Office of the Clerk/Treasurer

W240N3065 Pewaukee Road
Pewaukee, WI 53072
(262) 691-0770 Fax 691-1798

*****REVISED*****

COMMON COUNCIL
MEETING NOTICE AND AGENDA
Monday, December 4, 2023
6:30 PM

Common Council Chambers ~ Pewaukee City Hall
W240 N3065 Pewaukee Road ~ Pewaukee, Wisconsin

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1. Call to Order and Pledge of Allegiance
2. Public Comment - Please limit your comments to two (2) minutes, if further time for discussion is needed please contact your District Alderperson prior to the meeting.
3. Consent Agenda
   - 3.1. Approve Common Council Meeting Minutes Dated September 18, 2023
   - 3.2. Approve the Accounts Payable Dated December 4, 2023
4. Discussion and Possible Action Regarding the Conditional Use Permit for the Property Located at N18 W22670 Watertown Road (PWC 0958-990-005 & PWC 0958-990-006) for the Purpose of Developing Four-Family and Duplex Owner-Occupied Condominiums as Requested by Lawrence Marincic / Carity Land Corporation / Ancient Oaks [Fuchs]
5. Discussion and Possible Action Regarding **Ordinance 23-10** Rezoning the Lawrence Marincic / Carity Land Corporation / Ancient Oaks Property Located at N18 W22670 Watertown Road (PWC 0958-990-005 & PWC 0958-990-006) from A-2 Agricultural and LC Lowland Conservancy to Rm-1 Multiple-Family Residential Planned Unit Development, LC Lowland Conservancy, and UC Upland Conservancy for the Purpose of Developing Four-Family and Duplex Owner-Occupied Condominiums [Fuchs]
6. Discussion and Possible Action Regarding a Preliminary Certified Survey Map for Lawrence Marincic / Carity Land Corporation / Ancient Oaks for Property Located at N18 W22670 Watertown Road (PWC 0958-990-005 & PWC 0958-990-006) for the Purpose of Developing Four-Family and Duplex Owner-Occupied Condominiums [Fuchs]
7. Presentation, Discussion and Possible Action Regarding the Final Sanitary Sewer Master Plan [Mueller / Wagner]
8. Discussion and Possible Action to approve the Fourth Reduction of Woodleaf Reserve Phase 5 Development Letter of Credit from $610,525.21 to $50,000 (A Reduction of $560,525.21) [Wagner]
9. Discussion and Possible Action Regarding Westwood Drive and Corporate Court Road Rehabilitation and Related Improvements [Wagner]

9.1 Preliminary **Resolution 23-12-19** Declaring Intent to Exercise Special Assessment Powers Authorizing the Construction of Westwood Drive and Corporate Court Road Rehabilitation and Related Facilities Under Section 66.703 Wisconsin Statutes.

9.2 Comfort **Resolution 23-12-20** Declaring Official Intent to Reimburse Expenditures.

10. Discussion and Possible Action Regarding the Lindsay Road/Balmer Park Water Main Loop [Wagner]

10.1 Preliminary **Resolution 23-12-21** Declaring Intent to Exercise Special Assessment Powers Authorizing the Construction of the Lindsay Road/Balmer Park Water Main Loop and Related Facilities Under Section 66.0703 Wisconsin Statutes.

10.2 Comfort **Resolution 23-12-22** Declaring Official Intent to Reimburse Expenditures

11. Public Comment - Please limit your comments to two (2) minutes, if further time for discussion is needed please contact your district Alderperson prior to the meeting.

12. Adjournment

Kelly Tarczewski
Clerk/Treasurer

December 1, 2023

NOTICE

It is possible that members of other governmental bodies of the municipality may be in attendance to gather information that may form a quorum. At the above stated meeting, no action will be taken by any governmental body other than the governmental body specifically referred to above in this notice.

Any person who has a qualifying disability under the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible format must contact the Clerk/Treasurer, Kelly Tarczewski, at (262) 691-0770 three business days prior to the meeting so that arrangements may be made to accommodate your request.

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 3.1.

DATE: December 4, 2023

DEPARTMENT: Clerk/Treasurer

PROVIDED BY:

SUBJECT:

Approve Common Council Meeting Minutes Dated September 18, 2023

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

CC Minutes 9/18/2023

In Attendance:
Mayor Steve Bierce, Aldermen C. Brown, I. Clark, B. Dziwulski, R. Reinbold and J. Wamser. P. Vetterkind was absent and excused.

Also in Attendance:
Attorney S. Riffle, Administrator S. Klein, DPW Director M. Wagner, Park & Recreation Director N. Phalin, Director of People and Culture K. Woldanski, City Planner & Community Development Director N. Fuchs, and Clerk/Treasurer K. Tarczewski.

1. Call to Order and Pledge of Allegiance

   Mayor Bierce called the meeting to order at 6:30 p.m. and asked everyone to stand for the Pledge of Allegiance.

2. Public Comment

   Richard Carr (W268 N2433 Meadowbrook Road) stated he previously filed an ethics complaint and the Ethics Board found nothing in his complaint that complied with the City's Ethics Code. He said the Board was advised in an email, "that murder, while certainly a crime, is not prohibited in the code of conduct under the City's Ethics Code". He said that the Ethics Code does not regulate lack of professionalism of a public official, nor does the Ethics Code regulate perjury, lack of professionalism in communicating with the public or generally acting in an unprofessional manner. He said he disagrees and that is why he filed a revised ethics complaint this afternoon explaining why perjury is a violation of the State's misconduct code 946.12(1) - (4). He handed out copies to the Common Council and suggested the Common Council might want to think about changing the Ethics Code. Mr. Carr stated Mr. Riffle is advising the Ethics Board. He said the Ethics Board is supposed to be impartial. He said Mr. Riffle is not impartial since he represents the City in the upcoming lawsuit related to his abusive process claim. Mr. Carr stated if Mr. Riffle is representing the City in the upcoming lawsuit, he can't be impartial in advising the Ethics Board.

   Michael Lanois (N29 W27394 Peninsula Drive) stated he just received his special assessment notice for the 2021 water and street project. He said each household received a bill in the amount of $17,200.03. He was adamant that a new street was not necessary and that it only needed to be capped. Mr. Lanois stated the City wanted to put in water, but nobody on Peninsula Drive wanted it. He said the City wanted to put in fire hydrants. He said for the last hundreds of years the Fire Department used to siphon water out of the lake, but evidently technology is no longer capable of doing that. He said his complaint was how this project was run through and jammed down their throats. He said he took a survey of his neighbors and only three people wanted the water and four people did not express an opinion one way or the other. The balance was against the water. He said the street only had three minor cracks in it. He said he assumed the billing was based on the footage of pipe, but in speaking to the Engineer, it was per house. He added that he spoke with his Alderman and was advised that when the Council voted, the Alderman for the district voted against the project and the other four Aldermen voted in favor of the project. He said the expense should be distributed equally by the foot not by the house. He added that he appreciates the efforts of Colleen and Ian.

3. Consent Agenda
   3.1 Approval of Accounts Payable Listing Dated September 18, 2023

3.2 Approval of the Common Council Meeting Minutes Dated August 7, 2023

A motion was made and seconded (B. Dziwulski, R. Reinbold) to approve the consent agenda. Motion Passed: 5-For, 0-Against.

4. Discussion and Possible Action Regarding **Resolution 23-09-15** for Inclusion Under the Wisconsin Public Employer's Group Health Insurance Program

Ms. Woldanski stated the resolution is a necessary requirement for the State to accept us into the insurance program.

A motion was made and seconded (R. Reinbold, B. Dziwulski) to approve Resolution 23-09-15 for the inclusion under the Wisconsin Public Employer's Group Health Insurance Program. Motion Passed: 5-For, 0-Against.

5. Discussion and Possible Action Regarding a **Resolution 23-09-16** Accepting a Land and Water Conservation Fund (LWCF) Grant for the All-Inclusive Playground Project at the Pewaukee Sports Complex in the amount of $488,913

Mr. Phalin stated conversation around an all-inclusive playground started in the spring of 2021 and it was also brought to the Common Council at that time. He said in the fall of 2021, they received their first large donation from Rick Fury, who also received naming rights opportunities. Mr. Phalin said the City has had other successes through fundraisers and naming rights opportunities with local businesses. He added that Abby Lorenz, a friend of the community, has donated her time towards the project to find other local businesses potentially interested in donating. Mr. Phalin stated the City applied for a grant in 2022 and received no awards. The City reapplied in 2023 and was awarded a grant in the amount of $488,913. Mr. Phalin noted the new total of funds is roughly $1.1 million.

Mr. Fuchs stated the project is a little over halfway to the total project cost. He noted there is a list of projects in consideration for use of the AARPA funds. He added that staff prioritized the projects with the first priority being the solar initiative, and the second priority being the splash pad. Mr. Fuchs said once the cost of the solar project is narrowed down, he will come back to Common Council to look at dedicating the remaining funds to the splash pad project. He added that the City has two playgrounds planned at the Sports Complex and will come back to the City for a contribution of $300,000. Mr. Fuchs requested a resolution to accept the grant.

Abby Lorenz (1224 N. Dousman Road, Oconomowoc) commended Nick Fuchs and Nick Phalin for their hard work on the plans and extended her gratitude to Rick Fury for his initial donation. She said she is committed to helping raise funds for the project and thinks it is wonderful for the community. She was pleased and very excited about the grant and recommended approval. She also thanked the City of Pewaukee for the opportunity to represent the Friends of the Pewaukee Parks.

A motion was made and seconded (B. Dziwulski, I. Clark) to approve Resolution 23-09-16 accepting a grant for the all-inclusive playground. Motion Passed: 5-For, 0-Against.

6. Discussion and Possible Action Regarding a Storm Water Easement for Yench Road Culvert

Ms. Wagner stated the replacement of the culverts and the easement was to accommodate a request by the DNR. She said it will spread the water out into the wetlands. Ms. Wagner stated the land is owned by Lake Pewaukee Sanitary District and this will formalize the easement.

A motion was made and seconded (B. Dziwulski, I. Clark) to approve the storm water easement for the Yench Road culvert project based on a favorable final review by the City Attorney and City Engineer. Motion Passed: 5-For, 0-Against.

7. Discussion and Possible Action to Award the Yench Road Culvert Replacements to the Lowest Qualified Bidder, UPI LLC, in the Amount of $159,719.50

   Ms. Wagner stated three culverts are failing at Yench Road. She said the projects were lumped into one project as one replacement. She said there were six bidders ranging from $159,719.50 to $297,965.00. She recommended awarding the project to UPI in the amount of $159,719.50 and noted that there were adequate funds for this project in the budget.

   Mr. Dziwulski asked why the numbers were so low compared to what was budgeted and if the City has worked with UPI in the past. Ms. Wagner stated the project was budgeted high, and the City has worked with UPI before.

   A motion was made and seconded (B. Dziwulski, I. Clark) to award the project to UPI, LLC in the amount of $159,719.50. Motion Passed: 5-For, 0-Against.

8. Discussion and Possible Action Establishing the 2024 Garbage and Recycling Collection Rates with Johns Disposal, and Moving Recycling Collection to Weekly

   Ms. Wagner noted the City has been with Johns Disposal since 2015 under the current contract. She said the contract includes two price adjustments annually. One is based on the consumer price index and the other is the fuel index. She said there is a cap of no more than 2.65 percent increase on all collection costs. She said that increase results in a cost of $183 per home, which also includes recycling and City Hall recycling. Ms. Wagner noted two additional recycling dumpsters were added to the City yard this year due to complaints from residents that dumpsters were too full. She said in discussions with residents and Johns Disposal, weekly recycling would be supported. Ms. Wagner noted it was brought to the Public Works Committee and they recommended moving to weekly recycling at a rate of $210 per home.

   Ms. Brown stated she has pushed for weekly recycling and feels it will reduce the need for bins at City Hall. She added it will also help with confusion on which week is a recycling week. Ms. Brown noted she doesn't like the increase and asked if the extra bins at City Hall added additional fees. Ms. Wagner said there is no charge for the City to have the bins.

   A brief discussion took place regarding the increase and the up-the-drive service.

   A motion was made and seconded (C. Brown, J. Wamser) to set the 2024 garbage and recycling collection rate at $210 and establish weekly recycling, as well as sending out a standard letter to current "hardship" collections to require annual renewal. Motion Passed: 5-For, 0-Against.

9. Discussion and Possible Action to Awarding the Wagner Park Pond Retrofits to the Lowest Qualified Bidder, All Ways Contractors, Inc., in the Amount of $164,767.00

   Ms. Wagner stated the project was identified by the NR216 audit from the DNR. She said when the DNR came in they went to different areas in the community and identified long standing maintenance issues that needed to be addressed, including trees and brush growing along the edge of the ponds, storm sewer sections that have fallen off, and muskrats' erosion issues. Ms. Wagner stated the City received four bids and recommended approval of the bid to All Ways Contractors in the amount of $164,767.

Mr. Reinbold asked if the price included the pond being dredged. Ms. Wagner stated an analysis was done and it was determined that dredging was not needed, but the edges will be cleaned up.

A motion was made and seconded (R. Reinbold, B. Dziwulski) to award the Wagner Park pond retrofits to the lowest qualified bidder, All Ways Contractors, Inc., in the amount of $164,767.00 Motion Passed: 5-For, 0-Against.

10. Public Comment - None.

11. Closed Session – You are hereby notified that the Common Council and staff of the City of Pewaukee will convene into closed session after all regular scheduled business has been concluded and upon motion duly made and seconded and acted upon by roll-call vote as required under §19.85(1)(a), Stats. The purpose of the closed session is for the following:

> §19.85(1)(e): Deliberating or negotiating the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session, specifically related to the Joint Library Contract with the Village of Pewaukee.

You are further notified that at the conclusion of the Closed Session, the Common Council may convene into open session pursuant to 19.85(2), Stats., for possible additional discussion and action concerning any matters discussed in closed session and for adjournment.

A motion was made and seconded (J. Wamser, B. Dziwulski) to go into closed session at 7:10 p.m. Motion Passed: 5-For, 0-Against by roll call vote.

A motion was made and seconded (R. Reinbold, I. Clark) to go back into open session at 7:52 p.m. Motion Passed: 5-For, 0-Against.

12. Adjournment

A motion was made and seconded (B. Dziwulski, I. Clark) to adjourn the meeting at 7:52 p.m. Motion Passed: 5-For, 0-Against.

Respectfully Submitted,

Kelly Tarczewski
Clerk/Treasur

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 3.2.

DATE: December 4, 2023

DEPARTMENT: Clerk/Treasurer

PROVIDED BY:

SUBJECT:

Approve the Accounts Payable Dated December 4, 2023

BACKGROUND:

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

A/P 12/4/2023

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/03/2023	100	139167	ADP SCREENING & SELECTION SERVICES	EMPLOYEE SERVICES - EMPLOYMENT EXAMS	52150	51430	119.10
11/03/2023	100	139168	ASHLEY KRUEGER	RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	29.50
11/03/2023	100	139169	BIELINSKI LLC	BEB22-0036	23173	00000	2,000.00
11/03/2023	100	139170	BS&A SOFTWARE	BUILDING SERVICES - OPERATING SUPPLIES	53400	52400	606.00
11/03/2023	100	139171	CESA 10	EMPLOYEE SERVICES - SAFETY PERSONAL	53480	51430	1,500.00
11/03/2023	100	139172	CHERRIE LARSON	RECREATION PROGRAM - CONTRACTED	52190	55300	144.00
11/03/2023	100	139175*#	COMPLEX SECURITY SOLUTIONS INC	IT - OTHER PROFESSIONAL SERVICES	52190	51450	1,040.00
11/03/2023	100	139177	DAN PLAUTZ CLEANING SERVICE	CITY HALL - JANITORIAL SUPPLIES	52400	51600	2,873.00
11/03/2023	100	139179	DIVERSIFIED BENEFIT SERVICES, INC.	INSURANCE CONSULTANT	52150	51930	207.00
11/03/2023	100	139180	ELEVITY GORDON FLESCH CO INC	IT - SOFTWARE MAINTENANCE & UPDATES	52480	51450	4,485.80
				IT - OPERATING SUPPLIES	53400	51450	108.50
				CHECK 100 139180 TOTAL FOR FUND 100:			4,594.30
11/03/2023	100	139181	ELLIOTTS ACE HARDWARE	PARKS - SAFETY EQUIPMENT	53480	55200	13.99
				PARKS - NEW EQUIPMENT	53950	55200	4.99
				CHECK 100 139181 TOTAL FOR FUND 100:			18.98
11/03/2023	100	139182	EVELYN BIELEJESKI	COURT - MEETINGS & CONVENTIONS	53210	51200	323.28
11/03/2023	100	139183	FAMBRO MANAGEMENT	RECREATION PROGRAM - CONTRACTED	52190	55300	576.00
11/03/2023	100	139185	FIRST STUDENT	RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	225.00
				RECREATION PROGRAM - FIELD TRIPS	53460	55300	487.50
				RECREATION PROGRAM - FIELD TRIPS	53460	55300	412.50
				RECREATION PROGRAM - FIELD TRIPS	53460	55300	412.50
				RECREATION PROGRAM - FIELD TRIPS	53460	55300	412.50
				RECREATION PROGRAM - FIELD TRIPS	53460	55300	825.00
				CHECK 100 139185 TOTAL FOR FUND 100:			4,800.00
11/03/2023	100	139186*#	FORWARD TS	COURT - OPERATING SUPPLIES	53400	51200	27.87
				POLICE - OPERATING SUPPLIES	53400	52100	27.87
				ENGINEERING - OPERATING SUPPLIES	53400	53110	84.81
				RECREATION PROGRAM - OPERATING SUPPLIES	53400	55300	73.89
				CHECK 100 139186 TOTAL FOR FUND 100:			214.44
11/03/2023	100	139187	GALLS	FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	138.35
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	63.94
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	69.39
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	86.93
				CHECK 100 139187 TOTAL FOR FUND 100:			358.61
11/03/2023	100	139188	GENERAL PARTS	FIRE ADMINISTRATION - BUILDING REPAIRS	52410	52210	319.95
11/03/2023	100	139189#	GREG STOLLER	SALES TAX DUE STATE	24213	00000	4.85
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	92.15
				CHECK 100 139189 TOTAL FOR FUND 100:			97.00
11/03/2023	100	139190	Halen Homes	BOB23-0004	23175	00000	500.00
11/03/2023	100	139192	HEARTLAND BUSINESS SYSTEMS	IT - OTHER PROFESSIONAL SERVICES	52190	51450	23.00
11/03/2023	100	139193	HECKEL DANCE LLC	RECREATION PROGRAM - CONTRACTED	52190	55300	633.60
11/03/2023	100	139194	HIGHLANDS OF AVONDALE	COURT PENALTIES	45110	00000	1,150.00
11/03/2023	100	139195	HOPKINS SPORTS CAMPS	RECREATION PROGRAM - CONTRACTED	52190	55300	1,012.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
				RECREATION PROGRAM - CONTRACTED	52190	55300	1,429.50
				CHECK 100 139195 TOTAL FOR FUND 100:			2,441.50
11/03/2023	100	139196	IS OUTFITTERS	IT - OTHER PROFESSIONAL SERVICES	52190	51450	10,736.00
11/03/2023	100	139197	J.F. AHERN COMPANY	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	505.00
11/03/2023	100	139198	JAMES IMAGING SYSTEMS	IT - OTHER PROFESSIONAL SERVICES	52190	51450	65.00
11/03/2023	100	139199	JENNY SCHOLTKA	RECREATION PROGRAM - CONTRACTED	52190	55300	864.00
11/03/2023	100	139200	JOHNS DISPOSAL SERVICE	RECYCLE - GARBAGE COLLECTION	52800	53620	15,751.48
				RECYCLE - GARBAGE COLLECTION	52800	53620	56,158.75
				CHECK 100 139200 TOTAL FOR FUND 100:			71,910.23
11/03/2023	100	139201	JOHNSON'S NURSERY	PARKS - GROUNDS MAINTENANCE	52420	55200	195.00
				PARKS - EQUIPMENT PURCHASED WITH	53900	55200	1,050.00
				CHECK 100 139201 TOTAL FOR FUND 100:			1,245.00
11/03/2023	100	139202	JULIA ANDERSON	EMPLOYEE SERVICES - TRAINING	52980	51430	124.45
11/03/2023	100	139203	Kaerek Homes Inc	BEB22-0056	23173	00000	2,000.00
11/03/2023	100	139204	KARMEN LEHMAN	RECREATION PROGRAM - CONTRACTED	52190	55300	45.00
11/03/2023	100	139205*#	KMB ELECTRIC	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	283.50
				PARKS - BUILDING REPAIRS & MAINT	52410	55200	2,311.58
				CHECK 100 139205 TOTAL FOR FUND 100:			2,595.08
11/03/2023	100	139206	KWIK TRIP INC.	FIRE PROTECTIVE SERVICES - FUEL	53420	52230	14,083.46
11/03/2023	100	139207	KWIK TRIP PEWAUKEE	COURT PENALTIES	45110	00000	30.73
11/03/2023	100	139208	LF GEORGE INC	PARKS - EQUIPMENT RENTAL	55310	55200	765.00
11/03/2023	100	139209#	LIFE-ASSIST INC	FIRE ADMINISTRATION - CPSI ACCREDIATION	53450	52210	150.60
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	13.50
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	560.69

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	170.00
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	172.80
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	662.80
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	563.40
				CHECK 100 139209 TOTAL FOR FUND 100:			2,293.79
11/03/2023	100	139210	LINDA LEE STEELE POD	DEFERRED REVENUES - GARBAGE COLLECTION	26200	00000	90.00
11/03/2023	100	139211	MARK MOONEN	POLICE - COMMUNITY PROGRAM	52180	52100	191.68
11/03/2023	100	139212*#	MENARDS	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	209.87
				CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	95.91
				FIRE ADMINISTRATION - OPERATING	53400	52210	32.94
				PARKS - BUILDING REPAIRS & MAINT	52410	55200	36.77
				PARKS - GROUNDS MAINTENANCE	52420	55200	35.97
				PARKS - GROUNDS MAINTENANCE	52420	55200	917.00
				CHECK 100 139212 TOTAL FOR FUND 100:			1,328.46
11/03/2023	100	139215*#	MUNICIPAL LAW & LITIGATION GROUP	GENERAL AFFAIRS ATTORNEY	52100	51300	17,970.00
				ASSESSOR - ATTORNEY	52100	51530	372.00
				POLICE - ATTORNEY	52100	52100	3,580.00
				PLANNER - ATTORNEY	52100	56300	956.00
				CHECK 100 139215 TOTAL FOR FUND 100:			22,878.00
11/03/2023	100	139216	NATALIE GRIMSCHEID	COURT PENALTIES	45110	00000	1,739.00
11/03/2023	100	139217	NATIONAL FLEET GRAPHICS LLC	FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,959.16
11/03/2023	100	139218	NICK PHALIN	RECREATION PROGRAM - MILEAGE	53300	55300	149.34
11/03/2023	100	139219	NICK PHALIN	RECREATION PROGRAM - MEETINGS &	53210	55300	20.00
11/03/2023	100	139221	PHYSICIANS IMMEDIATE CARE	EMPLOYEE SERVICES - EMPLOYMENT EXAMS	52150	51430	100.00
11/03/2023	100	139223#	PREMIUM WATERS, INC	COURT - OPERATING SUPPLIES	53400	51200	86.99
				PARKS - OPERATING SUPPLIES	53400	55200	24.49
				CHECK 100 139223 TOTAL FOR FUND 100:			111.48

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/03/2023	100	139224	PROHEALTH CARE MEDICAL GROUP	FIRE ADMINISTRATION - EMPLOYMENT	52150	52210	333.00
				FIRE ADMINISTRATION - EMPLOYMENT	52150	52210	1,575.00
				CHECK 100 139224 TOTAL FOR FUND 100:			1,908.00
11/03/2023	100	139226	R&R INSURANCE SERVICES	EMPLOYEE SERVICES - TRAINING			** VOIDED **
11/03/2023	100	139228	RACHELLE AHO	ASSESSOR - MILEAGE & FUEL	53300	51530	160.48
11/03/2023	100	139229	RANDY ROMENS	BUILDING SERVICES - PERSONAL PROTECTIVE	53480	52400	221.55
11/03/2023	100	139231	REINDERS, INC.	PARKS - EQUIP REPAIR & MAINT	52430	55200	236.62
11/03/2023	100	139232	REINHART TRANSPORTATION	COURT PENALTIES	45110	00000	1,854.85
11/03/2023	100	139233*#	RUEKERT & MIELKE, INC.	ENGINEERING - OUTSIDE ENGINEERING	52190	53110	1,696.35
				ENGINEERING - OUTSIDE ENGINEERING	52190	53110	4,158.36
				CHECK 100 139233 TOTAL FOR FUND 100:			5,854.71
11/03/2023	100	139234	RUSS'S MULCH & TOPSOIL	PARKS - GROUNDS MAINTENANCE	52420	55200	297.00
11/03/2023	100	139235	SIGNS & LINES BY STRETCH	FIRE PROTECTIVE SERVICES - EQUIP REPAIR	52430	52230	2,881.47
11/03/2023	100	139236	ST. BARTHOLOMEW'S EPISCOPAL CHURCH	RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	180.00
11/03/2023	100	139237	STACI JOERS	RECREATION PROGRAM - CONTRACTED	52190	55300	560.00
				RECREATION PROGRAM - CONTRACTED	52190	55300	460.00
				CHECK 100 139237 TOTAL FOR FUND 100:			1,020.00
11/03/2023	100	139238	STATE OF WI COURT FINES & ASSMTS	COURT PENALTIES	45110	00000	5,923.19
11/03/2023	100	139240	Tim OBrien Homes	BOB23-0012	23175	00000	500.00
11/03/2023	100	139241*#	TURNING POINT SYSTEMS GROUP	ENGINEERING - OPERATING SUPPLIES	53400	53110	16.04
11/03/2023	100	139242	UNIFIRST CORP	FIRE ADMINISTRATION - OPERATING	53400	52210	95.27
11/03/2023	100	139244	VICK, BARBARA	COURT - MEETINGS & CONVENTIONS	53210	51200	461.18
11/03/2023	100	139245	Victory Homes of WI, Inc.	BEB21-0049	23173	00000	2,000.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/03/2023	100	139246#	VILLAGE OF PEWAUKEE	LIBRARY - OPERATING SUPPLIES	53400	55110	72,649.58
				PARKS - WATER	52230	55200	137.44
				PARKS - WATER	52230	55200	226.30
				PARKS - SEWER	52240	55200	138.76
				PARKS - SEWER	52240	55200	284.41
				PARKS - PUBLIC FIRE PROTECTION CHARGE	52950	55200	27.00
				PARKS - PUBLIC FIRE PROTECTION CHARGE	52950	55200	135.00
				CHECK 100 139246 TOTAL FOR FUND 100:			73,598.49
11/03/2023	100	139247	WACHTEL TREE SCIENCE	ENGINEERING - OUTSIDE ENGINEERING	52190	53110	165.00
11/03/2023	100	139249	WAUKESHA CO TREASURER	COURT PENALTIES	45110	00000	1,819.56
11/03/2023	100	139251	WESTRIDGE BUILDERS	EROSION/DITCH DEPOSIT	23173	00000	2,000.00
11/03/2023	100	139252	WISCONSIN DEPARTMENT OF REVENUE	ASSESSOR - WI MFG ASSESSOR CHARGES	52150	51530	9,457.03
11/03/2023	100	139253	WPRA	PREPAID EXPENSES	16200	00000	150.00
11/03/2023	100	1413(E)	DIVERSIFIED BENEFIT SERVICES, INC.	FLEX SPEND	21590	00000	346.21
11/08/2023	100	1414(E)	DELTA DENTAL	DENTAL CLEARING	21903	00000	2,656.80
11/10/2023	100	1410(E)	ADP, LLC		52480	51450	371.57
11/10/2023	100	1411(E)	WI DEPT OF REVENUE/SALES TAX	SALES TAX DUE STATE	24213	00000	96.81
				SALES TAX DISCOUNT	41220	00000	(10.00)
				CHECK 100 1411(E) TOTAL FOR FUND 100:			86.81
11/10/2023	100	1415(E)	DIVERSIFIED BENEFIT SERVICES, INC.	FLEX SPEND	21590	00000	3,459.60
11/13/2023	100	139261	ANDREW T JOHNSON AND CANDICE M	BOB22-0056	23175	00000	500.00
11/13/2023	100	139262*#	ARAMARK	HIGHWAY - CONTRACTED JANITORIAL	52400	53100	27.74
				HIGHWAY - UNIFORMS	53410	53100	88.00
				HIGHWAY - UNIFORMS	53410	53100	87.90
				CHECK 100 139262 TOTAL FOR FUND 100:			203.64

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/13/2023	100	139263*#	AT&T MOBILITY	ADMINISTRATOR - TELEPHONE & CELL	52260	51410	33.49
				CLERK/TREASURER - TELEPHONE & CELL	52260	51420	33.49
				EMPLOYEE SERVICES - PHONE & CELL	52260	51430	43.47
				IT - PHONE & CELL	52260	51450	82.01
				FIRE ADMINISTRATION - PHONE & CELL	52260	52210	133.96
				BUILDING SERVICES - PHONE & CELL	52260	52400	153.92
				HIGHWAY - PHONE & CELL	52260	53100	38.47
				ENGINEERING - PHONE & CELL	52260	53110	62.74
				PARKS - TELEPHONE & INTERNET	52260	55200	86.94
				RECREATION PROGRAM - PHONE & CELL	52260	55300	86.94
				CHECK 100 139263 TOTAL FOR FUND 100:			755.43
11/13/2023	100	139264	BATTERY SYSTEMS	PARKS - VEHICLE REPAIR & MAINT	52440	55200	236.98
11/13/2023	100	139265	BATZNER PEST CONTROL	PARKS - BUILDING REPAIRS & MAINT	52410	55200	82.50
				PARKS - BUILDING REPAIRS & MAINT	52410	55200	73.90
				CHECK 100 139265 TOTAL FOR FUND 100:			156.40
11/13/2023	100	139266	BREDAN MECHANICAL SYSTEMS INC	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	1,947.00
11/13/2023	100	139267*#	BUMPER TO BUMPER HARTLAND	PARKS - EQUIP REPAIR & MAINT	52430	55200	95.96
11/13/2023	100	139268	CHARLIE DWYER	BUILDING SERVICES - MILEAGE & FUEL	53300	52400	168.34
11/13/2023	100	139269	CHERRIE LARSON	RECREATION PROGRAM - CONTRACTED	52190	55300	403.20
				RECREATION PROGRAM - CONTRACTED	52190	55300	132.00
				CHECK 100 139269 TOTAL FOR FUND 100:			535.20
11/13/2023	100	139270	CONCENTRA MED COMPLIANCE ADMIN	EMPLOYEE SERVICES - EMPLOYMENT EXAMS	52150	51430	219.00
11/13/2023	100	139271*#	COREY OIL	HIGHWAY - FUEL	53420	53100	1,248.03
				HIGHWAY - FUEL	53420	53100	1,876.21
				HIGHWAY - FUEL	53420	53100	5,325.16
				HIGHWAY - FUEL	53420	53100	681.83
				CHECK 100 139271 TOTAL FOR FUND 100:			9,131.23

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/13/2023	100	139272	DARRYL AND ANGELA TERRY	EROSION/DITCH DEPOSIT	23173	00000	2,000.00
11/13/2023	100	139273	DIVERSIFIED BENEFIT SERVICES, INC.	INSURANCE CONSULTANT	52150	51930	353.38
11/13/2023	100	139274#	ELLIOTTS ACE HARDWARE	HIGHWAY - OPERATING SUPPLIES	53400	53100	41.85
				PARKS - NEW EQUIPMENT	53950	55200	73.97
				CHECK 100 139274 TOTAL FOR FUND 100:			115.82
11/13/2023	100	139275	Espire Homes	BEB21-0034	23173	00000	2,000.00
11/13/2023	100	139276	FIRST STUDENT	RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	11,700.00
11/13/2023	100	139277	FORWARD TS	CLERK/TREASURER - EQUIP REPAIR & MAINT	52430	51420	78.28
11/13/2023	100	139278	HFR ELECTRIC	ELECTRICAL PERMITS	44301	00000	60.00
11/13/2023	100	139279	INTERSTATE HEATING	ELECTRICAL PERMITS	44301	00000	60.00
11/13/2023	100	139280	KAESTNER AUTO ELECTRIC CO.	HIGHWAY - EQUIP REPAIR & MAINT	52430	53100	85.98
11/13/2023	100	139281	KARMEN LEHMAN	RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	135.00
11/13/2023	100	139282	KASKEY, MONICA	RECREATION PROGRAM - MEETINGS &	53210	55300	32.79
				RECREATION PROGRAM - MILEAGE	53300	55300	346.44
				RECREATION PROGRAM - PROGRAM EXPENSES	53430	55300	70.22
				CHECK 100 139282 TOTAL FOR FUND 100:			449.45
11/13/2023	100	139283	LANGE ENTERPRISES, INC	HIGHWAY - ROAD SIGNS & MARKINGS	53720	53100	2,868.60
11/13/2023	100	139284	LANNON STONE PRODUCTS	HIGHWAY - ROAD REPAIRS	53730	53100	267.93
11/13/2023	100	139285*#	LITHO-CRAFT	ENGINEERING - OPERATING SUPPLIES	53400	53110	1,477.00
11/13/2023	100	139286*#	MARIANNE HILTUNEN	ENGINEERING - OUTSIDE ENGINEERING	52190	53110	9.17
				ENGINEERING - MILEAGE	53300	53110	51.09
				CHECK 100 139286 TOTAL FOR FUND 100:			60.26
11/13/2023	100	139287	MARY FIRNROHR	RECREATION PROGRAM - CONTRACTED	52190	55300	544.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/13/2023	100	139288*#	MENARDS	HIGHWAY - OPERATING SUPPLIES	53400	53100	46.01
11/13/2023	100	139289	Mike & Kay Reiland	BEB21-0021	23173	00000	2,000.00
11/13/2023	100	139291*#	PAYNE & DOLAN	HIGHWAY - ROAD REPAIRS	53730	53100	1,809.35
11/13/2023	100	139292	REINDERS, INC.	PARKS - EQUIP REPAIR & MAINT	52430	55200	76.52
11/13/2023	100	139294*#	RUEKERT & MIELKE, INC.	ENGINEERING - OUTSIDE ENGINEERING	52190	53110	3,841.81
				ENGINEERING - OUTSIDE ENGINEERING	52190	53110	430.44
				CHECK 100 139294 TOTAL FOR FUND 100:			4,272.25
11/13/2023	100	139295	RUNDLE-SPENCE	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	76.00
11/13/2023	100	139297	STACI JOERS	RECREATION PROGRAM - CONTRACTED	52190	55300	420.00
11/13/2023	100	139298	TARGET SOLUTIONS LEARNING	EMPLOYEE SERVICES - TRAINING	52980	51430	4,539.11
11/13/2023	100	139300	UNITED STATES POSTAL SERVICE	RECREATION PROGRAM - POSTAGE	53110	55300	2,604.61
11/13/2023	100	139301	VICTORY HOMES	EROSION/DITCH DEPOSIT	23173	00000	2,000.00
11/13/2023	100	139302	VILLAGE OF PEWAUKEE	BUILDING SERVICES DUE TO VILLAGE	24400	00000	5,414.37
				AMBULANCE RUNS	46230	00000	26,459.39
				SHARED PARK & RECREATION PROGRAMS	47370	00000	3,827.46
				CONTRACTED BUILDING INSPECTION	47380	00000	(1,248.48)
				CHECK 100 139302 TOTAL FOR FUND 100:			34,452.74
11/13/2023	100	139303	WASTE MANAGEMENT	RECYCLE - HAULING RECYCLABLES	52900	53635	954.38
11/13/2023	100	139304	WAUKESHA CO TREASURER	RECREATION PROGRAM - CONTRACTED	52190	55300	660.00
11/13/2023	100	139305*#	WE ENERGIES	HIGHWAY - ELECTRICITY	52210	53100	867.09
				HIGHWAY - HEAT	52220	53100	194.49
				CHECK 100 139305 TOTAL FOR FUND 100:			1,061.58
11/13/2023	100	139307	WHITLOW'S SECURITY SPECIALISTS	PARKS - BUILDING REPAIRS & MAINT	52410	55200	125.00
11/15/2023	100	1416(E)	DELTA DENTAL	DENTAL CLEARING	21903	00000	949.80

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/16/2023	100	139308*#	A&M CLEANING SOLUTIONS	HIGHWAY - CONTRACTED JANITORIAL	52400	53100	1,246.66
11/16/2023	100	139309	ADVANCE NAME PLATE & BADGE	PLANNER - OPERATING SUPPLIES	53400	56300	14.93
11/16/2023	100	139310	AIR ONE EQUIPMENT	FIRE PROTECTIVE SERVICES - EQUIP REPAIR	52430	52230	228.00
11/16/2023	100	139311	AIRGAS USA	FIRE PROTECTIVE SERVICES - EMS	53450	52230	373.91
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	276.51
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	195.26
				CHECK 100 139311 TOTAL FOR FUND 100:			845.68
11/16/2023	100	139313	ALL COUNTY ELECTRIC	FIRE ADMINISTRATION - BUILDING REPAIRS	52410	52210	4,606.39
11/16/2023	100	139316*#	ARAMARK	HIGHWAY - CONTRACTED JANITORIAL	52400	53100	27.74
				HIGHWAY - UNIFORMS	53410	53100	284.29
				HIGHWAY - UNIFORMS	53410	53100	88.71
				CHECK 100 139316 TOTAL FOR FUND 100:			400.74
11/16/2023	100	139317	AT&T MOBILITY	FIRE ADMINISTRATION - PHONE & CELL	52260	52210	853.03
11/16/2023	100	139319	BUDGET TRUCK AND AUTO INC	FIRE PROTECTIVE SERVICES - NEW	53950	52230	120.00
11/16/2023	100	139320	BUMPER TO BUMPER HARTLAND	HIGHWAY - EQUIP REPAIR & MAINT	52430	53100	72.29
				HIGHWAY - EQUIP REPAIR & MAINT	52430	53100	37.96
				HIGHWAY - EQUIP REPAIR & MAINT	52430	53100	106.25
				HIGHWAY - OPERATING SUPPLIES	53400	53100	9.49
				CHECK 100 139320 TOTAL FOR FUND 100:			225.99
11/16/2023	100	139322	CINTAS CORPORATION #184	HIGHWAY - OPERATING SUPPLIES	53400	53100	122.01
				HIGHWAY - SAFETY EQUIPMENT	53480	53100	407.40
				CHECK 100 139322 TOTAL FOR FUND 100:			529.41
11/16/2023	100	139324	COMPASS MINERAL	HIGHWAY - SAND AND SALT	53710	53100	50,197.73
				HIGHWAY - SAND AND SALT	53710	53100	58,181.10
				HIGHWAY - SAND AND SALT	53710	53100	27,903.03

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
				HIGHWAY - SAND AND SALT	53710	53100	20,417.15
				CHECK 100 139324 TOTAL FOR FUND 100:			156,699.01
11/16/2023	100	139325	COMPLEX SECURITY SOLUTIONS INC	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	1,739.97
11/16/2023	100	139326	CONWAY SHIELD	FIRE PROTECTIVE SERVICES - NEW	53950	52230	200.00
11/16/2023	100	139327*#	ELLIOTTS ACE HARDWARE	FIRE ADMINISTRATION - OPERATING	53400	52210	8.59
				FIRE ADMINISTRATION - OPERATING	53400	52210	20.10
				CHECK 100 139327 TOTAL FOR FUND 100:			28.69
11/16/2023	100	139328	FIRE RESCUE SUPPLY LLC	FIRE PROTECTIVE SERVICES - EQUIP REPAIR	52430	52230	1,310.00
11/16/2023	100	139329	FORWARD TS	FIRE ADMINISTRATION - OPERATING	53400	52210	66.44
11/16/2023	100	139330	GALLS	FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	68.97
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	38.49
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	68.33
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	83.98
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	236.07
				FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	(68.97)
				CHECK 100 139330 TOTAL FOR FUND 100:			426.87
11/16/2023	100	139332	Halen Homes	BOB23-0003	23175	00000	500.00
11/16/2023	100	139333	Halen Homes	BOB23-0005	23175	00000	500.00
11/16/2023	100	139334	HARTLAND OVERHEAD DOOR	FIRE ADMINISTRATION - BUILDING REPAIRS	52410	52210	405.00
11/16/2023	100	139335	HEARTLAND BUSINESS SYSTEMS	IT - OTHER PROFESSIONAL SERVICES	52190	51450	59.99
11/16/2023	100	139336	HEIN ELECTRIC	FIRE ADMINISTRATION - BUILDING REPAIRS	52410	52210	25.53
11/16/2023	100	139337	HOLCIM - MAMR INC	HIGHWAY - EXCESS EXCAVATED MATERIALS	52490	53100	168.00
11/16/2023	100	139339	INTERNATIONAL INSTITUTE OF	PREPAID EXPENSES	16200	00000	125.00
11/16/2023	100	139340	JX ENTERPRISES, INC.	HIGHWAY - EQUIP REPAIR & MAINT	52430	53100	1,252.63
11/16/2023	100	139342	KWIK TRIP INC.	FIRE PROTECTIVE SERVICES - FUEL	53420	52230	5,360.05

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/16/2023	100	139343	LIFE-ASSIST INC	FIRE PROTECTIVE SERVICES - EMS	53450	52230	83.15
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	151.50
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	653.47
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	232.40
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	101.50
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	416.18
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	8.55
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	64.54
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	406.78
				FIRE PROTECTIVE SERVICES - EMS	53450	52230	(283.50)
				CHECK 100 139343 TOTAL FOR FUND 100:			1,834.57
11/16/2023	100	139345	MARY STRANOWSKI	BUILDING SERVICES - TRAINING	52980	52400	665.25
				BUILDING SERVICES - MEETINGS &	53210	52400	32.22
				CHECK 100 139345 TOTAL FOR FUND 100:			697.47
11/16/2023	100	139346	MATRIX TRUST COMPANY	DEFERRED COMPENSATION	21570	00000	50.00
				DEFERRED COMPENSATION	21570	00000	50.00
				CHECK 100 139346 TOTAL FOR FUND 100:			100.00
11/16/2023	100	139347*#	MENARDS	FIRE ADMINISTRATION - OPERATING	53400	52210	15.99
				FIRE ADMINISTRATION - OPERATING	53400	52210	53.12
				FIRE ADMINISTRATION - OPERATING	53400	52210	123.65
				FIRE ADMINISTRATION - OPERATING	53400	52210	(27.98)
				HIGHWAY - OPERATING SUPPLIES	53400	53100	5.98
				HIGHWAY - OPERATING SUPPLIES	53400	53100	118.84
				CHECK 100 139347 TOTAL FOR FUND 100:			289.60
11/16/2023	100	139349*#	MUNICIPAL LAW & LITIGATION GROUP	GENERAL AFFAIRS ATTORNEY	52100	51300	8,765.00
				POLICE - ATTORNEY	52100	52100	2,820.00
				PARKS - ATTORNEY	52100	55200	198.00
				PLANNER - ATTORNEY	52100	56300	471.00
				CHECK 100 139349 TOTAL FOR FUND 100:			12,254.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/16/2023	100	139350	NAPA	FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	135.75
11/16/2023	100	139351	NATIONWIDE RETIREMENT SOLUTIONS	DEFERRED COMPENSATION	21570	00000	2,169.00
				DEFERRED COMPENSATION	21570	00000	2,169.00
				CHECK 100 139351 TOTAL FOR FUND 100:			4,338.00
11/16/2023	100	139353*#	PARKING LOT MAINTENANCE	HIGHWAY - ROAD REPAIRS	53730	53100	11,250.00
11/16/2023	100	139355	PROHEALTH PHARMACY WAUKESHA	FIRE PROTECTIVE SERVICES - EMS	53450	52230	1,449.29
11/16/2023	100	139357	SHAWNS DEER PICK UP	DEER CONTROL - CONTRACTED SERVICES	52990	54160	720.00
11/16/2023	100	139358	SHIELD SOLUTIONS	FIRE PROTECTIVE SERVICES - OPERATING	53400	52230	396.00
11/16/2023	100	139359	SIGNARAMA	HIGHWAY - OPERATING SUPPLIES	53400	53100	150.00
11/16/2023	100	139360	SOFT WATER, INC.	FIRE ADMINISTRATION - OPERATING	53400	52210	70.00
11/16/2023	100	139361	STRYKER SALES CORPORATION	FIRE PROTECTIVE SERVICES - EQUIP REPAIR	52430	52230	625.35
				FIRE PROTECTIVE SERVICES - EQUIP REPAIR	52430	52230	338.71
				CHECK 100 139361 TOTAL FOR FUND 100:			964.06
11/16/2023	100	139362	TIA FIORENTINO	CLERK/TREASURER - MILEAGE	53300	51420	19.00
11/16/2023	100	139363	VERIZON	FIRE ADMINISTRATION - PHONE & CELL	52260	52210	49.49
				FIRE ADMINISTRATION - PHONE & CELL	52260	52210	40.03
				CHECK 100 139363 TOTAL FOR FUND 100:			89.52
11/16/2023	100	139364	VILLAGE OF PEWAUKEE	LIBRARY - OPERATING SUPPLIES	53400	55110	72,649.58
11/16/2023	100	139365	WASTE MANAGEMENT	RECYCLE - HAULING RECYCLABLES	52900	53635	4,186.64
11/16/2023	100	139366	WAUKESHA CO TECHNICAL COLLEGE	FIRE PROTECTIVE SERVICES - TRAINING	52980	52230	98.00
11/17/2023	100	139369	R&R INSURANCE SERVICES	PREPAID EXPENSES	16200	00000	70.00
11/17/2023	100	1417(E)	DIVERSIFIED BENEFIT SERVICES, INC.	FLEX SPEND	21590	00000	405.00
11/22/2023	100	1420(E)	DELTA DENTAL	DENTAL CLEARING	21903	00000	621.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/24/2023	100	1419(E)	ADP INC	IT - SOFTWARE MAINTENANCE & UPDATES	52480	51450	364.70
11/24/2023	100	1422(E)	DIVERSIFIED BENEFIT SERVICES, INC.	FLEX SPEND	21590	00000	1,991.82
11/28/2023	100	139371	AIRGAS USA	FIRE PROTECTIVE SERVICES - EMS	53450	52230	158.81
11/28/2023	100	139373	BATZNER PEST CONTROL	PARKS - BUILDING REPAIRS & MAINT	52410	55200	82.50
11/28/2023	100	139374	BOND TRUST SERVICES CORP	CITY HALL - DATA PROCESSING	52160	51600	400.00
11/28/2023	100	139375	BREDAN MECHANICAL SYSTEMS INC	CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	2,289.02
				CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	1,929.43
				CHECK 100 139375 TOTAL FOR FUND 100:			4,218.45
11/28/2023	100	139376	BUELOW VETTER BUIKEMA OLSON &	EMPLOYEE SERVICES - ATTORNEY	52100	51430	1,102.50
11/28/2023	100	139378	CHERRIE LARSON	RECREATION PROGRAM - CONTRACTED	52190	55300	252.00
				RECREATION PROGRAM - CONTRACTED	52190	55300	518.40
				RECREATION PROGRAM - CONTRACTED	52190	55300	72.00
				CHECK 100 139378 TOTAL FOR FUND 100:			842.40
11/28/2023	100	139381	DEMLANG BUILDERS	EROSION/DITCH DEPOSIT	23173	00000	2,000.00
11/28/2023	100	139382	ELLIOTTS ACE HARDWARE	FIRE ADMINISTRATION - OPERATING	53400	52210	9.23
				FIRE ADMINISTRATION - OPERATING	53400	52210	20.36
				FIRE ADMINISTRATION - OPERATING	53400	52210	7.99
				CHECK 100 139382 TOTAL FOR FUND 100:			37.58
11/28/2023	100	139383	FAMBRO MANAGEMENT	RECREATION PROGRAM - CONTRACTED	52190	55300	1,242.00
11/28/2023	100	139385	FIRE SERVICE INC	FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	3,205.61
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,200.00
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	507.00
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	802.12
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	708.42
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	2,352.72
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	3,570.62

