisconsin - Madison 1983

Bachelor of Science, Construction Management

Icon of the Industry, 2020, *The Daily Reporter*

PROFESSIONAL AFFILIATIONS

American Institute of Constructors

City of Waukesha, Member of the Board of Appeals

NAIOP - Wisconsin

Project Management Institute

Wisconsin Green Building Alliance

WasteCap Wisconsin

NOTABLE PROJECTS

COMMERCIAL PROJECTS

Amazon DML6

CubeSmart Self Storage

Five Star Fabrication

Four Points Sheraton Hotel-Milwaukee Airport

Hanson Dodge Creative Office Building

Kahler Slater Architects Headquarters

Metal Era

Northwestern Mutual Life Corporate

Orthopaedic Associates of Wisconsin

Robert W. Baird Corporate Headquarters

INSTITUTIONAL PROJECTS

Brookfield Academy

City of New Berlin

Columbia St. Mary's Hospital

Froedtert Hospital North Tower Vertical

Goodwill Industries of SE Wisconsin

Greater Milwaukee Convention & Visitor's Bureau

Kettle Moraine YMCA

Sixteenth Street Community Health Center

The Lynde & Harry Bradley Foundation

U.S. Federal Courthouse

Village of Chenequa Town Hall & Police/Fire

Waukesha Civic Theatre

Waukesha Family YMCA

Westbrook Church

Westlawn Neighborhood Revitalization Wisconsin

Humane Society

MULTI-FAMILY PROJECTS

601 Lofts Mixed-Use Development

Arrabelle Apartments

Drexel Ridge Apartments Phase II

Marquardt Village Senior Housing Development

Mercy Housing Johnston Center Residences

Orchard Hills Apartments

St. Catherine Commons Senior Living

SoNa Lofts Apartments

The Granary Apartments



AUSTIN MOORE, LEED AP

VICE PRESIDENT

EXPERIENCE

Austin's professional experience in construction spans nearly a decade but, in reality, he has been honing his skills and talents ever since he was a young man with early aspirations for a long career in the industry. Starting at the bottom, he worked his way up, progressively taking on more jobsite responsibility and in-house operational duties. His dedication has helped grow the company in revenue and staff, while earning it a solid reputation for project delivery.

Austin currently oversees complex commercial, industrial, educational and religious projects for Moore Construction Services. He draws on his communication skills and technical abilities to engage and build consensus amongst diverse teams of stakeholders including owners, employees, subcontractors, staff and government officials. His hard work ethic drives project success from preliminary planning and estimating, through construction to post occupancy and beyond.

EDUCATION & AWARDS

University of Wisconsin-Stout, 2009:

Bachelor of Science, Construction Management
Minor in Business Administration

OSHA 30-hour

LEED Accredited Professional, 2009

Leadership Menomonee Falls, 2012

Asbestos Awareness Training, 2014

Rising Young Professional, 2018, The Daily Reporter

Project Manager of the Year, 2019, The Daily Reporter

Top Projects: Standard Electric, 2018, The Daily Reporter

Top Projects: Catholic Memorial High School, 2019, The Daily Reporter

Fastest Growing Firm, 2018, 2019, Milwaukee Business Journal

Future 50 Fastest Growing Firm, 2017, 2018, 2019, MMAC COSBE

PROFESSIONAL AFFILIATIONS

Chairman of Young Professional of Menomonee Falls, 2016

Facilitator of Young Professional Roundtable - Chamber of Commerce of Menomonee Falls, 2016

Board of Director Chamber of Commerce of Menomonee Falls, 2018

St. Dominic's Safety & Security Committee Member, 2015

Chairman St. Dominic's Safety & Security Member, 2016

Catholic Memorial Facility Committee Member, 2017

Architectural Control Board Member - Menomonee Falls, 2018

Architectural Control Board Member - Brookfield, 2021

NOTABLE PROJECTS

COMMERCIAL PROJECTS

Amazon DML6
Agro-Biosciences, Inc.
Copart, Inc.
Five Star Fabrications
Glenroy, Inc.
Landmark Credit Union
Layton State Bank
Metal Era
Moore Corporate Office
Tesla, Inc.
The Marq Downtown
Standard Electric Supply