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,099.54
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	422.24
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	510.92
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,938.13
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	600.00
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,200.00
				CHECK 100 139385 TOTAL FOR FUND 100:			18,117.32
11/28/2023	100	139386	FIRST AMERICAN TITLE INSURANCE	CITY HALL - OPERATING SUPPLIES	53400	51600	150.00
11/28/2023	100	139387	GALLS	FIRE PROTECTIVE SERVICES - UNIFORMS	53410	52230	56.27
11/28/2023	100	139388	GREAT LAKES TESTING	FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,090.00
				FIRE PROTECTIVE SERVICES - VEHICLE	52440	52230	1,039.00
				CHECK 100 139388 TOTAL FOR FUND 100:			2,129.00
11/28/2023	100	139389	Halen Homes	BOB23-0002	23175	00000	500.00
11/28/2023	100	139392	JAMES IMAGING SYSTEMS	IT - OTHER PROFESSIONAL SERVICES	52190	51450	65.00
11/28/2023	100	139393	JOHNS DISPOSAL SERVICE	RECYCLE - GARBAGE COLLECTION	52800	53620	15,414.61
11/28/2023	100	139394#	KMB ELECTRIC	IT - OTHER PROFESSIONAL SERVICES	52190	51450	202.49
				CITY HALL - BUILDING REPAIRS & MAINT	52410	51600	347.90
				CHECK 100 139394 TOTAL FOR FUND 100:			550.39
11/28/2023	100	139395	Korndoerfer Homes	BEB21-0011	23173	00000	2,000.00
11/28/2023	100	139396	KUJAWA ENTERPRISES INC	PARKS - EQUIPMENT PURCHASED WITH	53900	55200	1,970.00
11/28/2023	100	139398	MALECKI GRAPHIC ARTS SERVICES	RECREATION PROGRAM - PROGRAM PRINTING	53120	55300	720.00
11/28/2023	100	139399*#	MENARDS	FIRE ADMINISTRATION - OPERATING	53400	52210	47.96
				PARKS - BUILDING REPAIRS & MAINT	52410	55200	107.64
				PARKS - BUILDING REPAIRS & MAINT	52410	55200	56.86
				CHECK 100 139399 TOTAL FOR FUND 100:			212.46
11/28/2023	100	139402	Pramod & Kapilaben Patel	BEB22-0042	23173	00000	2,000.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 100 GENERAL FUND							
11/28/2023	100	139403	PROHEALTH CARE MEDICAL GROUP	FIRE ADMINISTRATION - EMPLOYMENT	52150	52210	706.00
				FIRE ADMINISTRATION - EMPLOYMENT	52150	52210	532.00
				CHECK 100 139403 TOTAL FOR FUND 100:			1,238.00
11/28/2023	100	139406*#	SEILER INSTRUMENT & MANUFACTURING	ENGINEERING - NEW EQUIPMENT	53950	53110	337.87
11/28/2023	100	139407	STACI JOERS	RECREATION PROGRAM - CONTRACTED	52190	55300	500.00
11/28/2023	100	139409	STRYKER SALES CORPORATION	FIRE PROTECTIVE SERVICES - EMS	53450	52230	42,220.44
11/28/2023	100	139412	Westridge Builders	BEB22-0005	23173	00000	2,000.00
11/28/2023	100	139413	Westridge Builders	BEB21-0039	23173	00000	2,000.00
11/28/2023	100	139414	Westridge Builders	BEB22-0052	23173	00000	2,000.00
11/28/2023	100	139415	WISCONSIN DEPARTMENT OF	EMPLOYEE SERVICES - EMPLOYMENT EXAMS	52150	51430	14.00
				Total for fund 100 GENERAL FUND			767,734.39

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 230 STORM WATER MANAGEMENT							
11/03/2023	100	139186*#	FORWARD TS	OPERATING SUPPLIES	53400	53650	84.80
11/03/2023	100	139214*#	MSA PROFESSIONAL SERVICES INC	STORM WATER - CAPITAL	58100	53650	528.75
				STORM WATER - CAPITAL	58100	53650	945.00
				CHECK 100 139214 TOTAL FOR FUND 230:			1,473.75
11/03/2023	100	139230	REGISTER OF DEEDS	PROJECTS - SPRINGDALE DRAINAGE EASEMENT	58210	57370	37.00
11/03/2023	100	139233*#	RUEKERT & MIELKE, INC.	OUTSIDE ENGINEERING	52190	53650	121.00
				OUTSIDE ENGINEERING	52190	53650	369.96
				OUTSIDE ENGINEERING	52190	53650	94.23
				OUTSIDE ENGINEERING	52190	53650	339.71
				OUTSIDE ENGINEERING	52190	53650	121.00
				OUTSIDE ENGINEERING	52190	53650	154.73
				OUTSIDE ENGINEERING	52190	53650	786.50
				OUTSIDE ENGINEERING	52190	53650	679.42
				OUTSIDE ENGINEERING	52190	53650	124.48
				OUTSIDE ENGINEERING	52190	53650	154.73
				OUTSIDE ENGINEERING	52190	53650	739.92
				PROJECTS - HILL 'N DALE	58210	57301	14,092.38
				PROJECTS - VALLEY BROOK SUB. DITCH	58210	57354	1,886.50
				CHECK 100 139233 TOTAL FOR FUND 230:			19,664.56
11/03/2023	100	139241*#	TURNING POINT SYSTEMS GROUP	OPERATING SUPPLIES	53400	53650	16.04
11/13/2023	100	139262*#	ARAMARK	CONTRACTED JANITORIAL	52400	53650	13.88
11/13/2023	100	139263*#	AT&T MOBILITY	TELEPHONE & CELL	52260	53650	144.70
11/13/2023	100	139267*#	BUMPER TO BUMPER HARTLAND	EQUIPMENT REPAIR & MAINT	52430	53650	62.72
				EQUIPMENT REPAIR & MAINT	52430	53650	193.78
				EQUIPMENT REPAIR & MAINT	52430	53650	112.65
				CHECK 100 139267 TOTAL FOR FUND 230:			369.15

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 230 STORM WATER MANAGEMENT							
11/13/2023	100	139271*#	COREY OIL	EQUIPMENT REPAIR & MAINT	52430	53650	1,128.60
				STORM WATER - VEHICLE REPAIR & MAINT	52440	53650	1,736.00
				CHECK 100 139271 TOTAL FOR FUND 230:			2,864.60
11/13/2023	100	139285*#	LITHO-CRAFT	OPERATING SUPPLIES	53400	53650	1,477.00
11/13/2023	100	139286*#	MARIANNE HILTUNEN	PROJECTS - HILL 'N DALE	58210	57301	3.93
				PROJECTS - VALLEY BROOK SUB. DITCH	58210	57354	26.20
				PROJECTS - YENCH ROAD CULVERT	58210	57355	9.17
				PROJECTS - WAGNER PARK POND	58200	57367	1.96
				CHECK 100 139286 TOTAL FOR FUND 230:			41.26
11/13/2023	100	139288*#	MENARDS	OPERATING SUPPLIES	53400	53650	13.98
				OPERATING SUPPLIES	53400	53650	94.65
				CHECK 100 139288 TOTAL FOR FUND 230:			108.63
11/13/2023	100	139291*#	PAYNE & DOLAN	CATCH BASIN MAINT - CATCH BASIN	53510	53655	167.54
11/13/2023	100	139293	RICHARD WIRTZ	MEETINGS & CONVENTIONS	53210	53650	90.00
				MEETINGS & CONVENTIONS	53210	53650	100.00
				MILEAGE	53300	53650	165.06
				CHECK 100 139293 TOTAL FOR FUND 230:			355.06
11/13/2023	100	139294*#	RUEKERT & MIELKE, INC.	OUTSIDE ENGINEERING	52190	53650	211.75
				OUTSIDE ENGINEERING	52190	53650	217.31
				OUTSIDE ENGINEERING	52190	53650	217.31
				OUTSIDE ENGINEERING	52190	53650	217.31
				OUTSIDE ENGINEERING	52190	53650	217.31
				OUTSIDE ENGINEERING	52190	53650	372.73
				OUTSIDE ENGINEERING	52190	53650	514.25
				OUTSIDE ENGINEERING	52190	53650	466.97
				OUTSIDE ENGINEERING	52190	53650	244.78
				OUTSIDE ENGINEERING	52190	53650	286.15

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 230 STORM WATER MANAGEMENT							
				OUTSIDE ENGINEERING	52190	53650	618.22
				PROJECTS - HILL 'N DALE	58210	57301	6,189.08
				PROJECTS - VALLEY BROOK SUB. DITCH	58210	57354	8,931.97
				CHECK 100 139294 TOTAL FOR FUND 230:			18,705.14
11/13/2023	100	139296	SIGNARAMA	EQUIPMENT REPAIR & MAINT	52430	53650	54.00
11/13/2023	100	139299	TRUCK & AUTO ELEGANCE	STORM WATER - CAPITAL	58100	53650	532.00
11/13/2023	100	139305*#	WE ENERGIES	ELECTRICITY	52210	53650	433.54
				HEAT	52220	53650	97.25
				CHECK 100 139305 TOTAL FOR FUND 230:			530.79
11/13/2023	100	139306	WESTERN CULVERT & SUPPLY	DITCH & CULVERT MAINT - CULVERT	53510	53652	459.80
11/16/2023	100	139308*#	A&M CLEANING SOLUTIONS	CONTRACTED JANITORIAL	52400	53650	623.34
11/16/2023	100	139314	ALL-WAYS CONTRACTORS, INC	DITCH & CULVERT MAINT - DITCH	53520	53652	67.50
11/16/2023	100	139316*#	ARAMARK	CONTRACTED JANITORIAL	52400	53650	13.88
11/16/2023	100	139344	LINCOLN CONTRACTORS	OPERATING SUPPLIES	53400	53650	28.99
11/16/2023	100	139347*#	MENARDS	OPERATING SUPPLIES	53400	53650	29.94
				OPERATING SUPPLIES	53400	53650	52.70
				CHECK 100 139347 TOTAL FOR FUND 230:			82.64
11/16/2023	100	139348	MONROE TRUCK EQUIPMENT INC	STORM WATER - CAPITAL	58100	53650	30,959.00
11/16/2023	100	139349*#	MUNICIPAL LAW & LITIGATION GROUP	ATTORNEY	52100	53650	149.00
				PROJECTS - VALLEY BROOK SUB. DITCH	58210	57354	833.00
				PROJECTS - YENCH ROAD CULVERT	58210	57355	1,291.00
				CHECK 100 139349 TOTAL FOR FUND 230:			2,273.00
11/16/2023	100	139353*#	PARKING LOT MAINTENANCE	DITCH & CULVERT MAINT - CULVERT	53510	53652	3,950.00

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 230 STORM WATER MANAGEMENT							
11/16/2023	100	139354	PAYNE & DOLAN	CATCH BASIN MAINT - CATCH BASIN	53510	53655	83.44
				CATCH BASIN MAINT - CATCH BASIN	53510	53655	67.42
				CHECK 100 139354 TOTAL FOR FUND 230:			150.86
11/28/2023	100	139370*#	AECOM TECHNICAL SERVICES, INC	PROJECTS - YENCH ROAD CULVERT	58210	57355	14,272.71
				PROJECTS - FOXWOOD/KATHRINE CT	58210	57358	474.57
				PROJECTS - WAGNER PARK POND	58200	57367	3,026.85
				PROJECTS - SPRINGDALE DRAINAGE EASEMENT	58210	57370	301.41
				CHECK 100 139370 TOTAL FOR FUND 230:			18,075.54
11/28/2023	100	139406*#	SEILER INSTRUMENT & MANUFACTURING	NEW EQUIPMENT	53950	53650	337.86
				Total for fund 230 STORM WATER MANAGEMENT			103,662.31

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 250 TOURISM & CONVENTION							
11/03/2023	100	139250	WAUKESHA PEWAUKEE CVB	TOURISM - HOTEL ROOM TAX	59000	56700	24,000.00
11/28/2023	100	139405*#	R.A. SMITH & ASSOC., INC.	TOURISM - SPORTS COMPLEX TURF	58210	56700	1,838.25
11/28/2023	100	139411	WAUKESHA PEWAUKEE CVB	TOURISM - HOTEL ROOM TAX	59000	56700	66,962.50
				Total for fund 250 TOURISM & CONVENTION			92,800.75

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 420 CAPTIAL ROAD PROJECTS							
11/03/2023	100	139220	PARKING LOT MAINTENANCE	HIGHWAY PAVING MAINTENANCE - CAPITAL	58200	56000	69,300.00
11/03/2023	100	139227#	R.A. SMITH & ASSOC., INC.	QUIET ZONE - GREEN ROAD			** VOIDED **
				QUIET ZONE - DUPLAINVILLE ROAD			** VOIDED **
				QUIET ZONE - WATERTOWN ROAD			** VOIDED **
11/03/2023	100	139233*#	RUEKERT & MIELKE, INC.	SHADY LANE	58210	57407	12,515.50
				ROUNDY'S INDUSTRIAL PARK #2	58210	57422	1,623.37
				SPICE CREEK/MEADOWBROOK FARMS #2	58210	57552	151.00
				JOSEPH ROAD	58210	57553	34,957.65
				SPICE CREEK/MEADOWBROOK FARMS #3	58210	57556	11,932.04
				SPICE CREEK/MEADOWBROOK FARMS PH 4	58210	57557	10,031.88
				SHERWOOD FOREST/BUSSE	58210	57560	2,094.15
				APPLE TREE/PEAR TREE	58210	57561	830.67
				CHECK 100 139233 TOTAL FOR FUND 420:			74,136.26
11/03/2023	100	139239*#	STRAND ASSOCIATES, INC	DUPLAINVILLE TRACKS TO WEYER	58210	57420	3,303.13
				APPLE TREE/PEAR TREE	58210	57561	43,238.68
				CHECK 100 139239 TOTAL FOR FUND 420:			46,541.81
11/13/2023	100	139260	ALL-WAYS CONTRACTORS, INC	APPLE TREE/PEAR TREE	58210	57561	346,297.29
11/13/2023	100	139286*#	MARIANNE HILTUNEN	APPLE TREE/PEAR TREE	58210	57561	38.65
11/13/2023	100	139294*#	RUEKERT & MIELKE, INC.	SHADY LANE	58210	57407	37,022.95
				ROUNDY'S INDUSTRIAL PARK #2	58210	57422	892.12
				JOSEPH ROAD	58210	57553	3,900.83
				SPICE CREEK/MEADOWBROOK FARMS #3	58210	57556	6,031.80
				SPICE CREEK/MEADOWBROOK FARMS PH 4	58210	57557	11,474.59
				APPLE TREE/PEAR TREE	58210	57561	497.91
				CHECK 100 139294 TOTAL FOR FUND 420:			59,820.20
11/28/2023	100	139370*#	AECOM TECHNICAL SERVICES, INC	LEXINGTON/TACOMA	58210	57426	3,403.68

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 420 CAPTIAL ROAD PROJECTS							
11/28/2023	100	139405*#	R.A. SMITH & ASSOC., INC.	QUIET ZONE - WEYER ROAD	58200	56700	520.31
				QUIET ZONE - GREEN ROAD	58200	56710	520.31
				QUIET ZONE - GREEN ROAD	58200	56710	1,098.75
				QUIET ZONE - DUPLAINVILLE ROAD	58200	56720	520.31
				QUIET ZONE - DUPLAINVILLE ROAD	58200	56720	1,098.75
				QUIET ZONE - WATERTOWN ROAD	58200	56730	520.32
				QUIET ZONE - WATERTOWN ROAD	58200	56730	1,098.75
				CHECK 100 139405 TOTAL FOR FUND 420:			5,377.50
11/28/2023	100	139408*#	STRAND ASSOCIATES, INC	DUPLAINVILLE TRACKS TO WEYER	58210	57420	3,907.94
				APPLE TREE/PEAR TREE	58210	57561	32,660.10
				CHECK 100 139408 TOTAL FOR FUND 420:			36,568.04
				Total for fund 420 CAPTIAL ROAD PROJECTS			641,483.43

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 440 BIKE & PEDESTRIAN							
11/03/2023	100	139233*#	RUEKERT & MIELKE, INC.	NORTHVIEW ROAD SIDEWALK	58230	53550	1,802.00
11/13/2023	100	139294*#	RUEKERT & MIELKE, INC.	NORTHVIEW ROAD SIDEWALK	58230	53550	195.50
				Total for fund 440 BIKE & PEDESTRIAN			1,997.50

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 480 DPW BUILDING							
11/03/2023	100	139166	ABSOLUTE CONSTRUCTION	DPW BUILDING	58100	57700	54,605.24
11/03/2023	100	139175*#	COMPLEX SECURITY SOLUTIONS INC	DPW BUILDING	58100	57700	1,659.99
11/03/2023	100	139205*#	KMB ELECTRIC	DPW BUILDING	58100	57700	1,568.14
11/03/2023	100	139215*#	MUNICIPAL LAW & LITIGATION GROUP	DPW BUILDING	58100	57700	190.00
11/28/2023	100	139391	J.H. HASSINGER, INC.	DPW BUILDING	58100	57700	36,261.00
				Total for fund 480 DPW BUILDING			94,284.37

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 490 CAPTIAL EQUIPMENT							
11/03/2023	100	139214*#	MSA PROFESSIONAL SERVICES INC	ENGINEERING - CAPITAL EQUIPMENT	58100	57311	528.75
				ENGINEERING - CAPITAL EQUIPMENT	58100	57311	945.00
				CHECK 100 139214 TOTAL FOR FUND 490:			1,473.75
11/03/2023	100	139222	PLAYPOWER LT FARMINGTON INC	PARKS - CAPITAL PLAYGROUND EQUIP	58100	57621	5,966.60
11/16/2023	100	139341	KNOX COMPANY	FIRE ADMINISTRATION - CAPITAL EQUIPMENT	58100	57220	2,622.00
11/28/2023	100	139397	LOCHEN EQUIPMENT	PARKS - CAPITAL EQUIPMENT	58100	57620	44,999.97
				Total for fund 490 CAPTIAL EQUIPMENT			55,062.32

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 600 WATER UTILITY							
11/03/2023	100	139173*#	CINTAS CORP	UNIFORMS	53410	00641	51.25
				UNIFORMS	53410	00641	51.25
				CHECK 100 139173 TOTAL FOR FUND 600:			102.50
11/03/2023	100	139178	DEPARTMENT OF NATURAL RESOURCES	Utility Memberships & Continuing	53200	00930	45.00
11/03/2023	100	139184	FERGUSON WATERWORKS #1476	OPERATING SUPPLIES AND EXPENSE	53400	00641	205.88
11/03/2023	100	139191	HAWKINS, INC.	CHEMICALS	53200	00631	5,444.60
11/03/2023	100	139213	MID CITY CORPORATION	APPLE TREE WELL 9&10 REHAB	12824	00107	88,307.00
11/03/2023	100	139214*#	MSA PROFESSIONAL SERVICES INC	COMPUTER HARDWARE SOFTWARE	18587	00391	528.75
				COMPUTER HARDWARE SOFTWARE	18587	00391	945.00
				CHECK 100 139214 TOTAL FOR FUND 600:			1,473.75
11/03/2023	100	139225	PUBLIC SERVICE COMMISSION OF WI	PSC WATER RCA STUDY	52382	00928	1,665.53
11/03/2023	100	139243	USA BLUEBOOK	REPAIRS - TRANSMISSION LINES	52400	00651	739.95
11/03/2023	100	139248	WATER REMEDIATION TECHNOLOGY	WATER TESTING	52310	00632	4,091.19
11/13/2023	100	139290*	OLAMETER CORP	WATER SVC CHG	21100	00000	25.20
				WATER USAGE	21100	00000	285.98
				HYDRANT-FIRE PROTECT	21100	00000	182.57
				CHECK 100 139290 TOTAL FOR FUND 600:			493.75
11/16/2023	100	139312*	ALL CITY COMMUNICATIONS INC.	ANSWERING SERVICE	52331	00921	43.23
11/16/2023	100	139315*	ALLMAX SOFTWARE INC	SCADA/TELEMETARY	52100	00950	1,195.00
11/16/2023	100	139318	BADGER METER	METER READING EXPENSES	52200	00901	1,200.00
11/16/2023	100	139321*#	CINTAS CORP	UNIFORMS	53410	00641	51.25
				UNIFORMS	53410	00641	51.25
				CHECK 100 139321 TOTAL FOR FUND 600:			102.50

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 600 WATER UTILITY							
11/16/2023	100	139338	HYDROCORP	CROSS CONNECTION INSPECTION	52381	00641	1,288.00
11/16/2023	100	139347*#	MENARDS	OPERATING SUPPLIES AND EXPENSE	53400	00641	29.98
				REPAIRS - HYDRANTS	52400	00654	16.65
				CHECK 100 139347 TOTAL FOR FUND 600:			46.63
11/16/2023	100	139352	NORTHERN LAKE SERVICE, INC	WATER TESTING	52310	00632	725.00
11/16/2023	100	139356	RUEKERT & MIELKE, INC.	BLUMD WATER MAIN-BUSSE TO FOSTER	12810	00107	5,596.20
				BLUMD WATER MAIN-BUSSE TO FOSTER	12810	00107	17,883.89
				CHECK 100 139356 TOTAL FOR FUND 600:			23,480.09
11/16/2023	100	139368*	XEROX CORPORATION	OFFICE SUPPLIES & EXPENSES	53100	00921	119.16
11/28/2023	100	139372*#	AT&T MOBILITY	TELEPHONE	52330	00921	178.25
				SCADA/TELEMETARY	52100	00950	25.47
				CHECK 100 139372 TOTAL FOR FUND 600:			203.72
11/28/2023	100	139377*	BUMPER TO BUMPER HARTLAND	TRANSPORTATION EXPENSE - REPAIR &	52400	00933	18.98
11/28/2023	100	139379*#	CINTAS CORP	UNIFORMS	53410	00641	51.25
11/28/2023	100	139384	FASTENAL	REPAIRS - HYDRANTS	52400	00654	96.12
11/28/2023	100	139390	HARTLAND OVERHEAD DOOR	BUILDING AND GROUNDS	52310	00602	175.00
11/28/2023	100	139399*#	MENARDS	OPERATING SUPPLIES AND EXPENSE	53400	00641	17.98
				REPAIRS - HYDRANTS	52400	00654	39.68
				CHECK 100 139399 TOTAL FOR FUND 600:			57.66
11/28/2023	100	139401*	POSTMASTER	BILLING	53300	00903	155.00
11/28/2023	100	139404	PUBLIC SERVICE COMMISSION OF WI	PSC WATER RCA STUDY	52382	00928	722.14

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 600 WATER UTILITY							
11/28/2023	100	139410*	TERRY AND BONNIE ZIMMERMAN	WATER SVC CHG	21100	00000	25.20
				WATER USAGE	21100	00000	68.27
				CHECK 100 139410 TOTAL FOR FUND 600:			93.47
				Total for fund 600 WATER UTILITY			132,342.10

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 650 SEWER UTILITY							
11/03/2023	100	139173*#	CINTAS CORP	Uniforms & Protective Equipment	53410	01827	51.25
				Uniforms & Protective Equipment	53410	01827	51.25
				CHECK 100 139173 TOTAL FOR FUND 650:			102.50
11/03/2023	100	139174	CITY OF BROOKFIELD	INTEREST/LONG TERM DEBT	56100	01880	922.00
11/03/2023	100	139176	CUMMINS SALES & SERVICE	MAINTENANCE OF GENERAL PLANT STRUCTURE	52400	01834	1,384.54
11/03/2023	100	139212*#	MENARDS	MAINTENANCE/SCS - CONTROL PANEL	52430	01831	9.00
				MAINTENANCE OF PUMPING EQIUPMENT	52400	01832	9.87
				CHECK 100 139212 TOTAL FOR FUND 650:			18.87
11/03/2023	100	139214*#	MSA PROFESSIONAL SERVICES INC	COMPUTER HARDWARE/SOFTWARE	18587	01372	528.75
				COMPUTER HARDWARE/SOFTWARE	18587	01372	945.00
				CHECK 100 139214 TOTAL FOR FUND 650:			1,473.75
11/03/2023	100	139215*#	MUNICIPAL LAW & LITIGATION GROUP	BLUEMOUND - S. OF HARKEN	12802	00107	258.00
11/13/2023	100	139290*	OLAMETER CORP	SEWER ADMIN	21100	00000	30.70
				SEWER OPR.	21100	00000	1,323.60
				CHECK 100 139290 TOTAL FOR FUND 650:			1,354.30
11/16/2023	100	139312*	ALL CITY COMMUNICATIONS INC.	ANSWERING SERVICE	52331	00921	43.22
11/16/2023	100	139315*	ALLMAX SOFTWARE INC	SCADA/TELEMETARY	52100	00950	1,195.00
11/16/2023	100	139321*#	CINTAS CORP	Uniforms & Protective Equipment	53410	01827	51.25
				Uniforms & Protective Equipment	53410	01827	51.25
				CHECK 100 139321 TOTAL FOR FUND 650:			102.50
11/16/2023	100	139323#	CITY OF BROOKFIELD	PRE - PAYMENTS	16200	00143	30,334.33
				SEWER SERVICE CHARGE - BROOKFIELD	52340	01827	330,754.16

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 650 SEWER UTILITY							
				CHECK 100 139323 TOTAL FOR FUND 650:			361,088.49
11/16/2023	100	139327*#	ELLIOTTS ACE HARDWARE	MAINTENANCE OF GENERAL PLANT STRUCTURE	52400	01834	20.96
11/16/2023	100	139331	GREGG MARTIN INSTRUMENTATION	MAINTENANCE/SCS - FLOWMETER	52420	01831	600.00
11/16/2023	100	139367	WAUKESHA WATER UTILITY	SEWER SERVICE CHARGE - WCC	52344	01827	24,618.04
11/16/2023	100	139368*	XEROX CORPORATION	OFFICE SUPPLIES & EXPENSES	53100	00921	119.17
11/28/2023	100	139372*#	AT&T MOBILITY	TELEPHONE	52330	00921	178.26
				SCADA/TELEMETARY	52100	00950	25.46
				CHECK 100 139372 TOTAL FOR FUND 650:			203.72
11/28/2023	100	139377*	BUMPER TO BUMPER HARTLAND	TRANSPORTATION EXPENSE - REPAIR &	52400	00933	18.98
11/28/2023	100	139379*#	CINTAS CORP	Uniforms & Protective Equipment	53410	01827	51.25
11/28/2023	100	139380	COREY OIL	MAINTENANCE OF PUMPING EQIUPMENT	52400	01832	684.78
11/28/2023	100	139401*	POSTMASTER	BILLING	53300	00903	155.00
11/28/2023	100	139408*#	STRAND ASSOCIATES, INC	Gun Club Sewer Study	12831	00107	18,050.00
11/28/2023	100	139410*	TERRY AND BONNIE ZIMMERMAN	SEWER OPR.	21100	00000	106.53
11/28/2023	100	139416	XYLEM WATER SOLUTIONS U.S.A. INC	MAINTENANCE OF PUMPING EQIUPMENT	52400	01832	5,953.00
				Total for fund 650 SEWER UTILITY			418,524.60

Check Date	Bank	Check #	Payee	Description	Account	Dept	Amount
Fund: 800 CEMETERY							
11/03/2023	100	139215*#	MUNICIPAL LAW & LITIGATION GROUP	CAPITAL - ROAD RECONSTRUCTION	58200	54910	1,160.00
11/03/2023	100	139239*#	STRAND ASSOCIATES, INC	CAPITAL - ROAD RECONSTRUCTION	58200	54910	9,947.87
11/13/2023	100	139286*#	MARIANNE HILTUNEN	CAPITAL - ROAD RECONSTRUCTION	58200	54910	33.41
11/28/2023	100	139400	PARKING LOT MAINTENANCE	CAPITAL - ROAD RECONSTRUCTION	58200	54910	213,096.30
11/28/2023	100	139408*#	STRAND ASSOCIATES, INC	CAPITAL - ROAD RECONSTRUCTION	58200	54910	18,508.24
				Total for fund 800 CEMETERY			242,745.82
			TOTAL - ALL FUNDS				2,550,637.59

'*'-INDICATES CHECK DISTRIBUTED TO MORE THAN ONE FUND
'#'-INDICATES CHECK DISTRIBUTED TO MORE THAN ONE DEPARTMENT

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 4.

DATE: December 4, 2023

DEPARTMENT: Planning

PROVIDED BY: Nick Fuchs

SUBJECT:

Discussion and Possible Action Regarding the Conditional Use Permit for the Property Located at N18 W22670 Watertown Road (PWC 0958-990-005 & PWC 0958-990-006) for the Purpose of Developing Four-Family and Duplex Owner-Occupied Condominiums as Requested by Lawrence Marincic / Carity Land Corporation / Ancient Oaks [Fuchs]

BACKGROUND:

At their November 16, 2023 meeting, the Plan Commission recommended approval of a Conditional Use Permit for properties located at N18W22670 Watertown Road for the construction of a 96-unit condominium development. The motion passed with five in favor and one opposed.

The Plan Commission included the following recommendations:

- The access to Elmwood Drive shall be designed to discourage left turns and include signage stating no left turns.
- No plantings or structures shall be placed within City rights-of-way.
- An updated traffic study shall be provided for Common Council review.

The applicant is not objecting to these recommendations and has provided an updated TIA along with an Executive Summary. See attached.

FINANCIAL IMPACT:

RECOMMENDED MOTION:

A motion to approve the Conditional Use Permit for properties located at N18W22670 Watertown Road for the Ancient Oaks Condominiums development.

ATTACHMENTS:

Description

Ancient Oaks Condominiums Conditional Use Permit_Draft

Ancient Oaks Condominiums Site Plan

Ancient Oaks Condominiums Landscape Plan 1

Ancient Oaks Condominiums Landscape Plan 2

Neighbor Letter

A COVENANT
REGARDING THE ISSUANCE OF A
CONDITIONAL USE PERMIT
BY THE
CITY OF PEWAUKEE

TAX KEY NUMBER(S) OR PARCEL(S) INVOLVED: **CONDITIONAL USE PERMIT: NO. CUP-23-11-1**

PWC 0958990005 & PWC 0958990006

Recording area

Name & Return Address

City of Pewaukee
W240N3065 Pewaukee Rd
Pewaukee, WI 53072

LEGAL DESCRIPTION:

PWC 0958990005
PT E1/2 NW1/4 SEC 24 T7N R19E; COM NE COR NW1/4; N87°52'04"W 210.42 FT THE BGN; N87°52'04"W 421.40 FT TO THE E LI LANDS IN VOL 1011/100; S00°33'28"E 2148.31 FT TO CTRLI HWY SS; S58°15'59"E 115.68 FT TO CTRLI HWY M; N16°51'39"E 229.79 FT TO POINT OF CURVE; NELY ALG ARC OF CURVE 251.57 FT CTR LIES TO SE RADIUS IS 404.599 FT & CHORD BEARS N34°40'24"E 247.54 FT; N52°29'09"E 144.13 FT; N00°40'51"W 1682.24 FT TO BGN :: EX S 33 FT FOR ROAD :: DOC #4339111

PWC 0958990006
PT W1/2 SEC 24 & SW1/4 SEC 13 T7N R19E COM NW COR NE1/4 SW1/4 SEC 24 S00 15'40.56 FT S87 50'E 622.07 FT N13 24'E 46.00 FT N17 59'E 431.58 FT N57 47'W 114.04 FT N00 14'W 2158.28 FT N87 34'W 328.08 FT S00 00' 2635.29 FT N88 05'W 338.13 FT TO BGN 20.899 AC EX CSM 2012 DOC# 3112059

PERSON(S), AGENT(S) OR CORPORATION(S) PETITIONING FOR PERMIT:

Carity Land Corp./Ancient Oaks

WHEREAS, It is understood by all parties to this covenant that Section 62.23 of WIS. Statutes prescribes the legal basis for the granting of a conditional use permit by a City and Chapter 17 of the City Codes and Ordinances provides for the issuance of such permits as well as the standards by which all such uses will be measured; and,

WHEREAS, The City Plan Commission has held a public hearing on November 16, 2023; has reviewed the various elements of the petitioner's proposal; and has recommended that a Conditional

Use Permit be granted to the above-named petitioner for the property/parcel identified above; and,

WHEREAS, The City Common Council, at their meeting held on December 4, 2023 concurred with the Plan Commission.

NOW, THEREFORE, let it be known that the City Common Council, by its action on December 4, 2023 has, hereby, granted a Conditional Use Permit for the following use(s):

Development of four-family and duplex owner-occupied condominiums.

FURTHER, such approved use of the above designated parcel(s) are hereby allowed based on the following conditions being continually met:

1. Final utility, grading, erosion control and storm water management plans will require Engineering Department approval prior to any land disturbance.
2. Construction of the road and approval of the site plan is contingent upon Wisconsin Department of Natural Resources approval of the wetland impacts.
3. The wetland disturbance requires separate Wisconsin Department of Natural Resources review and approval prior to any land disturbance activities taking place.
4. A Lighting Plan consisting of light and fixture details must be provided to Community Development staff for review and approval, prior to permitting and installation.
5. An agreement is needed for the cul-de-sac landscaping within the public rights-of-way and a note is recommended to be placed on the Certified Survey Map and Condominium Plat indicating that plantings within the right-of-way are not the responsibility of the City and the City is not responsible for maintenance or damage to plantings or replacement of plantings.
6. The access to Elmwood Drive shall be designed to discourage left turns and include signage stating no left turns.
7. No plantings or structures shall be placed within City rights-of-way.
8. An updated traffic study shall be provided for Common Council review.

The parties hereto, namely the City of Pewaukee and the Equitable Owner of the property for which this conditional use has been sought, set their signatures or the signatures of their representatives below, thereby agreeing to the provisions and conditions set forth in this covenant.

Attest:	Signature of equitable owner
	Date
Kelly Tarczewski City Clerk	Steve Bierce Mayor, City of Pewaukee
	Date

DRAFT

State of Wisconsin
County of Waukesha

Signed or attested before me on _____, 2023 by Steve Bierce, Mayor and Kelly Tarczewski, Clerk.

(Seal)

_____
Ami Hurd
My Commission expires _____

This instrument was drafted by Ami Hurd, Deputy Clerk

DRAFT

PROPOSED DEVELOPMENT FOR

ANCIENT OAKS CONDOMINIUM

N18 W22670 WATERTOWN ROAD PEWUAKEE, WISCONSIN

Carity Land Corporation November 06, 2023

FRONT ELEVATION

1/8" = 1'-0"

ANCIENT OAKS
CONDOMINIUM- QUAD UNIT

CARITY LAND CORPORATION
12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

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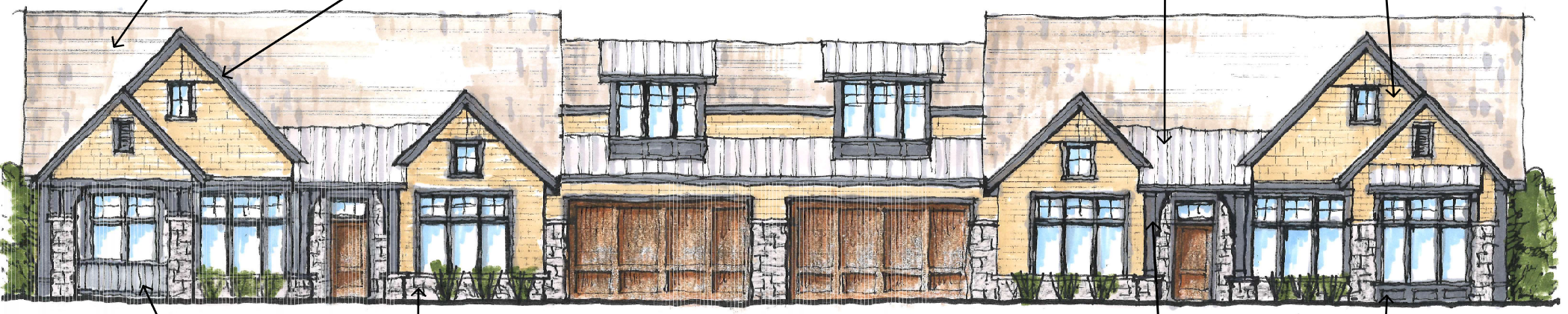
DEEP RIVER PARTNERS
©2023.09.26

Dimensional Fiberglass Shingles - Weathered Wood

Trim/Windows Benjamin Moore 1624 - Westcott Navy

Standing Seam Roof - Firestone Vintage

Shingle Siding Benjamin Moore HC9 Chestertown Buff



Porch Railing

Lannon Stone Veneer

AUTOCOURT ELEVATION

SCALE 1/8" = 1'-0"

Column & Bracket

Wall Panel

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ANCIENT OAKS
CONDOMINIUM- QUAD UNIT

N81 W22121 WATERTOWN ROAD, PEWAUKEE, WI

DEEP RIVER PARTNERS
©2023.09.26

REAR ELEVATION

1/8" = 1'-0"

CARITY LAND CORPORATION

12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

ANCIENT OAKS
CONDOMINIUM- DUPLEX UNIT

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N81 W22121 WATERTOWN ROAD, PEWAUKEE, WI

DEEP RIVER PARTNERS

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JSD

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jsdinc.com

MILWAUKEE REGIONAL OFFICE
W239 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666

DEVELOPER:
CARITY LAND CORPORATION

DEVELOPER ADDRESS:
12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

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PROJECT:
ANCIENT OAKS CONDOMINIUMS

PROJECT LOCATION:
N18W22670 WATERTOWN ROAD
PEWAUKEE, WAUKESHA COUNTY
WISCONSIN, 53186

PLAN MODIFICATIONS:

#	Date:	Description:
1	06/31/23	PRELIMINARY PRICING SET
2	09/29/23	PLAN COMMISSION SUBMITTAL
3	10/06/23	UPDATED SEC DELINEATION
4	11/06/23	CITY SUBMITTAL
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Designed By: JJS
Reviewed By: RWI
Approved By: RWI

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C1.0

JSD PROJECT NO. 23-3328

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF JSD PROFESSIONAL SERVICES, INC.

SITE INFORMATION BLOCK

SITE ADDRESS	N18W22670 WATERTOWN RD
SITE AREA (GROSS)	32.66 ACRES
RM-1 ZONING	23.20 ACRES
UPLAND CONSERVANCY	2.26 ACRES
LOWLAND CONSERVANCY	7.20 ACRES
NUMBER OF UNITS	96
UNITS PER ACRE (GROSS)	2.94
UNITS PER ACRE (NET)	3.77
MINIMUM DWELLING UNIT SIZE	1,750SF
TOTAL BUILDING AREA	5.70 ACRES
BUILDING AREA PER LOT AREA	17%
BUILDING SETBACKS	
RIGHT-OF-WAY	30 FT.
30% PUD SETBACK ALLOWANCE	24'-6"
SIDE & REAR PROPERTY LINES	24'-6"
LANDSCAPE BUFFER FROM ELMWOOD DR.	45 FT.
WETLAND SETBACK	25 FT.
MINIMUM BUILDING SEPARATION	40 FT.
NUMBER OF PARKING STALLS	384
INTERIOR	192
EXTERIOR	192
EXISTING VS. PROPOSED SITE COVERAGE	
EXISTING IMPERVIOUS SURFACE AREA	4,385 SF
EXISTING PERVIOUS SURFACE AREA	1,418,344 SF
EXISTING IMPERVIOUS SURFACE AREA RATIO	0.00
PROPOSED IMPERVIOUS SURFACE AREA	474,769 SF
PROPOSED PERVIOUS SURFACE AREA	947,960 SF
PROPOSED IMPERVIOUS SURFACE AREA RATIO	0.33

JSD
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jsdinc.com
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666

DEVELOPER:
CARITY LAND CORPORATION

DEVELOPER ADDRESS:
12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

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PROJECT:
ANCIENT OAKS CONDOMINIUMS

PROJECT LOCATION:
N18W22670 WATERTOWN ROAD PEWAUKEE, WAUKESHA COUNTY WISCONSIN, 53186

PLAN MODIFICATIONS:

#	Date:	Description:
1	08/31/23	PRELIMINARY PRICING SET
2	09/29/23	PLAN COMMISSION SUBMITTAL
3	10/06/23	UPDATED SEC DELINEATION
4	11/06/23	CITY SUBMITTAL
5		
6		
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8		
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10		
11		
12		
13		
14		
15		

Designed By:	JJS
Reviewed By:	RW
Approved By:	RW

SHEET TITLE:
SITE PAVEMENT ID & DIMENSION PLAN

SHEET NUMBER:
C1.1

JSD PROJECT NO: 23-13326

DIGGERS HOTLINE
Toll Free (800) 242-8511

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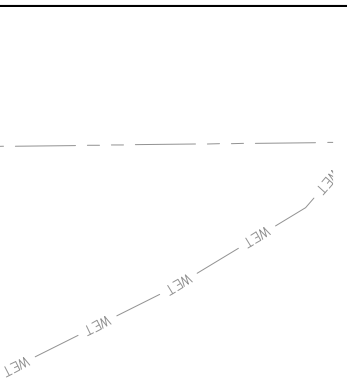

LEGEND

- PROPERTY LINE
- RIGHT–OF–WAY
- EASEMENT LINE
- BUILDING OUTLINE
- BUILDING OVERHANG
- PAVEMENT SETBACK LINE
- EDGE OF PAVEMENT
- MOUNTABLE CURB AND GUTTER
- ASPHALT PAVEMENT
- RETAINING WALL
- X X SAWCUT EXISTING PAVEMENT

SITE INFORMATION BLOCK

SITE ADDRESS	N18W22670 WATERTOWN RD
SITE AREA (GROSS)	32.66 ACRES
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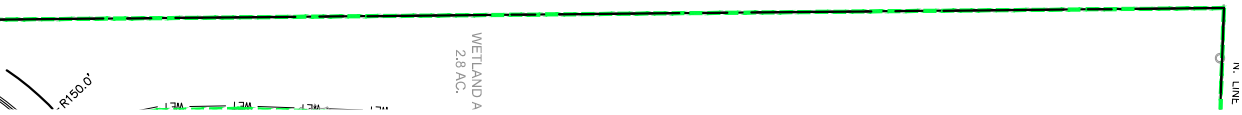
PROPOSED IMPERVIOUS SURFACE AREA	474,769 SF
PROPOSED PERVIOUS SURFACE AREA	947,960 SF
PROPOSED IMPERVIOUS SURFACE AREA RATIO	0.33



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DEVELOPER:
CARITY LAND CORPORATION

DEVELOPER ADDRESS:
12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

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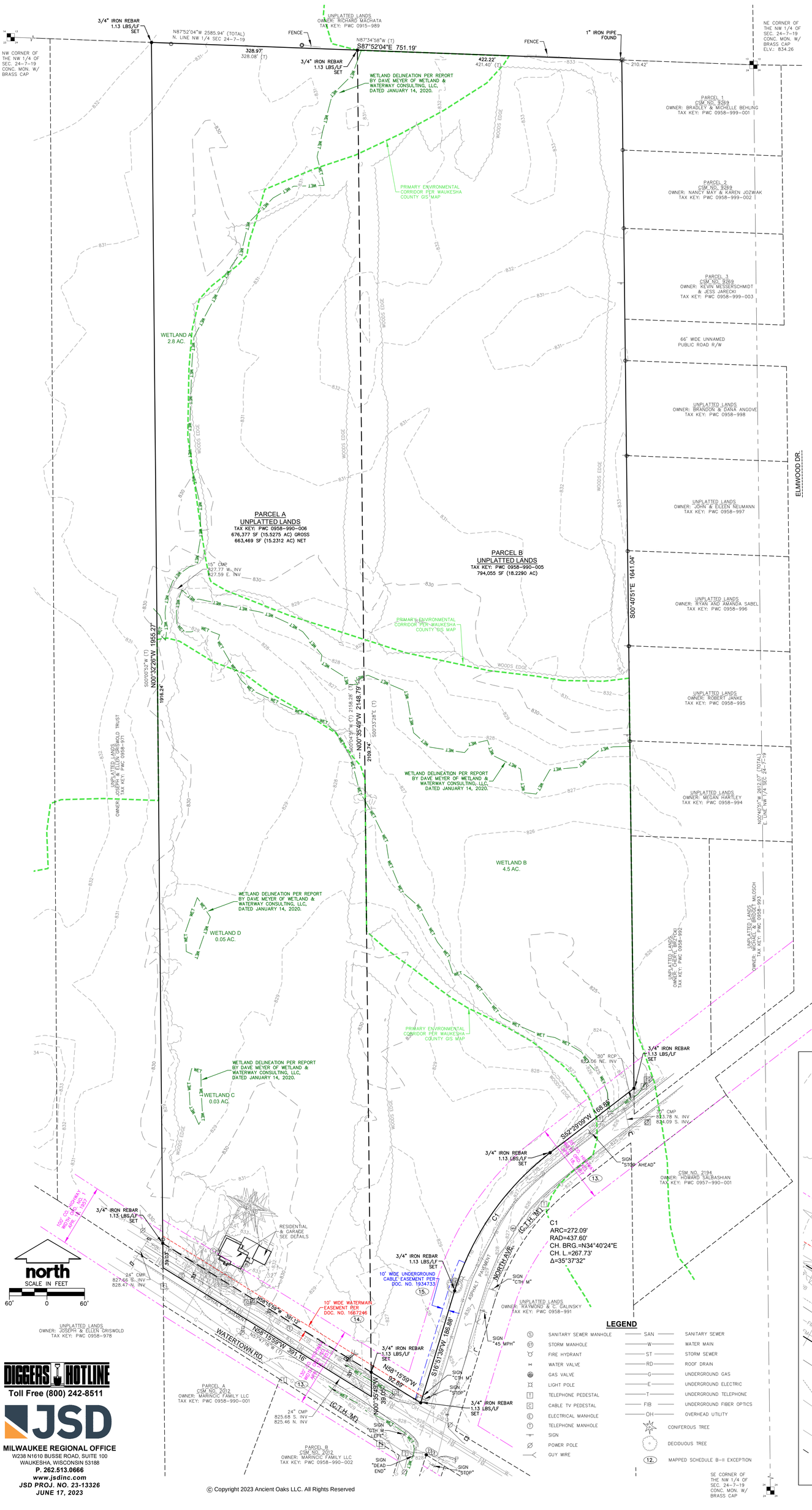
ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHEAST 1/4 AND SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN



NOTES:

1. Bearings are referenced to the Wisconsin State Plane Coordinate System, South Zone. The North line of the Northwest 1/4 of Section 24, Township 7 North, Range 19 East, was used as North 87°52'04" West.
2. Vertical Datum: NGVD29
   Reference Benchmark: Northeast corner of the Northwest 1/4 of Section 24, Township 7 North, Range 19 East, Concrete monument w/ SEWRPC brass cap, Elevation = 834.26
3. Field survey by JSD Professional Services, Inc on July 22 to 29, 2021, with supplement survey on June 16, 2023.
4. At the time of this survey the property is zoned A–2 w/LC Overlay, Agricultural District with Lowland Conservancy District, per the City of Pewaukee GIS Map, zoning layer.

   A–2 building setbacks/restrictions City of Pewaukee Chapter 17 Zoning Code

   Front/street setback: 50' from established right–of–way
   Side/Rear setback: 25' (farm dwelling)
   Side setback: 30' (detached farm building)
   Rear setback: 50' (detached farm building)
   Building max. height: 45' (except barns, elevators, grain dryers, and silos)
   Floodplain: 75'
   Wetland: 25'
5. At the time of this survey, there has been a recent field delineation of wetlands conducted by a qualified specialist. Wetland shown on map based on wetland delineation report by Dave Meyer of Wetland & Waterway Consulting, LLC, dated January 14, 2020.
6. This ALTA/NSPS Land Title Survey was prepared and based on Chicago Title Insurance Company Commitment No. CO–13980, Commitment date April 27, 2023.

TABLE A ITEMS:

2 Posted property address: N18W22670 Watertown Rd.

3 At the time of this survey this property is located within Zone X (Areas determined to be outside the 0.2% annual chance floodplain) per FEMA map panel number 55133C0212G, effective date November 5, 2014.

4 Property areas: Parcel A
Tax Key: PWC 0958–990–006
676,377 sq. ft. (15.5275 ac.) GROSS
663,469 sq. ft. (15.2312 ac.) NET

Parcel B
Tax Key: PWC 0958–990–006
794,055 sq. ft. (18.2290 ac.)

6 At the time of this survey zoning letter was not provided to surveyor. See General Note No. 4.

9 At the time of this survey, the property has no designated striped parking stalls:

11 Underground utility locations shown are based on field location markings by "Digger's Hotline", Ticket Nos. 20232309272, 20232309318 and 20232309372 with a start date of June 16, 2023. Underground utility information is shown for informational purposes only, and is not guaranteed to be accurate or all inclusive. The Contractor/Owner is responsible for making his own determination as to the type and location of underground utilities as may be necessary to avoid damage thereto. Contractor/Owner shall call "Digger's Hotline" prior to the start of any construction activities.

16 At the time of this survey there are no evidence of earth moving work or construction.

17 At the time of this survey pavement resurfacing was being conducted on Watertown Road (C.T.H. "M") and North Ave. (C.T.H. "M"). Cross culvert across Watertown Road (C.T.H. "M") recently replaced.

SCHEDULE B - SECTION II EXCEPTIONS

1, 5, 6, 7, 8, and 10 Shown if any.

2, 3, 4, and 9 Not survey related.

11. Easement(s) for the purpose(s) and rights incidental thereto, as granted in a document recorded on January 30, 1913, as Document No. 80876. **(BLANKET GENERAL EASEMENT)**

12. Order Establishing Sanitary District No. 3 of the Town of Pewaukee, Waukesha County, Wisconsin recorded as Document No. 977265. **(NOT SURVEY RELATED)**

13. Rights of the public in so much of the subject premises affected by ordinance adopted by the Board of Supervisors of Waukesha County June 18, 1954 and approved by the various towns in said County, establishing the widths of streets and highways and ordaining that said highway be widened to the width so established; together with rights of the public in that portion of said premises lying within the limits of said road and affected by said ordinance. A notice and plat etc. in said matter was filed April 18, 1957 as Map No. 1.

14. Permanent Easement and Grant recorded August 13, 1991 as Document No. 1667246.

15. Right–of–Way Grant recorded February 2, 1994 as Document No. 1934733.

LEGAL DESCRIPTION:

(Based on Chicago Title Insurance Company Commitment No. CO–13980, Commitment date April 27, 2023.)

Parcel A:
All that part of the Southwest One–quarter of Section 13 and the West One–half of Section 24, Town North, Range 19 East, City of Pewaukee, formerly Town of Pewaukee, bounded and described as follows:

Beginning at the Northwest Corner of the Northeast One–quarter of the Southwest One–quarter of Section 24; thence South 00 degrees 15 minutes East, along the West One–eighth Line, 40.56 feet; thence South 87 degrees 50 minutes East, 622.07 feet to the center line of North Avenue; thence North 13 degrees 24 minutes East, along said center line, 46.00 feet to an angle point, said point being on the West One–quarter Line of Section 24; thence continuing along said center line. North 17 degrees 59 minutes 19 seconds East, 431.58 feet to the center line intersection with County Trunk Highway "SS" thence North 57 degrees 47 minutes 16 seconds West, along said Center line, 114.04 feet to a point on the extension of a fence; thence North 00 degrees 04 minutes 51 seconds West, along an existing fence, 2158.28 feet to a fence corner, said corner being 2.50 feet North 00 degrees 04 minutes 51 seconds West of and North 87 degrees 23 minutes 27 seconds West, 631.82 feet distant from the North One–quarter Corner of Section 24; thence North 87 degrees 34 minutes 58 seconds West, along an existing fence, 328.08 feet to a fence corner; thence South 00 degrees 00 minutes 52 seconds West, along an existing fence, 2635.29 feet to a fence corner; thence North 88 degrees 05 minutes 51 seconds West, along an existing fence, 338.13 feet to the place of beginning.
EXCEPTING THEREFROM:
Parcels A, B, C and D of Certified Survey Map No. 2012 recorded January 11, 1974 in Volume 14 of Certified Survey Maps, pages 95, 96 and 97, as Document No. 871532, in the Office of the Register of Deeds for Waukesha County, Wisconsin, being a part of the Southwest One–Quarter of Section 13 and the West One–Half of Section 24, Town 7 North, Range 19 East, City of Pewaukee, formerly Town of Pewaukee, Waukesha County, Wisconsin.

Tax Key No.: PWC 0958990006
Address: N18W22670 Watertown Road

Parcel B:
All that part of the East 1/2 of the NW 1/4 of Section 24, Township 7 North, Range 19 East, in the Town of Pewaukee, County of Waukesha, State of Wisconsin, bounded and described as follows: Commencing at the NE corner of said NW1/4 of Section 24; thence North 87° 52' 04" West along the North line of said 1/4 Section, 210.42 feet to the point of beginning of the lands to be described; thence continuing North 87° 52'04" West, 421.40 feet to the East line of those lands described in Volume 1011, page 100, in the office of the Register of Deeds for Waukesha County; thence South 00° 33' 28" East along said East line, 2148.31 feet to the center line of County Trunk Highway "SS"; thence South 58° 15' 59" East along said center line, 115.68 feet to the center line of County Trunk Highway "M" (North Ave.); thence along the center line of County Trunk Highway "M" the following three courses, North 16° 51' 39" East, 229.79 feet to a point of curve; thence along the arc of a curve, 251.57 feet, center lies to the Southeast, radius is 404.599 feet, chord bears North 34° 40' 24" East, 247.54 feet; thence North 52° 29' 09" East, 144.13 feet; thence North 00° 40' 51" West, 1682.24 feet to the point of beginning. Excepting therefrom the Southerly 33 feet for road purposes for County Trunk Highway "SS" and County Trunk Highway "M".

Tax Key No. PWC 0958990005

SURVEYOR'S CERTIFICATE:

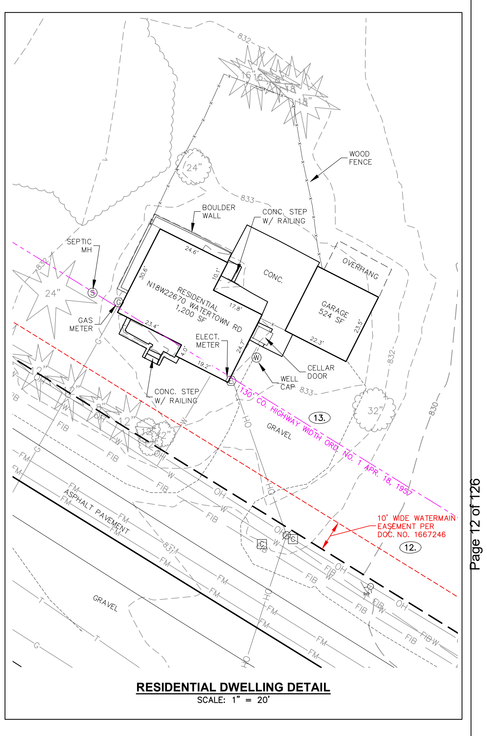
To HRG Legacy Trust; Marincic Family LLC; and Chicago Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6(a), 6(b), 7a, 7(b)(1), 8, 9, 11(a), 13, 16, and 17 of Table A thereof. The field work was completed on June 16, 2023.

Date of Map: 6/17/2023

Rizal W. Iskandarsjach, P.L.S.
Professional Land Surveyor, S–2738
JSD Professional Services, Inc.
W238N1610 Busse Rd., Ste. 100
Waukesha, WI 53188
262–513–0666

WISCONSIN RIZAL W. ISKANDARSJACH S–2738 MILWAUKEE, WIS. LAND SURVEYOR



RESIDENTIAL DWELLING DETAIL
SCALE: 1" = 20'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666
www.jsdinc.com
JSD PROJ. NO. 23-13326
JUNE 17, 2023

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SHEET 1 OF 1

ZONING LEGEND

ABBREVIATION	DESCRIPTION
LC	LOWLAND CONSERVANCY
UC	UPLAND CONSERVANCY
RM–1	MULTI–FAMILY RESIDENTIAL

north

SCALE IN FEET
60' 0 60'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD
CREATE THE VISION TELL THE STORY
jsdinc.com
MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666

DEVELOPER:
CARITY LAND CORP.

DEVELOPER ADDRESS:
12720 W. NORTH AVE.
BROOKFIELD, WI 53005

PROJECT:
ANCIENT OAKS CONDOMINIUMS

PROJECT LOCATION:
N18W22670 WATERTOWN ROAD
PEWAUKEE, WAUKESHA COUNTY
WISCONSIN, 53186

PLAN MODIFICATIONS:

#	Date:	Description:
1	08/31/23	PRELIMINARY PRICING SET
2	09/29/23	PLAN COMMISSION SUBMITTAL
3	10/06/23	UPDATED SEC DELINEATION
4		
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8		
9		
10		
11		
12		
13		
14		
15		

Designed By: JJS
Reviewed By: RWI
Approved By: RWI

SHEET TITLE:
ZONING EXHIBIT

SHEET NUMBER:
EX1.0

JSD PROJECT NO: 23-13326

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File: R:\2023\23133260\WD\23-13326 Layout.dwg Layout: ZONING EXHIBIT User: jsimon Plotted: Oct 23, 2023 - 10:08am Xref's:

UNPLATTED LANDS
OWNER: JOSEPH & ELLEN GRISWOLD
TAX KEY: PWC 0958-971

UNPLATTED LANDS
OWNER: JOSEPH & ELLEN GRISWOLD
TAX KEY: PWC 0958-970

PARCEL A
CSM NO. 2014
OWNER: WARWICK FAMILY, LLC

UNPLATTED LANDS
OWNER: RAYMOND & C. BALINSKY
TAX KEY: PWC 0958-991

100' CO. HIGHWAY
WIDTH DED. NO. 1
AVE. 18, 1852

130' CO. HIGHWAY
WIDTH DED. NO. 1
AVE. 18, 1852

100' CO. HIGHWAY
WIDTH DED. NO. 1
AVE. 18, 1852

WATERTOWN RD.

NORTH AVE. (C.T.H. 'M')

UC "C"

RM–1

LC "A"

UC "B"

LC "B"

RM–1

UC "A"

WET

ZONING LEGEND	
ABBREVIATION	DESCRIPTION
LC	LOWLAND CONSERVANCY
UC	UPLAND CONSERVANCY
RM–1	MULTI–FAMILY RESIDENTIAL

north

SCALE IN FEET
60' 0 60'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD

CREATE THE VISION TELL THE STORY

jsdinc.com

MILWAUKEE REGIONAL OFFICE
W238 N1610 BUSSE ROAD, SUITE 100
WAUKESHA, WISCONSIN 53188
P. 262.513.0666

DEVELOPER:
CARITY LAND CORP.

DEVELOPER ADDRESS:
12720 W. NORTH AVE.
BROOKFIELD, WI 53005

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PROJECT:
WATERTOWN RD MULTI-FAMILY

PROJECT LOCATION:
N18W22670 WATERTOWN ROAD
PEWAUKEE, WAUKESHA COUNTY
WISCONSIN, 53186

PLAN MODIFICATIONS:

#	Date:	Description:
1	08/31/23	PRELIMINARY PRICING SET
2	09/29/23	PLAN COMMISSION SUBMITTAL
3	10/06/23	UPDATED SEC DELINEATION
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14		
15		

Designed By:	JJS
Reviewed By:	RWI
Approved By:	RWI

SHEET TITLE:
ZONING EXHIBIT

SHEET NUMBER:
EX1.0

JSD PROJECT NO: 23-13326

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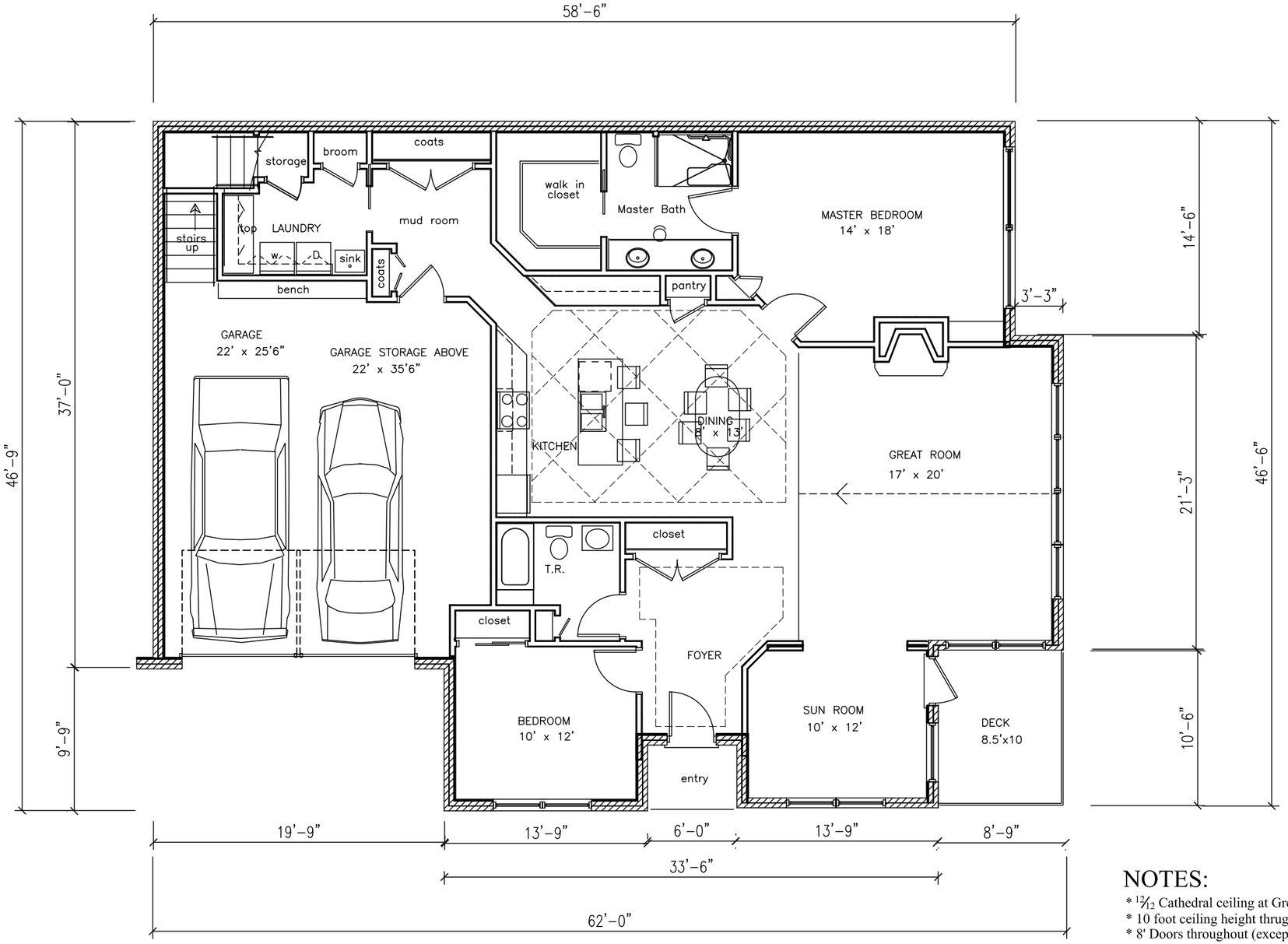

NOTES:

* 12/12 Cathedral ceiling at Great Room
* 10 foot ceiling height thrughout
* 8' Doors throughout (except under stairs)
* 4" casing "no rip"
* 12 lite entry door

*Dwelling unit size: 1,750 sq. ft.
* Garage : 550 sq.ft.

CONCEPTUAL 2 BEDROOM LAYOUT

SCALE: 1/8 = 1'-0" (11x17 print)

0 5 10 20 30 40

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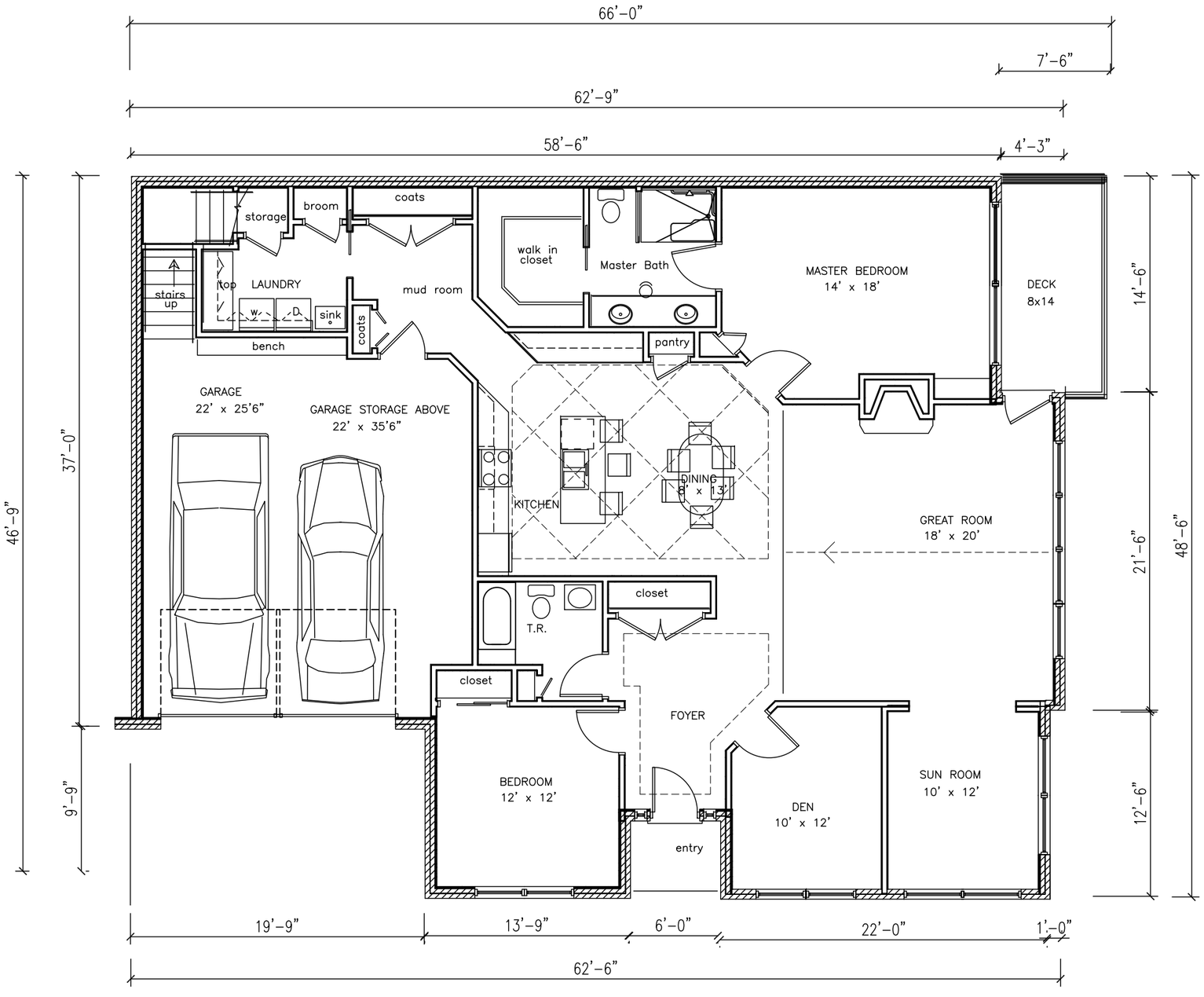
MARINCIC PROPERTY N81 W22121 Watertown Road
Watertown Road and North Avenue Pewaukee, Wisconsin
August, 2023 3223



NOTES:

* 12/12 Cathedral ceiling at Great Room
* 10 foot ceiling height throughout
* 8' Doors throughout (except under stairs)
* 4" casing "no rip"
* 12 lite entry door

*Dwelling unit size: 1,940 sq. ft.
* Garage : 550 sq.ft.

0 5 10 20 30 40

CONCEPTUAL 3 BEDROOM LAYOUT

SCALE: 1/8 = 1'-0" (11x17 print)

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12720 W North Avenue Brookfield, Wisconsin 53005

MARINCIC PROPERTY N81 W22121 Watertown Road
Watertown Road and North Avenue Pewaukee, Wisconsin
August, 2023 3223

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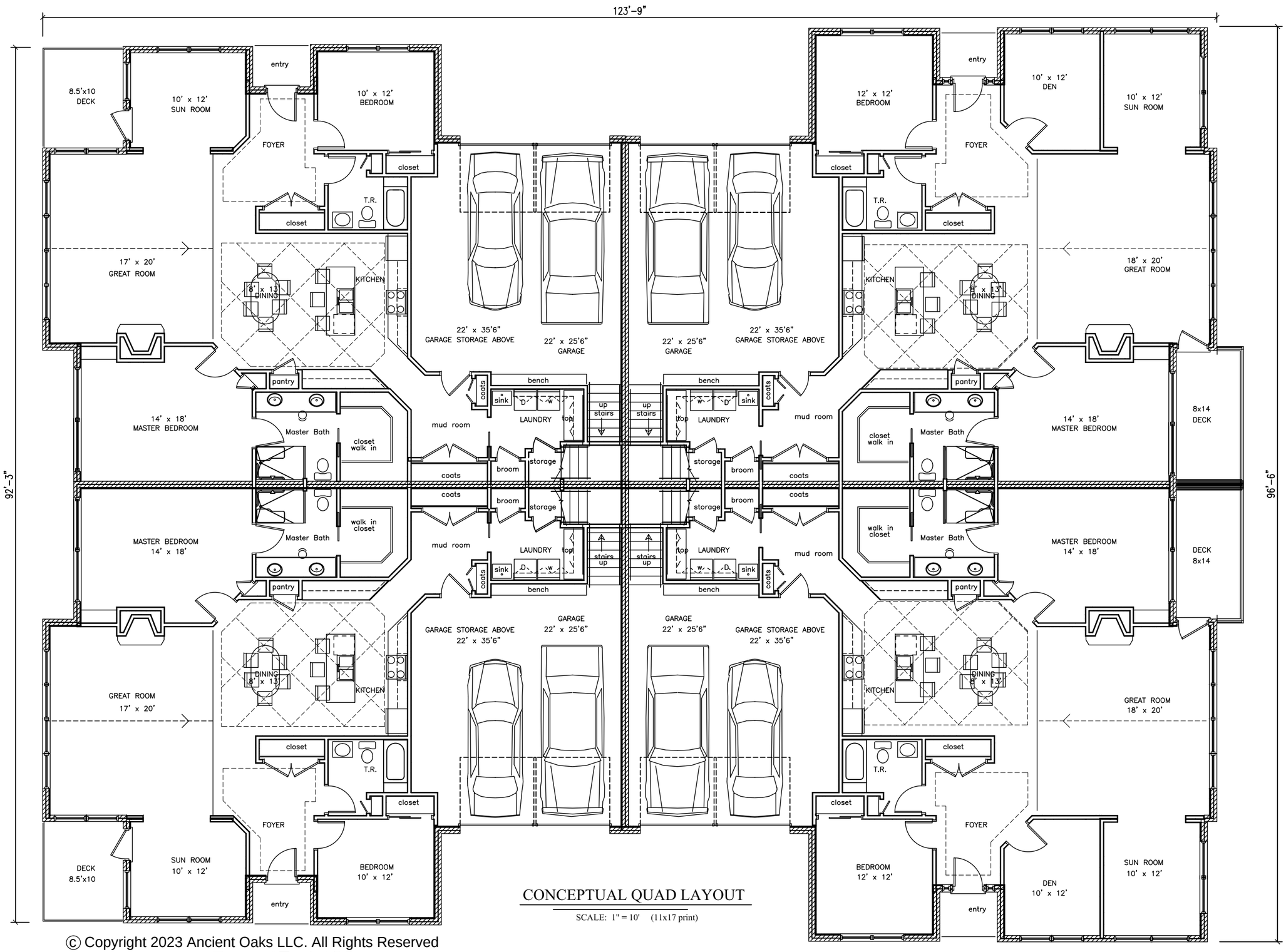

CONCEPTUAL QUAD LAYOUT

SCALE: 1" = 10' (11x17 print)

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MARINCIC PROPERTY N81 W22121 Watertown Road
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August, 2023 3223

FRONT ELEVATION

1/8" = 1'-0"

CARITY LAND CORPORATION
12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

ANCIENT OAKS
CONDOMINIUM- QUAD UNIT

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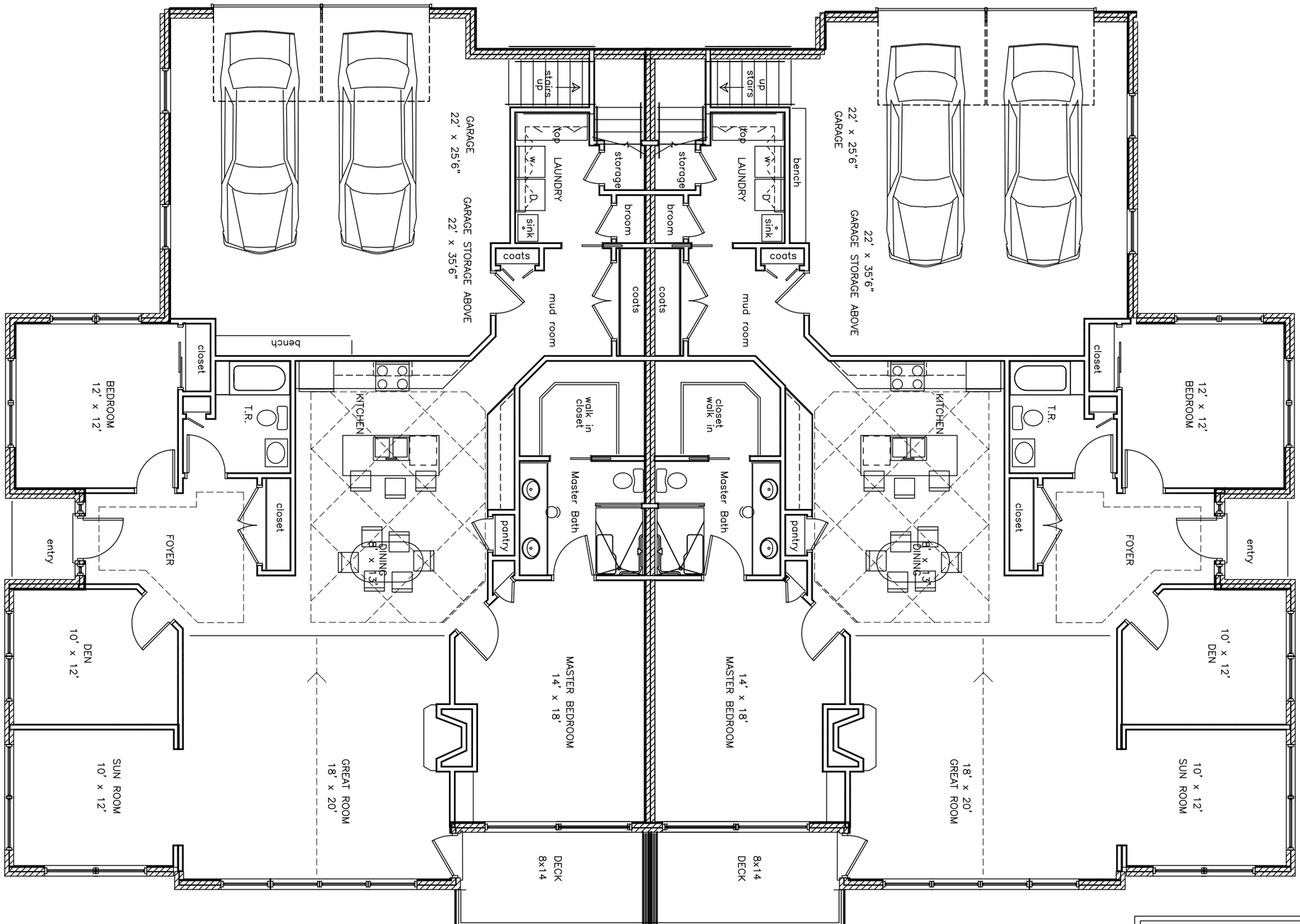
N81 W22121 WATERTOWN ROAD, PEWAUKEE, WI

DEEP RIVER PARTNERS

©2023.09.26



0 5 10 20 30 40

CONCEPTUAL DUPLEX FLOOR LAYOUT

SCALE: 1/8 = 1'-0" (11x17 print)

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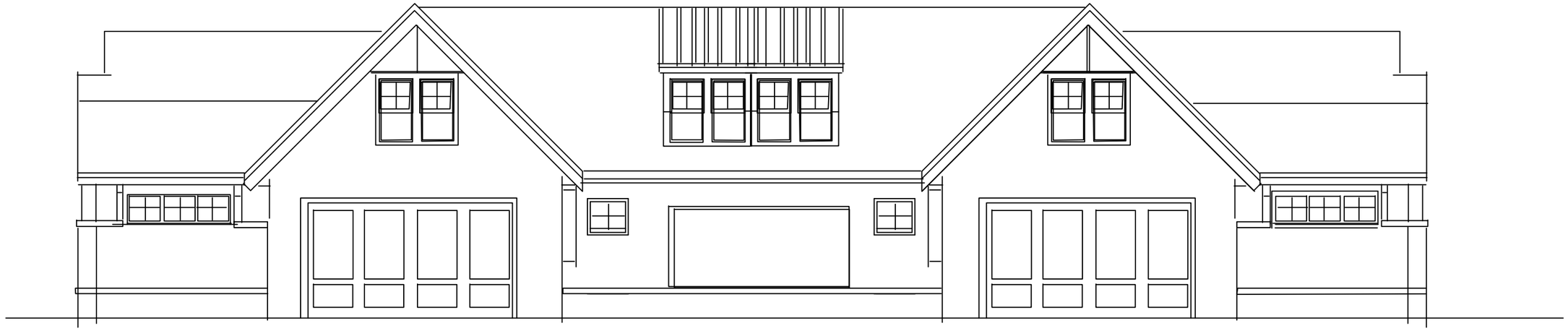
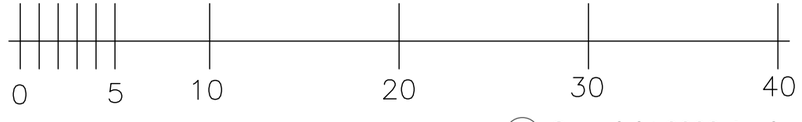
ANCIENT OAKS CONDOMINIUM N81 W22121 Watertown Road
Watertown Road and North Avenue Pewaukee, Wisconsin
October, 2023 3223



DUPLEX : FRONT ELEVATION

SCALE: 1/8 = 1'-0" (11x17 print)



DUPLEX : REAR ELEVATION

SCALE: 1/8 = 1'-0" (11x17 print)

ANCIENT OAKS CONDOMINIUM

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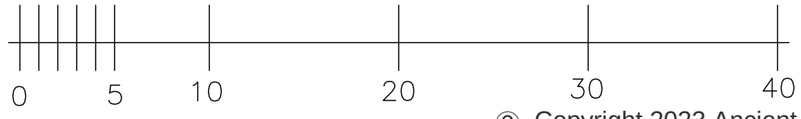
October, 2023 3223

DUPLEX RIGHT ELEVATION

SCALE: 1/8 = 1'-0" (11x17 print)



DUPLEX LEFT ELEVATION

SCALE: 1/8 = 1'-0" (11x17 print)

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ANCIENT OAKS
CONDOMINIUM- Duplex UNIT

Carity Land Corporation
12720 W North Avenue Brookfield, Wisconsin 53005

ANCIENT OAKS CONDOMINIUM N81 W22121 Watertown Road
Watertown Road and North Avenue Pewaukee, Wisconsin
October, 2023 3223

REAR ELEVATION

1/8" = 1'-0"

CARITY LAND CORPORATION
12720 West North Avenue
Brookfield, WI 53005
(262) 785-1968

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CONDOMINIUM- DUPLEX UNIT

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N81 W22121 WATERTOWN ROAD, PEWAUKEE, WI

DEEP RIVER PARTNERS

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REAR ELEVATION

1/8" = 1'-0"

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Brookfield, WI 53005
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DEEP RIVER PARTNERS

C 2023.09.26

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1 PROPOSED LANDSCAPE PLAN

Project Sheet Legend:

LGD1.0	LEGEND SHEET & OVERALL PHASE I LANDSCAPE PLAN
LSP1.1	PROPOSED PARTIAL LANDSCAPE PLAN - SOUTHERN THIRD
LSP1.2	PROPOSED PARTIAL LANDSCAPE PLAN - MIDDLE THIRD
LSP1.3	PROPOSED PARTIAL LANDSCAPE PLAN - NORTHERN THIRD
LSP1.4	PROPOSED BUILDING TYPE 4 - FOUNDATION PLAN TYPE "A" & "B"
LSP1.5	PROPOSED BUILDING TYPE 4 - FOUNDATION PLAN TYPE "C" AND BUILDING TYPE 2 - FOUNDATION PLAN TYPE "D"
LSP1.6	PROPOSED DEVELOPMENT MONUMENT SIGN PLAN & ELEVATION
LSP1.7	PROPOSED ENTRANCE POLE SIGN PLAN & ELEVATION
LSP1.8	PROPOSED LANDSCAPE DETAILS

SITE CLEARING / GRADING NOTE:
TREE CANOPY PROTECTION AREAS IDENTIFIED ON THIS PLAN REPRESENT INDIVIDUAL TREES AND/OR MASSINGS OF TREES AND UNDERSTORY PLANT MATERIAL THAT ARE TO BE PRESERVED AND ARE DESIGNATED / IDENTIFIED AS ENVIRONMENTALLY SENSITIVE OR SIGNIFICANT. NO CLEARING, GRADING AND FILL ACTIVITY IS PERMITTED IN THESE AREAS MUST BE IN KEEPING WITH RESTRICTIONS ESTABLISHED AT THE TIME OF PLAN APPROVAL.
TREE PROTECTION FENCING SHALL BE ERECTED ADJACENT TO ALL TCPAS PRIOR TO SITE DISTURBANCE. REFER TO 4/LSP1.10 FOR ADDITIONAL INFORMATION REGARDING THE INSTALLATION OF THE TREE PROTECTION FENCING.
THIS PLAN REPRESENTS PORTIONS OF THE SITE THE DEVELOPER HAS DESIGNATED TO BE LEFT UNDISTURBED DURING THE DEVELOPMENT OF ROADWAYS, UTILITIES, AND SIMILAR INFRASTRUCTURE.
THE SITE SHALL BE DEVELOPED IN ACCORDANCE WITH THE WOODLAND PRESERVATION AREAS DELINEATED ON THE SITE PLAN AND RELATED NOTES. ANY MODIFICATION OF WOODLAND PRESERVATION AREAS REQUIRES NOTIFICATION OF CITY OF NEW BERLIN STAFF AND APPROVAL PRIOR TO CONSTRUCTION.
NO GRADING OR LANDSCAPE CONSTRUCTION SHALL OCCUR BEYOND THE LIMITS OF THE EROSION CONTROL FENCING OR PROPERTY LINES

SITE CLEARING / GRADING NOTE:
DURING THE PHASE I SITE CLEARING/GRADING/INFRASTRUCTURE INSTALLATION CONSTRUCTION PROCESS, IF A RESIDENTIAL HOME LOT IS NOT UNDERCONSTRUCTION, IT WILL BE ROUGH GRADED AND STABILIZED AT THE SOME TIME AS THE OTHER ADJACENT COMON AREAS ARE STABILIZED BY THE GRADING/LANDCAPE CONTRACTOR.

INSTALLER NOTE:
FINAL STREET TREE LOCATION TO BE COORDINATED WITH INDIVIDUAL HOME OWNER DRIVEWAY LOCATIONS AND WITH THE STEET LIGHT LOCATIONS. COORDINATE ANY REVISIONS TO STREET TREE PLAN WITH CITY LANDSCAPE ARCHITECT OR VILLAGE FORESTER.

INSTALLER NOTE:
ANY AND ALL FINAL STREET LOCATIONS MUST BE COORDINATED WITH ALL BURIED UTILITIES. TREE SHOULD BE PLANTED A MINIMUM OF 10'-0" AWAY FROM A BURIED UTILITY OR STRUCTURE.

❋❋❋ NEW PROPOSED PLANT MATERIAL AT PERIMETER BUFFER BETWEEN EXISTING RESIDENTIAL HOMES AND ANCIENT OAKS DEVELOPMENT IS GRAPHIC REPRESENTATION THE OF DESIGN INTENT. NEW PROPOSED PLANT MATERIAL ALONG EASTERN BOUNDARY TO BE FIELD VERIFIED AND PLACED IN GAPS IN EXISTING WOOD LINE AND UNDER PLANT TO CREATE MULTI-LAYERED, YEAR-ROUND SCREENING BUFFER BETWEEN NEW PROPOSED & THE EXISTING RESIDENTIAL HOMES. UNDERSTORY TO BE CLEARED ONLY AS REQUIRED TO MAKE ROOM FOR NEW AND ANY HORIZONTAL LIMBS CONFLICTING WITH NEW PROPOSED PLANT MATERIAL TO BE REMOVED. ❋❋❋

STORMWATER MANAGEMENT AREA IS SHOWN AS A CONCEPT. MODIFYTHE STORMWATER MANAGEMENT AREA AS REQUIRED IN AN EFFORT TO PRESERVE EXISTING HEALTHY OAK TREES. REFER TO CIVIL ENGINEERING DOCUMENTS FOR FINAL DESIGN AND CAPACITY.

SITE INFORMATION

USDA PLANT HARDINESS ZONE	5a (-20 to -15 Degrees F)	LOT AREA	1,470,432 SQ. FT. (33.76 Acres)
LOT ZONING	A-2 - AGRICULTURE	NUMBER OF CONDOMINIUM BUILDINGS	25 LOTS
		TOTAL CONSERVATION AREA	

EXISTING CONDITIONS GENERAL NOTES

1. INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE LANDSCAPE DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE ACTUAL EXISTING FIELD CONDITIONS. INSITE LANDSCAPE DESIGN, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THEIR NEW WORK. REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE LANDSCAPE ARCHITECT IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACT.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA OF DISTURBANCE THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES.
3. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ALIGNMENT OF WALLS. BRING ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECTS ATTENTION PRIOR TO FABRICATION / CONSTRUCTION BEGINS.
4. VERIFY LOCATION OF ACCESS PANELS w/ MECHANICAL AND ELECTRICAL EQUIPMENT FOR ACCESSIBILITY OF MECHANICAL & ELECTRICAL ITEMS. VERIFY LOCATIONS OF ALL BURIED UTILITIES AND STRUCTURES AND LOCATIONS OF ALL OVERHEAD WIRES.
5. VERIFY LOCATION OF ALL EXISTING EASEMENTS.
6. INSITE LANDSCAPE DESIGN, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITY OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF INSITE LANDSCAPE DESIGN, INC.

DESIGN COMPLIANCE: THIS LANDSCAPE PLAN IS ACCURATE AND IN COMPLAINACE WITH THE CITY OF PEWAUKEE LANDSCAPE REQUIREMENTS SET FOR IN SECTION SEC. 17.0210 PRINCIPLES AMD STANDARDS FOR THE AESTHETIC EVALUATION OF SITE AND BUILDING PROJECTS.

SEC. 17.0210d SITE PLANNING AND DESIGN STANDARDS

CONTRACTOR NOTE: THE LANDSCAPE CONTRACTOR/GENERAL CONTRACTOR ARE RESPONSIBLE TO INSTALL THE LANDSCAPE AS PER THE APPROVED PLAN. IF ANY CHANGES OR DEVIATIONS ARE MADE FROM THE THIS APPROVED PLAN. THE LANDSCAPE CONTRACTOR / GENERAL CONTRACTOR ARE RESPONSIBLE FOR UPDATING THE PLANS ACCORDINGLY AND SUBMITTING THOSE REVISED PLANS FOR APPROVAL AND "SIGN OFF" WITH THE CITY OF PEWAUKEE . THE LANDSCAPE CONTRACTOR / GENERAL CONTRACTOR ARE ALSO RESPONSIBLE FOR VERIFYING THAT ANY PLANT MATERIAL SUBSTITUTIONS OR MODIFICATIONS THAT ARE MADE TO THE APPROVED LANDSCAPE DESIGN DOCUMENTS WILL NOT CHANGE OR ALTER ANY OF THE REQUIRED SUPPORTING LANDSCAPE REQUIREMENT CALCULATIONS. UPON COMPLETION OF THE CONSTRUCTION PROJECT AND FILE THAT AFFIDAVIT WITH THE CITY OF PEWAUKEE

LANDSCAPE PLAN GENERAL NOTES

PLANT MATERIAL SHOWN ON LANDSCAPE PLAN IS DEPICTED AT MATURE GROWTH.

1. AT LEAST SEVENTY-TWO HOURS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AS GIVEN BY THE ELECTRIC, GAS, TELEPHONE, WATER, SEWER, AND CABLE TELEVISION COMPANIES, UTILITIES OR ENTITIES. REVIEW WITH OWNER'S REPRESENTATIVE SITE MECHANICAL, SITE ELECTRICAL AND LIGHTING, SITE GRADING AND DRAINAGE, SITE IRRIGATION AND ALL OTHER DRAWINGS PERTAINING TO UNDERGROUND UTILITY LOCATIONS. RECORD SET OF INFORMATION THE SAME AS IN POSSESSION OF OWNER'S REPRESENTATIVE. ALSO REVIEW OWNER'S "MARK SETS" OF ALL OF THESE DRAWINGS IN POSSESSION OF THE CONTRACTOR OR OWNER. MARK ALL SUCH UTILITIES ON THE SITE PRIOR TO COMMENCING. COORDINATE WITH OWNER BEFORE AND DURING CONSTRUCTION. REPAIR ANY DAMAGE TO ANY SYSTEM THAT IS CAUSED BY LANDSCAPE CONTRACTOR AT NO COST TO OWNER.
2. ALL PLANTINGS SPECIFIED FOR THE ANCIENT OAKS CONDOMINIUMS PROJECT PLANTING TABLES SHALL COMPLY WITH STANDARDS AS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK ANSI Z60.1 2014 AND ANSI STANDARDS FOR PLANTING 2012.
3. ALL DEVIATIONS FROM THE APPROVED ANCIENT OAKS CONDOMINIUMS PROJECT PLANS SHALL BE NOTED ON THE RECORD DRAWINGS BY THE CONTRACTOR AND MAY BE EXECUTED ONLY WITH PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE. VERBAL AGREEMENTS OR REVISIONS WITHOUT A CHANGE ORDER WILL NOT BE RECOGNIZED BY LANDSCAPE ARCHITECT AND OWNER.
4. ALL PLANTS MUST BE BID AND SELECTED PER THE SPECIES SPECIFIED ON THE PLANS. ANY SPECIES SUBSTITUTIONS MUST BE APPROVED IN WRITING BY LANDSCAPE ARCHITECT. THE SIZES OF PLANT MATERIAL LISTED HEREIN IS A MINIMUM ACCEPTABLE SIZE. ADDITIONALLY, IF EXCESSIVE PRUNING REDUCES THE CROWN THE PLANT SHALL BE REPLACED.
5. PROTECT PUBLIC FROM CONSTRUCTION WITH BARRIERS AND BARRICADES.
6. ALL AREAS THAT WERE DISTURBED DURING CONSTRUCTION AND AREAS NOT COVERED WITH PAVEMENT, BUILDING, PLANTING BEDS, OR TREE PITS ARE TO BE TOPSOILED 3" DEEP (MIN.) AND SHALL BE SODDED/SEEDED WITH SPECIFIED LAWN GRASS. LANDSCAPE CONTRACTOR SHALL INCLUDE COST PER SQUARE YARD FOR ADDITIONAL SEED OPERATIONS AS MAY BE POSSIBLY REQUIRED TO REESTABLISH ADJACENT TURF GRASS AREAS WHICH MAY BECOME DAMAGED DURING THE CONSTRUCTION PROCESS OR TO REPAIR DAMAGE DONE BY OTHERS.
7. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL MATERIALS, TOOLS, EQUIPMENT, LABOR, AND PLANTS NECESSARY FOR PROPER PLANTING AND INSTALLATION OF ALL LANDSCAPE MATERIAL.
8. QUANTITIES ON PLANT MATERIALS LIST ARE FOR CONVENIENCE OF BIDDING ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON LANDSCAPE PLANS AND COVERAGE OF ALL AREAS DELINEATED. THE PLANS ARE TO SUPERSEDE THE PLANT LIST IN ALL CASES.
9. CONTRACTOR IS RESPONSIBLE FOR ALL ESTIMATING AND BIDDING, ALL AREAS, QUANTITIES MATERIALS SHOULD BE FIELD VERIFIED WITH SITE CONDITION.
10. WHERE DISCREPANCIES OCCUR BETWEEN THE LANDSCAPE PLANS AND/OR ARCHITECTURAL AND/OR THE CIVIL DRAWINGS (AND ANY OTHER SITE DRAWINGS) THE DISCREPANCIES MUST BE BROUGHT TO THE LANDSCAPE ARCHITECTS ATTENTION FOR COORDINATION AND RESOLUTION.
11. ALL DISEASED, NOXIOUS OR INAPPROPRIATE MATERIALS SHALL BE REMOVED FROM THE PROPOSED SITE PRIOR TO THE START OF CONSTRUCTION AND DURING THE MAINTENANCE PERIOD.
12. GENERAL CONTRACTOR SHALL LEAVE THE SITE FREE OF CONSTRUCTION DEBRIS.
13. ALL LAWN AND PLANTING AREAS SHALL SLOPE TO DRAIN A MINIMUM OF 2% UNLESS NOTED OTHERWISE AND REVIEWED WITH OWNER'S REPRESENTATIVE FOR FINAL APPROVAL.
14. FINISH GRADES FOR SHRUB AND GROUND COVER AREAS SHALL BE HELD 1" BELOW TOP OF ADJACENT PAVEMENTS AND CURBS, UNLESS NOTED OTHERWISE ON THE PLANS. REFER TO LSP1.7 FOR FURTHER INFORMATION.
15. ALL PERENNIAL, ANNUAL AND GROUND COVER AREAS TO RECEIVE A BLEND OF ORGANIC SOIL AMENDMENTS PRIOR TO PLANTING. TILL THE FOLLOWING MATERIALS INTO EXISTING TOPSOIL TO A DEPTH OF APPROXIMATELY 8". A DEPTH OF 12" IN TREE PITS. PROPORTIONS AND QUANTITIES MAY REQUIRE ADJUSTMENT DEPENDING ON THE CONDITION OF EXISTING SOIL. REFER TO LSP1.7 FOR FURTHER INFORMATION.
   PER EVERY 100 SQUARE FEET ADD: ONE - 2 CUBIC FOOT BALE OF PEAT MOSS, 2 POUNDS OF 5 -10 -5 GARDEN FERTILIZER, 1/4 CUBIC YARD OF COMPOSTED MANURE OR OTHER COMPOSTED, ORGANIC MATERIAL.
16. ALL SHRUBS TO BE POCKET PLANTED WITH A 50/50 MIX OF COMPOSTED, ORGANIC MATERIAL AND EXISTING SOIL. INSTALL TOPSOIL INTO ALL BEDS AS NEEDED TO ACHIEVE PROPER GRADE. REMOVE ALL EXCESSIVE GRAVEL, CLAY AND STONES. REFER TO LSP1.7 FOR FURTHER INFORMATION.
17. PLANT ALL TREES SLIGHTLY HIGHER THAN FINISHED GRADE AT ROOT FLARE. BACK FILL HOLE WITH 2/3 EXISTING TOPSOIL AND ORGANIC SOIL AMENDMENTS SPECIFIED IN NOTE 15. AVOID ANY AIR POCKETS. DISCARD ANY GRAVEL CLAY OR STONES. REFER TO LSP1.7 FOR FURTHER INFORMATION.
18. ALL TREES TO BE INSTALLED, STAKED AND GUYED ACCORDING TO DETAILS. REFER TO ANSI STANDARDS FOR PLANTING 2012 AND DETAILS ON LSP1.7 FOR FURTHER INFORMATION.
19. PROVIDE A 4'-0" - 5'-0" DIAMETER MULCH RING AT THE ROOT BALL FLARE OF ALL LAWN TREES.
20. ALL PLANTINGS TO BE WATERED AT THE TIME OF PLANTING, THROUGHOUT CONSTRUCTION AND UPON COMPLETION OF PROJECT AS REQUIRED.
21. WHERE SPECIFIED, ALL PLANT BEDS, PITS AND TREE RINGS ARE TO RECEIVE A MINIMUM OF 2" - 3" DRESSING OF SHREDDED HARDWOOD OAK BARK MULCH SHAVINGS FREE OF GROWTH, WEEDS, FOREIGN MATTER DETRIMENTAL TO PLANT LIFE OR GERMINATION INHIBITING INGREDIENTS. LANDSCAPE CONTRACTOR TO PROVIDE A SAMPLE TO OWNER FOR APPROVAL. CONTRACTOR TO TAKE CARE WITH INSTALLATION NOT TO DAMAGE OR COVER PLANTS. REFER TO LSP1.7 FOR FURTHER INFORMATION.
22. LAWN INSTALLATION: CONTRACTOR TO FURNISH AND PREPARE TOPSOIL (3" MIN) AND SEED BED (REMOVE ALL STONES 1" OR LARGER), APPLY STARTER FERTILIZER AND SEED UNIFORMLY. PROVIDE A MULCH COVERING SUITABLE TO GERMINATE AND ESTABLISH TURF. EROSION CONTROL MESH SHOULD BE USED IN SWALES AND STEEP GRADES WHERE APPLICABLE. METHODS OF INSTALLATION MAY VARY AT THE DISCRETION OF CONTRACTOR. IT IS HIS/HER RESPONSIBILITY TO ESTABLISH AND GUARANTEE A SMOOTH, UNIFORM, QUALITY TURF. IF STRAW MULCH IS USED AS A COVERING, A TACKIFIER MAY BE NECESSARY TO AVOID WIND DAMAGE.
23. **DELUXE 50 GRASS SEED MIX REINDER'S (800) 785-3301**
    20% KENTUCKY BLUE GRASS
    15% NEWPORT KENTUCKY BLUE GRASS
    15% SR 2100 Kentucky Bluegrass
    25% Creeping Red Fescue
    15% Replicator Perennial Ryegrass
    10% Fiesta 4 Perennial Ryegrass
    APPLY AT A RATE OF 200 POUNDS PER ACRE. REFER TO SUPPLIERS SPECIFICATIONS & INSTALLATION CUT SHEETS FOR FURTHER FORMATION
24. DURING THE INITIAL "30 DAY MAINTENANCE PERIOD" THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE AND ON-GOING PLEASANT VISUAL ENVIRONMENT WHEREAS ANY PLANT WHICH IS NOT RESPONDING TO TRANSPLANTING OR THRIVING SHALL IMMEDIATELY BE REPLACED. NEW LAWNS SHALL BE WATERED AND REPAIRED AND WEEDS MUST CONSTANTLY BE REMOVED, NO EXCEPTIONS WILL BE GRANTED.
    MAINTENANCE NOTE:
    MAINTENANCE IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN REQUIRED LANDSCAPING IN ACCORDANCE WITH THE MUNICIPALITY'S PROPERTY MAINTENANCE CODE AND AN APPROVED MAINTENANCE PLAN. THE MAINTENANCE MUST INCLUDE, AT A MINIMUM, METHODS FOR PROVIDING THE FOLLOWING:
    - NECESSARY IRRIGATION (IF REQUIRED)
    - INTEGRATED PEST MANAGEMENT,
    - PROPER FERTILIZATION
    - TREE CARE AND PRUNING, SHRUB TIP CLIPPING AND SHAPING AS REQUIRED
    - REPLACEMENT OF LOST VEGETATION, AND ALL DISEASED, DAMAGED, OR DEAD MATERIAL WILL BE REPLACED BY THE END OF THE FOLLOWING PLANTING SEASON IN PERPETUITY.
    - WEED MANAGEMENT AND BED CARE.
25. ALL NEWLY PLANTED TREES AND SHRUBS ARE TO RECEIVE AN APPLICATION OF AN ANTI-TRANSPIRANT SPRAY THAT WILL EFFECTIVELY REDUCE THE WATER LOSS OF TRANSPIRATION OF PLANT MATERIAL AND REDUCE THE STRESS OF TRANSPLANTATION. IT IS RECOMMENDED AS PART OF THE ONGOING MAINTENANCE THAT ANY BROADLEAF EVERGREEN AND CONIFEROUS TREE AND SHRUBS (EXCLUDING ARBORVITAE) RECEIVE AN APPLICATION OF AN ANTI-DESICANT SPRAY TO REDUCE THE LOSS OF MOISTURE DUE TO WINTER DESICCATION.
26. MAINTENANCE. THE OWNER SHALL TEND AND MAINTAIN ALL PLANT MATERIALS IN A HEALTHY GROWING CONDITION AS PER THE APPROVED PLAN. PLANTINGS SHALL BE REPLACED WHEN NECESSARY AND KEPT FREE FROM REFUSE & DEBRIS. ALL PLANTING MATERIAL WHICH IS DYING OR DAMAGED BEYOND RECOVERY SHALL BE REPLACED WITHIN SIX (6) MONTHS OR BY THE NEXT PLANTING SEASON, WHICHEVER COMES FIRST.
27. LANDSCAPE / SITE DEMOLITION CONTRACTOR TO VERIFY LOCATIONS OF EXISTING TREES AND SHRUBS TO BE SALVAGED AND CLEARLY TAG THEM WITH MARKING TAPE AND CONSTRUCTION FENCE.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN
DIGGERS HOT LINE
WISCONSIN STATUTE 182.0175 (1974) REQUIRES A MINIMUM OF 3 DAYS NOTICE BEFORE YOU EXCAVATE (NOT INCLUDING SATURDAY, SUNDAY OR LEGAL HOLIDAYS)