INSTITUTIONAL PROJECTS

Catholic Memorial High School
City of New Berlin Water Utilities
City of New Berlin Arts & Recreation Center
City of New Berlin DPW
Facility Crossroads Community Church
Fairview Evangelical Lutheran Church Fox
Point Lutheran Church
Hartford City Hall & Police Station
Holy Apostles Church & School
Lakeshore Medical
Marian University
Saint A Clinical Services
School District of South Milwaukee
St. Elizabeth Ann Seton
St. Dominic Catholic Church
St. Paul Lutheran Church Wauwatosa
Avenue - United Church of Christ
Waukesha School District Wauwatosa
School District

MULTI-FAMILY PROJECTS

White Oaks Apartments



JASON BIVER

PROJECT SUPERINTENDENT

EXPERIENCE

Jason's expertise in construction and facilities management encompasses more than twenty years of supervising building projects of all sizes and types throughout Southeastern Wisconsin. Currently, Jason's focus is on commercial and industrial projects that are complex and have many stakeholders.

On the jobsite, Jason is successful at problem solving and running an efficient program to achieve client objectives. He manages daily on-site operations and oversees subcontractor work, monitoring all construction-related tasks so they are accomplished safely, within the approved schedule and in a high-quality manner that is representative of Moore Construction Services. Jason is an aggressive project advocate, a self-starting leader with high standards and has the expertise needed to turn challenges into positive results.

EDUCATION & TRAINING

OSHA 10 hour certification 2009

Uniform Dwelling Code Training, 2006

Managing Exterior Moisture Course, 2005

Rough Terrain Telescopic (Fork Lift) Certification (OSHA 1926.602), 2000 & 2011

Basic Supervision Course, 1999

Completed Course of Facilities Management, 1998

Completed C.P.O Course, Cert.#85-54750, 1996

NOTABLE PROJECTS

COMMERCIAL PROJECTS

Amazon DML6
Chicago Tube & Iron
Copart, Inc.
Create-A-Pack
Entrust
Five Star Fabricating
Gray & Associates Law Offices
Harken
Ingeteam
Kapco
Lake Geneva Yacht Club
Landmark Credit Union
Metal Era
River Glen
Rogers Behavioral Health
Rosendale Biodigester (BD2)
Sendik's Grocery Stores
Standard Electric Supply
Tesla, Inc.

INSTITUTIONAL PROJECTS

St. Anthony on the Lake
Trek
University of Wisconsin Oshkosh

3. PROJECT APPROACH



YOUR CONSTRUCTION PARTNER

Pre-Construction:

A big reason Moore Construction Services stands out as a valued construction partner is because of our Pre-Construction services, led by Executive Vice President, Tom Smith. If selected as the Construction Management firm, Tom will work with Austin, the architect, and owner to solidify the design, provide budgetary guidance, assist with permits and city approval, and solidify the project schedule. His proactive and diligent approach in all projects that he has led in his 40 years of experience, enables him to create an informed project budget, mitigating any surprises, and provide value engineering options to reduce cost. In summary, here are our main goals within our Pre-Construction process.

1. Prepare master schedule with milestones to track progress
2. Prepare initial budget with potential cost saving ideas
3. Track changes during the course of the design phase to confirm value is being achieved

ANTICIPATED ENVIRONMENTAL & PUBLIC INVOLVEMENT CHALLENGES:

1. Engineering: Lead times for steel, precast, roofing materials, RTU's, Generator, Electrical switch gear.
 - a. Early Bid Packages to lock in lead time and pricing.
2. MMSD approval, DNR approvals, Wet land fill permits. Confirm timely application and tracking of status.
 - a. Request meeting if need be.
3. Final TID approvals
 - a. Public hearing meeting with timely response to comments.

VALUE ENGINEERING:

1. VE options are handled as alternate bids within the bid packages we create. Examples are as follows:
 - a. Grade beam ILO frost walls
 - b. Precast panels finish options and textures
 - c. Ballasted roof ILO fully adhered
 - d. Skylights unit price
 - e. Floor finish options
 - f. Epoxy paint vs Latex
 - g. AHU's vs in-floor radiant
 - h. Alternate light fixture manufacture
 - i. Pavement thickness
 - j. Concrete pavement vs asphalt paving