UNDERGROUND SEWER AND UTILITY INFORMATION AS SHOWN IS OBTAINED FROM THE RECORDS OF MUNICIPALITY AND LOCAL UTILITY COMPANIES. THE ACCURACY OF WHICH CAN NOT BE GUARANTEED OR CERTIFIED TO. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS SURVEY ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

TO OBTAIN LOCATION OF PARTICIPANT'S UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONN CALL THE MILWAUKEE UTILITY ALERT NETWORK
www.Diggersholline.com
(800)-242-8511
OR

811 Know what's below. Call 811 before you dig.

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ANCIENT OAKS CONDOMINIUM

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Pewaukee, WI

Project:

CARITY LAND CORPORATION

12720 West North Avenue
Brookfield, WI 53005

Issuance and Revisions:

Date	Number	Description
09/27/23		Client Review Submittal
10/02/23		Plan Commission Submittal
10/27/23		Revisions Based on Client Comments
11/06/23		Revisions Based on Site Changes

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Sheet Title:

PROPOSED LANDSCAPE PLAN AND GENERAL NOTES

Date of Drawing:	11/06/23
Scale:	1" = 80'-0"
Drawn By:	MCD
Job Number:	L23-057
Sheet Number:	LGD1.0

L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023

1 PROPOSED PARTIAL LANDSCAPE PLAN

SCALE: 1" = 30'-0"

North

Proposed Plant Material Table - LSP1.1

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
7	Amgr		Amelanchier grandiflora	Autumn Brilliance Serviceberry	10' - 12' - Clump B&B	
5	BeniH		Betula Nigra 'Heritage"	Heritage River Birch	10' - 12' - Clump B&B	
3	GibiPS		Ginko biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	2 1/2"-Cal - B&B	
6	MaM		Malus 'Marilee'	Marilee Flowering Crab	1 1/2" Cal - B&B	
3	QubI		Quercus bicolor	Swamp White Oak	2 1/2"-Cal - B&B	
2	Quma		Quercus macrocarpa	Bur oak	2 1/2"-Cal - B&B	
6	QuroC		Quercus robur 'Crimschmidt'	Crimson Spire English Oak	2"-Cal - B&B	
3	SabI		Salix blanda	Wisconsin weeping willow	2 1/2"-Cal - B&B	

Conifer Evergreen Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
58	JuJNSB		Juniperus 'J.N. Select Blue'	Star Power Juniper	6' - 7' - B&B	
4	Pist		Pinus strobus	Eastern white pine	5' - 6' - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
35	DiloKO		Diervilla lonicera Kodiak Orange	Kodiak Orange Bush Honeysuckle Diervilla	18" - 24" - B&B	
11	EualC		Euonymus alatus 'compatus'	Dwarf Burning Bush	24" - 30" - B&B	
53	HymaFI		Hydrangea macrophylla 'Horrifire'	Seaside Serenade Fire Island Hydrangea	18" - 24" - B&B	
4	HypaLQF		Hydrangea paniculata 'SMHPLQF'	Little Quick Fire Hardy Hydrangea	18" - 24" - B&B	
25	PhopGW		Physocarpus opulifolius 'Ginger Wine'	Ginger Wine Ninebark	24" - 30" - B&B	
6	RoKO		Rosa 'Knockout'	Knock Out Rose	18" - Cont	
23	RoM		Rosa 'Meimirrot'	Apricot Drift Groundcover Rose	15" - 18" - Cont	
22	VideM		Viburnum dentatum 'Morton'	Northern Burgundy Arrowwood Viburnum	3' - 4' - B&B	
52	WeflCT		Weigela floridab 'Czechmark Trilogy'	Czechmark Trilogy Weigela	18" - 24"- Cont	

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
17	ChpiCB		Chamaecyparis pisifera 'Cream Ball'	Cream BallJapanese falsecypress	18" - Cont	
32	JuchMJ		Juniperus chinensis 'Mint Julep'		18" - 24" - B&B	
8	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	4' - B&B	
49	JupISG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
24	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	
59	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	
30	ScscC		Schizachyrium scoparium 'Carousel'	Carousel Little Blue Stem	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
46	EcpuRT		Echinacea purpurea 'Raspberry Tart'	Raspberry Tart Coneflower	4 1/2" pot	
64	HeNo		Hemerocallis x 'Nosferatu'	Trophytaker Nosferatu Daylily	4 1/2" pot	
40	PeatLS		Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	4 1/2" pot	

Proposed Plant Material Table - for Cul de Sac

Broadleaf Deciduous

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	AcpaT		Acer palmatum var. dissectum 'Tamukeyama'	Tamukeyama Japanese Maple	3.5' - Cont	
1	AcpsN		Acer pseudosieboldianum 'Northwind'	Northwind Korean Maple	1"-Cal - B&B	
1	Ceca		Cercis canadensis	Eastern redbud	2 1/2"-Cal - B&B	

Conifer Evergreen

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	3' - 4' - B&B	
7	JupISG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - B&B	
1	PiomB		Picea omorika 'Bruns'	Bruns Serbian Spruce	4' - 5' - B&B	

Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
6	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	
20	SpheT		Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
14	EcPM		Echinacea 'Pixie Meadowbrite'	Pixie Meadowbrite Coneflower	1-Gal - Cont	
49	SeR		Sedum 'Razleberry'	Sunsparkler Dazzleberry Sedum	4" Plug	

Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	CoalPF		Cornus alba 'Prairie Fire'	Prairie Fire Dogwood	24" - B&B	
9	HypaLQF		Hydrangea paniculata 'SMHPLQF'	Little Quick Fire Hardy Hydrangea	18" - 24"- Cont	
10	HyseTS		Hydrangea serrata 'MAK20'	Tuff Stuff Reblooming Mountain Hydrangea	1-Gal - Cont	
8	RoKO		Rosa 'Knockout'	Knock Out Rose	18" - Cont	

Stormwater Management Areas

Upper Third of the Bowl - Economy Prairie Seed Mix Storm Water Management Pond area from Cardno

Quantity	Symbol	Supplier	Type
20,500 sq. ft. VERIFY		Cardno	Economy Prairie Seed Mix - mixture contains 7 native permanent grass/ sedge species and 15 native forb species. Apply at 10 PLS pounds per acre. Refer to cut sheets for mix specifics and installation instructions.

lower Two-Thirds of the Bowl - Stormwater Prairie Seed Mix @ Storm Water Management Pond area from Cardno

Quantity	Symbol	Supplier	Type
12,400 sq. ft. VERIFY		Cardno	Rainwater Renewal Seed Mix - mixture contains 15 native permanent grass/ sedge species and 19 native forb species. Refer to cut sheets for mix specifics and installation instructions.

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Well balanced, multi-stemmed tree with a minimum of (3) strong canes and full appearance.
3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
4. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
5. Evenly shaped upright tree with full branching to the ground.
6. Full, well rooted plant, evenly shaped.
7. Full, well rooted plant.
8. Male only
9. Tree-form, Single Stem Specimen
10. At grade coverage points for this plant do not contribute to the 10% coverage area requirement.

***** NEW PROPOSED PLANT MATERIAL AT PERIMETER BUFFER BETWEEN EXISTING RESIDENTIAL HOMES AND ANCIENT OAKS DEVELOPMENT IS GRAPHIC REPRESENTATION THE OF DESIGN INTENT. NEW PROPOSED PLANT MATERIAL ALONG EASTERN BOUNDARY TO BE FIELD VERIFIED AND PLACED IN GAPS IN EXISTING WOOD LINE AND UNDER PLANT TO CREATE MULTI-LAYERED, YEAR-ROUND SCREENING BUFFER BETWEEN NEW PROPOSED & THE EXISTING RESIDENTIAL HOMES. UNDERSTORY TO BE CLEARED ONLY AS REQUIRED TO MAKE ROOM FOR NEW AND ANY HORIZONTAL LIMBS CONFLICTING WITH NEW PROPOSED PLANT MATERIAL TO BE REMOVED. *****

INSTALLER NOTE:
FINAL STREET TREE LOCATION TO BE COORDINATED WITH INDIVIDUAL HOME OWNER DRIVEWAY LOCATIONS AND WITH THE STEET LIGHT LOCATIONS. COORDINATE ANY REVISIONS TO STREET TREE PLAN WITH CITY LANDSCAPE ARCHITECT OR VILLAGE FORESTER.

INSTALLER NOTE:
ANY AND ALL FINAL STREET LOCATIONS MUST BE COORDINATED WITH ALL BURIED UTILITIES. TREE SHOULD BE PLANTED A MINIMUM OF 10'-0" AWAY FROM A BURIED UTILITY OR STRUCTURE.

STORMWATER MANAGEMENT AREA IS SHOWN AS A CONCEPT. MODIFYTHE STORMWATER MANAGEMENT AREA AS REQUIRED IN AN EFFORT TO PRESERVE EXISTING HEALTHY OAK TREES. REFER TO CIVIL ENGINEERING DOCUMENTS FOR FINAL DESIGN AND CAPACITY.

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Project:

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12720 West North Avenue
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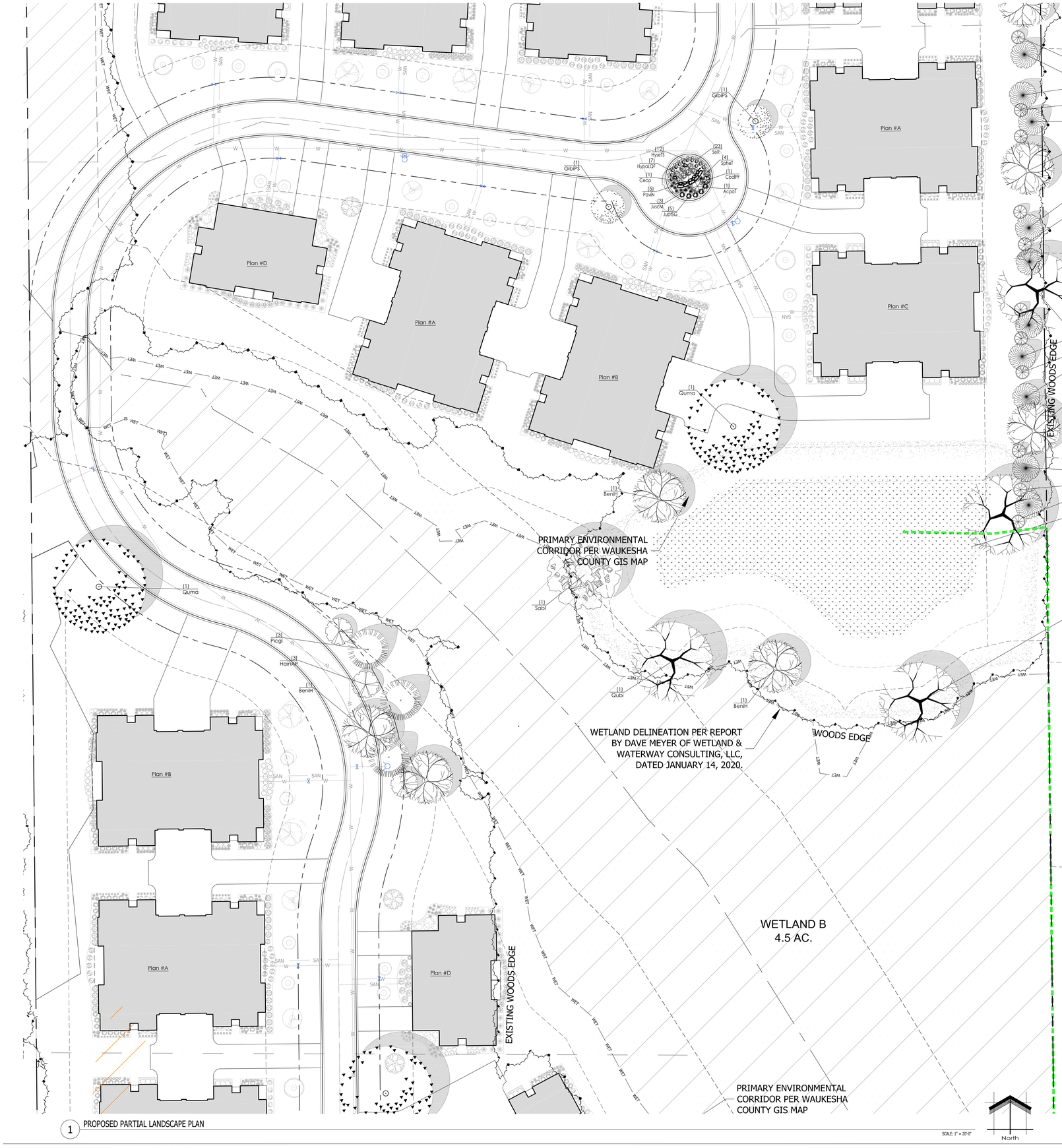
Sheet Title:

PROPOSED PARTIAL LANDSCAPE PLAN AND PLANT MATERIAL TABLE

Date of Drawing: 11/06/23
Scale: 1" = 20'-0"
Drawn By: MCD
Job Number: L23-057
Sheet Number:

LSP1.1

L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023



1 PROPOSED PARTIAL LANDSCAPE PLAN

Proposed Plant Material Table - LSP1.2

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
6	BeniH		Betula Nigra "Heritage"	Heritage River Birch	10' - 12' - Clump B&B	
2	GibIPS		Ginko biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	2 1/2"-Cal - B&B	
4	Qubi		Quercus bicolor	Swamp White Oak	2 1/2"-Cal - B&B	
2	Quma		Quercus macrocarpa	Bur oak	2 1/2"-Cal - B&B	
1	Sabl		Salix blanda	Wisconsin weeping willow	2 1/2"-Cal - B&B	
7	Extg		Existing to Remain	Existing to Remain	Existing	

Conifer Evergreen Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
11	JuchI		Juniperus chinensis 'Iowa'	Iowa Juniper	7' - B&B	
10	PicgI		Picea glauca	White spruce	7' - B&B	
3	PisI		Pinus strobus	Eastern white pine	7' - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	HainAP		Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Witch Hazel	24"- Cont	

Proposed Plant Material Table - for Cul de Sac

Broadleaf Deciduous

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	AcpaT		Acer palmatum var. dissectum 'Tamukeyama'	Tamukeyama Japanese Maple	3.5' - Cont	
1	Ceca		Cercis canadensis	Eastern redbud	2 1/2"-Cal - B&B	

Conifer Evergreen

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
3	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	3' - 4' - B&B	
5	JupTSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - B&B	

Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
6	PsiVN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	
4	SpheT		Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
23	SeR		Sedum 'Razzleberry'	Sunsparkler Dazzleberry Sedum	4" Plug	

Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	CoaIPF		Cornus alba 'Prairie Fire'	Prairie Fire Dogwood	24" - B&B	
7	HypaLQF		Hydrangea paniculata 'SMHPLQF'	Little Quick Fire Hardy Hydrangea	18" - 24"- Cont	
12	HyseTS		Hydrangea serrata 'MAK20'	Tuff Stuff Reblooming Mountain Hydrangea	1-Gal - Cont	

Stormwater Management Areas

Upper Third of the Bowl - Economy Prairie Seed Mix Storm Water Management Pond area from Cardno

Quantity	Symbol	Supplier	Type
32,650 sq. ft. VERIFY		Cardno	Economy Prairie Seed Mix - mixture contains 7 native permanent grass/ sedge species and 15 native forb species. Apply at 10 PLS pounds per acre. Refer to cut sheets for mix specifics and installation instructions.

lower Two-Thirds of the Bowl - Stormwater Prairie Seed Mix @ Storm Water Management Pond area from Cardno

Quantity	Symbol	Supplier	Type
21,500 sq. ft. VERIFY		Cardno	Rainwater Renewal Seed Mix - mixture contains 15 native permanent grass/ sedge species and 19 native forb species. Refer to cut sheets for mix specifics and installation instructions.

Project Area Seed Mixes

Prairie Seed Mix @ Drainage Swale from Agrecol

Quantity	Symbol	Supplier	Type
VERIFY		Agrecol	Native Prairie Swale Enhancement Seed Mix - mixture contains 2 native permanent grass/ sedge species and 13 native forb species. Refer to cut sheets for mix specifics and installation instructions.

Deluxe 50 Grass Seed Mix @ Roadway Edge from Reinders

Quantity	Symbol	Supplier	Type
VERIFY		Agrecol	DELUXE 50 GRASS SEED MIX RBINDER'S (800) 785-3301 - 20% KENTUCKY BLUE GRASS, 15% NEWPORT KENTUCKY BLUE GRASS, 15% SR 2100 Kentucky Bluegrass, 25% Creeping Red Fescue, 15% Replicator Perennial Ryegrass, 10% Riesta 4 Perennial Ryegrass. APPLY AT A RATE OF 200 POUNDS PER ACRE. REFER TO SUPPLIERS SPECIFICATIONS & INSTALLATION CUT SHEETS FOR FURTHER FORMATION

NO-MOW LOW GROW GRASS Seed Mix @Natural Areas from Reinders

Quantity	Symbol	Supplier	Type
VERIFY		Agrecol	NO-MOW LOW GROW GRASS SEED MIX RBINDER'S • 45% SPARTAN HARD FESCUE, 40% AZAY SHEEP FESCUE, 15% TRANSIT ANNUAL RYE GRASS, APPLY AT A RATE OF 175 POUNDS PER ACRE. REFER TO SUPPLIERS SPECIFICATIONS AND INSTALLATION CUT SHEETS FOR FURTHER INFORMATION.

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Well balanced, multi-stemmed tree with a minimum of (3) strong canes and full appearance.
3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
4. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
5. Evenly shaped upright tree with full branching to the ground.
6. Full, well rooted plant, evenly shaped.
7. Full, well rooted plant.
8. Male only
9. Tree-form, Single Stem Specimen
10. At grade coverage points for this plant do not contribute to the 10% coverage area requirement.

***** NEW PROPOSED PLANT MATERIAL AT PERIMETER BUFFER BETWEEN EXISTING RESIDENTIAL HOMES AND ANCIENT OAKS DEVELOPMENT IS GRAPHIC REPRESENTATION THE OF DESIGN INTENT. NEW PROPOSED PLANT MATERIAL ALONG EASTERN BOUNDARY TO BE FIELD VERIFIED AND PLACED IN GAPS IN EXISTING WOOD LINE AND UNDER PLANT TO CREATE MULTI-LAYERED, YEAR-ROUND SCREENING BUFFER BETWEEN NEW PROPOSED & THE EXISTING RESIDENTIAL HOMES. UNDERSTORY TO BE CLEARED ONLY AS REQUIRED TO MAKE ROOM FOR NEW AND ANY HORIZONTAL LIMBS CONFLICTING WITH NEW PROPOSED PLANT MATERIAL TO BE REMOVED. *****

INSTALLER NOTE:
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STORMWATER MANAGEMENT AREA IS SHOWN AS A CONCEPT. MODIFYTHE STORMWATER MANAGEMENT AREA AS REQUIRED IN AN EFFORT TO PRESERVE EXISTING HEALTHY OAK TREES. REFER TO CIVIL ENGINEERING DOCUMENTS FOR FINAL DESIGN AND CAPACITY.

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Project:

ANCIENT OAKS CONDOMINIUM

N18 W22670 Watertown Road
Pewaukee, WI

Project:

CARITY LAND CORPORATION

12720 West North Avenue
Brookfield, WI 53005

Issuance and Revisions:

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Sheet Title:

PROPOSED PARTIAL LANDSCAPE PLAN AND PLANT MATERIAL TABLE

Date of Drawing:	11/06/23
Scale:	1" = 30'-0"
Drawn By:	MCD
Job Number:	L23-057
Sheet Number:	LSP1.2

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L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023

1 PROPOSED PARTIAL LANDSCAPE PLAN

Proposed Plant Material Table - LSP1.3

Broadleaf Deciduous

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
3	Amgr		Amelanchier grandiflora	Autumn Brilliance Serviceberry	10' - 12' - Clump B&B	
6	BeniH		Betula Nigra "Heritage"	Heritage River Birch	10' - 12' - Clump B&B	
4	GibiPS		Ginko biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	2 1/2"-Cal - B&B	
1	Qubi		Quercus bicolor	Swamp White Oak	2 1/2"-Cal - B&B	
1	Quma		Quercus macrocarpa	Bur oak	2 1/2"-Cal - B&B	

Conifer Evergreen

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
8	Abba		Abies balsamea	Balsam Fir	7' - B&B	
21	Juchl		Juniperus chinensis 'Iowa'	Iowa Juniper	7' - B&B	
13	Picgl		Picea glauca	White spruce	7' - B&B	
9	Piom		Picea omorika	Serbian Spruce	7' - B&B	
1	Pist		Pinus strobus	Eastern white pine	7' - B&B	
12	ThplGG		Thuja plicata 'Green Giant'	Green Giant Arborvitae	6' - 7' - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	HainAP		Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Witch Hazel	24"- Cont	
2	Rhty		Rhus typhina	Staghorn sumac	24"- Cont	

Proposed Plant Material Table - for Cul de Sac

Broadleaf Deciduous

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
1	AcpaT		Acer palmatum var. dissectum 'Tamukeyama'	Tamukeyama Japanese Maple	3.5' - Cont	
1	AcpsN		Acer pseudosieboldianum 'Northwind'	Northwind Korean Maple	1"-Cal - B&B	
1	Ceca		Cercis canadensis	Eastern redbud	2 1/2"-Cal - B&B	

Conifer Evergreen

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	3' - 4' - B&B	
7	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - B&B	
1	Piom8		Picea omorika 'Bruns'	Bruns Serbian Spruce	4' - 5' - B&B	

Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
6	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	
20	SpheT		Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
14	EcPM		Echinacea 'Pixie Meadowbrite'	Pixie Meadowbrite Coneflower	1-Gal - Cont	
49	SeR		Sedum 'Razzleberry'	Sunsparkler Dazzleberry Sedum	4" Plug	

Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	CoalPF		Cornus alba 'Prairie Fire'	Prairie Fire Dogwood	24" - B&B	
9	HypaLQF		Hydrangea paniculata 'SMHPLQF'	Little Quick Fire Hardy Hydrangea	18" - 24"- Cont	
10	HyseTS		Hydrangea serrata 'MAK20'	Tuff Stuff Reblooming Mountain Hydrangea	1-Gal - Cont	
8	RoKO		Rosa 'Knockout'	Knock Out Rose	18" - Cont	

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Well balanced, multi-stemmed tree with a minimum of (3) strong canes and full appearance.
3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
4. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
5. Evenly shaped upright tree with full branching to the ground.
6. Full, well rooted plant, evenly shaped.
7. Full, well rooted plant.
8. Male only
9. Tree-form, Single Stem Specimen
10. At grade coverage points for this plant do not contribute to the 10% coverage area requirement.

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PROPOSED PARTIAL
LANDSCAPE PLAN
AND PLANT MATERIAL TABLE

Date of Drawing:	11/06/23
Scale:	1" = 30'-0"
Drawn By:	MCD
Job Number:	L23-057
Sheet Number:	LSP1.3

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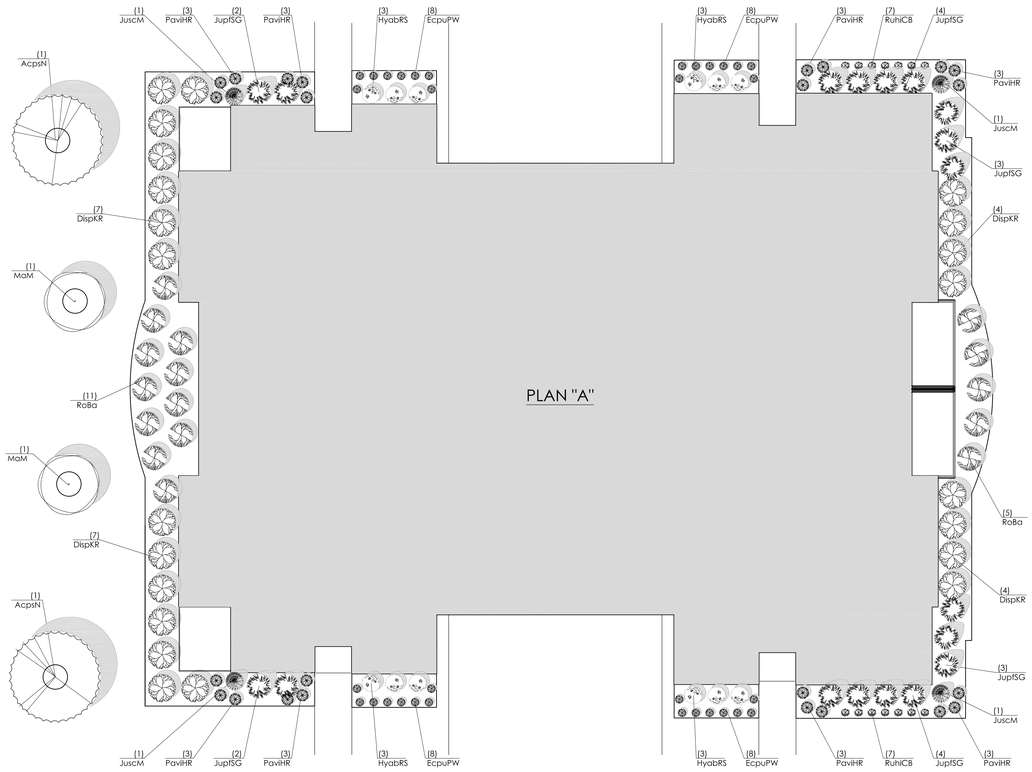
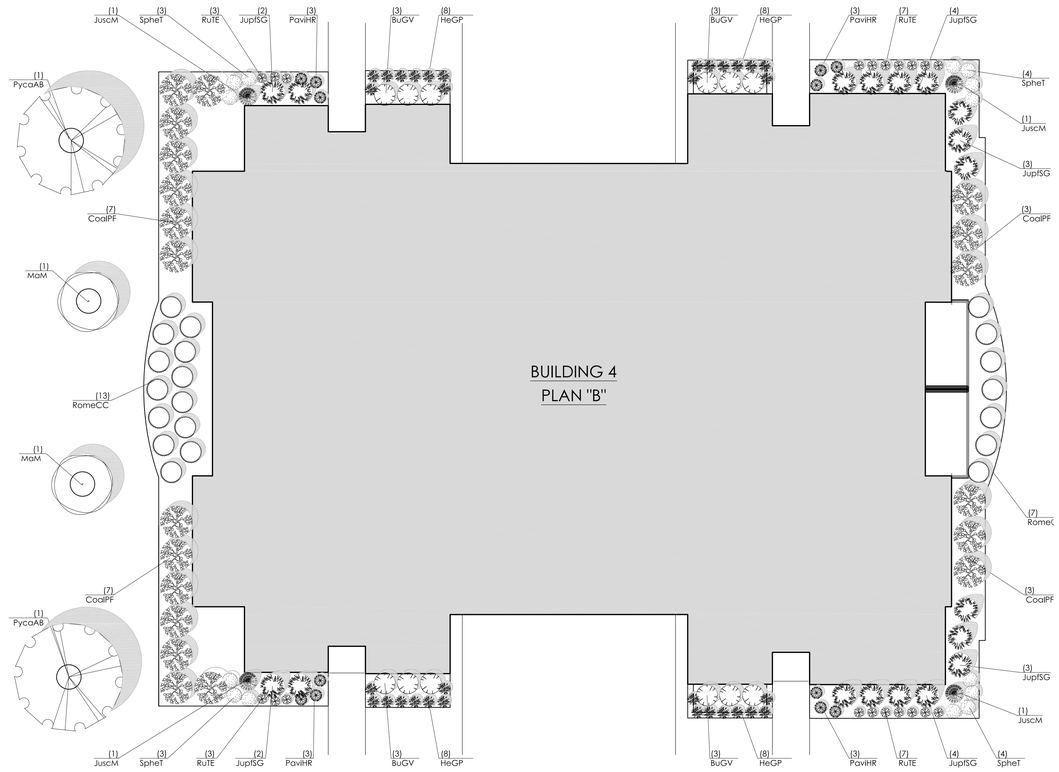
L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023



1 PROPOSED LANDSCAPE PLAN "A" FOR QUAD BUILDING PLAN

SCALE: 1" = 10'-0"



1 PROPOSED LANDSCAPE PLAN "B" FOR QUAD BUILDING PLAN

SCALE: 1" = 10'-0"

Proposed Plant Material Table Building 4 - Plan A
(8) Thus or Similar

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	AcpsN		Acer pseudosieboldianum 'Northwind'	Northwind Korean Maple	2"-Cal - B&B	
2	MaM		Malus 'Marilee'	Marilee Flowering Crab	1 1/2" Cal - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
22	DispKR		Diervilla splendens 'G2X885411'	Kodiak Red Diervilla	18" - Cont	
12	HyabRS		Hydrangea arborescens 'NCHA3'	Invincibelle Ruby Smooth Hydrangea	18" - Cont	
16	RoBa		Rosa 'Baiove'	Coral Cove Elegance Rose	18" - Cont	

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	4' - B&B	
18	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
24	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
32	EcpuPW		Echinacea purpurea 'PAS702917'	Pow Wow Wild Berry Coneflower	4 1/2" pot	
14	RuhiCB		Rudbeckia hirta 'Cherry Brandy'	Cherry Brandy Gloriosa Daisy	4 1/2" pot	

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Well balanced, multi-stemmed tree with a minimum of (3) strong canes and full appearance.
3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
4. Evenly shaped upright tree with full branching to the ground.
5. Full, well rooted plant, evenly shaped.
6. Full, well rooted plant.
7. Male only
8. Tree form, single stem specimen

Proposed Plant Material Table Building 4 - Plan B
(8) Thus or Similar

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	MaM		Malus 'Marilee'	Marilee Flowering Crab	1 1/2" Cal - B&B	
2	PycaAB		Pyrus calleryana 'Autumn Blaze'	Autumn Blaze Pear	2"-Cal - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
20	CoalPF		Cornus alba 'Prairie Fire'	Prairie Fire Dogwood	18" - 24"- Cont	
20	RomeCC		Rosa 'Meiriansois'	Candy Cane Cocktail Rose	18" - Cont	

Broadleaf Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
12	BuGV		Buxus 'Green Velvet'	Green Velvet Boxwood	18" - B&B	

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	4' - B&B	
18	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
12	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	
14	SpheT		Sporobolus heterolepis 'Tara'	Tara Prairie Dropseed	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
32	HeGP		Heuchera x 'Georgia Peach'	Georgia Peach Coral Bells	4 1/2" pot	
20	RuTE		Rudbeckia 'TigerEye'	TigerEye Gloriosa Daisy	4 1/2" pot	

Comments

1. Straight central leader, full & even crown. Prune only after planting.
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3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
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6. Full, well rooted plant.
7. Male only
8. Tree form, single stem specimen

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Sheet Title:

PROPOSED QUAD BUILDING "A" AND "B" FOUNDATION PLANS AND PLANT MATERIAL TABLES

Date of Drawing: 11/06/23
Scale: 1" = 20'-0"
Drawn By: MCD
Job Number: L23-057
Sheet Number: LSP1.4

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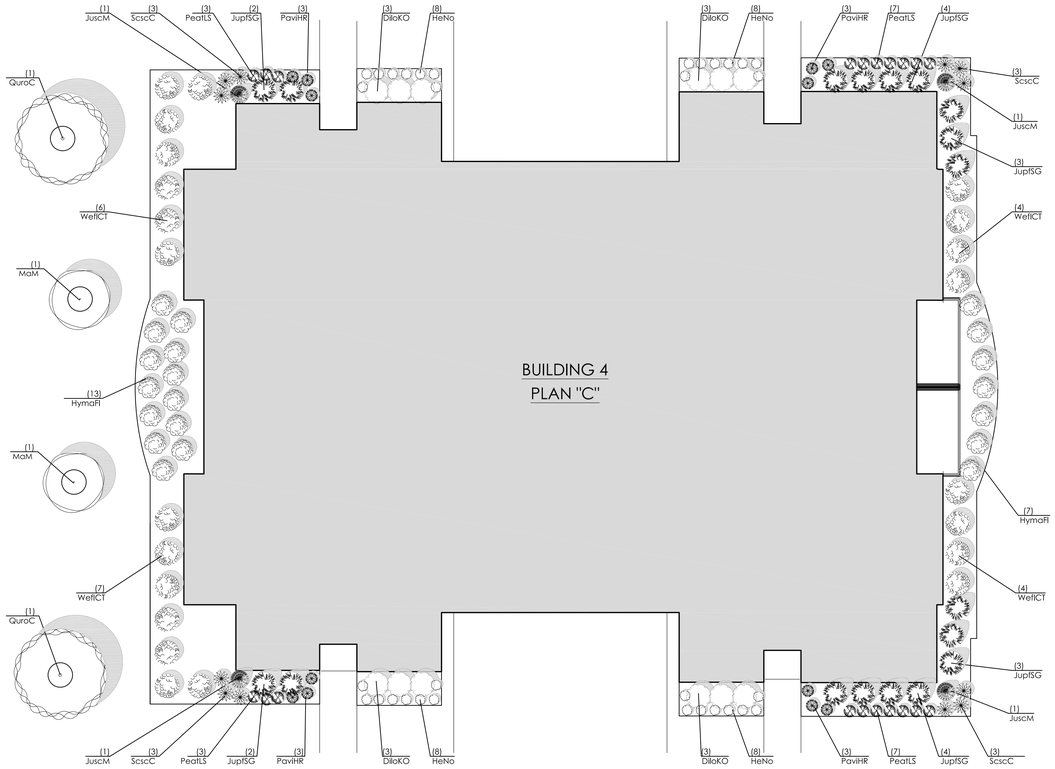
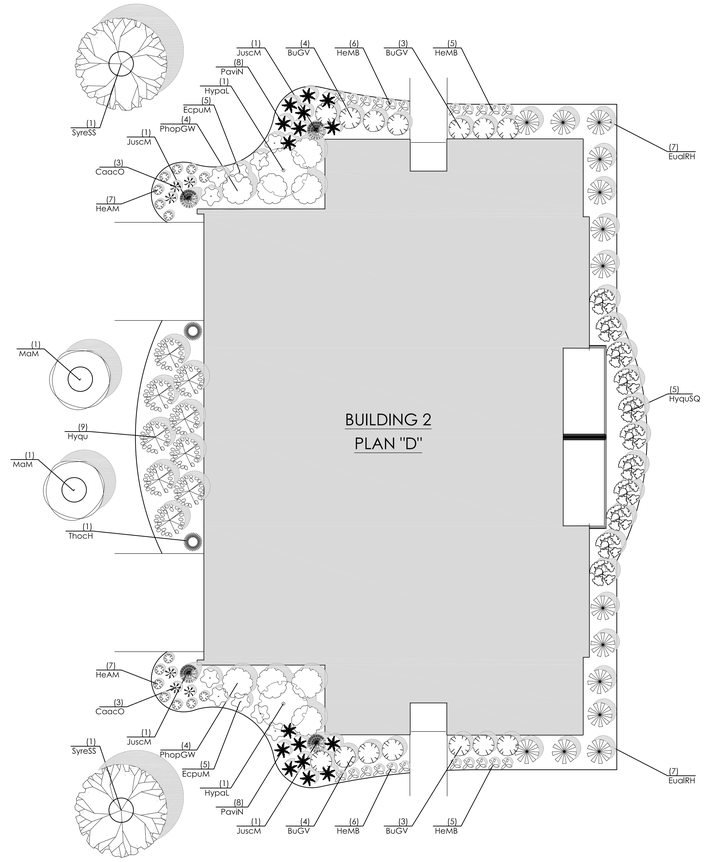


1 PROPOSED LANDSCAPE PLAN "C" FOR QUAD BUILDING PLAN

SCALE: 1" = 10'-0"



2 PROPOSED LANDSCAPE PLAN "D" FOR TWIN BUILDING PLAN

SCALE: 1" = 10'-0"

Proposed Plant Material Table Building 4 - Plan C
(7) Thus or Similar

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
2	MaM		Malus 'Marilee'	Marilee Flowering Crab	1 1/2" Cal - B&B	
2	QuroC		Quercus robur 'Crimschmidt'	Crimson Spire English Oak	2"-Cal - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
12	DiloKO		Diervilla lonicera Kodiak Orange	Kodiak Orange Bush Honeysuckle Diervilla	18" - 24"- Cont	
20	HymaFl		Hydrangea macrophylla 'Hortfire'	Seaside Serenade Fire Island Hydrangea	18" - Cont	
22	WeifCT		Weigela floridab 'Czechmark Trilogy'	Czechmark Trilogy Weigela	18" - 24"- Cont	

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	4' - B&B	
18	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
12	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	
12	ScscC		Schizachyrium scoparium 'Carousel'	Carousel Little Blue Stem	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
32	HeNo		Hemerocallis x 'Nosferatu'	Trophytaker Nosferatu Daylily	4 1/2" pot	
20	PeatLS		Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	4 1/2" pot	

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Well balanced, multi-stemmed tree with a minimum of (3) strong canes and full appearance.
3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
4. Evenly shaped upright tree with full branching to the ground.
5. Full, well rooted plant, evenly shaped.
6. Full, well rooted plant.
7. Male only
8. Tree form, single stem specimen

Proposed Plant Material Table Building 2 - Plan D
(2) Thus or Similar

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
9	Hyqu		Hydrangea quercifolia	Oakleaf hydrangea	18" - 24"- Cont	
2	MaM		Malus 'Marilee'	Marilee Flowering Crab	1 1/2" Cal - B&B	
2	SyreSS		Syringa reticulata 'Summer Snow'	'Summer Snow' Japanese tree lilac	2"-Cal - B&B	

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
14	EualRH		Euonymus alatus 'Rudy Haag'	Rudy Haag Burning Bush.	18" - 24"- Cont	
2	HypaL		Hydrangea paniculata 'Limelight'	Limelight Hardy Hydrangea	4' - 5' - B&B	
11	HyquSQ		Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea	18" - 24"- Cont	
8	PhopGW		Physocarpus opulifolius 'Ginger Wine'	Ginger Wine Ninebark	18" - 24"- Cont	

Broadleaf Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
14	BuGV		Buxus 'Green Velvet'	Green Velvet Boxwood	18" - B&B	

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
4	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	4' - B&B	
2	ThocH		Thuja occidentalis 'Holmstrup'	Holmstrup Dwarf Arborvitae	3' - Cont	

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
6	CaacO		Calamagrotis actifolia "overdam"	Overdam FeatheReed Grass	1-Gal - Cont	
16	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
10	EcpuM		Echinacea purpurea 'Magnus'	Magnus Purple Coneflower	1-Gal - Cont	
14	HeAM		Heuchera x 'Amethyst Mist'	Amethyst Mist Coral Bells	4 1/2" pot	
22	HeMB		Heuchera x 'Midnight Bayou'	Midnight Bayou Coral Bells	4 1/2" pot	

Comments

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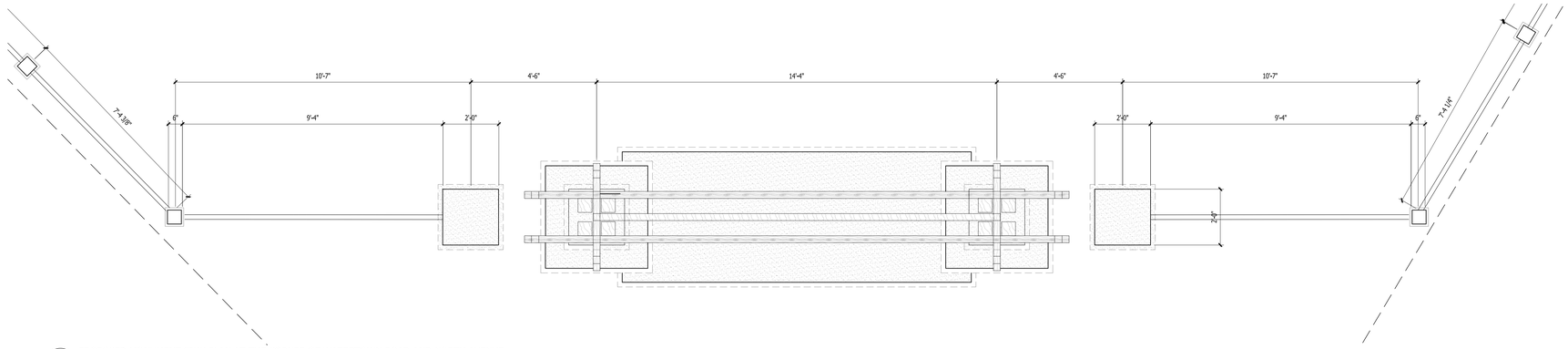
Sheet Title:

PROPOSED QUAD BUILDING "C" FOUNDATION PLAN AND TWIN BUILDING "D" FOUNDATION PLANS AND PLANT MATERIAL TABLES

Date of Drawing: 11/06/23
Scale: 1" = 20'-0"
Drawn By: MCD
Job Number: L23-057
Sheet Number:

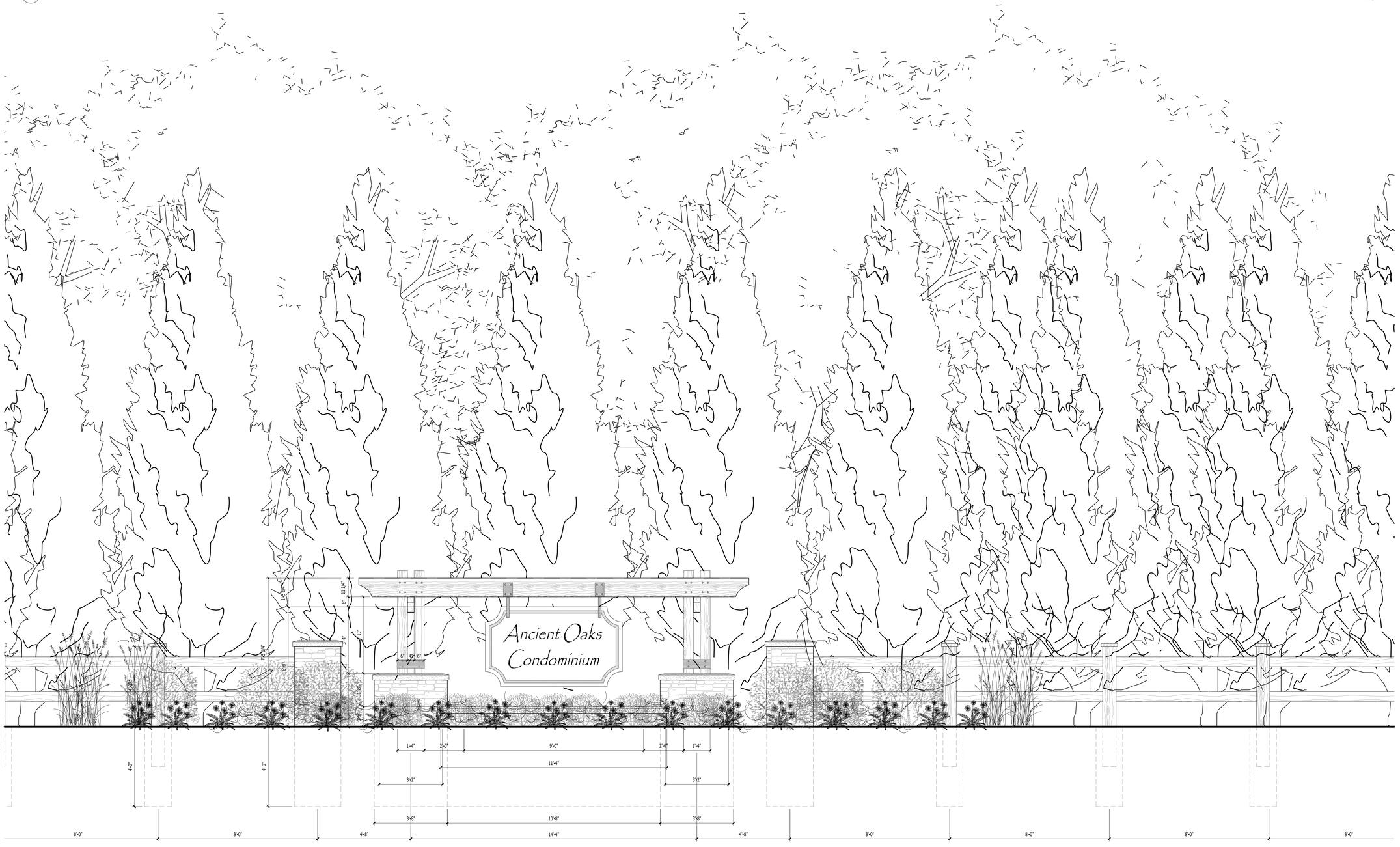
LSP1.5

L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023



1 PROPOSED MONUMENT SIGN PLAN AT THE CORNER OF WATERTOWN ROAD AND NORTH AVENUE

SCALE: 1/2" = 1'-0"



2 PROPOSED MONUMENT SIGN ELEVATION AT THE CORNER OF WATERTOWN ROAD AND NORTH AVENUE

SCALE: 1/2" = 1'-0"

INSITE LANDSCAPE DESIGN
Landscape Consulting
& Master Planning Design Sevices
11525 W. North Avenue, Suite 1B
Wauwatosa, WI 53226
Tel (414) 476-1204
www.insitedesigninc.com
mdavis@insitedesigninc.com

Project:

ANCIENT OAKS CONDOMINIUM

N18 W22670 Watertown Road
Pewaukee, WI

Project:

CARITY LAND CORPORATION

12720 West North Avenue
Brookfield, WI 53005

Issuance and Revisions:

Date	Number	Description
09/27/23		Client Review Submittal
10/02/23		Plan Commission Submittal
10/27/23		Revisions Based on Client Comments
11/06/23		Revisions Based on Site Changes

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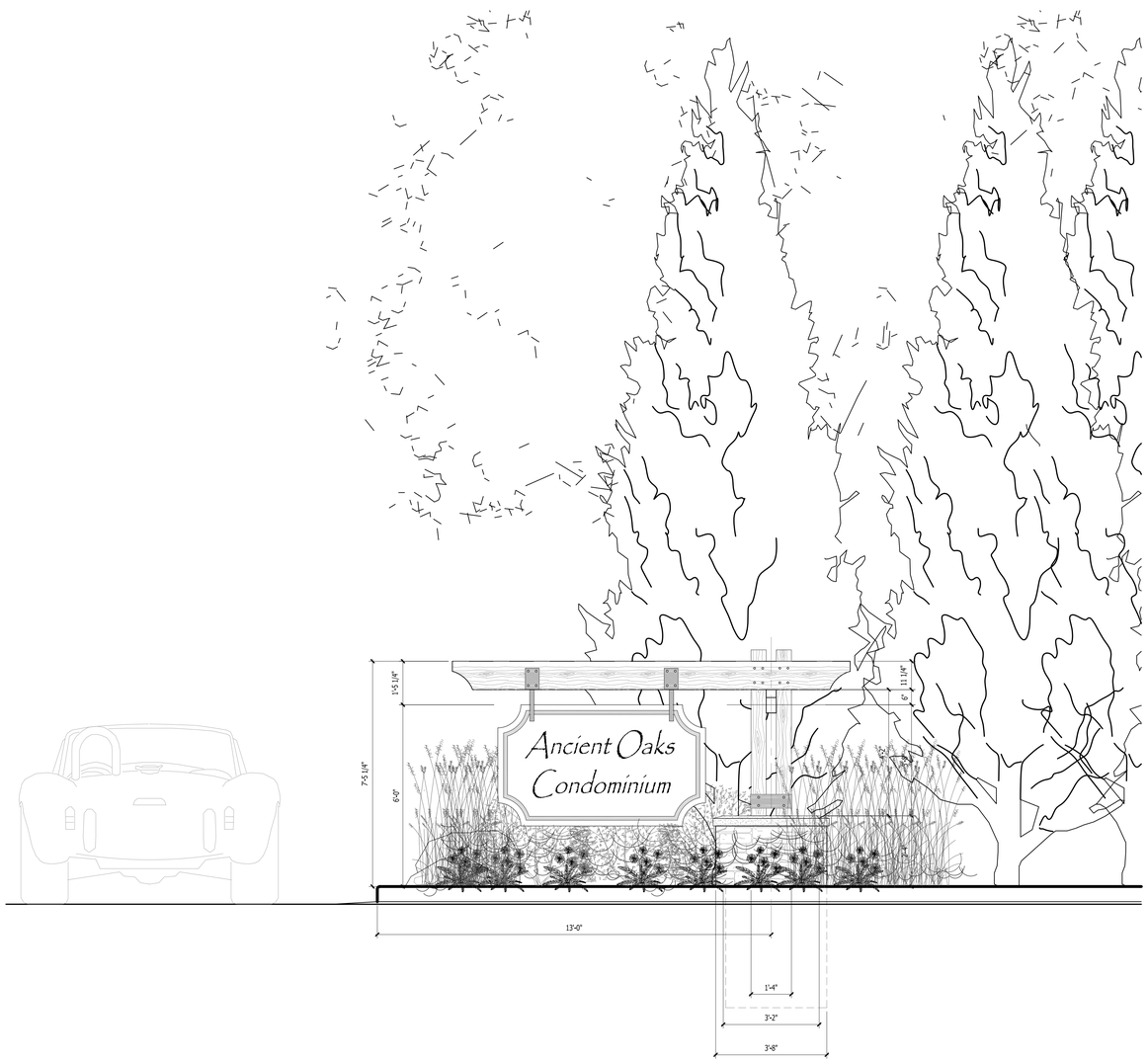
Sheet Title:

PROPOSED MONUMENT SIGN AT THE CORNER OF WATERTOWN ROAD & NORTH AVE. PLAN AND ELEVATION

Date of Drawing:	11/06/23
Scale:	1/2" = 1'-0"
Drawn By:	MCD
Job Number:	L23-057
Sheet Number:	LSP1.6

L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023



1 PROPOSED SIGN AT THE WEST SIDE OF NORTH AVENUE ENTRANCE

SCALE: 1/2" = 1'-0"

2 CROSS SECTION THROUGH STREET YARD BUFFER BERM ALONG WATERTOWN ROAD

SCALE: 3/8" = 1'-0"

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& Master Planning Design Sevices
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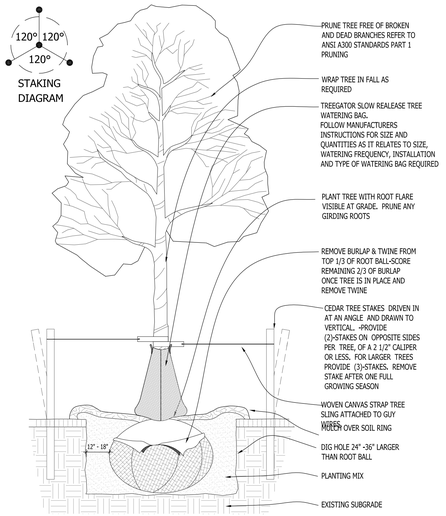
Sheet Title:

PROPOSED SIGN AT THE WEST SIDE OF NORTH AVENUE ENTRANCE PLAN AND ELEVATION

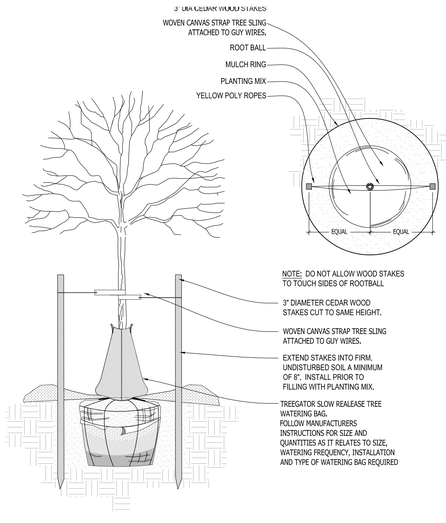
Date of Drawing:	11/06/23
Scale:	AS NOTED
Drawn By:	MCD
Job Number:	L23-057
Sheet Number:	LSP1.7

L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023



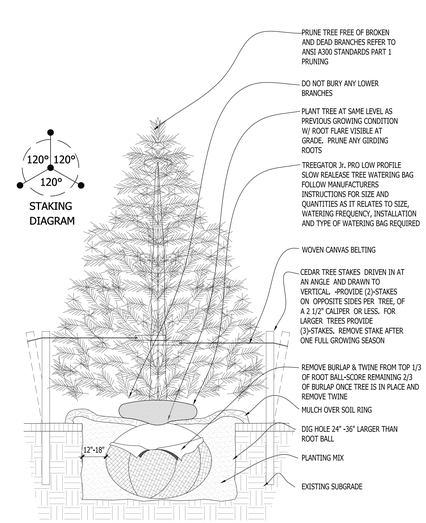
1 DECIDUOUS TREE PLANTING DETAIL

SCALE: NONE



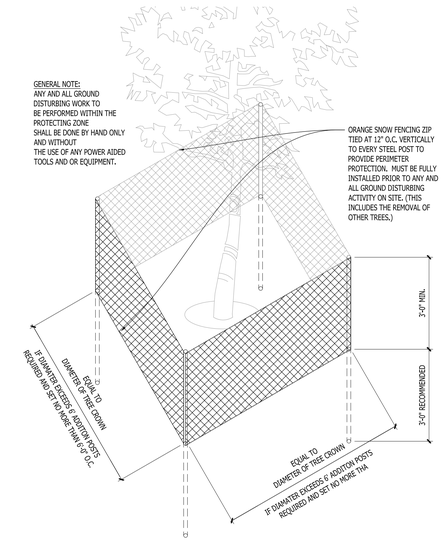
2 DECIDUOUS TREE STAKING PARKING ISLAND/RESTRICTED AREAS

SCALE: NONE



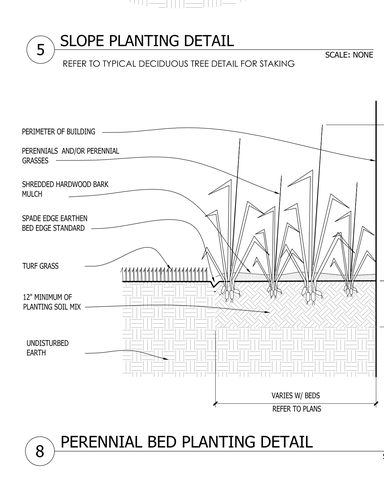
3 CONIFEROUS TREE PLANTING DETAIL

SCALE: NONE



4 EXISTING TREE PROTECTION DETAIL

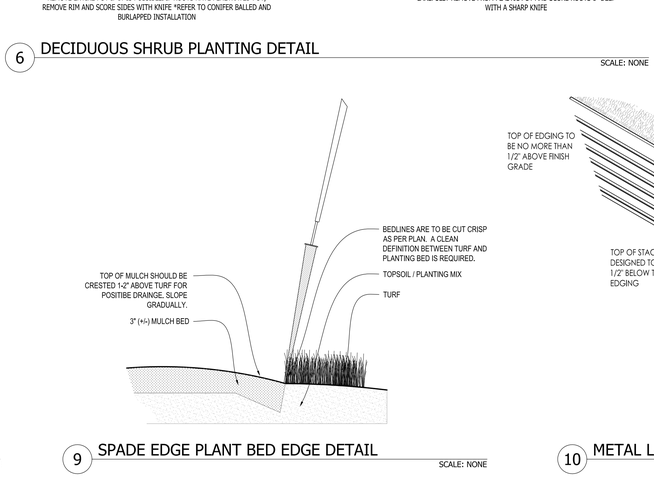
SCALE: NONE



5 SLOPE PLANTING DETAIL

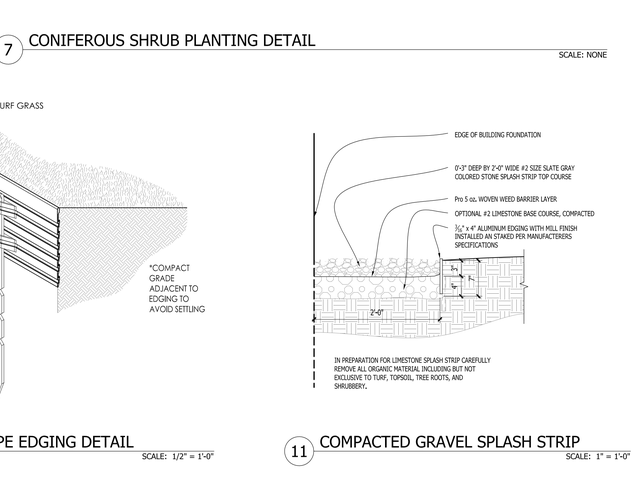
SCALE: NONE

REFER TO TYPICAL DECIDUOUS TREE DETAIL FOR STAKING



6 DECIDUOUS SHRUB PLANTING DETAIL

SCALE: NONE



7 CONIFEROUS SHRUB PLANTING DETAIL

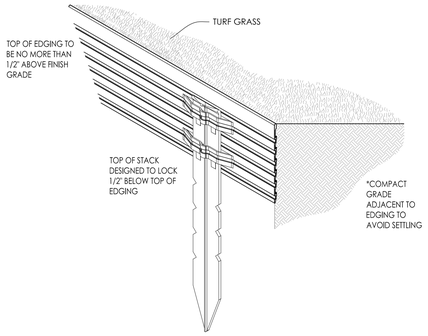
SCALE: NONE

8 PERENNIAL BED PLANTING DETAIL

SCALE: NONE

9 SPADE EDGE PLANT BED EDGE DETAIL

SCALE: NONE

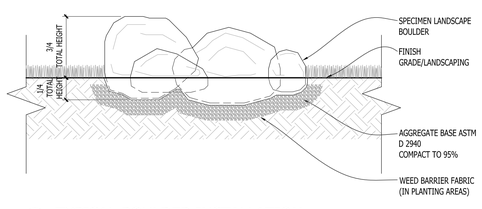


10 METAL LANDSCAPE EDGING DETAIL

SCALE: 1/2" = 1'-0"

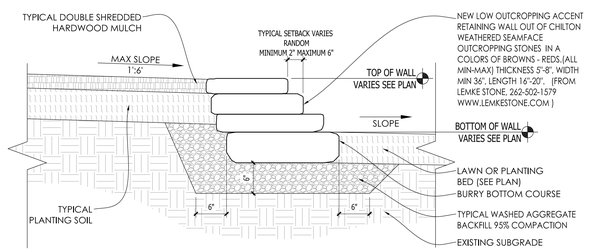
11 COMPACTED GRAVEL SPLASH STRIP

SCALE: 1" = 1'-0"



12 TYPICAL BOULDER INSTALLATION

SCALE: NONE



13 LOW OUTCROPPING STONE GARDEN WALL SECTION

SCALE: 1" = 1'-0

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Sheet Title:

PROPOSED LANDSCAPE PLAN, PLANTING DETAILS

Date of Drawing:	11/06/23
Scale:	AS NOTED
Drawn By:	MCD
Job Number:	L23-057
Sheet Number:	LSP1.8

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L23-057 - ANCIENT OAKS CONDOMINIUM - 11/06/2023

November 28, 2023

Richard Machata
W224N2295 Elmwood Dr.
Waukesha, Wi 53186
414 791 6070

Nick Fuchs
Planner & Community Development Director
City of Pewaukee
W240N3065 Pewaukee Road
Pewaukee, WI 53072

Re: Ancient Oaks development

Per our conversation please pass this onto the board and Clarity Land Corp.

Looking at the proposed drawing of land use showing buildings, road and land development I noticed the following.

1. The developer is putting the condos 45' from the properties along Elmwood and putting in trees and bushes for privacy between existing homes and new condos.
2. My property borders the entire North side of the development.
3. They show a four family condo going in 20 some feet from my property with the condo garages centered facing my home.
4. They are putting a retaining wall on the property line obviously raising the ground level several feet.
5. They are putting a drive drive and parking right next to my property.
6. I have large windows facing the condo with large windows in living room,kitchen dining area and two bedrooms. I'll be looking at garages, parked cars and probably trash and recycle containers. This will be devaluing my property. Most of the trees between the two properties are on their property and thus removed.

I'm not against the development as long as its not devaluing my property and giving me a bad view out my windows or my having to pay to put trees on my property to maintain some privacy.

I have one possible solution. If they put the two family where the four family is it would allow 45' from my property and allow trees and shrubs on north side as they have on the east and south. They could put the four family where two family is now by moving the line of three condos around so they won't loose any condos. See attached pasted up drawing.

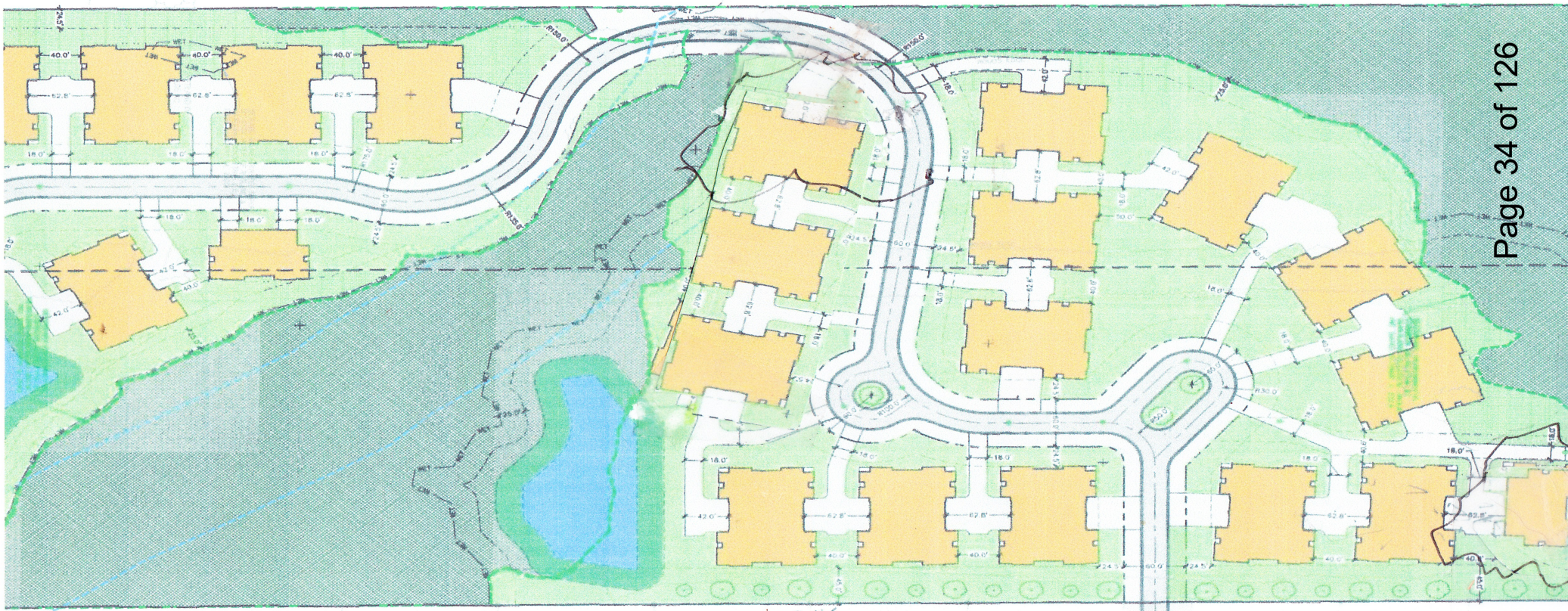
Since they are raising the property for the condos and my property is higher than the existing farm field when heavy rains come the water drains SW as it does from the houses on Elmwood. Is the water from the higher development going to drain some of the water NW onto my property and possibly ruin my septic system.

Thanks

Richard Machata

DRAWING INDEX

C1.0	OVERALL SITE PLAN
C1.1	SITE PAVEMENT ID AND DIMENSIONAL PLAN
C2.0	SITE GRADING AND EROSION CONTROL PLA
C3.0-C3.3	STORM SEWER PLAN
C4.0-C4.8	SANITARY AND WATER PLAN AND PROFILE
C5.0-C5.2	NOTES AND DETAILS



1634'

Date: November 29, 2023

Traffic Impact Analysis Executive Summary

The Ancient Oaks Condominium Development is proposed to be located northwest of the intersection of Watertown Road & North Avenue and west of Elmwood Drive in the City of Pewaukee, Waukesha County. TADI performed this TIA to determine and document the expected weekday morning and evening peak hour operating conditions and recommendations at identified study area intersections. The analysis identifies recommended modifications based on existing roadway conditions and additional traffic expected to be generated by the condominium development.

Recommended modifications are for jurisdictional consideration and are not legally binding. Waukesha County and the City of Pewaukee reserve the right to determine alternative solutions.

Based on the traffic analysis of the study area intersections, the following are the recommendations at each intersection.

Watertown Road & North Avenue

- With the existing traffic, Waukesha County is planning to construct a 200-foot-long eastbound left-turn lane, a 75-foot westbound left-turn lane, and a 150-foot southbound right-turn lane (see Exhibit G) when funded through the HSIP program in future years. Since this intersection is not shown to meet traffic signal warrants based on the existing and new development traffic, a single-lane roundabout is an alternative that would also work operationally at this intersection. (A roundabout was not investigated as far as how much additional right-of-way is needed to be constructed and would be an option the County could consider if it is HSIP eligible for funding of the intersection improvements.)
- With the development traffic, no additional modifications are being proposed. Note that the proposed development does not significantly add traffic to the intersection and does not trigger the need for the modifications at the Watertown Road & North Avenue intersection.

North Avenue & Elmwood Drive

- No modifications are being proposed with the development traffic.

North Avenue & South Site Driveway

- Per Waukesha County Ordinance Chapter 15, Section 15-55(a), construct an eastbound bypass lane of 250 feet and a 50-foot westbound right-turn lane on North Avenue. See Exhibit H for the layout of the bypass lane.

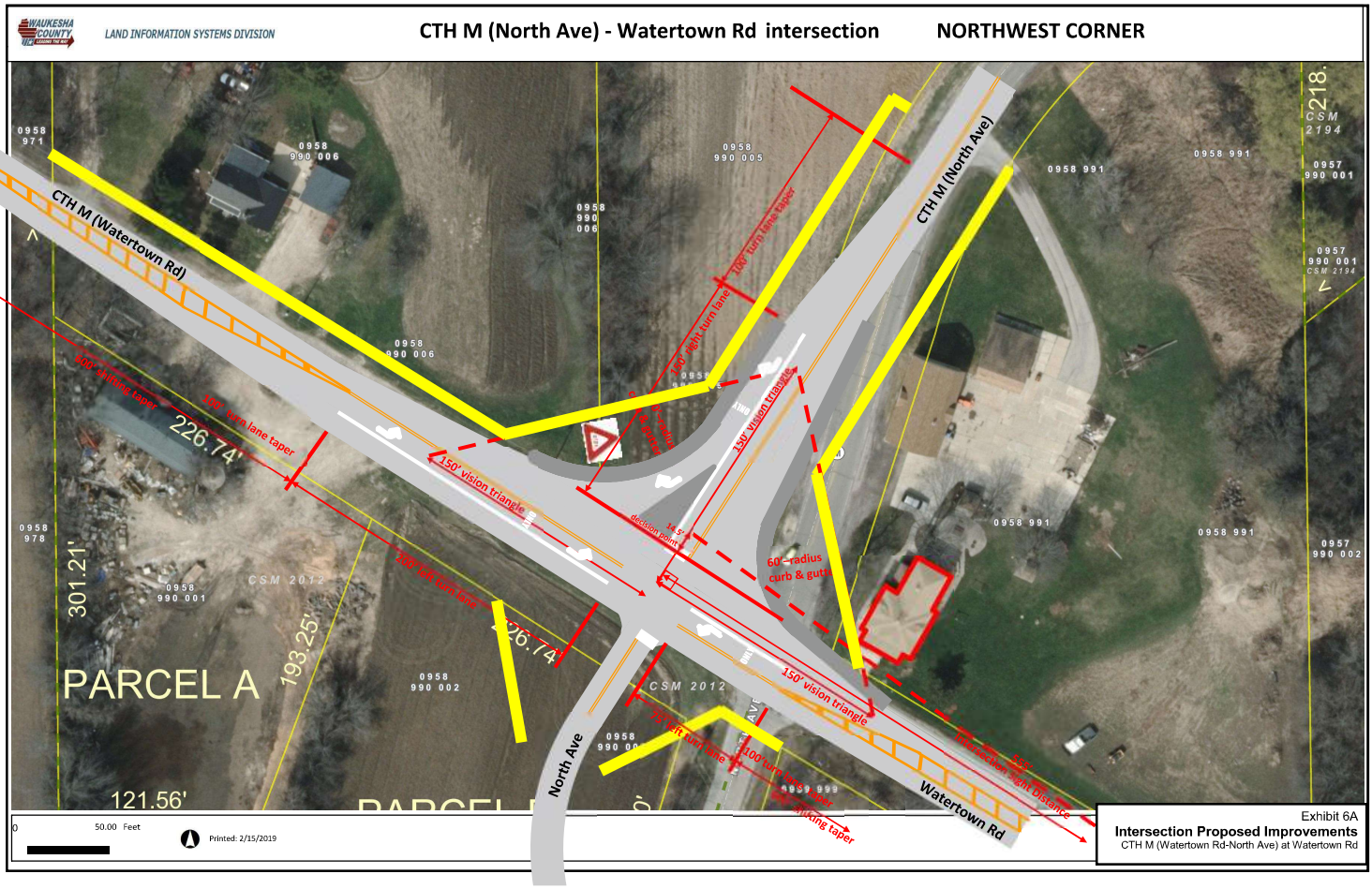
- Construct one shared left-turn/right-turn lane on the Driveway southbound approach. Install a stop sign to control the southbound approach. Intersection sight distance was not checked and should be verified by the site designer.

Elmwood Drive & North Site Driveway

- Construct the north site driveway approximately 1,000 feet north of North Avenue within the existing access right-of-way. The driveway will be a left-in, right-in, right-out access; therefore, a right-turn island (to prohibit left turns) is recommended to be constructed as shown in Exhibit N along with signing and pavement markings. Additional dedicated turn lanes are not necessary.

Except for the northbound approach of North Avenue at Watertown Road (as noted in Part E of the TIA), all movements are expected to operate at LOS D or better conditions with the recommended modifications.

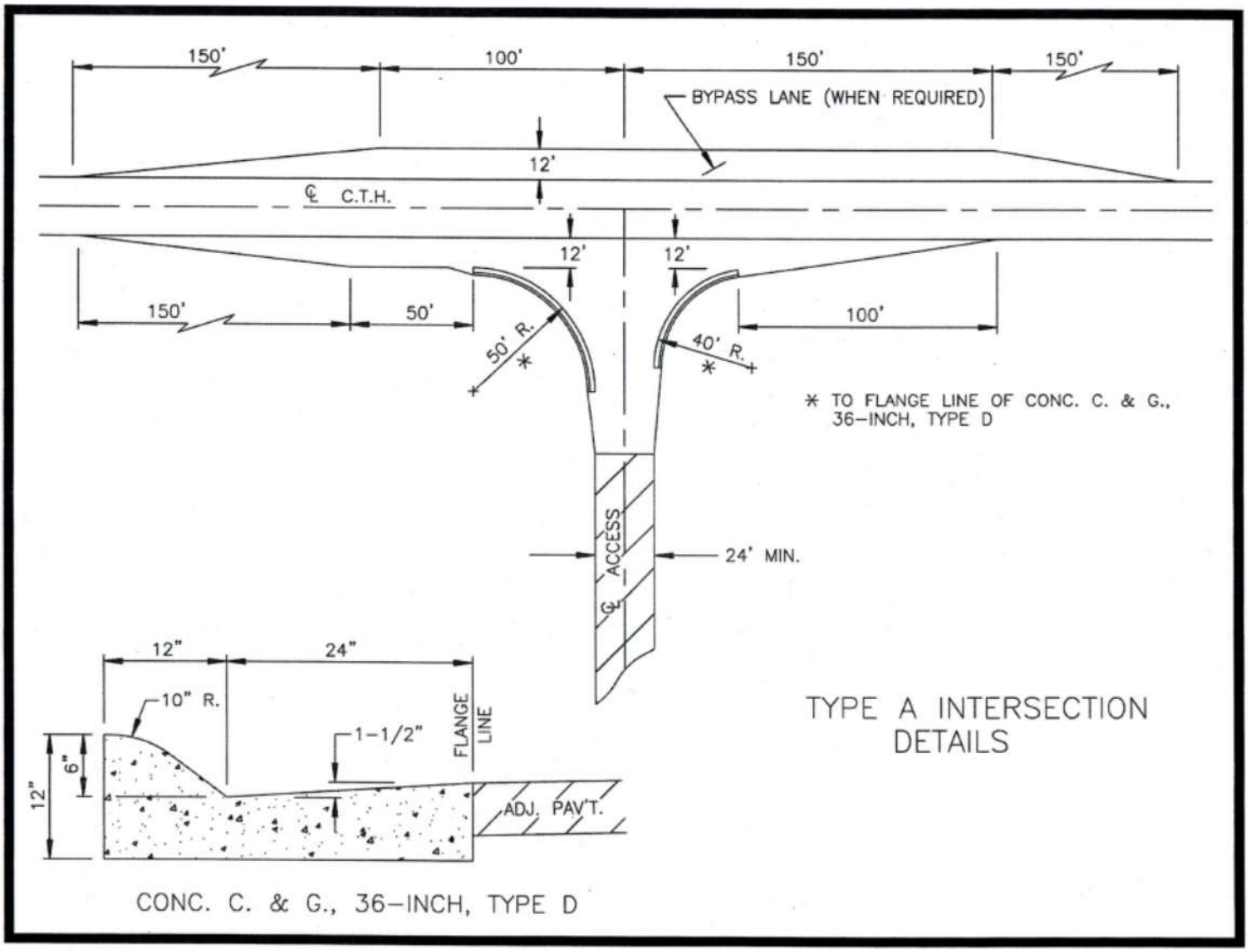
NOT TO SCALE



TRAFFIC ANALYSIS & DESIGN, INC.
3172; 11/20/2023

EXHIBIT G
COUNTY CONCEPTUAL LAYOUT FOR WATERTOWN RD. & NORTH AVE. FUTURE IMPROVEMENTS

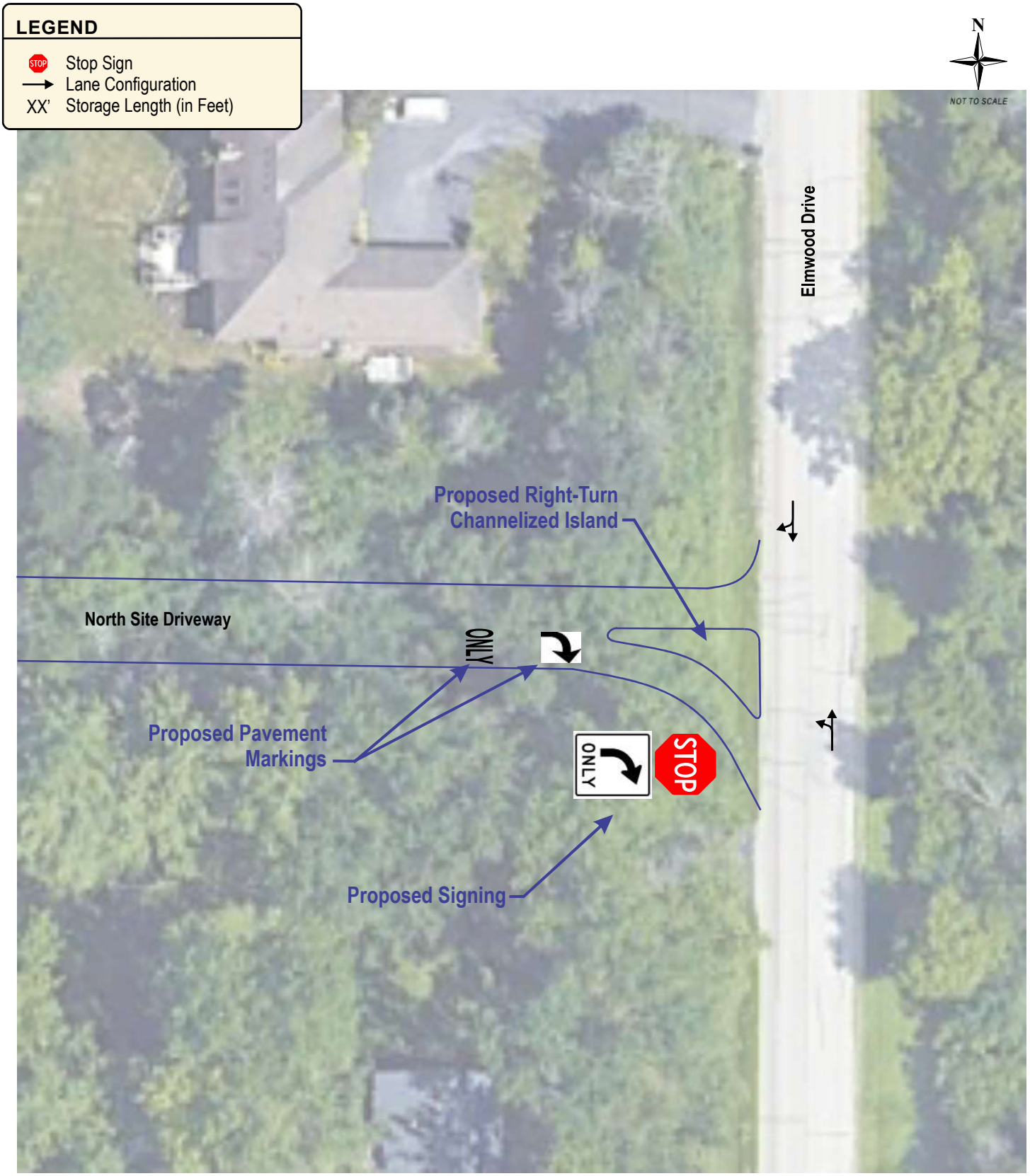
PEWAUKEE, WISCONSIN



TRAFFIC ANALYSIS & DESIGN, INC.
3172; 11/20/2023

EXHIBIT H
WAUKESHA COUNTY TYPE A INTERSECTION DETAILS

PEWAUKEE, WISCONSIN



TRAFFIC ANALYSIS & DESIGN, INC.
3172; 11/20/2023

EXHIBIT N
NORTH SITE DRIVEWAY
RECOMMENDED MODIFICATIONS

PEWAUKEE, WISCONSIN

Date: November 27, 2023

Traffic Impact Analysis Memorandum

To: Magdeline Wagner, P.E.
City of Pewaukee

From: Daniel C. Bieberitz, P.E. PTOE

cc List: William W. Carity
Carity Land Corporation

Subject: Ancient Oaks Condominium Development
Pewaukee, Wisconsin

PART A – INTRODUCTION

The Ancient Oaks Condominium Development is proposed to be located northwest of the intersection of Watertown Road & North Avenue and west of Elmwood Drive in the City of Pewaukee, Waukesha County. A site location map is shown in Exhibit A. The development conceptual site plan is shown in Exhibit B. A traffic impact analysis (TIA) is required for the development.

TADI performed this TIA to determine and document the expected weekday morning and evening peak hour operating conditions and recommendations at identified study area intersections. This report documents the procedures, findings, and conclusions of the analysis. The analysis identifies recommended modifications based on existing roadway conditions and additional traffic expected to be generated by the condominium development.

PART B – STUDY AREA

The study area includes the following existing intersections. A transportation detail illustrating existing intersection lane configurations and speed limits is shown in Exhibit C.

- Watertown Road & North Avenue (existing intersection, two-way stop control)
- North Avenue & Elmwood Drive (existing intersection, one-way stop control)

Proposed development access points are included as the study area intersections and are described later in *Part C – Project Description*.

Watertown Road is a two-lane east/west highway with a rural cross-section and a posted speed limit of 45 mph. According to WisDOT, the Year 2022 annual average daily traffic (AADT) volumes on Watertown Road were approximately 6,100 vehicles per day (vpd) east of North Avenue and 9,200 vpd west of Westwood Drive (west of the study area). A railroad crosses Watertown Road approximately 1,300-feet west of North Avenue (center-center). No pedestrian,

bicycle, or transit accommodations were identified. Watertown Road is also designated as County Trunk Highway (CTH) M west of North Avenue.

North Avenue is a two-lane undivided east/west highway with a posted speed limit of 45 mph that curves towards the south to intersect Watertown Road from the north. The south leg of North Avenue is a north/south local road with a posted speed limit of 25 mph. The WisDOT Year 2022 AADT volume was approximately 3,500 vpd east of Elmwood Drive. No pedestrian, bicycle, or transit accommodations were identified. North Avenue is also designated as CTH M north of Watertown Road.

Elmwood Drive is a two-lane undivided north/south road servicing a residential neighborhood with a posted speed limit of 25 mph. Elmwood Drive intersects North Avenue as a tee-intersection from the north. No AADT volume is recorded. No pedestrian, bicycle, or transit accommodations were identified.

The site of the Ancient Oaks Condominium Development is currently zoned A-2 Agriculture. The City of Pewaukee Year 2050 Land Use/Transportation Plan shows the planned use as Medium Density Residential (6,500-sf to half-acre per dwelling unit (du)). Surrounding planned future uses include residential development to the north, south, east, and west to the railroad. West of the railroad is planned for manufacturing, fabrication, and warehousing.

PART C – PROJECT DESCRIPTION

The Condominium Development is proposed to consist of 96-du of quad (23 buildings) and duplex (two buildings) style condominiums. Ten of the building units will be congregated in the northwest corner of the Watertown Road & North Avenue intersection and the remaining 15 building units will be congregated on the north side of the site. An environmental corridor separates the two halves. A roadway will connect the two halves of the development on the far west side of the site.

As shown in Exhibit B, two access points are proposed for the development.

- North Avenue & South Site Driveway is proposed to be located approximately 525-feet northeast of Watertown Road and 460-feet southwest of Elmwood Drive (center-center).
- Elmwood Drive & North Site Driveway is proposed to be located approximately 1,000-feet north of North Avenue. This driveway will be a left-in, right-in, right-out driveway (no left-turns out).

PART D – TRAFFIC VOLUMES

D1. Year 2023 Existing Traffic Volumes

Intersection turning movement traffic counts were performed at the two existing study area intersections on Monday and Tuesday, Nov. 20 and 21, 2023. Based on the counts, the weekday morning and evening peak hours were identified as being 7:30 to 8:30 am and 4:15 to 5:15pm. The Year 2023 existing traffic volumes are shown in Exhibit D.

When comparing the year 2023 traffic volumes from the previous year 2021 summer traffic count volumes, it shows that the year 2023 volumes are approximately 5% higher at the Watertown Road and North Avenue intersection. The year 2023 6-hour traffic count was

expanded to 24-hour volumes using typical expansion factors based on functional classification of the roadway. This 24-hour hour estimated volume (year 2023) on Watertown Road west of the North Avenue intersection shows 9,880 vehicles per day (vpd), which closely matches the year 2022 AADT of 9,200 vpd by WisDOT. Likewise, the estimated 24-hour volumes on Watertown Road east of North Avenue shows 6,380 vpd, which also closely follows the year 2022 AADT of 6,200 vpd by WisDOT. On North Avenue just north of Watertown Road, the estimated 24-hour volume is 3,790 vpd, which is fairly close to the year 2022 AADT of 3,500 vpd by WisDOT (taken north of Elmwood Drive).

The year 2021 previous TIA (completed for the same development site) increased the year 2021 counted traffic volumes by 93.8% in the morning peak hour and 119% in the evening peak hour on North Avenue to account for the reduced pandemic-related travel activity and the construction activities along North Avenue at and east of Calhoun Road in Brookfield. On Watertown Road, the traffic volumes were increased by 10.2% in the morning peak hour and 30.3% in the evening peak hour. Back in year 2021, it was believed that traffic volumes would rebound to pre-pandemic levels; however, in many cities throughout Wisconsin, the post-pandemic morning peak hour volumes are still lower than the year 2019 volumes (pre-pandemic) and the evening peak hour volumes are more spread out over several hours and in many locations, are still lower than the 2019 volumes. This is reflected in the most recent year 2022 AADT volumes on Watertown Road when compared to the year 2018 AADT levels. On average, the year 2022 AADT is 26% lower than the year 2018 AADTs along Watertown Road.

When comparing the year 2023 traffic volumes to the year 2021 adjusted traffic volumes as used in the year 2021 TIA, it shows that the current year 2023 traffic volumes are 19% lower in the AM peak hour and 31% lower than the year 2021 adjusted TIA volumes. Because the current year 2023 traffic volumes closely follow the estimated AADT volumes on Watertown Road and North Avenue (completed by WisDOT in 2022), the year 2023 traffic volumes will be used for this study.

To address potential future traffic impacts at the study area intersections, it is necessary to identify the hourly volume of traffic generated by the Condominium Development. The traffic volumes expected to be generated are based on the size and type of the proposed use and on trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition*. The development trip generation is shown below in Table 1.

Table 1
Ancient Oaks Condominium Development Trip Generation Table

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak In	AM Peak Out	AM Peak Total	PM Peak In	PM Peak Out	PM Peak Total
Multifamily Housing (Low-Rise) (Not Close to Rail Transit)	220	96 Units	690 FCE	15 (24%)	40 (76%)	55 FCE	40 (63%)	20 (37%)	60 FCE
Total New Trips			**690**	**15**	**40**	**55**	**40**	**20**	**60**
Trip Distribution									
West on Watertown Road	50%		350	10	20		20	10	
East on Watertown Road	35%		240	5	15		15	5	
East on North Avenue	15%		100	0	5		5	5	
	100%		***690***	***15***	***40***		***40***	***20***	

FCE = Fitted Curve Equation
Rail Transit refers to a passenger rail transit station within a 1/2 mile of development site as noted in the ITE Trip Generation.

Multifamily Housing (Low-Rise) was chosen for the land use as it includes attached condominiums in their data set. Compared to the previous TIA with 174 multifamily units (completed in August 2021), this 96-unit condominium development will generate 45% less weekday daily traffic, 31% less traffic in the AM peak hour, and 37% less traffic in the PM peak hour.

The trip generation was assigned to the study area network with the estimate based on current traffic patterns that 50% of development traffic will travel to/from the west on Watertown Road, 35% will travel to/from the east on Watertown Road, and 15% will travel to/from the east on North Avenue. The condominium development new trips are shown in Exhibit E.

D2. Year 2023 Build Traffic Volumes

The Year 2023 build traffic volumes were determined by adding the Year 2023 existing traffic volumes (Exhibit D) to the generated new trips (Exhibit E). The Year 2024 build traffic volumes are shown in Exhibit F.

The construction of the development will commence prior to the County reconstruction of Watertown Road & North Avenue. However, as a residential development, it may take a few years for the units to be fully occupied and the full traffic volumes to be realized. That is, traffic to/from the full build-out of the development may not be present for a few years past Year 2024.

PART E – INTERSECTION CAPACITY ANALYSIS

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). Intersection operation is defined by "Level of Service." Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A', to very poor, represented by LOS 'F'. For the purpose of this study, and as is standard for use in urban and suburban areas in southeastern Wisconsin, LOS D or better was used to define desirable peak hour operating conditions at the study area intersections. Descriptions of the various levels of service are shown in Table 2.

Table 2: Level of Service Descriptions

LOS	Signalized Intersections Control Delay/Vehicle (sec/veh)	Unsignalized Intersections Avg. Control Delay (sec/veh)	Relative Delay
A	≤10	≤10	Short Delays
	Free-flow traffic operations at avearge travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections		
B	> 10 - 20	> 10 - 15	
	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.		
C	> 20 - 35	> 15 - 25	
	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer intersection delays.		
D	> 35 - 55	> 25 - 35	Moderate Delays
	Small increases in traffic flow can cause increased delays. Delays likely attributable to increased traffic, reduced signal progression, and adverse timing.		
E	> 55 - 80	> 35 - 50	
	Significant delays. Travel speeds reduced to one-third of average free flow travel speed.		
F	> 80	> 50	Long Delays
	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		

Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010

The capacity analysis was performed with the following assumptions:

- The Watertown Road & North Avenue intersection was analyzed under three alternatives.
    - The existing lane configuration as shown in Exhibit C.
    - With the County-provided conceptual interection layout as shown in Exhibit G. This layout includes eastbound/westbound left-turn lanes on Watertown Road at North Avenue, and a dedicated southbound right-turn lane from North Avenue to Watertown Road.
    - With a single lane roundabout. A traffic signal was not analyzed since it does not meet signal warrants. See Part F of the report for signal warrant discussion.
- The North Site Driveway at Elmwood Drive intersection was analyzed under the left-in, right-in, right-out lane control and no changes to the lane configuation on Elmwood Drive as shown in Exhibit N.

The traffic analysis results, including expected maximum queue lengths, are shown in the following exhibits.

- Exhibit I – Year 2023 Existing Traffic Operations & Queues
- Exhibit J – Year 2024 Build Traffic Operations & Queues with Existing Geometrics and Traffic Control

- Exhibit K – Year 2024 Build Traffic Operations & Queues with Anticipated Geometrics and Existing Traffic Control
- Exhibit L – Year 2024 Build Traffic Operations & Queues with Roundabout at Watertown Road and North Avenue

As shown in Exhibit I for the year 2023 existing traffic volumes, all movements currently operate at a LOS D or better, except the northbound approach on North Avenue at Watertown Road. This movement operates at a LOS E in the PM peak hour; however, there was only five vehicles counted on this approach and the 95th percentile queue is 25 feet (one vehicle). See Appendix B for existing analysis outputs.

It is important to note that during the traffic counts, there was one occasion in the late afternoon in which the westbound traffic on Watertown Road backed up from the railroad tracks through the North Avenue intersection due to a train. The analysis did not take into account traffic backups from train activity west of this intersection as this is a random occurance throughout the day and train delays and queues vary depending on the length of the train. Traffic backups related to train activity is an issue encountered; however, this report does not address this issue as it relates directly with the operations of the railroad company and the at-grade crossing. This report addresses the generated traffic from the development and not existing railroad activity concerns.

Under the build traffic volumes (Exhibit J) with existing geometrics and traffic control, all movements are expected to operate at a LOS D or better, except the northbound approach on North Avenue at Watertown Road. As shown in the existing traffic volume analysis, this movement is still expected to operate with a LOS E with slightly more delay for the northbound approach; however, the expected queue still remains at one vehicle. See Appendix C for build analysis outputs.

With the Waukesha County anticipated improvments (when funded through the HSIP program in future years) at the Watertown Road and North Avenue intersection (additional EB and WB left-turn lane on Watertown Road and a southbound right-turn lane), the build traffic analysis (Exhibit K) shows that the delays slightly improve at the Watertown Road and North Avenue intersection; however, the LOS for each approach remain the same as the existing geometric analysis. As an alternative, a separate analysis was also completed with a single lane roundabout at the intersection of Watertown Road and North Avenue, as shown in Exhibit L, if Waukesha County improves this intersection with an alternative design through the HSIP program in a few years. With a roundabout, all movements at the intersection are expected to operate at a LOS A with minimal queues. See Appendix D for roundabout analysis outputs.

All of the other study intersections are expected to operate at a LOS B or better. The South Site Driveway at North Avenue intersection was analyzed using the Waukesha County Type A intersection design shown in Exhibit H because the condominium development unit count exceeds 20-du (Waukesha County Ordinance Chapter 15, Section 15-54(c)). Due to this ordinance (which stipulates that a bypass lane shall be required when the mainline highway traffic volume exceeds 2,500-vpd.), a bypass lane was included at this driveway. This intersection is expected to operate at a LOS A with the northeast bound bypass lane. See Appendix D for build analysis outputs with anticipated improvements.

PART F – WATERTOWN & NORTH SIGNAL WARRANT ANALYSIS

Warrants should be viewed as guidelines to help determine whether traffic signal control may be installed. Meeting warrants does not translate to a legal requirement for their installation. Completed warrant analysis worksheets are included in the Appendix E.

Chapter 4C of the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) outlines the standards for determining the need for traffic signals at a particular location. For a traffic signal to be installed, the MUTCD stipulates that at least one of the following warrants must be satisfied prior to installing traffic signals. The nine signal warrants are listed below:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Hour
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal Systems
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network
- Warrant 9, Intersection Near a Grade Crossing

Warrants 1 and 2 have been evaluated for Watertown Road & North Avenue. Warrant 9 was not evaluated as it does not meet the MUTCD criteria for this warrant. The eastbound Watertown Road approach at North Avenue would need to be a stop condition and within 140-feet of the railroad crossing in order to be able to be evaluated for Warrant 9.

The MUTCD stipulates different threshold criteria based on urban speeds (less than or equal to 40 mph) and rural speeds (greater than 40 mph). The posted speed limit along both Watertown Road and North Avenue is 45 mph. Therefore, the 70-percent vehicular volume thresholds were used in this evaluation.

The warrant evaluation was performed with two different methods, with one being Watertown Road as the major street and North Avenue as the minor street and the other assuming westbound Watertown Road as the major street with one through lane and the Watertown Road eastbound left-turn lane as the minor street with one lane.

The warrant analysis was conducted using a 12-hour turning movement traffic count at Watertown Road & North Avenue from both the November 2023 traffic count for the hours of 6:00 am to 9:00 am and 3:00 pm to 6:00 pm and the July 2021 traffic count from 9:00 am to 3:00 pm. (The July 2021 midday traffic count was used since the 2021 traffic volumes were within 3% of the November 2023 traffic count volumes when comparing the morning and late afternoon hours.) Proposed generated traffic from the Ancient Oaks Condominium development were also added to the existing traffic volumes when analyzing the signal warrants.

Based on the warrant evaluation of the traffic volume warrants (Warrants #1 and #2), no signal warrants are met in either method. Even with an overall increase in traffic volumes of 10%, both Signal Warrants #1 and #2 are not met; however, Warrant # 2 is one hour shy of meeting the warrant (need an additional 50 vehicles).

PART G – RECOMMENDATION & CONCLUSION

Modifications for the study area intersections are outlined below and shown in Exhibit M.

- *Existing Traffic* – These modifications are recommended to accommodate the adjusted existing traffic volumes and are in addition to conditions as they currently exist. These improvement would be funded through Waukesha County as part of the HSIP program.
- *Development* – These modifications are recommended to mitigate the additional traffic impact of the Ancient Oaks Condominium Development.