4: FEES



YOUR CONSTRUCTION PARTNER

Construction Phase Fee:	2.25%
General Conditions:	\$603,451

DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
Superintendent	Hours	2580	\$135	\$348,300
Project Manager	Hours	967.5	\$125	\$120,938
Project Coordinator	Hours	322.5	\$65	\$20,963
Engineering Services				Not Included
Safety	Allow	1	\$20,000	\$20,000
Temporary Toilets	Months	15	\$1,200	\$18,000
Temporary Enclosures	Allow			Bid Pkg
Misc Job Supplies	Allow	1	\$15,000	\$15,000
Dumpster/Cleanup	EA	35	\$500	\$17,500
Final Cleaning	By Owner			By Owner
Job Trailer	Months	15	\$850	\$12,750
Technology	Months	1	\$15,000	\$15,000
Site Equipment	Months	15	\$1,000	\$15,000
Building Permits	By Owner			By Owner

Total

\$603,451

5: PAST DISPUTES, ARBITRATION AND/OR MEDIATION



YOUR CONSTRUCTION PARTNER

Claims in the past five years	None
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6: SAFETY RECORD

2019:	.92
2020:	.89
2021:	.86

Moore Construction Services has an exemplary workplace safety record because of our commitment to safe work practices in every aspect of our business. *Our team has experienced NO lost time due to safety issues since the inception of the company.*

Additionally, we have hired SiteGuard Safety Services as our onsite safety consultant to provide safety audit reports.

7: COST

Construction Manager Services Cost	See Page 8
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8: REFERENCES

City of New Berlin <i>DPW, Arts & Recreation Center & History Museum</i>	Greg Kessler <i>Community Development Director</i> gkessler@newberlin.org 262-797-2445
City of New Berlin <i>Water Utilities Building</i>	Jim Hart <i>Utility Manager</i> jhart@newberlin.org 262-786-7086
Amazon <i>DML6</i>	Asher Cousin <i>Regional Construction Manager</i> couasher@amazon.com 832-405-9656
Five Star Fabricating, Inc <i>Company Headquarters</i>	Carl Schultz <i>Chief Executive Officer</i> carlschultz@fivestarbodies.com 262-745-5198

CITY OF NEW BERLIN TESIMONIALS:

"The City of New Berlin has worked with Moore Construction Services on multiple occasions, such as our Historic Museum and Utility building additions and now our new Activity and Recreation Center and DPW. Our residents expect an efficient and cost-effective approach while also providing facilities that our community can be proud of. Moore understands these values and has been able to seamlessly work with our elected officials and staff to complete our projects. Working on public sector projects can have its challenges and it has become abundantly clear that Moore is always up for the task."

Dan Hogan, Code Compliance Specialist, City of New Berlin

"The staff at Moore Construction Services was very friendly and considerate of our building requirements and addressed our concerns promptly and efficiently. From design through close-out, the Moore staff listened to our needs and addressed our concerns in a highly professional manner. This helped make our building experience a very enjoyable one. We would highly recommend using Moore Construction Services for your building needs."

Jim Hart, Utility Manager, City of New Berlin

STATUS OF PROJECTS

May 11, 2022

- 1) Construction of Holy Hill Road (from the east ramps of I41 to approximately 500 feet east of Goldendale Rd): Construction has started, two-way traffic has been moved to the north half of the street until the south side is complete. New road will have two lanes in each direction separated by an 18' median with street lights in the median. Traffic lights will control the Goldendale Rd intersection.
- 2) New Well #12 and Well House in TID #8 (SE corner of Gateway Crossing & Rockfield Road). WisDNR has approved as a Shallow Well. Well casing is complete and water testing has been completed with the result of very good water. Well House and associated equipment in final design.
- 3) Elevated Water Tank in TID #8: Tank will have 500,000-gal capacity. Logo and color scheme have been decided. Construction status: foundation, piping and base (cone) section is complete. Tank fabrication is completed to two sections, these will be welded together as erection takes place. Village Board and WisDNR have approved to construct tower with the additional height. PSC approval anticipated soon. After all approvals are received final construction will be delayed due to delivery of remaining materials and contractors schedule.



- 4) PP/II project –Graef and Village staff have begun moving project forward. Project plan was submitted and approved by MMSD. Staff & Graef engineers have held two Public Information Meetings and three door notification attempts made to have residents receive and return permission forms indicating their desire to participate in the program. Currently 88% of residents have responded in a positive manner to participate. Televising of sanitary laterals was bid but bids were very high and therefore all bids rejected. Working with MMSD to revised plan for repairing leaking laterals.