Recommended modifications are for jurisdictional consideration and are not legally binding. Waukesha County and the City of Pewaukee reserve the right to determine alternative solutions.

Watertown Road & North Avenue

- With the existing traffic, Waukesha County is planning to construct a 200-foot-long eastbound left-turn lane, a 75-foot westbound left-turn lane, and a 150-foot southbound right-turn lane (see Exhibit G) when funded through the HSIP program in future years. Since this intersection is not shown to meet traffic signal warrants based on the existing and new development traffic, a single-lane roundabout is an alternative that would also work operationally at this intersection. (A roundabout was not investigated as far as how much additional right-of-way is needed to be constructed, and would be an option the County could consider if it is HSIP eligible for funding of the intersection improvements.)
- With the development traffic, no additional modifications are being proposed. Note that the proposed development does not significantly add traffic to the intersection and does not trigger the need for the modifications at the Watertown Road & North Avenue intersection.

North Avenue & Elmwood Drive

- No modifications are being proposed with the development traffic.

North Avenue & South Site Driveway

- Construct the Driveway at the location as shown in Exhibit B (Conceptual Site Plan). Per Waukesha County Ordinance Chapter 15, Section 15-55(a), construct an eastbound bypass lane of 250 feet and a 50-foot westbound right-turn lane on North Avenue.
- Construct one shared left-turn/right-turn lane on the Driveway southbound approach. Install a stop sign to control the southbound approach. Intersection sight distance was not checked and should be verified by the site designer.

Elmwood Drive & North Site Driveway

- Construct the north site driveway approximately 1,000 feet north of North Avenue within the existing access right-of-way. The driveway will be a left-in, right-in, right-out access; therefore, a right-turn island (to prohibit left turns) is recommended to be

constructed as shown in Exhibit N along with signing and pavement markings. Additional dedicated turn lanes are not necessary.

Except where noted, all movements are expected to operate at LOS D or better conditions with the recommended modifications.

Should any questions or comments arise, please feel free to contact Daniel Bieberitz, P.E. PTOE of TADI at 614-483-1297 or dbieberitz@tadi-us.com.

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EXHIBIT A
SITE LOCATION MAP

PEWAUKEE, WISCONSIN

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EXHIBIT B
CONCEPTUAL SITE PLAN

PEWAUKEE, WISCONSIN

LEGEND

- Stop Sign
- Lane Configuration
- XX' Distance Between Intersections (C-C, in Feet)

N

NOT TO SCALE

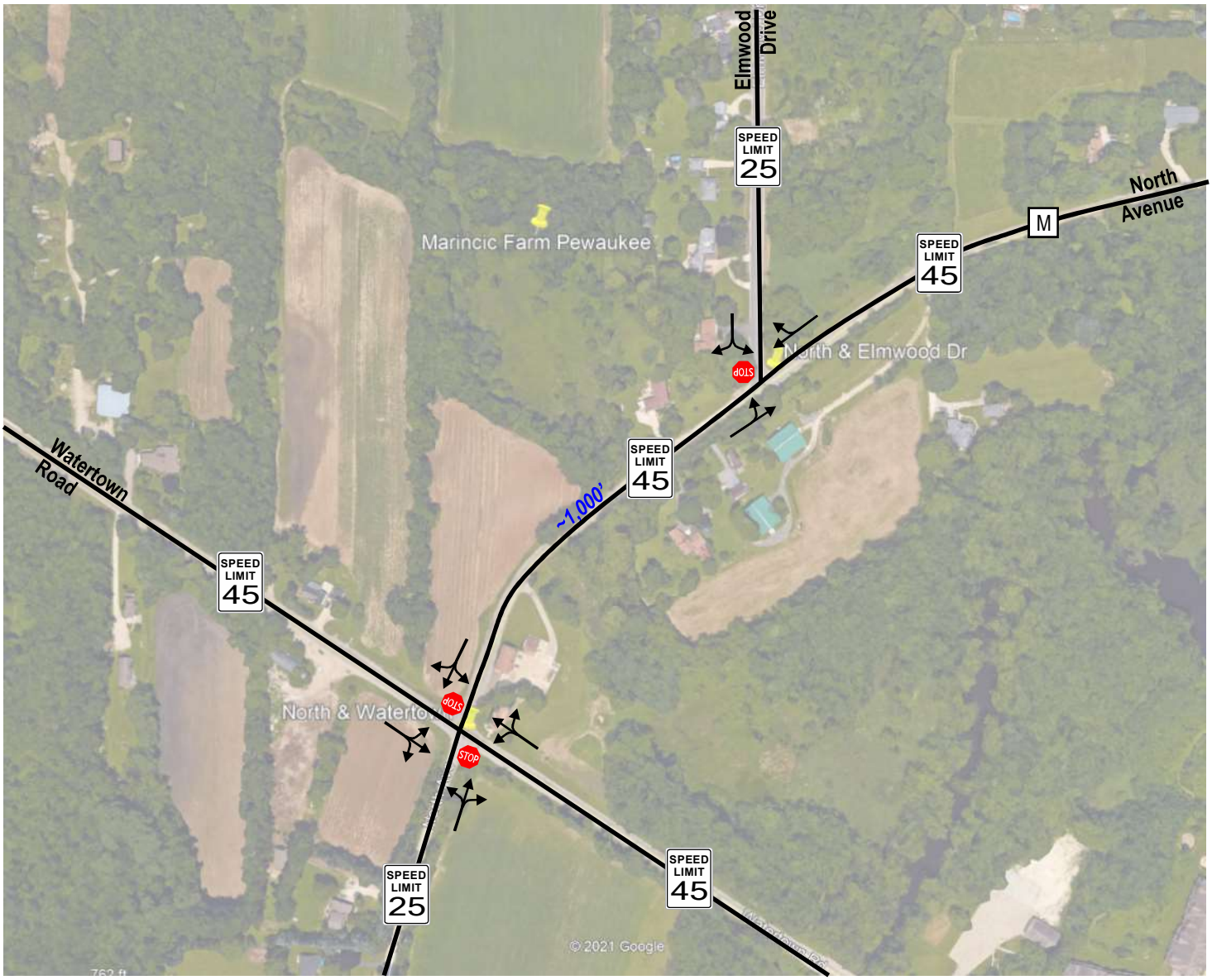

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EXHIBIT C
EXISTING TRANSPORTATION DETAIL

PEWAUKEE, WISCONSIN

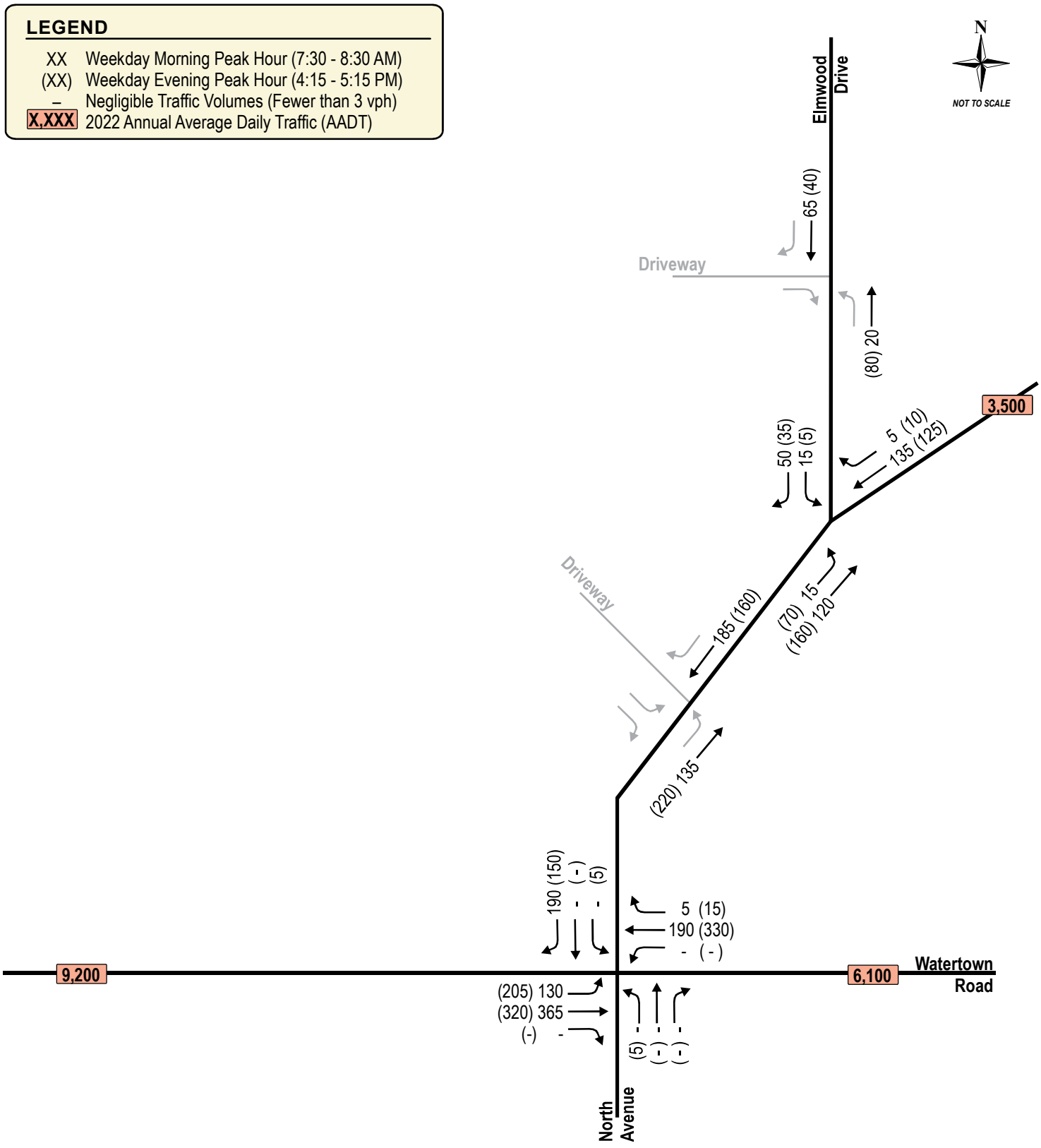

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EXHIBIT D
YEAR 2023 EXISTING TRAFFIC VOLUMES

PEWAUKEE, WISCONSIN

LEGEND

XX	Weekday Morning Peak Hour (7:30 - 8:30 AM)
(XX)	Weekday Evening Peak Hour (4:15 - 5:15 PM)
-	Fewer than 2 vehicles per hour

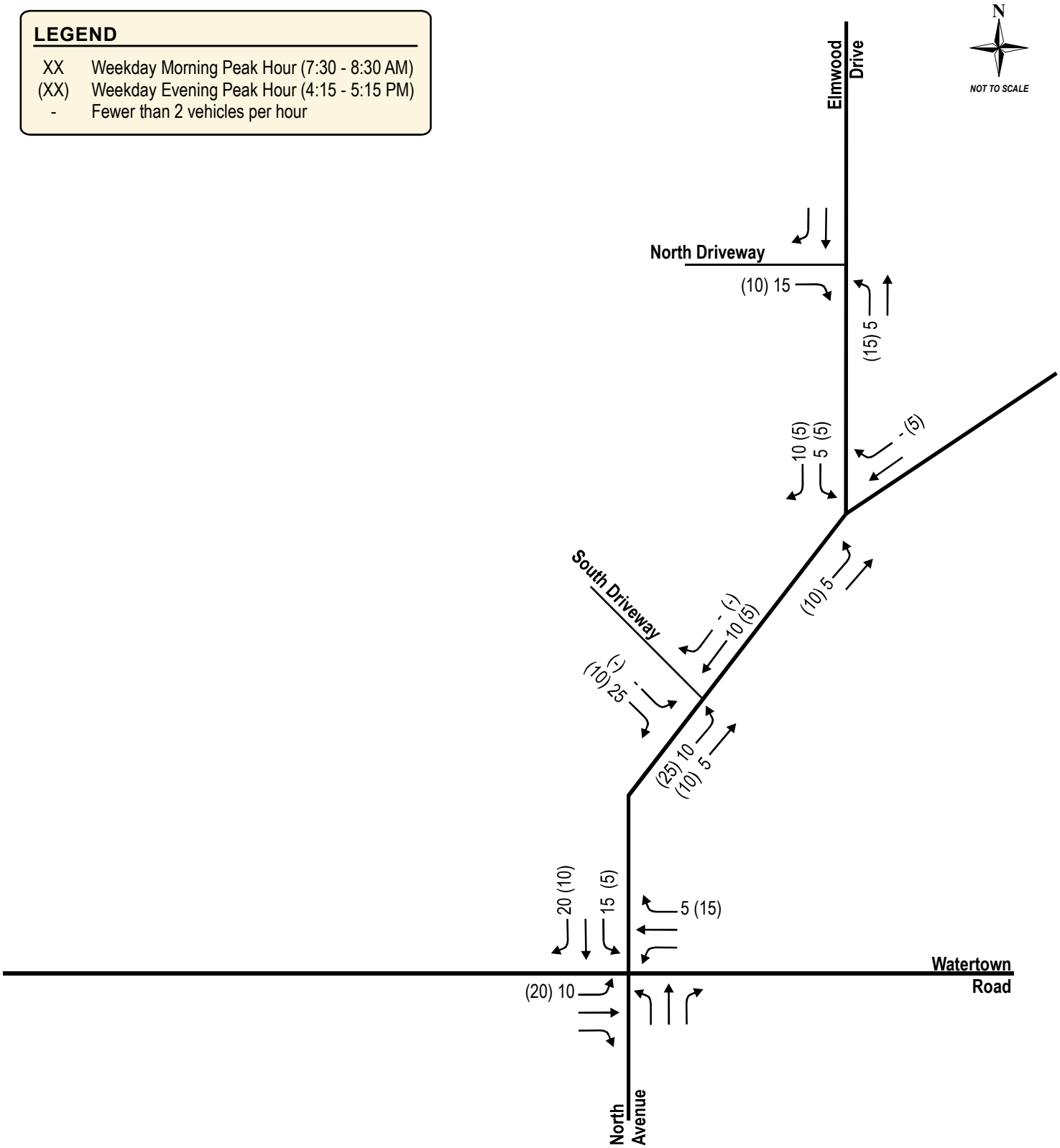

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EXHIBIT E
PROPOSED DRIVEWAY NEW TRIPS

PEWAUKEE, WISCONSIN

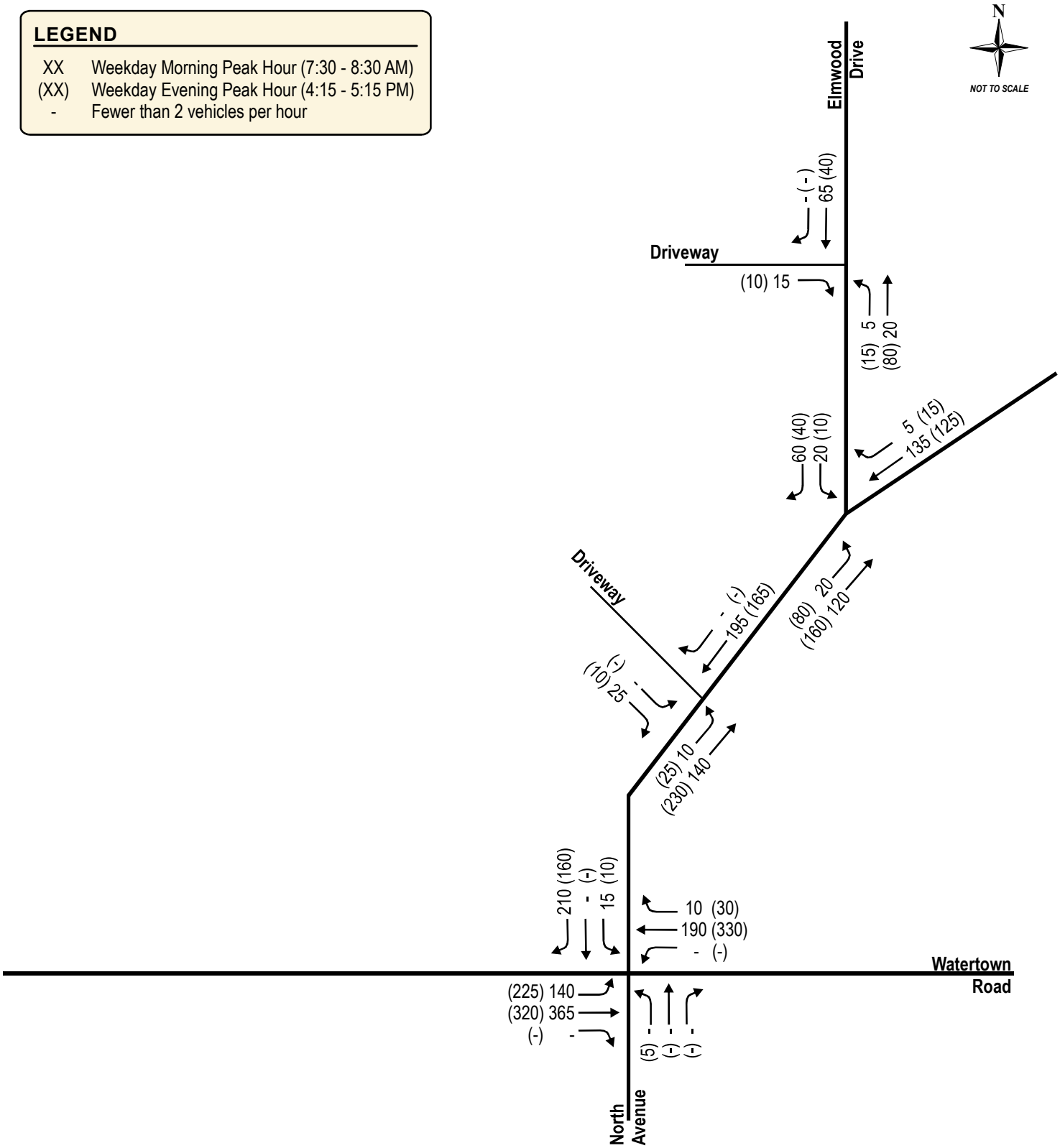

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EXHIBIT F
YEAR 2024 BUILD TRAFFIC

PEWAUKEE, WISCONSIN

N

NOT TO SCALE

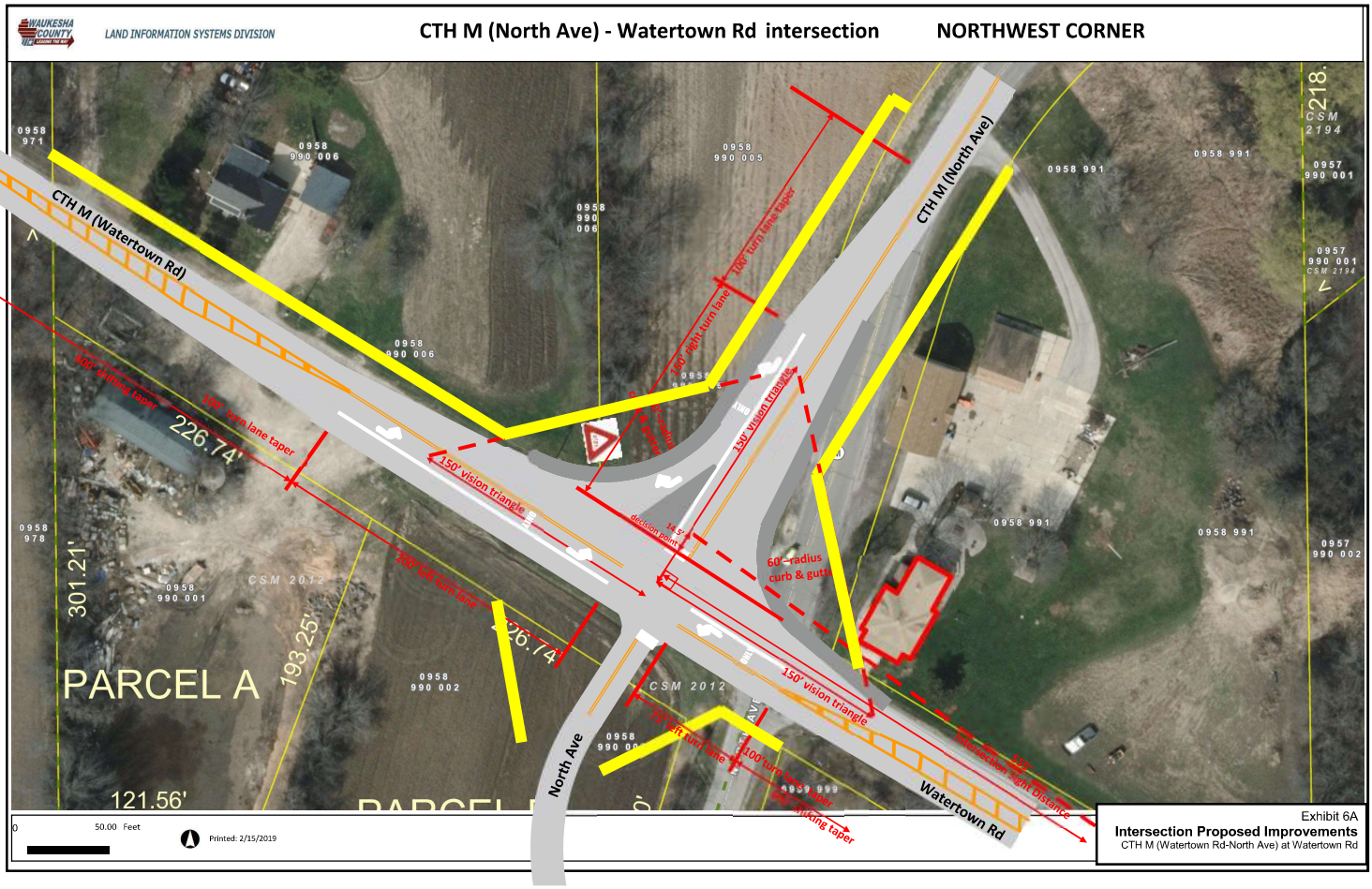

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EXHIBIT G
COUNTY CONCEPTUAL LAYOUT FOR WATERTOWN RD. & NORTH AVE. FUTURE IMPROVEMENTS

PEWAUKEE, WISCONSIN

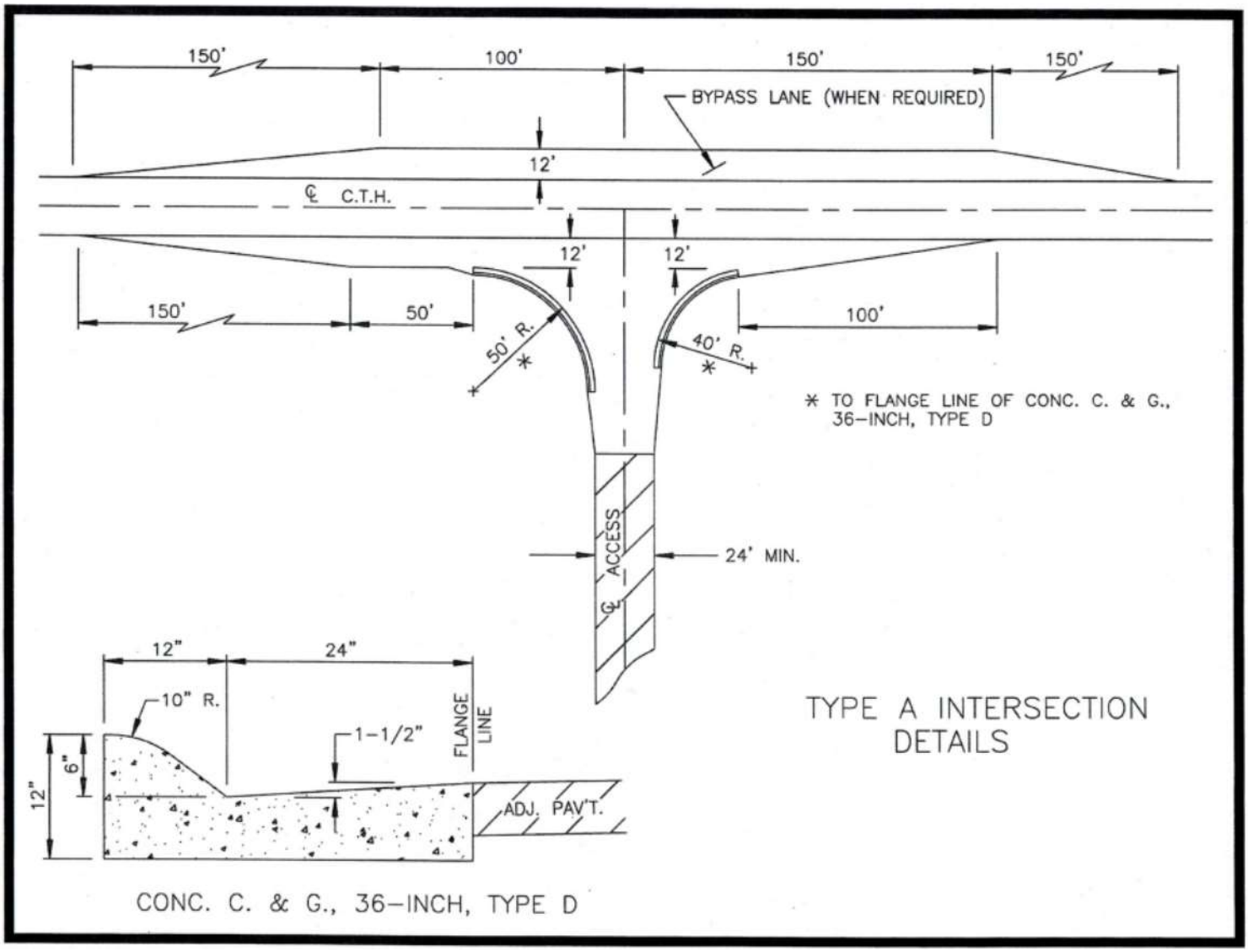

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EXHIBIT H
WAUKESHA COUNTY TYPE A INTERSECTION DETAILS

PEWAUKEE, WISCONSIN

Year 2023 Existing Traffic Peak Hour Operating Conditions

With Existing Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
#100: Watertown Road & North Avenue *(Existing Configuration)* *Stop Sign Control (NB/SB)*		*Lanes->*	*1*			*1*			*1*			*1*		*1 **	
	AM	LOS	A			A			D			D		B	A
		Delay	8.2			8.4			27.8			33		13	3.8
		Queue	25'			25'			25'			25'		30'	
	PM	LOS	A			A			E			D		B	A
		Delay	8.7			7.9			35.9			30		11.8	3.8
		Queue	25'			25'			25'			25'		25'	
#300: North Avenue & Elmwood Drive *Stop Sign Control (SB)*		*Lanes->*	*1*	-	-	*1*		-	-	-		*1*			
	AM	LOS	A	-	-	*		-	-	-		A			A
		Delay	7.6	-	-	*		-	-	-		9.8			2.2
		Queue	25'	-	-	*		-	-	-		25'			
	PM	LOS	A	-	-	*		-	-	-		A			A
		Delay	7.6	-	-	*		-	-	-		9.6			2.3
		Queue	25'	-	-	*		-	-	-		25'			

* A short right-turn lane was included due to the wide approach.

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.

Delay is reported in seconds. Queue is the 95th percentile queue, measured in feet.

Year 2024 Build Traffic Peak Hour Operating Conditions

With Existing Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
#100: Watertown Road & North Avenue *(Existing Configuration)* *Stop Sign Control (NB/SB)*		*Lanes->*	*1*			*1*			*1*			*1*		*1*	
	AM	LOS	A			A			D			D		B	A
		Delay	8.2			8.4			30.3			27.7		11.7	4.4
		Queue	25'			25'			25'			25'		35'	
	PM	LOS	A			A			E			D		B	A
		Delay	8.8			7.9			40.4			34.1		12	4.2
		Queue	25'			25'			25'			25'		25'	
#200: North Avenue & South Site Driveway *Stop Sign Control (SB)*		*Lanes->*	*1*		-	-	*1*	-	-	-	*1*				
	AM	LOS	A		-	-	*	-	-	-	A				A
		Delay	7.7		-	-	*	-	-	-	9.7				0.9
		Queue	25'		-	-	*	-	-	-	25'				
	PM	LOS	A		-	-	*	-	-	-	A				A
		Delay	7.6		-	-	*	-	-	-	9.5				0.7
		Queue	25'		-	-	*	-	-	-	25'				
#300: North Avenue & Elmwood Drive *Stop Sign Control (SB)*		*Lanes->*	*1*		-	-	*1*	-	-	-	*1*				
	AM	LOS	A		-	-	*	-	-	-	B				A
		Delay	7.6		-	-	*	-	-	-	10				2.7
		Queue	25'		-	-	*	-	-	-	25'				
	PM	LOS	A		-	-	*	-	-	-	B				A
		Delay	7.7		-	-	*	-	-	-	10				2.6
		Queue	25'		-	-	*	-	-	-	25'				
#400: Elmwood Drive & North Site Driveway *Stop Sign Control (SB)*		*Lanes->*	-	-	*1*	-	-	-	*1*			-			
	AM	LOS	-	-	A	-	-	-	A			*			A
		Delay	-	-	8.7	-	-	-	7.4			*			1.6
		Queue	-	-	25'	-	-	-	0'			*			
	PM	LOS	-	-	A	-	-	-	A			*			A
		Delay	-	-	8.5	-	-	-	7.3			*			1.4
		Queue	-	-	25'	-	-	-	0'			*			

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Delay is reported in seconds. Queue is the 95th percentile queue, measured in feet.

Year 2024 Build Traffic Peak Hour Operating Conditions
With Anticipated Geometrics and Existing Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
#100: Watertown Road & North Avenue *(Planned Configuration)* *Stop Sign Control (NB/SB)*		*Lanes->*	*1*		*1*	*1*				*1*			*1*		
	AM	LOS	A		*	A		*		D		D		B	A
		Delay	8.2		*	8.4		*		29.3		26.7		11.7	4.4
		Queue	25'		*	25'		*		25'		25'		35'	
	PM	LOS	A		*	A		*		E		D		B	A
		Delay	8.8		*	7.9		*		38.8		32.8		12	4.1
		Queue	25'		*	25'		*		25'		25'		25'	
#200: North Avenue & South Site Driveway *Stop Sign Control (SB)*		*Lanes->*	*1*	*1*	-	-	*1*	*1*	-	-	-		*1*		
	AM	LOS	A	*	-	-	*	*	-	-	-		A		A
		Delay	7.7	*	-	-	*	*	-	-	-		9.7		0.9
		Queue	25'	*	-	-	*	*	-	-	-		25'		
	PM	LOS	A	*	-	-	*	*	-	-	-		A		A
		Delay	7.6	*	-	-	*	*	-	-	-		9.5		0.7
		Queue	25'	*	-	-	*	*	-	-	-		25'		
#300: North Avenue & Elmwood Drive *Stop Sign Control (SB)*		*Lanes->*	*1*		-	-	*1*		-	-	-		*1*		
	AM	LOS	A		-	-	*		-	-	-		B		A
		Delay	7.6		-	-	*		-	-	-		10		2.7
		Queue	25'		-	-	*		-	-	-		25'		
	PM	LOS	A		-	-	*		-	-	-		B		A
		Delay	7.7		-	-	*		-	-	-		10		2.6
		Queue	25'		-	-	*		-	-	-		25'		
#400: Elmwood Drive & North Site Driveway *Stop Sign Control (SB)*		*Lanes->*	-	-	*1*	-	-	-	*1*			-			
	AM	LOS	-	-	A	-	-	-	A			*			A
		Delay	-	-	8.7	-	-	-	7.4			*			1.6
		Queue	-	-	25'	-	-	-	0'			*			
	PM	LOS	-	-	A	-	-	-	A			*			A
		Delay	-	-	8.5	-	-	-	7.3			*			1.4
		Queue	-	-	25'	-	-	-	0'			*			

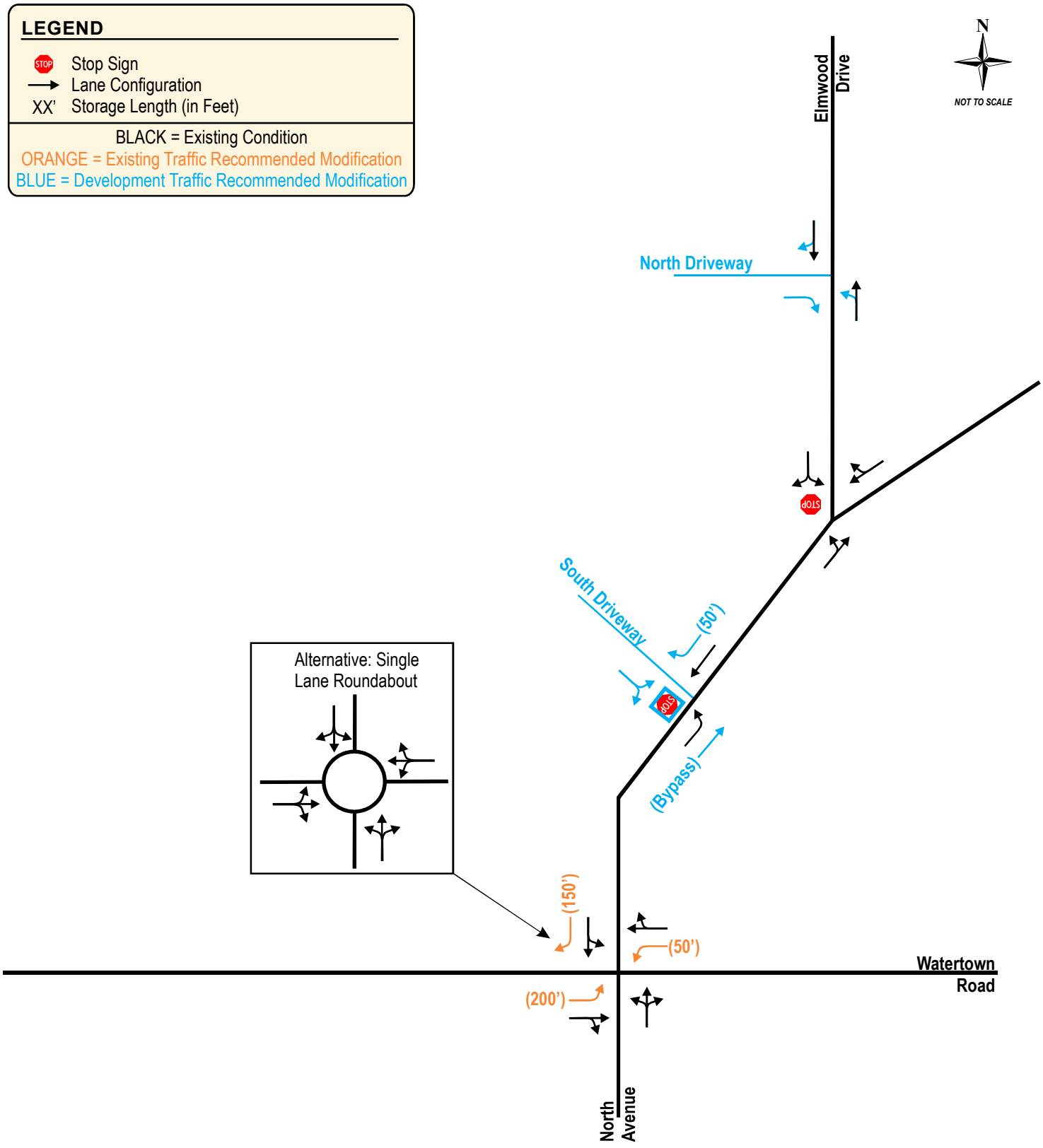
(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Delay is reported in seconds. Queue is the 95th percentile queue, measured in feet.

Year 2024 Build Traffic Peak Hour Operating Conditions

With Roundabout at Watertown Road & North Avenue

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
#100: Watertown Road & North Avenue *Roundabout Control*		*Lanes->*	*1*			*1*			*1*			*1*			
	AM	LOS	A			A			A			A			A
		Delay	8			5.6			5.1			6.0			7.0
		Queue	70'			25'			25'			30'			
	PM	LOS	A			A			A			A			A
		Delay	7			6.9			4.7			5.6			6.7
		Queue	60'			40'			25'			25'			

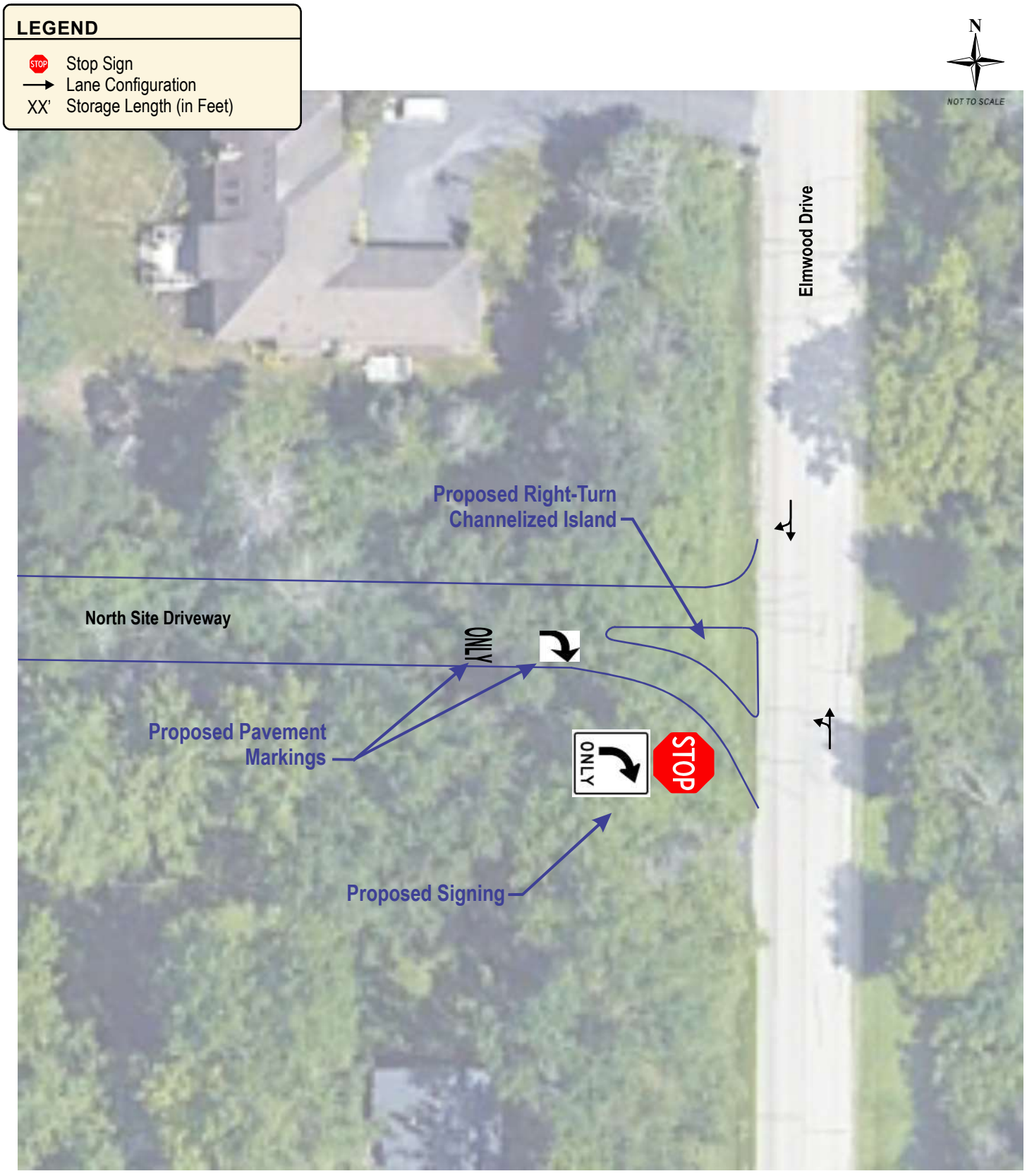
Delay is reported in seconds. Queue is the 95th percentile queue, measured in feet.



TRAFFIC ANALYSIS & DESIGN, INC.
3172; 11/20/2023

EXHIBIT M
RECOMMENDED MODIFICATIONS

PEWAUKEE, WISCONSIN



TRAFFIC ANALYSIS & DESIGN, INC.
3172; 11/20/2023

EXHIBIT N
NORTH SITE DRIVEWAY
RECOMMENDED MODIFICATIONS

PEWAUKEE, WISCONSIN

Appendix A
Traffic Counts

Intersection Traffic Volume Report

Count Basics	Version 2023.10		Page 1 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Major St: **Watertown Road**
Minor St: **CTH M - North Avenue**
Intersection of: ***Watertown Road & CTH M - North Avenue*** **IX_ID:**

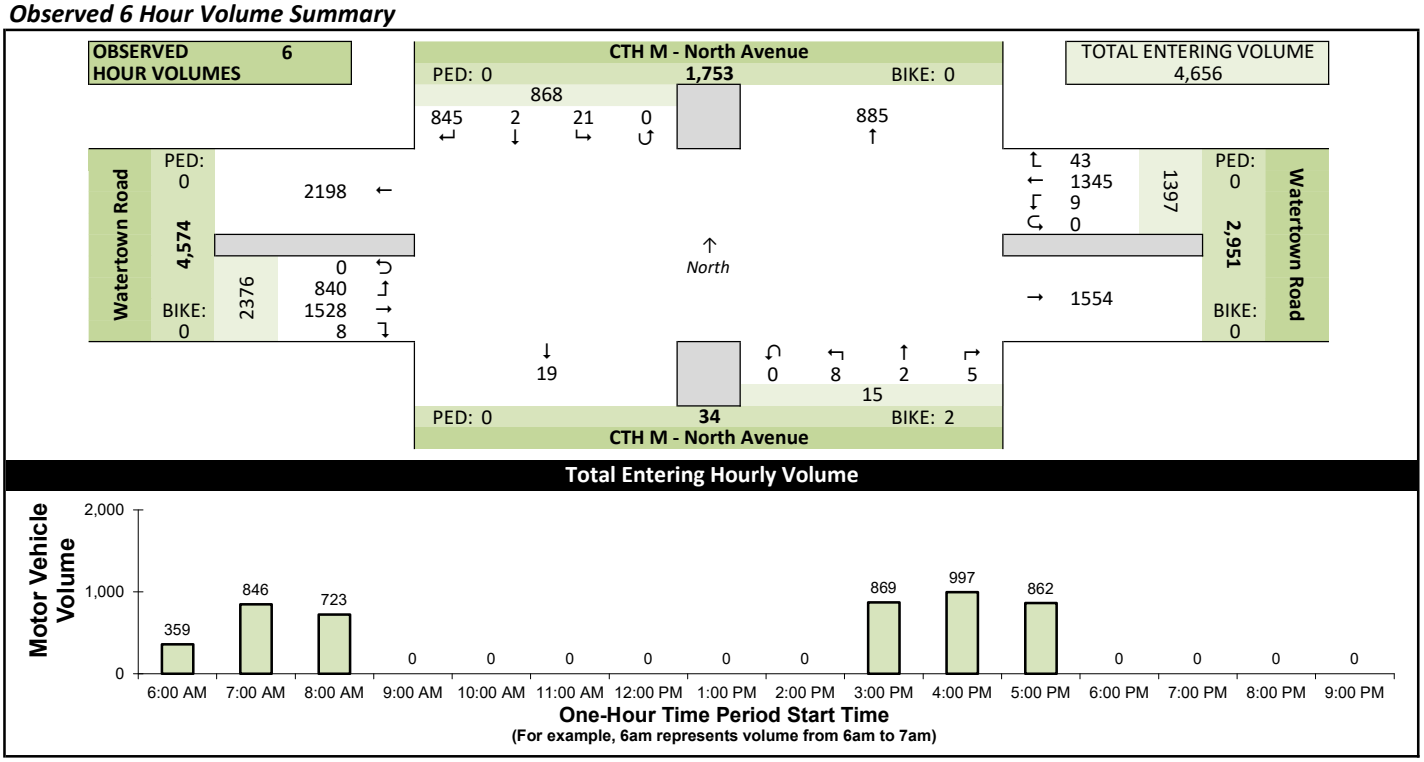
Site Information

Municipality	City of Pewaukee		
County	67 - Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	CTH M - North Avenue		
East Leg	Watertown Road		
South Leg	CTH M - North Avenue		
West Leg	Watertown Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

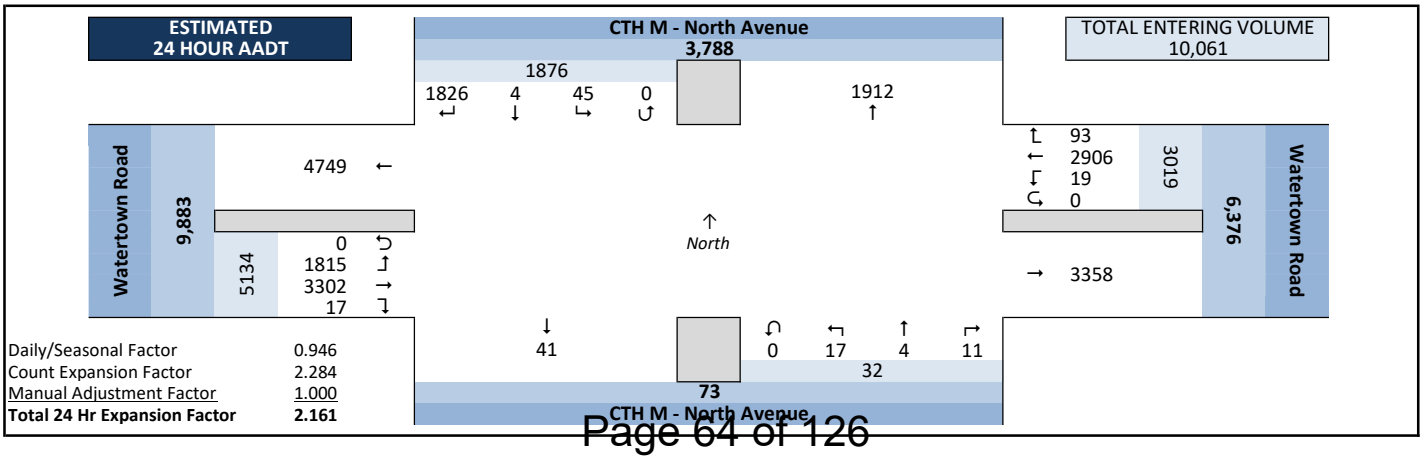
Count Information

Hrs Counted:	06:00 AM-09:00 AM and 03:00 PM-06:00 PM				
1st Day of Count	Monday, November 20, 2023			Weather	
AM Peak Period	Tuesday, November 21, 2023			Clear & Dry	
Midday Peak Period	Tuesday, November 21, 2023			Clear & Dry	
PM Peak Period	Monday, November 20, 2023			Clear & Dry	
Calculated Peak Hours					
AM	7:30-8:30am	MD		PM	4:15-5:15pm
Peak Hours Selected for Analysis					
AM	7:30-8:30am	MD		PM	4:15-5:15pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.946	Count Expansion Factor	2.284		
Company Name	TADI			Manual Adj.	1.000
Observers	AM Peak Period	Amy Scheuerlein			
	Midday Peak Period	None			
	PM Peak Period	Amy Scheuerlein			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 6 Hour Volume Summary



Estimated 24 Hour AADT



Daily/Seasonal Factor	0.946
Count Expansion Factor	2.284
Manual Adjustment Factor	1.000
Total 24 Hr Expansion Factor	**2.161**

Intersection Traffic Volume Report

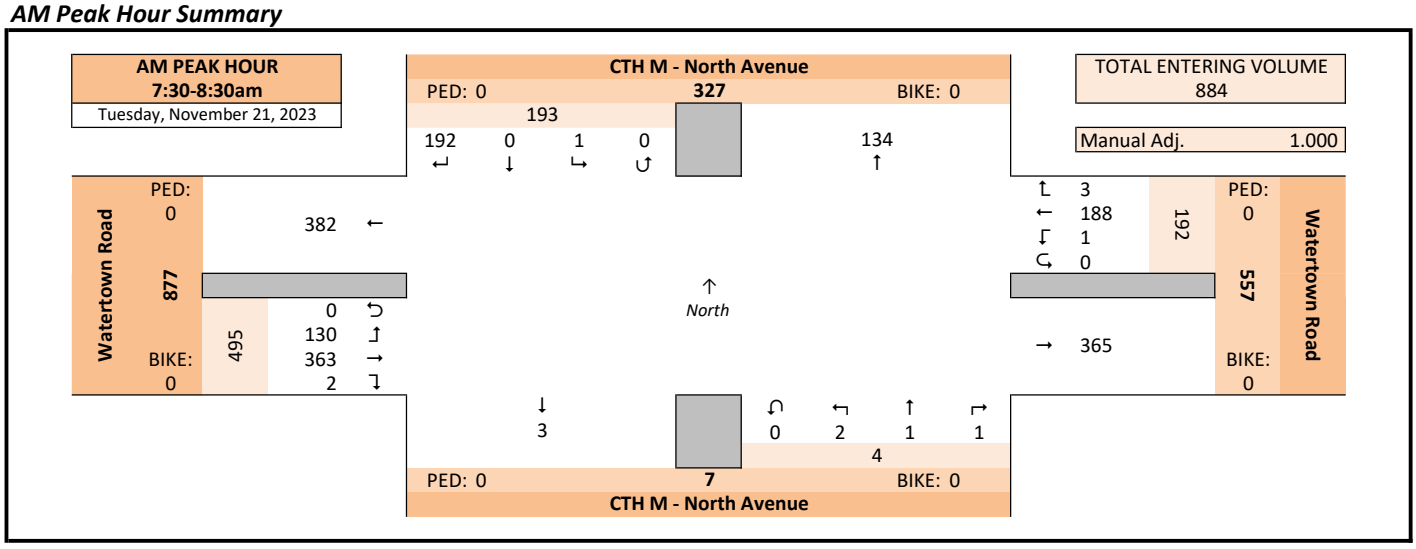
Peak Hour Volume Graphical Summary

Watertown Road & CTH M - North Avenue

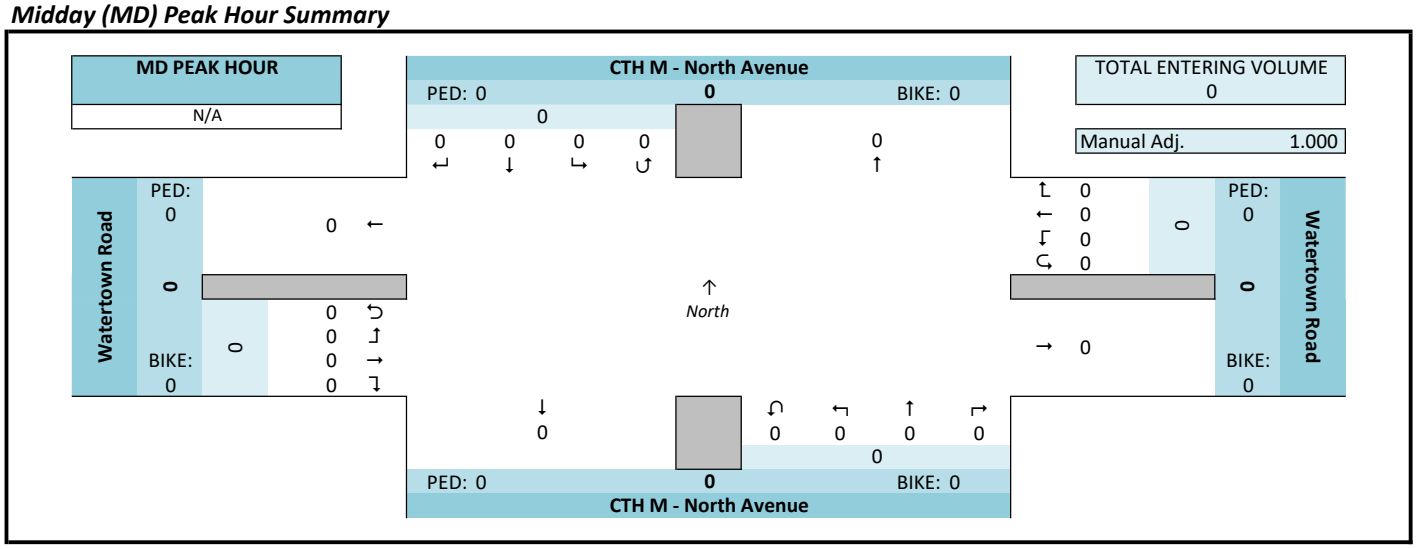
Count Basics			*Page 2 of 13*
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

All Motor Vehicles

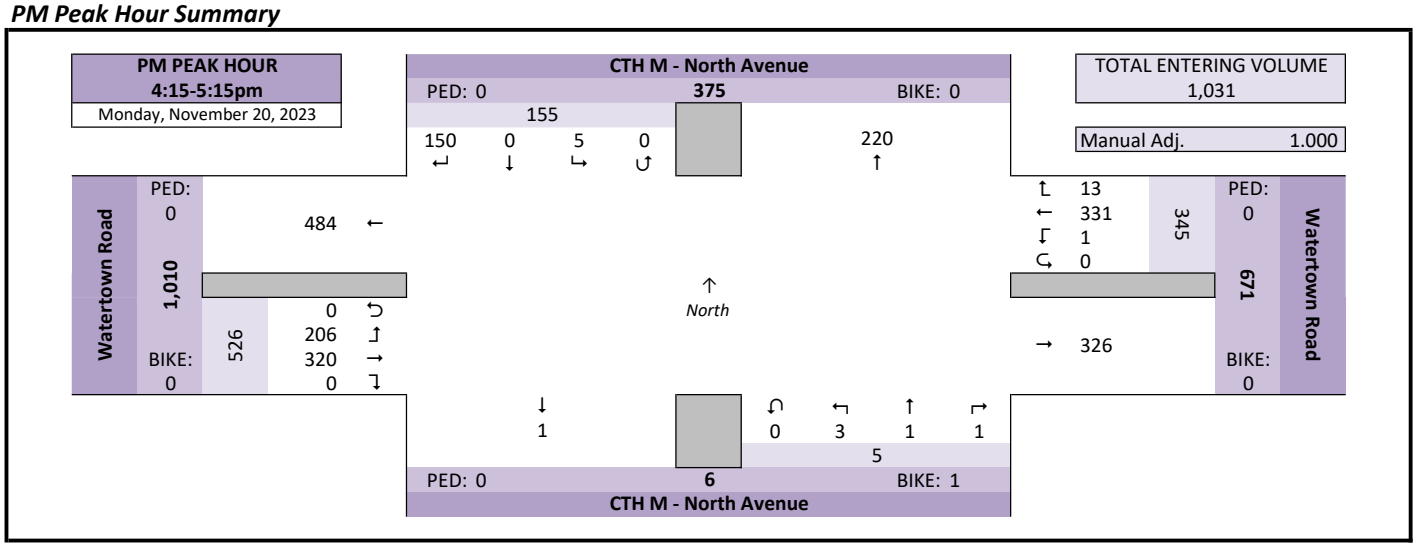
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Summary

Watertown Road & CTH M - North Avenue

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, November 21, 2023		From North					From East					From South					From West					
	AM Peak Hour	CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown 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
AM Peak Hour	7:30 AM	46	0	0	0	46	0	60	0	0	60	0	0	1	0	1	0	84	38	0	122	229
	7:45 AM	59	0	1	0	60	2	55	1	0	58	1	0	1	0	2	1	112	39	0	152	272
	8:00 AM	41	0	0	0	41	0	36	0	0	36	0	0	0	0	0	0	78	26	0	104	181
	8:15 AM	46	0	0	0	46	1	37	0	0	38	0	1	0	0	1	1	89	27	0	117	202
	Peak Hour Volume	192	0	1	0	193	3	188	1	0	192	1	1	2	0	4	2	363	130	0	495	884
	Rounded Hourly Volume	190	0	0	0	190	5	190	0	0	195	0	0	0	0	0	0	365	130	0	495	880
	% Single Unit Trucks	1.6	0.0	0.0	0.0	1.6	33.3	8.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.6	0.0	4.6	4.8
	% Heavy Trucks	1.0	0.0	0.0	0.0	1.0	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.4	1.2
	% Trucks (Total)	2.6	0.0	0.0	0.0	2.6	33.3	9.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	6.6	4.6	0.0	6.1	6.0
	Peak Hour Factor (PHF)	0.81	0.00	0.25	0.00	0.80	0.37	0.78	0.25	0.00	0.80	0.25	0.25	0.50	0.00	0.50	0.50	0.81	0.83	0.00	0.81	0.81

N/A		From North					From East					From South					From West					
	MD Peak Hour	CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown 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
Midday (MD) Peak Hour	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
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% 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	0.0	0.0	0.0	0.0	0.0
	% 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	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monday, November 20, 2023		From North					From East					From South					From West					
	PM Peak Hour	CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown 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
PM Peak Hour	4:15 PM	32	0	3	0	35	3	67	1	0	71	0	1	0	0	1	0	97	44	0	141	248
	4:30 PM	36	0	0	0	36	4	83	0	0	87	0	0	2	0	2	0	76	69	0	145	270
	4:45 PM	40	0	2	0	42	2	92	0	0	94	1	0	1	0	2	0	66	43	0	109	247
	5:00 PM	42	0	0	0	42	4	89	0	0	93	0	0	0	0	0	0	81	50	0	131	266
	Peak Hour Volume	150	0	5	0	155	13	331	1	0	345	1	1	3	0	5	0	320	206	0	526	1031
	Rounded Hourly Volume	150	0	5	0	155	15	330	0	0	345	0	0	5	0	5	0	320	205	0	525	1030
	% Single Unit Trucks	2.7	0.0	20.0	0.0	3.2	0.0	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.5	0.0	2.7	2.1
	% 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	0.6	0.0	0.0	0.4	0.2
	% Trucks (Total)	2.7	0.0	20.0	0.0	3.2	0.0	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.5	0.0	3.0	2.3
	Peak Hour Factor (PHF)	0.89	0.00	0.42	0.00	0.92	0.81	0.90	0.25	0.00	0.92	0.25	0.25	0.37	0.00	0.62	0.00	0.82	0.75	0.00	0.91	0.95

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		CTH M - North Avenue			Watertown Road			CTH M - North Avenue			Watertown Road			
	15-Minute Start Time	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	0	0	0	0
	7:45 AM	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
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	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
	12:30 PM	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
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1
	4:45 PM	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
	Total	0	0	0	0	0	0	0	1	1	0	0	0	1

Intersection Traffic Volume Report

Count Basics		*Page 4 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

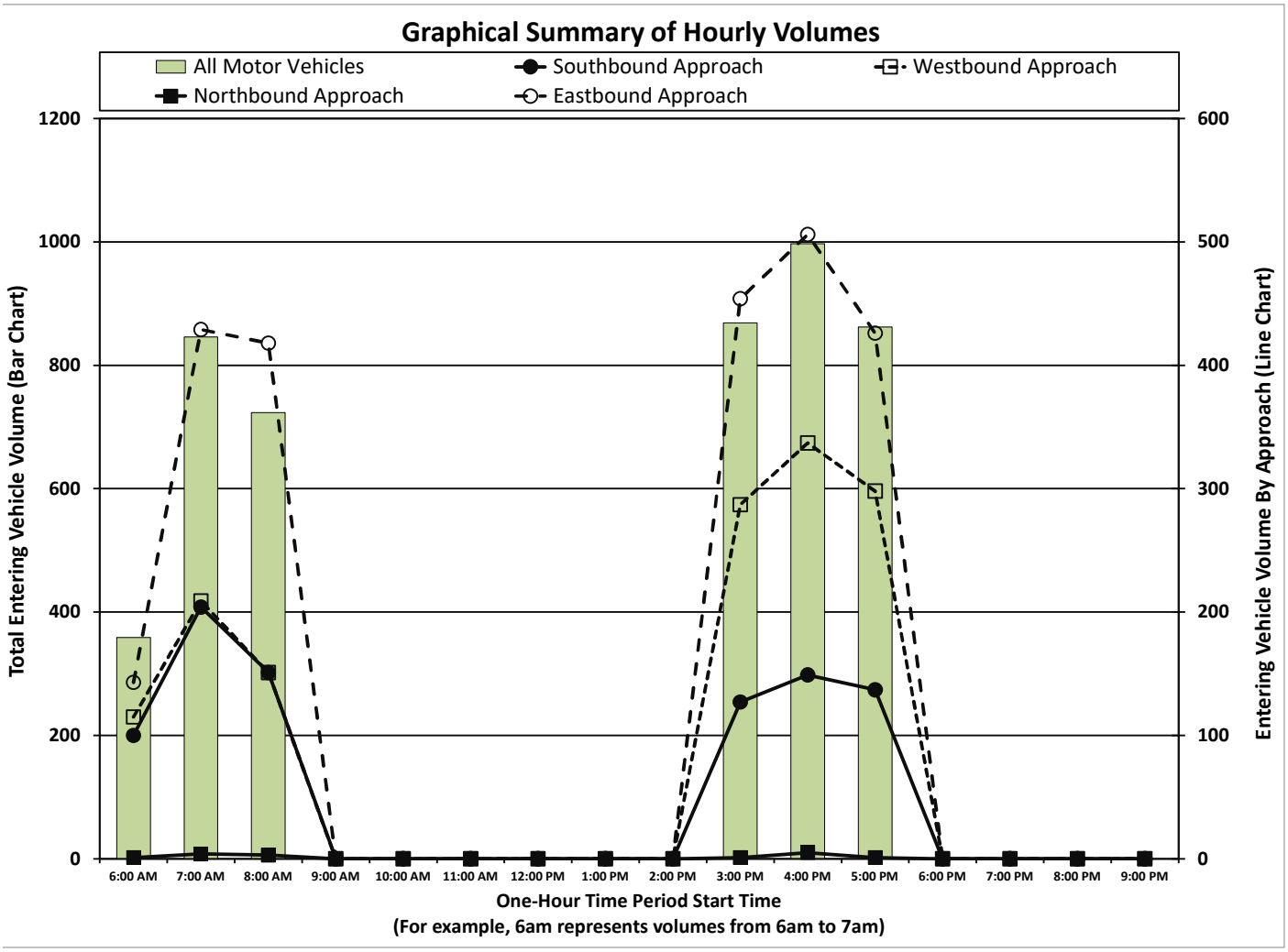
Hourly Volume Summary - Motor Vehicle Data

Watertown Road & CTH M - North Avenue

All Motor Vehicles

One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown 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	94	1	5	0	100	2	113	0	0	115	0	0	1	0	1	0	112	31	0	143	359	258	101
	7:00 AM	199	0	5	0	204	4	201	4	0	209	2	0	2	0	4	1	305	123	0	429	846	638	208
	8:00 AM	151	0	0	0	151	1	150	0	0	151	0	1	2	0	3	3	292	123	0	418	723	569	154
	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
MD	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
	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
	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
	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
PM	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
	3:00 PM	124	0	3	0	127	11	272	4	0	287	1	0	0	0	1	2	265	187	0	454	869	741	128
	4:00 PM	143	0	6	0	149	9	327	1	0	337	1	1	3	0	5	2	306	198	0	506	997	843	154
	5:00 PM	134	1	2	0	137	16	282	0	0	298	1	0	0	0	1	0	248	178	0	426	862	724	138
	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
	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		845	2	21	0	868	43	1345	9	0	1397	5	2	8	0	15	8	1528	840	0	2376	4656	3773	883



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Watertown Road & CTH M - North Avenue

Count Basics		*Page 5 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

All Motor Vehicles

15-Minute Motor Vehicle Data

	15-Minute Time Period	From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					15-Min	Hourly	
	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	Sum	PHF
AM Peak Period	6:00 AM	8	1	0	0	9	0	20	0	0	20	0	0	0	0	0	0	13	4	0	17	46	359	0.64
	6:15 AM	20	0	0	0	20	0	29	0	0	29	0	0	0	0	0	0	17	7	0	24	73	463	0.77
	6:30 AM	26	0	0	0	26	1	30	0	0	31	0	0	1	0	1	0	32	9	0	41	99	585	0.75
	6:45 AM	40	0	5	0	45	1	34	0	0	35	0	0	0	0	0	0	50	11	0	61	141	715	0.78
	7:00 AM	51	0	1	0	52	2	31	1	0	34	1	0	0	0	1	0	47	16	0	63	150	846	0.78
	7:15 AM	43	0	3	0	46	0	55	2	0	57	0	0	0	0	0	0	62	30	0	92	195	877	0.81
	7:30 AM	46	0	0	0	46	0	60	0	0	60	0	0	1	0	1	0	84	38	0	122	229	884	0.81
	7:45 AM	59	0	1	0	60	2	55	1	0	58	1	0	1	0	2	1	112	39	0	152	272	828	0.76
	8:00 AM	41	0	0	0	41	0	36	0	0	36	0	0	0	0	0	0	78	26	0	104	181	723	0.89
	8:15 AM	46	0	0	0	46	1	37	0	0	38	0	1	0	0	1	1	89	27	0	117	202		
	8:30 AM	34	0	0	0	34	0	40	0	0	40	0	0	1	0	1	1	64	33	0	98	173		
	8:45 AM	30	0	0	0	30	0	37	0	0	37	0	0	1	0	1	1	61	37	0	99	167		
	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	28	0	2	0	30	4	75	1	0	80	1	0	0	0	1	1	51	48	0	100	211	869	0.95
	3:15 PM	33	0	1	0	34	2	59	3	0	64	0	0	0	0	0	1	69	45	0	115	213	890	0.96
	3:30 PM	35	0	0	0	35	2	66	0	0	68	0	0	0	0	0	0	79	46	0	125	228	925	0.93
	3:45 PM	28	0	0	0	28	3	72	0	0	75	0	0	0	0	0	0	66	48	0	114	217	967	0.90
	4:00 PM	35	0	1	0	36	0	85	0	0	85	0	0	0	0	0	2	67	42	0	111	232	997	0.92
	4:15 PM	32	0	3	0	35	3	67	1	0	71	0	1	0	0	1	0	97	44	0	141	248	1031	0.95
	4:30 PM	36	0	0	0	36	4	83	0	0	87	0	0	2	0	2	0	76	69	0	145	270	1019	0.94
	4:45 PM	40	0	2	0	42	2	92	0	0	94	1	0	1	0	2	0	66	43	0	109	247	926	0.87
	5:00 PM	42	0	0	0	42	4	89	0	0	93	0	0	0	0	0	0	81	50	0	131	266	862	0.81
	5:15 PM	37	0	0	0	37	5	71	0	0	76	1	0	0	0	1	0	71	51	0	122	236		
	5:30 PM	24	0	1	0	25	3	67	0	0	70	0	0	0	0	0	0	41	41	0	82	177		
	5:45 PM	31	1	1	0	33	4	55	0	0	59	0	0	0	0	0	0	55	36	0	91	183		
	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		845	2	21	0	868	43	1345	9	0	1397	5	2	8	0	15	8	1528	840	0	2376	4656		

Peak Hour All Vehicle Volume Summary

	Hourly Time Period	From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					Total Hourly	
	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	Volume	PHF
AM	7:30 AM	192	0	1	0	193	3	188	1	0	192	1	1	2	0	4	2	363	130	0	495	884	0.81
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:15 PM	150	0	5	0	155	13	331	1	0	345	1	1	3	0	5	0	320	206	0	526	1031	0.95

Intersection Traffic Volume Report

Count Basics			Page 6 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Automobile Data

Watertown Road & CTH M - North Avenue

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

15-Minute Time Period		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					15-Min	Hourly
	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	Sum
AM Peak Period	6:00 AM	8	1	0	0	9	0	20	0	0	20	0	0	0	0	0	0	13	4	0	17	46	346
	6:15 AM	20	0	0	0	20	0	27	0	0	27	0	0	0	0	0	0	17	7	0	24	71	448
	6:30 AM	26	0	0	0	26	1	27	0	0	28	0	0	1	0	1	0	32	8	0	40	95	564
	6:45 AM	36	0	5	0	41	1	32	0	0	33	0	0	0	0	0	0	49	11	0	60	134	684
	7:00 AM	51	0	1	0	52	2	30	1	0	33	1	0	0	0	1	0	46	16	0	62	148	811
	7:15 AM	42	0	3	0	45	0	53	2	0	55	0	0	0	0	0	0	59	28	0	87	187	833
	7:30 AM	45	0	0	0	45	0	49	0	0	49	0	0	1	0	1	0	82	38	0	120	215	831
	7:45 AM	59	0	1	0	60	2	54	1	0	57	1	0	1	0	2	1	103	38	0	142	261	779
	8:00 AM	38	0	0	0	38	0	35	0	0	35	0	0	0	0	0	0	73	24	0	97	170	674
	8:15 AM	45	0	0	0	45	0	33	0	0	33	0	1	0	0	1	1	81	24	0	106	185	
	8:30 AM	32	0	0	0	32	0	38	0	0	38	0	0	1	0	1	1	60	31	0	92	163	
	8:45 AM	30	0	0	0	30	0	33	0	0	33	0	0	1	0	1	1	57	34	0	92	156	
	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	25	0	2	0	27	4	70	1	0	75	1	0	0	0	1	1	50	47	0	98	201	830
	3:15 PM	29	0	1	0	30	2	55	2	0	59	0	0	0	0	0	1	66	45	0	112	201	855
	3:30 PM	34	0	0	0	34	2	61	0	0	63	0	0	0	0	0	0	78	43	0	121	218	893
	3:45 PM	28	0	0	0	28	3	72	0	0	75	0	0	0	0	0	0	64	43	0	107	210	936
	4:00 PM	34	0	1	0	35	0	85	0	0	85	0	0	0	0	0	2	63	41	0	106	226	970
	4:15 PM	31	0	2	0	33	3	66	1	0	70	0	1	0	0	1	0	91	44	0	135	239	1007
	4:30 PM	34	0	0	0	34	4	83	0	0	87	0	0	2	0	2	0	70	68	0	138	261	1002
	4:45 PM	39	0	2	0	41	2	91	0	0	93	1	0	1	0	2	0	65	43	0	108	244	912
	5:00 PM	42	0	0	0	42	4	88	0	0	92	0	0	0	0	0	0	79	50	0	129	263	850
	5:15 PM	37	0	0	0	37	5	70	0	0	75	1	0	0	0	1	0	70	51	0	121	234	
	5:30 PM	24	0	1	0	25	3	64	0	0	67	0	0	0	0	0	0	38	41	0	79	171	
	5:45 PM	31	1	1	0	33	4	55	0	0	59	0	0	0	0	0	0	55	35	0	90	182	
	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		820	2	20	0	842	42	1291	8	0	1341	5	2	8	0	15	8	1461	814	0	2283	4481	

Peak Hour Automobile Volume Summary

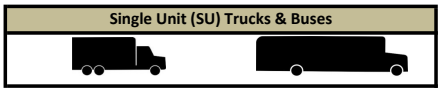
Hourly Time Period		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	187	0	1	0	188	2	171	1	0	174	1	1	2	0	4	2	339	124	0	465	831
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	146	0	4	0	150	13	328	1	0	342	1	1	3	0	5	0	305	205	0	510	1007

Intersection Traffic Volume Report

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

Watertown Road & CTH M - North Avenue

Count Basics		*Page 7 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events



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

15-Minute		From North (↓)					From East (←)					From South (↑)					From West (→)						
Time Period		CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown Road					15-Min	Hourly
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	Sum
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	11
	6:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	13
	6:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	3	19
	6:45 AM	4	0	0	0	4	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	6	28
	7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	32
	7:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3	2	0	5	8	39
	7:30 AM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	2	0	0	2	12	42
	7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	8	1	0	9	10	36
	8:00 AM	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	0	3	2	0	5	9	35
	8:15 AM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	4	3	0	7	11	
	8:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	6	
	8:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	3	0	6	9	
	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	3	0	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	7	31
	3:15 PM	4	0	0	0	4	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	9	28
	3:30 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	1	3	0	4	8	27
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7	7	27
	4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	4	23
	4:15 PM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	8	22
	4:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5	1	0	6	8	15
	4:45 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	12
	5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	10
	5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
	5:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
	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		22	0	1	0	23	1	42	1	0	44	0	0	0	0	0	0	49	26	0	75	142	

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

Hourly		From North (↓)					From East (←)					From South (↑)					From West (→)					Total	
Time Period		CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown Road					Hourly	
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	Volume	
AM	7:30 AM	3	0	0	0	3	1	15	0	0	16	0	0	0	0	0	0	17	6	0	23	42	
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:15 PM	4	0	1	0	5	0	3	0	0	3	0	0	0	0	0	0	13	1	0	14	22	

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Watertown Road & CTH M - North Avenue

Semi-Trucks

15-Minute Semi-Truck Data

15-Minute Time Period		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					15-Min	Hourly
	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	Sum
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	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	2
	6:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	7:30 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	11
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	13
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	14
	8:15 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	6	
	8:30 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	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	
	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	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	8
	3:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	7
	3:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	5
	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
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	4
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	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	2
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
	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		3	0	0	0	3	0	12	0	0	12	0	0	0	0	0	0	18	0	0	18	33	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					Total Hourly
	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	Volume
AM	7:30 AM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	7	0	0	7	11
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

Count Basics			*Page 9 of 13*
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Watertown Road & CTH M - North Avenue

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

15-Minute Heavy Vehicle Data

15-Minute		From North (↓)					From East (←)					From South (↑)					From West (→)						
Time Period		CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown Road					15-Min	Hourly
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	Sum
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	13
	6:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	15
	6:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	4	21
	6:45 AM	4	0	0	0	4	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	7	31
	7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	35
	7:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3	2	0	5	8	44
	7:30 AM	1	0	0	0	1	0	11	0	0	11	0	0	0	0	0	0	2	0	0	2	14	53
	7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	9	1	0	10	11	49
	8:00 AM	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	0	5	2	0	7	11	49
	8:15 AM	1	0	0	0	1	1	4	0	0	5	0	0	0	0	0	0	8	3	0	11	17	
	8:30 AM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	4	2	0	6	10	
	8:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	3	0	7	11	
	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	3	0	0	0	3	0	5	0	0	5	0	0	0	0	0	0	1	1	0	2	10	39
	3:15 PM	4	0	0	0	4	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	12	35
	3:30 PM	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	0	1	3	0	4	10	32
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7	7	31
	4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	6	27
	4:15 PM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	9	24
	4:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6	1	0	7	9	17
	4:45 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	14
	5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	12
	5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	
	5:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
	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		25	0	1	0	26	1	54	1	0	56	0	0	0	0	0	0	67	26	0	93	175	

Peak Hour Heavy Vehicle Volume Summary

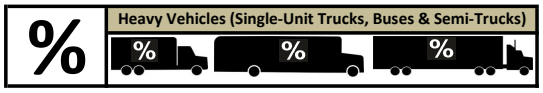
Hourly		From North (↓)					From East (←)					From South (↑)					From West (→)					Total
Time Period		CTH M - North Avenue					Watertown Road					CTH M - North Avenue					Watertown Road					Hourly
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	5	0	0	0	5	1	17	0	0	18	0	0	0	0	0	0	24	6	0	30	53
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	4	0	1	0	5	0	3	0	0	3	0	0	0	0	0	0	15	1	0	16	24

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Watertown Road & CTH M - North Avenue

Count Basics		*Page 10 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events



15-Minute Heavy Vehicle Percentages

15-Minute Time Period		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					Total Heavy Vehicle	Hourly Heavy Vehicle
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	Percent	Percent
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	0.0	3.6
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.2
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	2.4	4.0	3.6
	6:45 AM	10.0	0.0	0.0	0.0	8.9	0.0	5.9	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.6	5.0	4.3
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.6	1.3	4.1
	7:15 AM	2.3	0.0	0.0	0.0	2.2	0.0	3.6	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	4.8	6.7	0.0	5.4	4.1	5.0
	7:30 AM	2.2	0.0	0.0	0.0	2.2	0.0	18.3	0.0	0.0	18.3	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	1.6	6.1	6.0
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	8.0	2.6	0.0	6.6	4.0	5.9
	8:00 AM	7.3	0.0	0.0	0.0	7.3	0.0	2.8	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	6.4	7.7	0.0	6.7	6.1	6.8
	8:15 AM	2.2	0.0	0.0	0.0	2.2	100.0	10.8	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	9.0	11.1	0.0	9.4	8.4	
	8:30 AM	5.9	0.0	0.0	0.0	5.9	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	6.1	0.0	6.1	5.8	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	6.6	8.1	0.0	7.1	6.6	
	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	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	0.0	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	
	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	
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	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	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	0.0	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	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:00 PM	10.7	0.0	0.0	0.0	10.0	0.0	6.7	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.1	0.0	2.0	4.7	4.5
	3:15 PM	12.1	0.0	0.0	0.0	11.8	0.0	6.8	33.3	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	2.6	5.6	3.9
	3:30 PM	2.9	0.0	0.0	0.0	2.9	0.0	7.6	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	1.3	6.5	0.0	3.2	4.4	3.5
	3:45 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	3.0	10.4	0.0	6.1	3.2	3.2
	4:00 PM	2.9	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	2.4	0.0	4.5	2.6	2.7
	4:15 PM	3.1	0.0	33.3	0.0	5.7	0.0	1.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.0	4.3	3.6	2.3
	4:30 PM	5.6	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	1.4	0.0	4.8	3.3	1.7
	4:45 PM	2.5	0.0	0.0	0.0	2.4	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.9	1.2	1.5
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	1.5	1.1	1.4
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.8	0.8	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	3.7	3.4	
	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	2.8	0.0	1.1	0.5	
	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 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	
	9:15 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	
	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		3.0	0.0	4.8	0.0	3.0	2.3	4.0	11.1	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	3.1	0.0	3.9	3.8	

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period		From North (↓) CTH M - North Avenue					From East (←) Watertown Road					From South (↑) CTH M - North Avenue					From West (→) Watertown Road					Hourly Heavy Vehicle
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	Percent
AM	7:30 AM	2.6	0.0	0.0	0.0	2.6	33.3	9.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	6.6	4.6	0.0	6.1	6.0
MD	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	0.0
PM	4:15 PM	2.7	0.0	20.0	0.0	3.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.5	0.0	3.0	2.3

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Watertown Road & CTH M - North Avenue

Count Basics			*Page 11 of 13*
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

	15-Minute Time Period	Crossing North Approach CTH M - North Avenue			Crossing East Approach Watertown Road			Crossing South Approach CTH M - North Avenue			Crossing West Approach Watertown Road			15-Min	Hourly
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	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
	6:30 AM	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
	7:00 AM	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
	7:30 AM	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
	8:00 AM	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	
	8:30 AM	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	
	9:00 AM	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	
	9:30 AM	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	
Midday Peak Period	10:00 AM	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	
	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	0	0	0	0	0	0	0	
	11:00 AM	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	
	11:30 AM	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	
	12:00 PM	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	
	12:30 PM	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	
	1:00 PM	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	
	1:30 PM	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	
PM Peak Period	2:00 PM	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	
	2:30 PM	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	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	3:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	3:30 PM	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	1
	4:00 PM	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	1
	4:30 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	1
	4:45 PM	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
	5:15 PM	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	
	5:45 PM	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	
	6:15 PM	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	
	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		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**2**	

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementry School Age Children	x					
Visually Impaired (white cane/help	x					
Elderly/Disabled (except wheelcha	x					
Wheelchairs/Electric Scooters	x					
Other (None	x					

Intersection Traffic Volume Report

Count Basics	Version 2023.10		Page 1 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Major St: **CTH M - North Avenue**
Minor St: **Elmwood Drive**
Intersection of: ***CTH M - North Avenue & Elmwood Drive*** **IX_ID:**

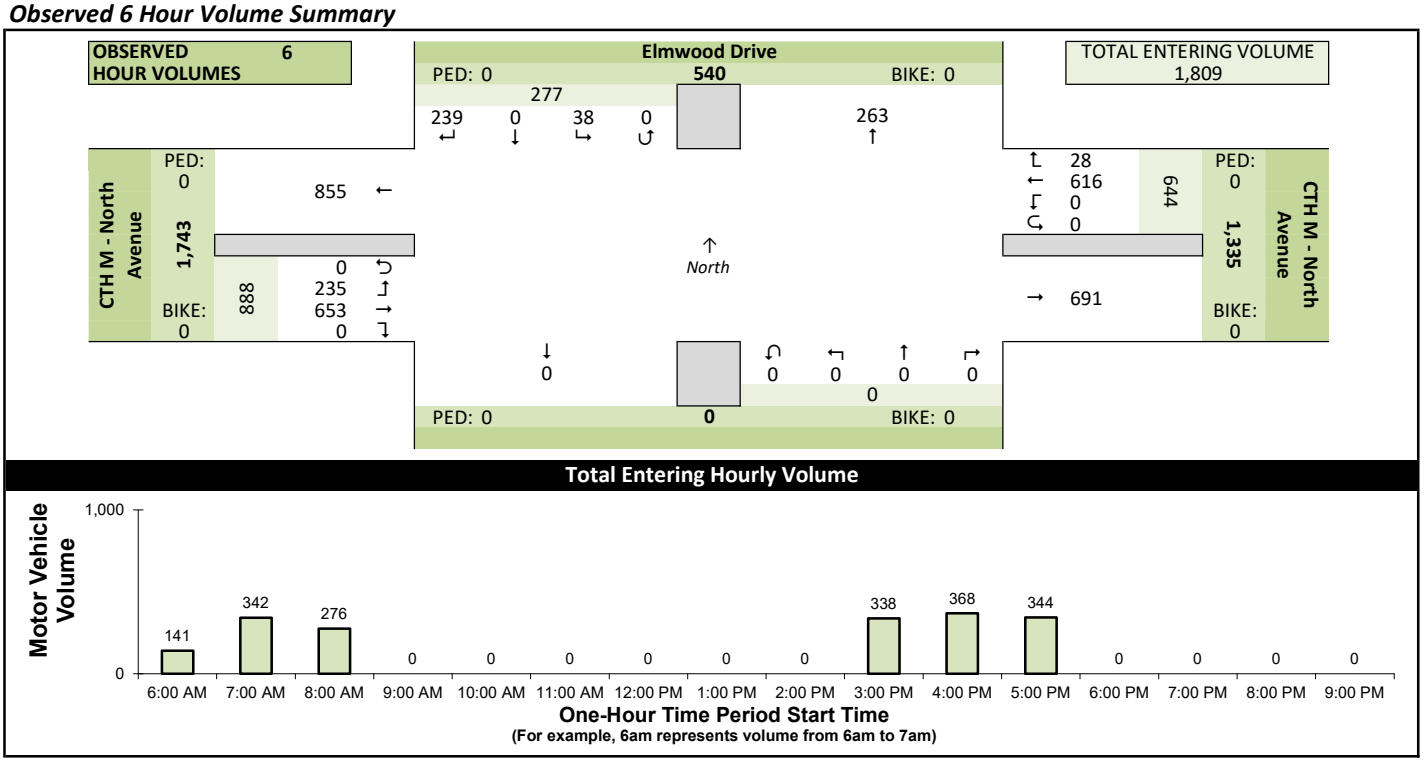
Site Information

Municipality	City of Pewaukee		
County	67 - Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Elmwood Drive		
East Leg	CTH M - North Avenue		
South Leg			
West Leg	CTH M - North Avenue		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

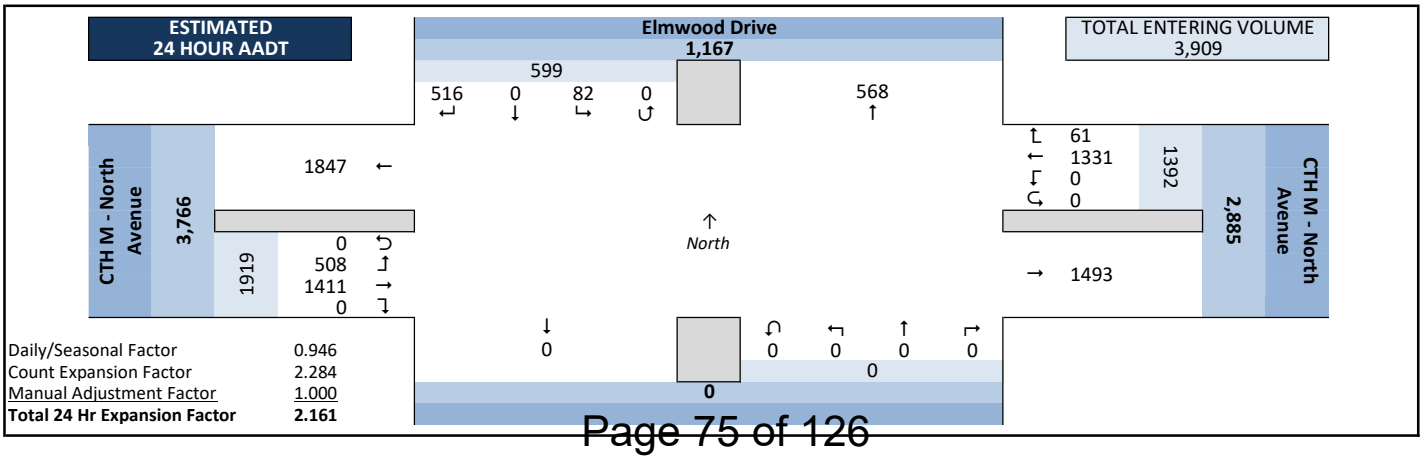
Count Information

Hrs Counted:	06:00 AM-09:00 AM and 03:00 PM-06:00 PM				
1st Day of Count	Monday, November 20, 2023			Weather	
AM Peak Period	Tuesday, November 21, 2023			Clear & Dry	
Midday Peak Period	Tuesday, November 21, 2023			Clear & Dry	
PM Peak Period	Monday, November 20, 2023			Clear & Dry	
Calculated Peak Hours					
AM	7:00-8:00am	MD		PM	4:30-5:30pm
Peak Hours Selected for Analysis					
AM	7:30-8:30am	MD		PM	4:30-5:30pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.946	Count Expansion Factor	2.284		
Company Name	TADI			Manual Adj.	1.000
Observers	AM Peak Period	Lori Atwell			
	Midday Peak Period	None			
	PM Peak Period	Jane Fait			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 6 Hour Volume Summary



Estimated 24 Hour AADT



Intersection Traffic Volume Report

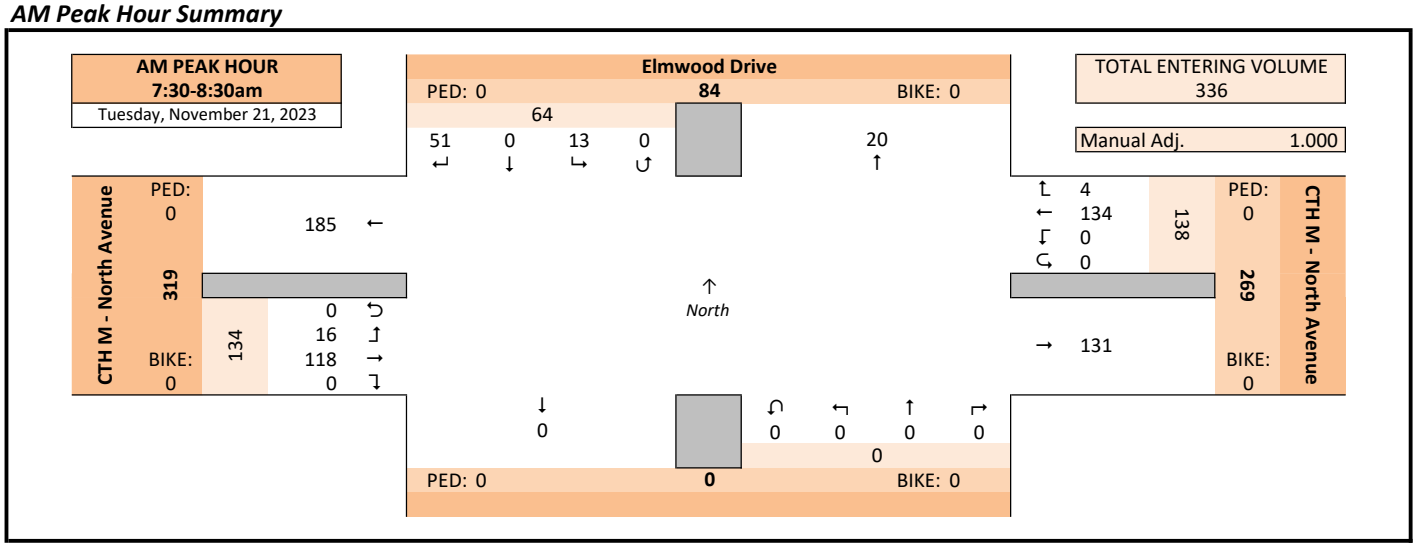
Peak Hour Volume Graphical Summary

Count Basics			*Page 2 of 13*
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

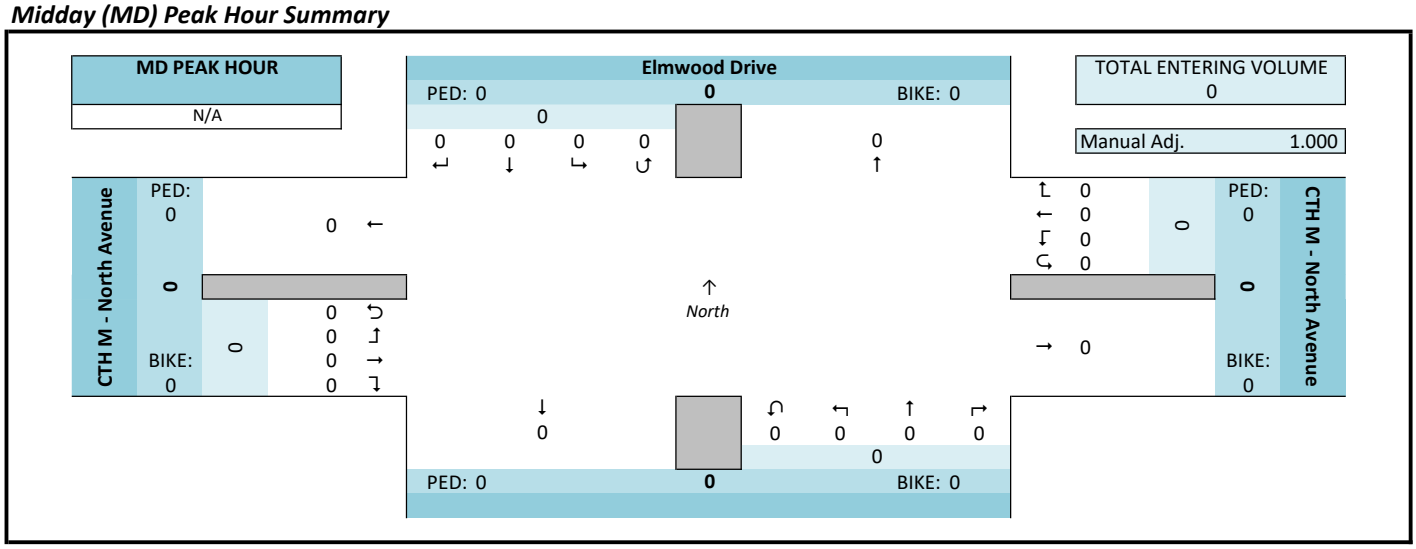
CTH M - North Avenue & Elmwood Drive

All Motor Vehicles

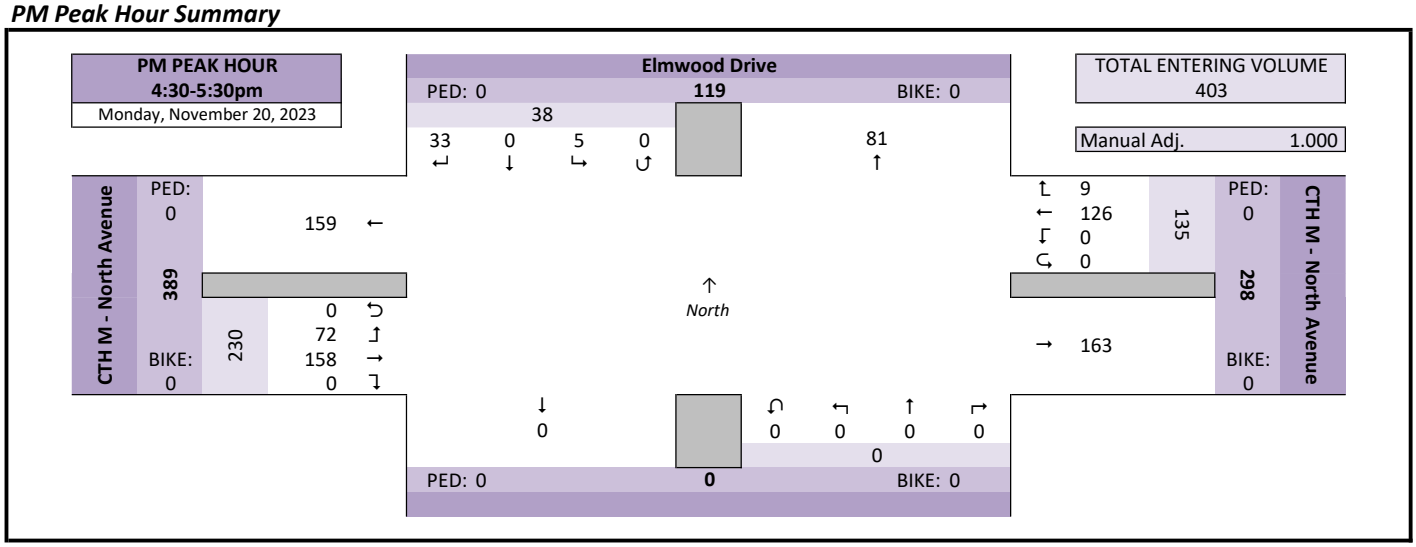
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Summary

CTH M - North Avenue & Elmwood Drive

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, November 21, 2023		From North					From East					From South					From West					
	AM Peak Hour	Elmwood Drive					CTH M - North Avenue										CTH M - North Avenue					
	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
AM Peak Hour	7:30 AM	14	0	4	0	18	2	40	0	0	42	0	0	0	0	0	0	32	6	0	38	98
	7:45 AM	14	0	4	0	18	1	38	0	0	39	0	0	0	0	0	0	39	2	0	41	98
	8:00 AM	14	0	2	0	16	0	23	0	0	23	0	0	0	0	0	0	22	4	0	26	65
	8:15 AM	9	0	3	0	12	1	33	0	0	34	0	0	0	0	0	0	25	4	0	29	75
	Peak Hour Volume	51	0	13	0	64	4	134	0	0	138	0	0	0	0	0	0	118	16	0	134	336
	Rounded Hourly Volume	50	0	15	0	65	5	135	0	0	140	0	0	0	0	0	0	120	15	0	135	340
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	25.0	1.5	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.2	0.0	4.5	2.7
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	25.0	3.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.2	0.0	4.5	3.3
	Peak Hour Factor (PHF)	0.91	0.00	0.81	0.00	0.89	0.50	0.84	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.67	0.00	0.82	0.86

N/A		From North					From East					From South					From West					
	MD Peak Hour	Elmwood Drive					CTH M - North Avenue										CTH M - North Avenue					
	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
Midday (MD) Peak Hour	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
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% 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	0.0	0.0	0.0	0.0	0.0
	% 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	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monday, November 20, 2023		From North					From East					From South					From West					
	PM Peak Hour	Elmwood Drive					CTH M - North Avenue										CTH M - North Avenue					
	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
PM Peak Hour	4:30 PM	9	0	1	0	10	2	25	0	0	27	0	0	0	0	0	0	53	21	0	74	111
	4:45 PM	12	0	1	0	13	3	30	0	0	33	0	0	0	0	0	0	27	18	0	45	91
	5:00 PM	8	0	2	0	10	2	36	0	0	38	0	0	0	0	0	0	38	16	0	54	102
	5:15 PM	4	0	1	0	5	2	35	0	0	37	0	0	0	0	0	0	40	17	0	57	99
	Peak Hour Volume	33	0	5	0	38	9	126	0	0	135	0	0	0	0	0	0	158	72	0	230	403
	Rounded Hourly Volume	35	0	5	0	40	10	125	0	0	135	0	0	0	0	0	0	160	70	0	230	405
	% Single Unit Trucks	3.0	0.0	0.0	0.0	2.6	0.0	0.8	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.7
	% 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)	3.0	0.0	0.0	0.0	2.6	0.0	0.8	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.7
	Peak Hour Factor (PHF)	0.69	0.00	0.62	0.00	0.73	0.75	0.87	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.86	0.00	0.78	0.91

Peak Hour Pedestrian and Bicyclist Volumes

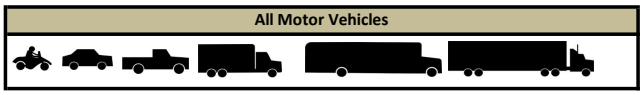
Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Elmwood Drive			CTH M - North Avenue						CTH M - North Avenue			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	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
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	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
	12:30 PM	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
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	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
	5:00 PM	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
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics		Page 4 of 13
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