- 5) 2021 Road Program; Payne & Dolan, Inc. has completed all roads.
 - Elm Ln reconstruction (Wasauke Rd to west termini) will hold off on placing the 2" surface course until June 2022. NO CHNAGE
- 6) Development of site plans for future DPW facility continues. New Building Plans at 90% complete. Village Board approved purchase of land to relocate DPW site/ Village offers for purchase land have been accepted. Rock investigation, Phase 1 environmental, site survey, soils investigation and Wetland Delineation are complete. Target date for bidding is June/July 2022 with possible construction start end of 2022. Occupancy revised to end of 2023 or spring of 2024.
- 7) CIPP (Cured In Place Pipe) Project; The project includes the remaining 7,654 LF of unlined 48-inch diameter RCP pipe and lining 530 VF of manholes. Project limits are from just south of Donges Bay & STH 145 to 124th & County Line Rd. This is the Main Interceptor sewer that transports the Villages wastewater to MMSD. Current flow of sewage will be pumped around work area with no disturbance to residents. By-Pass pump and pipe cleaning to start week of May 9, 2022.
- 8) Engineering Staff has submitted an application for an "STP" Funding Grant through the WisDOT to reconstruct Division Rd from Mequon Rd to Revere Lane. Funding is applied for to the WisDOT "Surface Transportation Program" (STP). Remaining section of Division Rd from Revere Lane to south of Wendy Lane will be completed under the Annual Road Improvement program. The Grant was not awarded, The Village resubmitted for future Grants.
- 9) The Village has been approved to receive a Grant from WisDOT through the HSIP funding program to make corrections to the intersection of Maple Rd & Mequon-Lannon Rd. The project will include turn lanes at Maple Rd and other horizontal alignment modifications. The Grant is for construction in 2024 and is a 90%-10% Grant where the Village is responsible for 10%. The estimated cost of the project is \$800,000.00. This is the same type of funding that was the basis for the reconstruction of Freistadt Rd & Maple Rd. NO CHANGE
- 10) 2021 Annual Road Seal Coat program has completed work in the Business Park, (Mequon Rd to Donges Bay Rd.) and in the Industrial Park west of Maple Rd. Remaining seal coating work on residential streets to be completed in 2022 due to unfavorable weather conditions, contractor to honor 2021 pricing.
- 11) 2022 Annual Road Seal Coat program is in design with anticipated bid in May 2022
- 12) WIDOT has scheduled reconstruction of the intersection of Division Rd (CTH G) and STH 145. The new intersection will be a roundabout with design starting in 2021 and construction slated for 2023. This project is fully funded by the WIDOT.

13) The 2022 Annual Road Improvement program was bid with Wolf Paving submitting the low bid. Alternate roads may be added as cost estimates of initial roads are completed. Initial roads included are:

- Bonniwell Rd (CTH G to termini)
- Fawn Ln (Maple Rd to termini)
- Holy Hill Rd (CTH G to termini)
- Maple Rd (Holy Hill Rd to Rockfield Rd)
- Lovers Ln (Division Rd to Century Ln)
- Century Ln (Lovers Rd to STH 145)
- Willow Creek Way: Pave Surface Course of Asphalt (TID #6 Funds)
- Woodside Acres Subdivision
- Willow Creek Way (TID #6 surface Course)
- Pheasant Lane

14) 2022 Local Road Improvement Project (LRIP) is a bi-annual Grant Program of State Funds managed by Washington County. In 2022 the Village of Germantown will receive approximately \$63,874.00. These funds in conjunction with additional funds approved by the Village Board will be used to reconstruct Country Aire Dr from approximately 500 feet north of Mequon Rd to Freistadt Rd. Extension of the sidewalk from current termini to Friedenfeld Park to be included with payment by Neumann Development.

15) Private Development

- Murphy Pet Foods: installation of the public water main is complete, and Building Walls are 75% complete
- Capstone-41: footings/foundation, walls, roof complete: water service and sanitary sewer to building #1 is complete.
- Zilber #5 Building: submitted for review; construction not started (located west of Zilber #4)
- Dickman Bild #3 has been submitted for review. Located near the Illing Bldg.
- Heritage Park-North Subdivision is rescheduled for start construction early spring of 2022 (35 single family lots) Located at the northeast corner of Division Rd & Revere Ln
- Wrenwood-North Subdivision work continues. Grading work is approximately 70% complete. Installation of sanitary sewer and water main is approx. 90% complete. Estimate begin house construction summer of 2022. Developer has revised schedule to combine both phases for sanitary sewer and water main construction in 2022.