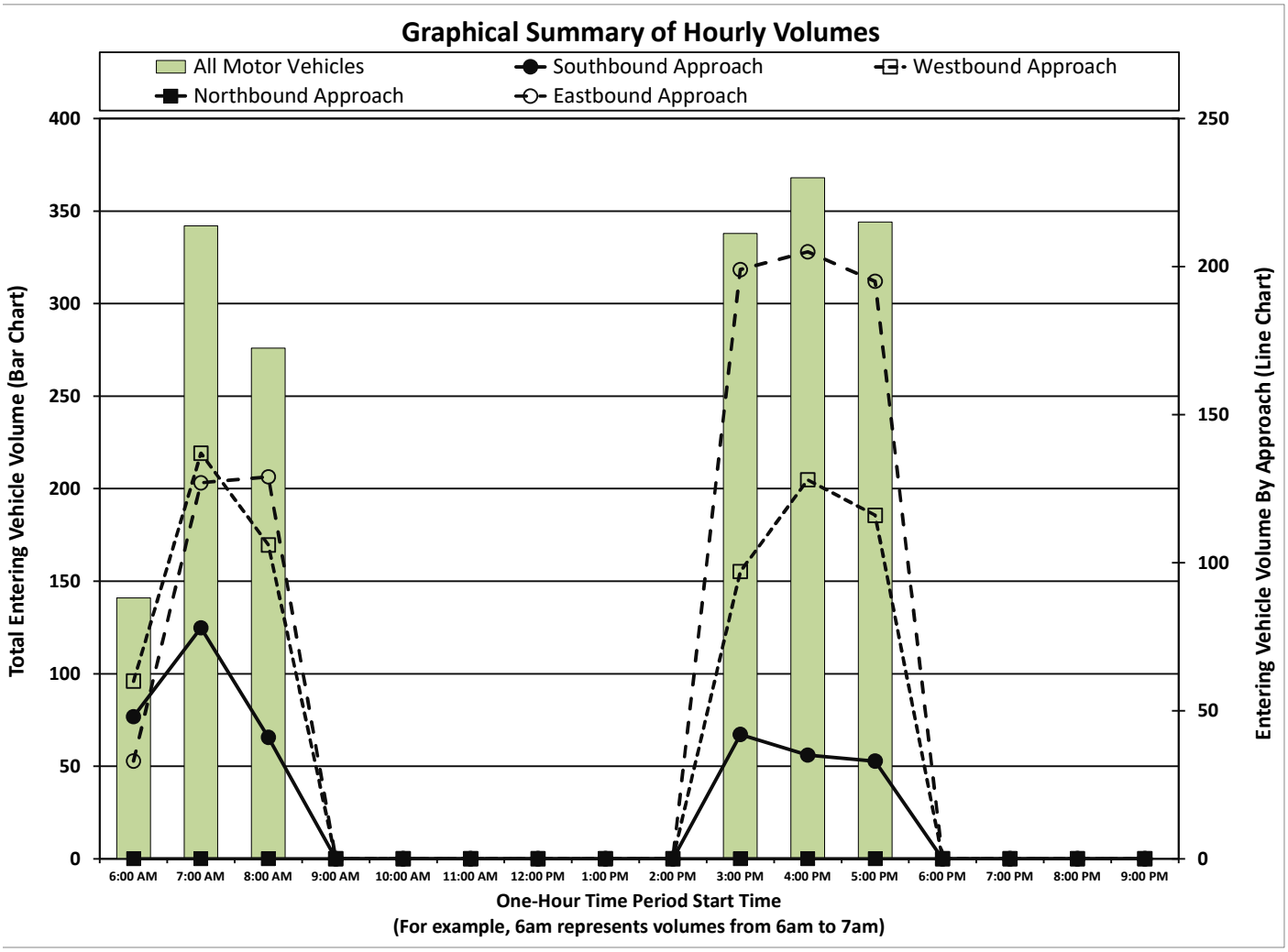
Hourly Volume Summary - Motor Vehicle Data

CTH M - North Avenue & Elmwood Drive



One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Total Vehicle Volume	Directional Volume Totals E/W	Directional Volume Totals N/S
		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	6:00 AM	41	0	7	0	48	0	60	0	0	60	0	0	0	0	0	0	25	8	0	33	141	93	48
AM	7:00 AM	68	0	10	0	78	3	134	0	0	137	0	0	0	0	0	0	109	18	0	127	342	264	78
AM	8:00 AM	33	0	8	0	41	1	105	0	0	106	0	0	0	0	0	0	105	24	0	129	276	235	41
AM	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
MD	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
MD	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
MD	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
MD	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
PM	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
PM	3:00 PM	38	0	4	0	42	7	90	0	0	97	0	0	0	0	0	0	138	61	0	199	338	296	42
PM	4:00 PM	30	0	5	0	35	9	119	0	0	128	0	0	0	0	0	0	139	66	0	205	368	333	35
PM	5:00 PM	29	0	4	0	33	8	108	0	0	116	0	0	0	0	0	0	137	58	0	195	344	311	33
PM	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
PM	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
PM	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
PM	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		239	0	38	0	277	28	616	0	0	644	0	0	0	0	0	0	653	235	0	888	1809	1532	277



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

CTH M - North Avenue & Elmwood Drive

Count Basics		*Page 5 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					15-Min	Hourly	
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	Sum	PHF
AM Peak Period	6:00 AM	1	0	1	0	2	0	9	0	0	9	0	0	0	0	0	0	2	2	0	4	15	141	0.61
	6:15 AM	7	0	2	0	9	0	13	0	0	13	0	0	0	0	0	0	7	0	0	7	29	198	0.69
	6:30 AM	12	0	1	0	13	0	16	0	0	16	0	0	0	0	0	0	8	2	0	10	39	243	0.82
	6:45 AM	21	0	3	0	24	0	22	0	0	22	0	0	0	0	0	0	8	4	0	12	58	302	0.77
	7:00 AM	27	0	1	0	28	0	27	0	0	27	0	0	0	0	0	0	14	3	0	17	72	342	0.87
	7:15 AM	13	0	1	0	14	0	29	0	0	29	0	0	0	0	0	0	24	7	0	31	74	335	0.85
	7:30 AM	14	0	4	0	18	2	40	0	0	42	0	0	0	0	0	0	32	6	0	38	98	336	0.86
	7:45 AM	14	0	4	0	18	1	38	0	0	39	0	0	0	0	0	0	39	2	0	41	98	307	0.78
	8:00 AM	14	0	2	0	16	0	23	0	0	23	0	0	0	0	0	0	22	4	0	26	65	276	0.92
	8:15 AM	9	0	3	0	12	1	33	0	0	34	0	0	0	0	0	0	25	4	0	29	75		
	8:30 AM	5	0	2	0	7	0	25	0	0	25	0	0	0	0	0	0	28	9	0	37	69		
	8:45 AM	5	0	1	0	6	0	24	0	0	24	0	0	0	0	0	0	30	7	0	37	67		
	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	9	0	2	0	11	2	22	0	0	24	0	0	0	0	0	0	38	14	0	52	87	338	0.96
	3:15 PM	13	0	1	0	14	2	20	0	0	22	0	0	0	0	0	0	31	17	0	48	84	326	0.93
	3:30 PM	10	0	0	0	10	0	30	0	0	30	0	0	0	0	0	0	39	9	0	48	88	333	0.91
	3:45 PM	6	0	1	0	7	3	18	0	0	21	0	0	0	0	0	0	30	21	0	51	79	356	0.80
	4:00 PM	4	0	1	0	5	0	31	0	0	31	0	0	0	0	0	0	23	16	0	39	75	368	0.83
	4:15 PM	5	0	2	0	7	4	33	0	0	37	0	0	0	0	0	0	36	11	0	47	91	395	0.89
	4:30 PM	9	0	1	0	10	2	25	0	0	27	0	0	0	0	0	0	53	21	0	74	111	403	0.91
	4:45 PM	12	0	1	0	13	3	30	0	0	33	0	0	0	0	0	0	27	18	0	45	91	360	0.88
	5:00 PM	8	0	2	0	10	2	36	0	0	38	0	0	0	0	0	0	38	16	0	54	102	344	0.84
	5:15 PM	4	0	1	0	5	2	35	0	0	37	0	0	0	0	0	0	40	17	0	57	99		
	5:30 PM	5	0	0	0	5	2	17	0	0	19	0	0	0	0	0	0	35	9	0	44	68		
	5:45 PM	12	0	1	0	13	2	20	0	0	22	0	0	0	0	0	0	24	16	0	40	75		
	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		239	0	38	0	277	28	616	0	0	644	0	0	0	0	0	0	653	235	0	888	1809		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Total Hourly	
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	Volume	PHF
AM	7:30 AM	51	0	13	0	64	4	134	0	0	138	0	0	0	0	0	0	118	16	0	134	336	0.86
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:30 PM	33	0	5	0	38	9	126	0	0	135	0	0	0	0	0	0	158	72	0	230	403	0.91

Intersection Traffic Volume Report

Count Basics		*Page 6 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

15-Minute Automobile Data

CTH M - North Avenue & Elmwood Drive

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

	15-Minute	From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					15-Min	Hourly
	Time Period 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	Sum
AM Peak Period	6:00 AM	1	0	1	0	2	0	9	0	0	9	0	0	0	0	0	0	2	2	0	4	15	136
	6:15 AM	7	0	2	0	9	0	13	0	0	13	0	0	0	0	0	0	7	0	0	7	29	193
	6:30 AM	12	0	1	0	13	0	16	0	0	16	0	0	0	0	0	0	8	1	0	9	38	235
	6:45 AM	19	0	3	0	22	0	20	0	0	20	0	0	0	0	0	0	8	4	0	12	54	294
	7:00 AM	27	0	1	0	28	0	27	0	0	27	0	0	0	0	0	0	14	3	0	17	72	336
	7:15 AM	13	0	1	0	14	0	28	0	0	28	0	0	0	0	0	0	23	6	0	29	71	326
	7:30 AM	14	0	4	0	18	2	39	0	0	41	0	0	0	0	0	0	32	6	0	38	97	325
	7:45 AM	14	0	4	0	18	0	37	0	0	37	0	0	0	0	0	0	39	2	0	41	96	293
	8:00 AM	14	0	2	0	16	0	22	0	0	22	0	0	0	0	0	0	20	4	0	24	62	261
	8:15 AM	9	0	3	0	12	1	32	0	0	33	0	0	0	0	0	0	22	3	0	25	70	
	8:30 AM	5	0	2	0	7	0	23	0	0	23	0	0	0	0	0	0	28	7	0	35	65	
	8:45 AM	5	0	1	0	6	0	23	0	0	23	0	0	0	0	0	0	28	7	0	35	64	
	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	8	0	2	0	10	2	20	0	0	22	0	0	0	0	0	0	37	14	0	51	83	320
	3:15 PM	12	0	1	0	13	2	17	0	0	19	0	0	0	0	0	0	31	17	0	48	80	309
	3:30 PM	10	0	0	0	10	0	29	0	0	29	0	0	0	0	0	0	37	7	0	44	83	317
	3:45 PM	6	0	1	0	7	3	17	0	0	20	0	0	0	0	0	0	28	19	0	47	74	343
	4:00 PM	3	0	1	0	4	0	31	0	0	31	0	0	0	0	0	0	23	14	0	37	72	359
	4:15 PM	4	0	2	0	6	4	31	0	0	35	0	0	0	0	0	0	36	11	0	47	88	389
	4:30 PM	9	0	1	0	10	2	24	0	0	26	0	0	0	0	0	0	52	21	0	73	109	400
	4:45 PM	11	0	1	0	12	3	30	0	0	33	0	0	0	0	0	0	27	18	0	45	90	359
	5:00 PM	8	0	2	0	10	2	36	0	0	38	0	0	0	0	0	0	38	16	0	54	102	343
	5:15 PM	4	0	1	0	5	2	35	0	0	37	0	0	0	0	0	0	40	17	0	57	99	
	5:30 PM	5	0	0	0	5	2	17	0	0	19	0	0	0	0	0	0	35	9	0	44	68	
	5:45 PM	12	0	1	0	13	2	20	0	0	22	0	0	0	0	0	0	23	16	0	39	74	
	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		232	0	38	0	270	27	596	0	0	623	0	0	0	0	0	0	638	224	0	862	1755	

Peak Hour Automobile Volume Summary

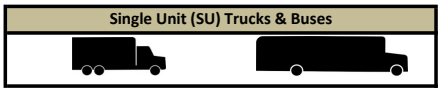
	Hourly	From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Total
	Time Period Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Hourly Volume
AM	7:30 AM	51	0	13	0	64	3	130	0	0	133	0	0	0	0	0	0	113	15	0	128	325
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	32	0	5	0	37	9	125	0	0	134	0	0	0	0	0	0	157	72	0	229	400

Intersection Traffic Volume Report

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

Count Basics		*Page 7 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

CTH M - North Avenue & Elmwood Drive



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

15-Minute		From North (Elmwood Drive)					From East (CTH M - North Avenue)					From South					From West (CTH M - North Avenue)					15-Min	Hourly
Time Period	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	Sum
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	5
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	8
	6:45 AM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4	7
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	3	8
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	7:45 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2	12
	8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	13
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	4	
	8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	2	3	
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	
	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	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	18
	3:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	17
	3:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	5	16
	3:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	5	13
	4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	9
	4:15 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	6
	4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	3
	4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	
	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	1	0	0	1	1	
	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		7	0	0	0	7	1	17	0	0	18	0	0	0	0	0	0	15	11	0	26	51	

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

Hourly		From North (Elmwood Drive)					From East (CTH M - North Avenue)					From South					From West (CTH M - North Avenue)					Total Hourly
Time Period	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	Volume
AM	7:30 AM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	5	1	0	6	9
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

CTH M - North Avenue & Elmwood Drive

Semi-Trucks

15-Minute Semi-Truck Data

	15-Minute	From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					15-Min	Hourly
	Time Period 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	Sum
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
	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
	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
	6:45 AM	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
	8:30 AM	0	0	0	0	0	0	1	0	0	1	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	
	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	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	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	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	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	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	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	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	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	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	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	

Peak Hour Semi-Truck Volume Summary

	Hourly	From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Total Hourly
	Time Period 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	Volume
AM	7:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

Count Basics		*Page 9 of 13*
Start Date: Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

CTH M - North Avenue & Elmwood Drive

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

15-Minute Heavy Vehicle Data

15-Minute Time Period		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					15-Min	Hourly
	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	Sum
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	5
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	8
	6:45 AM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4	8
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	3	9
	7:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	11
	7:45 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2	14
	8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	15
	8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	5	
	8:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	4	
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	
	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	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4	18
	3:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	17
	3:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	5	16
	3:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	5	13
	4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	9
	4:15 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	6
	4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	3
	4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	
	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	1	0	0	1	1	
	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		7	0	0	0	7	1	20	0	0	21	0	0	0	0	0	0	15	11	0	26	54	

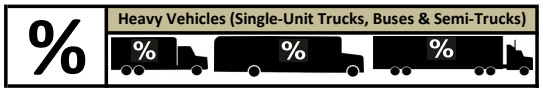
Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Total Hourly
	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	Volume
AM	7:30 AM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	5	1	0	6	11
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3

Intersection Traffic Volume Report

Count Basics			Page 10 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Percentages



CTH M - North Avenue & Elmwood Drive

15-Minute Heavy Vehicle Percentages

15-Minute Time Period Start Time		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
		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	0.0	3.5
	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	0.0	2.5
	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	50.0	0.0	10.0	2.6	3.3
	6:45 AM	9.5	0.0	0.0	0.0	8.3	0.0	9.1	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	2.6
	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	0.0	0.0	0.0	0.0	0.0	0.0	1.8
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	4.2	14.3	0.0	6.5	4.1	2.7
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.3
	7:45 AM	0.0	0.0	0.0	0.0	0.0	100.0	2.6	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.6
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	7.7	4.6	5.4
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	12.0	25.0	0.0	13.8	6.7	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	5.4	5.8	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	5.4	4.5	
	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	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	0.0	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	
	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	
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	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	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	0.0	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	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:00 PM	11.1	0.0	0.0	0.0	9.1	0.0	9.1	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	1.9	4.6	5.3
	3:15 PM	7.7	0.0	0.0	0.0	7.1	0.0	15.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	5.2
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	5.1	22.2	0.0	8.3	5.7	4.8
	3:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	6.7	9.5	0.0	7.8	6.3	3.7
	4:00 PM	25.0	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	0.0	0.0	0.0	12.5	0.0	5.1	4.0	2.4
	4:15 PM	20.0	0.0	0.0	0.0	14.3	0.0	6.1	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.5
	4:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.4	1.8	0.7
	4:45 PM	8.3	0.0	0.0	0.0	7.7	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	0.0	1.1	0.3
	5:00 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	0.3
	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	4.2	0.0	0.0	2.5	1.3	
	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 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	
	9:15 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	
	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		2.9	0.0	0.0	0.0	2.5	3.6	3.2	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.7	0.0	2.9	3.0	

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period Start Time		From North (↓) Elmwood Drive					From East (←) CTH M - North Avenue					From South (↑)					From West (→) CTH M - North Avenue					Hourly Heavy Vehicle Percent
		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	25.0	3.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.3	0.0	4.5	3.3
MD	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	0.0
PM	4:30 PM	3.0	0.0	0.0	0.0	2.6	0.0	0.8	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.4	0.7

Intersection Traffic Volume Report

Count Basics			Page 11 of 13
Start Date:	Monday, November 20, 2023	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Pedestrian and Bicyclist Data

CTH M - North Avenue & Elmwood Drive

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period		Crossing North Approach Elmwood Drive			Crossing East Approach CTH M - North Avenue			Crossing South Approach			Crossing West Approach CTH M - North Avenue			15-Min	Hourly
Start Time		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	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
	6:30 AM	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
	7:00 AM	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
	7:30 AM	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
	8:00 AM	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	
	8:30 AM	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	
	9:00 AM	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	
	9:30 AM	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	
Midday Peak Period	10:00 AM	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	
	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	0	0	0	0	0	0	0	
	11:00 AM	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	
	11:30 AM	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	
	12:00 PM	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	
	12:30 PM	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	
	1:00 PM	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	
	1:30 PM	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	
PM Peak Period	2:00 PM	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	
	2:30 PM	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	
	3:00 PM	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
	3:30 PM	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
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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	
	5:30 PM	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	
	6:00 PM	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	
	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		0	0	0	0	0	0	0	0	0	0	0	0	0	

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementry School Age Children	x					
Visually Impaired (white cane/help	x					
Elderly/Disabled (except wheelcha	x					
Wheelchairs/Electric Scooters	x					
Other (None	x					

Appendix B
Existing Traffic
Peak Hour Analysis Outputs

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↰	↱
Traffic Vol, veh/h	130	365	2	1	190	5	2	1	1	1	0	190
Future Vol, veh/h	130	365	2	1	190	5	2	1	1	1	0	190
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	6	6	6	9	9	9	1	1	1	3	3	3
Mvmt Flow	160	451	2	1	235	6	2	1	1	1	0	235

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	453	0	0	1130	1015	452	1013	1013	238
Stage 1	-	-	-	-	-	-	772	772	-	240	240	-
Stage 2	-	-	-	-	-	-	358	243	-	773	773	-
Critical Hdwy	4.16	-	-	4.19	-	-	7.11	6.51	6.21	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Follow-up Hdwy	2.254	-	-	2.281	-	-	3.509	4.009	3.309	3.527	4.027	3.327
Pot Cap-1 Maneuver	1302	-	-	1072	-	-	182	239	610	216	238	798
Stage 1	-	-	-	-	-	-	394	411	-	761	705	-
Stage 2	-	-	-	-	-	-	662	707	-	390	407	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1302	-	-	1072	-	-	112	200	610	187	199	798
Mov Cap-2 Maneuver	-	-	-	-	-	-	112	200	-	187	199	-
Stage 1	-	-	-	-	-	-	329	344	-	636	704	-
Stage 2	-	-	-	-	-	-	467	706	-	324	340	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	0	27.8	11.5
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	163	1302	-	-	1072	-	-	187	798
HCM Lane V/C Ratio	0.03	0.123	-	-	0.001	-	-	0.007	0.294
HCM Control Delay (s)	27.8	8.2	0	-	8.4	0	-	24.4	11.4
HCM Lane LOS	D	A	A	-	A	A	-	C	B
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	0	1.2

Intersection	
Int Delay, s/veh	2.2

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	15	50	15	120	135	5
Future Vol, veh/h	15	50	15	120	135	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	5	5	4	4
Mvmt Flow	17	58	17	140	157	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	334	160	163	0	-	0
Stage 1	160	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.245	-	-	-
Pot Cap-1 Maneuver	663	888	1398	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	859	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	654	888	1398	-	-	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	859	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.8	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1398	-	820	-	-
HCM Lane V/C Ratio	0.012	-	0.092	-	-
HCM Control Delay (s)	7.6	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↰	↱
Traffic Vol, veh/h	205	320	1	1	330	15	5	1	1	5	0	150
Future Vol, veh/h	205	320	1	1	330	15	5	1	1	5	0	150
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	1	1	1	1	1	1	3	3	3
Mvmt Flow	216	337	1	1	347	16	5	1	1	5	0	158

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	363	0	0	338	0	0	1206	1135	338	1128	1127	355
Stage 1	-	-	-	-	-	-	770	770	-	357	357	-
Stage 2	-	-	-	-	-	-	436	365	-	771	770	-
Critical Hdwy	4.13	-	-	4.11	-	-	7.11	6.51	6.21	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.209	-	-	3.509	4.009	3.309	3.527	4.027	3.327
Pot Cap-1 Maneuver	1190	-	-	1227	-	-	161	203	706	181	204	687
Stage 1	-	-	-	-	-	-	395	412	-	659	627	-
Stage 2	-	-	-	-	-	-	601	625	-	391	409	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1190	-	-	1227	-	-	103	158	706	149	158	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	158	-	149	158	-
Stage 1	-	-	-	-	-	-	307	320	-	512	626	-
Stage 2	-	-	-	-	-	-	462	624	-	302	318	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.4	0	35.9	12.4
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	124	1190	-	-	1227	-	-	149	687
HCM Lane V/C Ratio	0.059	0.181	-	-	0.001	-	-	0.035	0.23
HCM Control Delay (s)	35.9	8.7	0	-	7.9	0	-	30	11.8
HCM Lane LOS	E	A	A	-	A	A	-	D	B
HCM 95th %tile Q(veh)	0.2	0.7	-	-	0	-	-	0.1	0.9

Intersection	
Int Delay, s/veh	2.3

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	5	35	70	160	125	10
Future Vol, veh/h	5	35	70	160	125	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	5	38	77	176	137	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	473	143	148	0	-	0
Stage 1	143	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-	-
Pot Cap-1 Maneuver	548	902	1440	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	516	902	1440	-	-	-
Mov Cap-2 Maneuver	516	-	-	-	-	-
Stage 1	830	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.6	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1440	-	825	-	-
HCM Lane V/C Ratio	0.053	-	0.053	-	-
HCM Control Delay (s)	7.6	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Appendix C
Build Traffic
Peak Hour Analysis Outputs
(Existing Geometrics)

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↰	↱
Traffic Vol, veh/h	140	365	2	1	190	10	2	1	1	15	0	210
Future Vol, veh/h	140	365	2	1	190	10	2	1	1	15	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	6	6	6	9	9	9	1	1	1	3	3	3
Mvmt Flow	173	451	2	1	235	12	2	1	1	19	0	259

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	453	0	0	1171	1047	452	1042	1042	241
Stage 1	-	-	-	-	-	-	798	798	-	243	243	-
Stage 2	-	-	-	-	-	-	373	249	-	799	799	-
Critical Hdwy	4.16	-	-	4.19	-	-	7.11	6.51	6.21	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Follow-up Hdwy	2.254	-	-	2.281	-	-	3.509	4.009	3.309	3.527	4.027	3.327
Pot Cap-1 Maneuver	1296	-	-	1072	-	-	170	229	610	207	229	795
Stage 1	-	-	-	-	-	-	381	400	-	758	703	-
Stage 2	-	-	-	-	-	-	650	702	-	378	396	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1296	-	-	1072	-	-	99	188	610	177	188	795
Mov Cap-2 Maneuver	-	-	-	-	-	-	99	188	-	177	188	-
Stage 1	-	-	-	-	-	-	313	329	-	623	702	-
Stage 2	-	-	-	-	-	-	438	701	-	309	326	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0	30.3	12.8
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	147	1296	-	-	1072	-	-	177	795
HCM Lane V/C Ratio	0.034	0.133	-	-	0.001	-	-	0.105	0.326
HCM Control Delay (s)	30.3	8.2	0	-	8.4	0	-	27.7	11.7
HCM Lane LOS	D	A	A	-	A	A	-	D	B
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0	-	-	0.3	1.4

Intersection	
Int Delay, s/veh	0.9

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	25	10	140	195	1
Future Vol, veh/h	1	25	10	140	195	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	5	5	4	4
Mvmt Flow	1	29	12	163	227	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	415	228	228	0	-	0
Stage 1	228	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.245	-	-	-
Pot Cap-1 Maneuver	596	814	1323	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	590	814	1323	-	-	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	847	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1323	-	802	-	-
HCM Lane V/C Ratio	0.009	-	0.038	-	-
HCM Control Delay (s)	7.7	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	20	60	20	120	135	5
Future Vol, veh/h	20	60	20	120	135	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	5	5	4	4
Mvmt Flow	23	70	23	140	157	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	346	160	163	0	-	0
Stage 1	160	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.245	-	-	-
Pot Cap-1 Maneuver	653	888	1398	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	641	888	1398	-	-	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1398	-	810	-	-
HCM Lane V/C Ratio	0.017	-	0.115	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	5	20	65	0
Future Vol, veh/h	0	15	5	20	65	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	17	6	23	76	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	76	76	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	4.11	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	0	988	1529	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	988	1529	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1529	-	988	-	-
HCM Lane V/C Ratio	0.004	-	0.018	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↰	↱
Traffic Vol, veh/h	225	320	1	1	330	30	5	1	1	10	0	160
Future Vol, veh/h	225	320	1	1	330	30	5	1	1	10	0	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	25
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	1	1	1	1	1	1	3	3	3
Mvmt Flow	237	337	1	1	347	32	5	1	1	11	0	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	379	0	0	338	0	0	1261	1193	338	1178	1177	363
Stage 1	-	-	-	-	-	-	812	812	-	365	365	-
Stage 2	-	-	-	-	-	-	449	381	-	813	812	-
Critical Hdwy	4.13	-	-	4.11	-	-	7.11	6.51	6.21	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.209	-	-	3.509	4.009	3.309	3.527	4.027	3.327
Pot Cap-1 Maneuver	1174	-	-	1227	-	-	148	188	706	167	190	680
Stage 1	-	-	-	-	-	-	374	394	-	652	622	-
Stage 2	-	-	-	-	-	-	591	615	-	371	391	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1174	-	-	1227	-	-	90	141	706	134	143	680
Mov Cap-2 Maneuver	-	-	-	-	-	-	90	141	-	134	143	-
Stage 1	-	-	-	-	-	-	281	296	-	490	621	-
Stage 2	-	-	-	-	-	-	444	614	-	277	294	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.6	0	40.4	13.3
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	109	1174	-	-	1227	-	-	134	680
HCM Lane V/C Ratio	0.068	0.202	-	-	0.001	-	-	0.079	0.248
HCM Control Delay (s)	40.4	8.8	0	-	7.9	0	-	34.1	12
HCM Lane LOS	E	A	A	-	A	A	-	D	B
HCM 95th %tile Q(veh)	0.2	0.8	-	-	0	-	-	0.3	1

Intersection	
Int Delay, s/veh	0.7

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	10	25	230	165	1
Future Vol, veh/h	1	10	25	230	165	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	1	11	27	253	181	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	489	182	182	0	-	0
Stage 1	182	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	540	863	1399	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	528	863	1399	-	-	-
Mov Cap-2 Maneuver	528	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.5	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1399	-	816	-	-
HCM Lane V/C Ratio	0.02	-	0.015	-	-
HCM Control Delay (s)	7.6	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	10	40	80	160	125	15
Future Vol, veh/h	10	40	80	160	125	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	11	44	88	176	137	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	497	145	153	0	-	0
Stage 1	145	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-	-
Pot Cap-1 Maneuver	531	900	1434	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	495	900	1434	-	-	-
Mov Cap-2 Maneuver	495	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	710	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10	2.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1434	-	773	-	-
HCM Lane V/C Ratio	0.061	-	0.071	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	15	80	40	0
Future Vol, veh/h	0	10	15	80	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	3	3	3	3
Mvmt Flow	0	11	16	88	44	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	44	44	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	2.227	-	-	-
Pot Cap-1 Maneuver	0	1029	1558	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	1029	1558	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1558	-	1029	-	-
HCM Lane V/C Ratio	0.011	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Appendix D
Build Traffic
Peak Hour Analysis Outputs
Anticipated Geometrics & Roundabout Alternative

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	365	2	1	190	10	2	1	1	15	0	210
Future Vol, veh/h	140	365	2	1	190	10	2	1	1	15	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	75	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	6	6	6	9	9	9	1	1	1	3	3	3
Mvmt Flow	173	451	2	1	235	12	2	1	1	19	0	259

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	453	0	0	1171	1047	452	1042	1042	241
Stage 1	-	-	-	-	-	-	798	798	-	243	243	-
Stage 2	-	-	-	-	-	-	373	249	-	799	799	-
Critical Hdwy	4.16	-	-	4.19	-	-	7.11	6.51	6.21	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Follow-up Hdwy	2.254	-	-	2.281	-	-	3.509	4.009	3.309	3.527	4.027	3.327
Pot Cap-1 Maneuver	1296	-	-	1072	-	-	170	229	610	207	229	795
Stage 1	-	-	-	-	-	-	381	400	-	758	703	-
Stage 2	-	-	-	-	-	-	650	702	-	378	396	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1296	-	-	1072	-	-	103	198	610	184	198	795
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	198	-	184	198	-
Stage 1	-	-	-	-	-	-	330	347	-	657	702	-
Stage 2	-	-	-	-	-	-	438	701	-	326	343	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0	29.3	12.7
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	153	1296	-	-	1072	-	-	184	795
HCM Lane V/C Ratio	0.032	0.133	-	-	0.001	-	-	0.101	0.326
HCM Control Delay (s)	29.3	8.2	-	-	8.4	-	-	26.7	11.7
HCM Lane LOS	D	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0	-	-	0.3	1.4

Intersection	
Int Delay, s/veh	0.9

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	25	10	140	195	1
Future Vol, veh/h	1	25	10	140	195	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	50
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	5	5	4	4
Mvmt Flow	1	29	12	163	227	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	414	227	228	0	-	0
Stage 1	227	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.245	-	-	-
Pot Cap-1 Maneuver	597	815	1323	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	592	815	1323	-	-	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	847	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1323	-	803	-	-
HCM Lane V/C Ratio	0.009	-	0.038	-	-
HCM Control Delay (s)	7.7	-	9.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	20	60	20	120	135	5
Future Vol, veh/h	20	60	20	120	135	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	5	5	4	4
Mvmt Flow	23	70	23	140	157	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	346	160	163	0	-	0
Stage 1	160	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.15	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.245	-	-	-
Pot Cap-1 Maneuver	653	888	1398	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	641	888	1398	-	-	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1398	-	810	-	-
HCM Lane V/C Ratio	0.017	-	0.115	-	-
HCM Control Delay (s)	7.6	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	5	20	65	0
Future Vol, veh/h	0	15	5	20	65	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	0	17	6	23	76	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	76	76	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	4.11	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	0	988	1529	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	988	1529	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1529	-	988	-	-
HCM Lane V/C Ratio	0.004	-	0.018	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	225	320	1	1	330	30	5	1	1	10	0	160
Future Vol, veh/h	225	320	1	1	330	30	5	1	1	10	0	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	75	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	1	1	1	1	1	1	3	3	3
Mvmt Flow	237	337	1	1	347	32	5	1	1	11	0	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	379	0	0	338	0	0	1261	1193	338	1178	1177	363
Stage 1	-	-	-	-	-	-	812	812	-	365	365	-
Stage 2	-	-	-	-	-	-	449	381	-	813	812	-
Critical Hdwy	4.13	-	-	4.11	-	-	7.11	6.51	6.21	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.209	-	-	3.509	4.009	3.309	3.527	4.027	3.327
Pot Cap-1 Maneuver	1174	-	-	1227	-	-	148	188	706	167	190	680
Stage 1	-	-	-	-	-	-	374	394	-	652	622	-
Stage 2	-	-	-	-	-	-	591	615	-	371	391	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1174	-	-	1227	-	-	94	150	706	140	151	680
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	150	-	140	151	-
Stage 1	-	-	-	-	-	-	298	314	-	520	621	-
Stage 2	-	-	-	-	-	-	444	614	-	295	312	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.6	0	38.8	13.2
HCM LOS			E	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	114	1174	-	-	1227	-	-	140	680
HCM Lane V/C Ratio	0.065	0.202	-	-	0.001	-	-	0.075	0.248
HCM Control Delay (s)	38.8	8.8	-	-	7.9	-	-	32.8	12
HCM Lane LOS	E	A	-	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.2	0.8	-	-	0	-	-	0.2	1

Intersection	
Int Delay, s/veh	0.7

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	1	10	25	230	165	1
Future Vol, veh/h	1	10	25	230	165	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	50
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	1	11	27	253	181	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	488	181	182	0	-	0
Stage 1	181	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	541	864	1399	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	531	864	1399	-	-	-
Mov Cap-2 Maneuver	531	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	9.5	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1399	-	817	-	-
HCM Lane V/C Ratio	0.02	-	0.015	-	-
HCM Control Delay (s)	7.6	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	10	40	80	160	125	15
Future Vol, veh/h	10	40	80	160	125	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	11	44	88	176	137	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	497	145	153	0	-	0
Stage 1	145	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-	-
Pot Cap-1 Maneuver	531	900	1434	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	495	900	1434	-	-	-
Mov Cap-2 Maneuver	495	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	710	-	-	-	-	-

Approach	SB	NE	SW
HCM Control Delay, s	10	2.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NEL	NET	SBLn1	SWT	SWR
Capacity (veh/h)	1434	-	773	-	-
HCM Lane V/C Ratio	0.061	-	0.071	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	15	80	40	0
Future Vol, veh/h	0	10	15	80	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	3	3	3	3
Mvmt Flow	0	11	16	88	44	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	44	44	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.21	4.13	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.309	2.227	-	-	-
Pot Cap-1 Maneuver	0	1029	1558	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	1029	1558	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

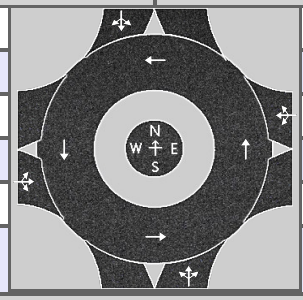
Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1558	-	1029	-	-
HCM Lane V/C Ratio	0.011	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCS Roundabouts Report

General Information

Analyst	Dan Bieberitz
Agency or Co.	TADI
Date Performed	11/22/2023
Analysis Year	2024
Time Analyzed	AM Peak Hour
Project Description	Ancient Oaks Condominium Development



Site Information

Intersection	Watertown Road & North A...
E/W Street Name	Watertown Road
N/S Street Name	North Avenue
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.81
Jurisdiction	Waukesha County

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	1	140	365	2	1	1	190	10	1	2	1	1	1	15	1	210
Percent Heavy Vehicles, %	6	6	6	6	9	9	9	9	1	1	1	1	3	3	3	3
Flow Rate (v_{PCE}), pc/h	1	183	478	3	1	1	256	13	1	2	1	1	1	19	1	267
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.7000			4.7000			4.7000			4.7000	
Follow-Up Headway, s		2.6000			2.6000			2.6000			2.6000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		665			271			5			288	
Entry Volume, veh/h		627			249			5			280	
Circulating Flow (v_c), pc/h	24			189			683			262		
Exiting Flow (v_{ex}), pc/h	499			526			198			6		
Capacity (c_{pce}), pc/h		1354			1158			726			1081	
Capacity (c), veh/h		1277			1063			719			1050	
v/c Ratio (x)		0.49			0.23			0.01			0.27	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		8.0			5.6			5.1			6.0	
Lane LOS		A			A			A			A	
95% Queue, veh		2.8			0.9			0.0			1.1	
Approach Delay, s/veh | LOS	8.0	A		5.6	A		5.1	A		6.0	A	
Intersection Delay, s/veh | LOS	7.0						A					

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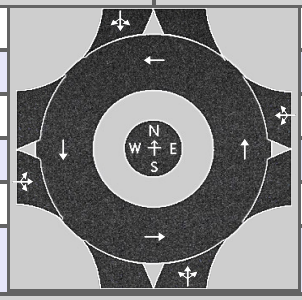
HCS Roundabouts Report

General Information

Analyst	Dan Bieberitz
Agency or Co.	TADI
Date Performed	11/22/2023
Analysis Year	2024
Time Analyzed	PM Peak Hour
Project Description	Ancient Oaks Condominium Development



Site Information

Intersection	Watertown Road & North A...
E/W Street Name	Watertown Road
N/S Street Name	North Avenue
Analysis Time Period, hrs	0.25
Peak Hour Factor	0.95
Jurisdiction	Waukesha County

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	1	225	320	1	1	1	330	30	1	5	1	1	1	10	1	160
Percent Heavy Vehicles, %	3	3	3	3	1	1	1	1	1	1	1	1	3	3	3	3
Flow Rate (v_{PCE}), pc/h	1	244	347	1	1	1	351	32	1	5	1	1	1	11	1	173
Right-Turn Bypass	None				None				None				None			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			
Proportion of CAVs	0															

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway, s		4.7000			4.7000			4.7000			4.7000	
Follow-Up Headway, s		2.6000			2.6000			2.6000			2.6000	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		593			385			8			186	
Entry Volume, veh/h		576			381			8			181	
Circulating Flow (v_c), pc/h	16			253			605			360		
Exiting Flow (v_{ex}), pc/h	360			530			278			4		
Capacity (c_{pce}), pc/h		1364			1090			782			986	
Capacity (c), veh/h		1324			1080			774			957	
v/c Ratio (x)		0.43			0.35			0.01			0.19	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		7.0			6.9			4.7			5.6	
Lane LOS		A			A			A			A	
95% Queue, veh		2.3			1.6			0.0			0.7	
Approach Delay, s/veh | LOS	7.0	A		6.9	A		4.7	A		5.6	A	
Intersection Delay, s/veh | LOS	6.7						A					

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Appendix E
Traffic Signal Warrant Outputs

Watertown Road & North Avenue

Wisconsin Department of Transportation Traffic Signal Warrant Summary Worksheet

70%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Watertown Road & North Avenue
County: Waukesha
City: Pewaukee

Major Street: Watertown Road
Critical Approach Speed: 45 mph
Lanes: 1 lane

Minor Street: North Ave.
Critical Approach Speed: 45 mph
Lanes: 1 lane

% Right Turns Included
From North (SB) 0%
From East (WB) 100%
From South (NB) 100%
From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 4 or more
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level? No

Analysis based on PROJECTED volume data.

Forecast Year	Within 5 Years of Construction?	Time (HH:MM)			
		From	AM / PM	To	AM / PM
2024	Yes	6:00	AM	6:00	PM

Warrant Evaluation Summary	Warrant Met:
Warrant 1: Eight - Hour Vehicular Volume	**No**
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
Warrant 2: Four-Hour Volume	**No**
Warrant 3: Peak Hour Volume	**N/A**
Warrant 4: Pedestrian Volume	**N/A**
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
Warrant 5: School Crossing	**N/A**
Warrant 6: Coordinated Signal System	**N/A**
Warrant 7: Crash Experience	**N/A**
Warrant 8: Roadway Network	**N/A**
Warrant 9: Intersection Near a Grade Crossing	**N/A**

Warrant Analysis Conducted By:

Name: DCB
Agency: TADI
Date: 11/22/2023

Warrant 1: Eight - Hour Vehicular Volume 70%

Warrant Evaluated? Yes **Warrant Satisfied? No** **Manually Set To:**

Condition A : Min. Veh. Volume		
Volume Level	70%	56%
Major Rd. Req	350	280
Minor Rd. Req	105	84
Number of Hours	0	0

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	70%	56%
Major Rd. Req	525	420
Minor Rd. Req	53	42
Number of Hours	0	0

Satisfied? No

Condition C: Combination of A & B at 56%

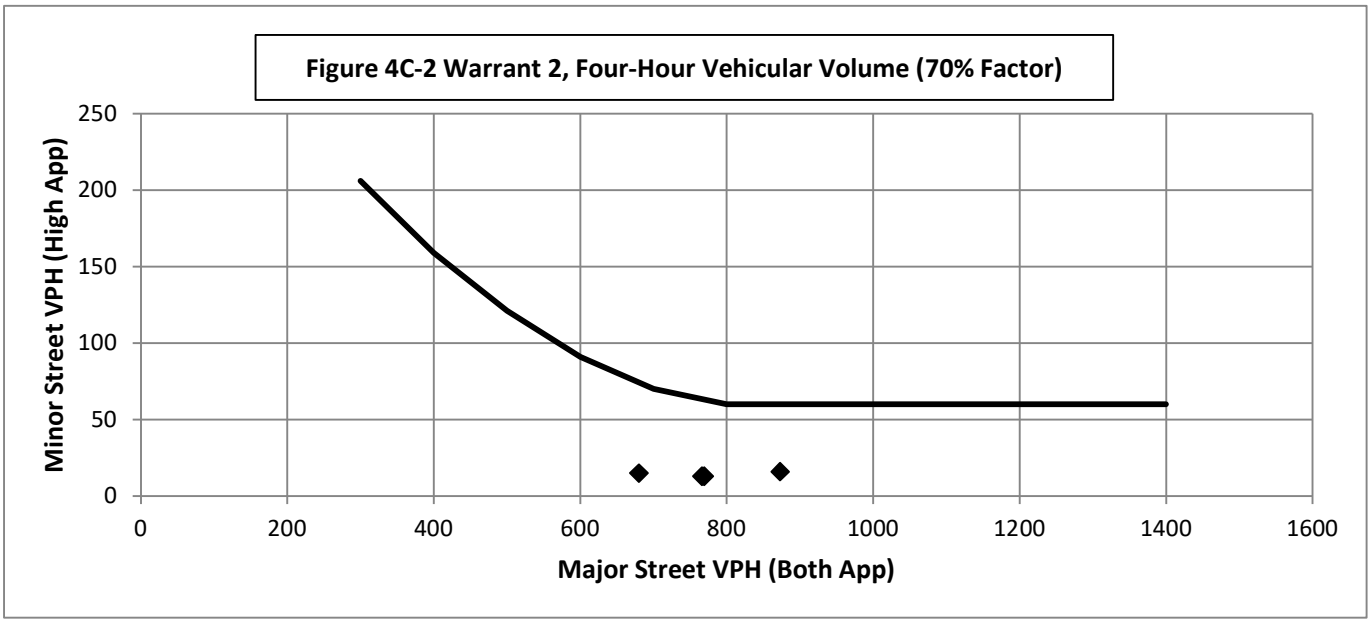
Satisfied? No

6:00 AM	Enter Start Time (Military Time) (HH:MM)				
Time Period	**From**	**To**	**Major Road: Both App. (VPH)**	**Minor Road: High App. (VPH)**	**Total**
1	6:00	7:00	263	16	279
2	7:00	8:00	653	15	668
3	8:00	9:00	584	5	589
4	9:00	10:00	400	10	410
5	10:00	11:00	441	16	457
6	11:00	12:00	576	12	588
7	12:00	13:00	680	15	695
8	13:00	14:00	577	14	591
9	14:00	15:00	585	16	601
10	15:00	16:00	766	13	779
11	16:00	17:00	873	16	889
12	17:00	18:00	769	13	782
13	18:00	19:00	0	0	0
14	19:00	20:00	0	0	0
15	20:00	21:00	0	0	0
16	21:00	22:00	0	0	0

Warrant 2: Four-Hour Volume 70%

Warrant Evaluated? Yes
Warrant Satisfied? No
Manually Set To:

Hour Start	16:00	17:00	15:00	12:00
Major Road Vol.	873	769	766	680
Minor Road Vol.	16	13	13	15



Warrant 3: Peak Hour Volume 70%

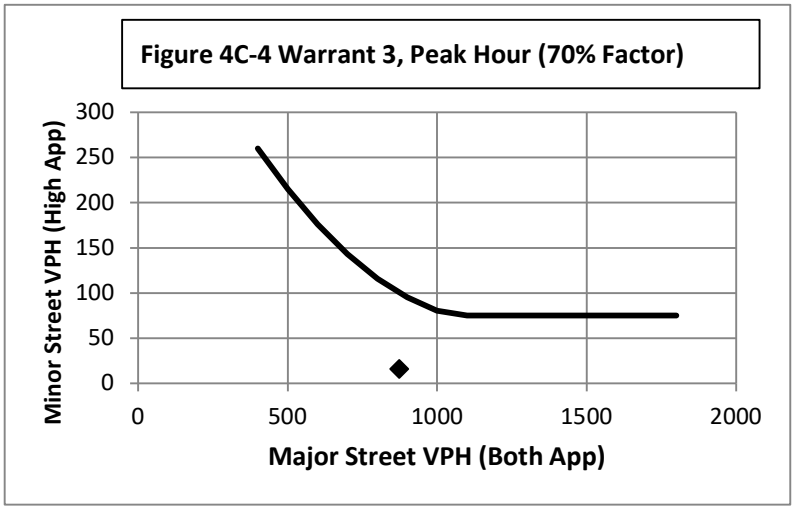
Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	4	
Volume on Minor Approach	100	
Total Entering Volume (veh/h)	800	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
16:00	873	16



Warrant 4: Pedestrian Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

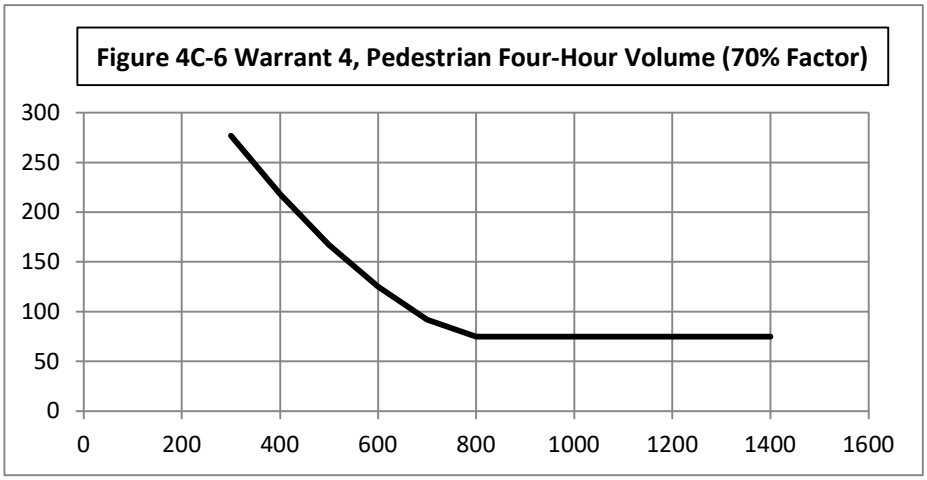
Criterion A: Four Hour

Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?

Avg. walk speed less than 3.5 ft/s?

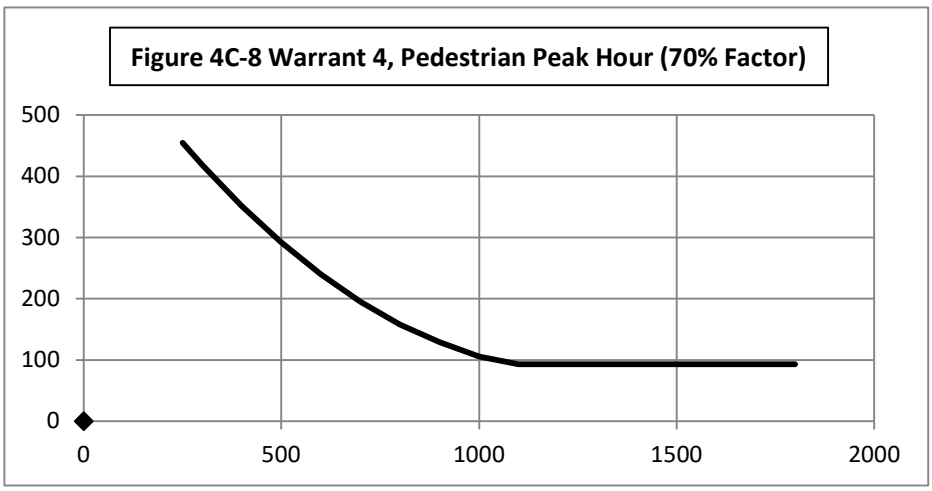
Criterion A Satisfied?



Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?



Warrant 5: School Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria		Fulfilled?
1	There are a MINIMUM of 20 school children during the highest crossing hour.	
2	There are fewer adequate gaps in the major road traffic stream during the period when the school children are using the crossing than the number of minutes in the same period.	
3	The nearest traffic signal along the major road is located more than 300 ft away. Or, the nearest traffic signal is within 300 ft but the proposed traffic signal will not restrict the progressive movement of traffic.	

Warrant 6: Coordinated Signal System 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria		Fulfilled?
1	Signal spacing > 1000 ft	
2	On a one-way road or a road that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.	
3	On a two-way road, adjacent signals do not provide the necessary degree of platooning and the proposed and the adjacent signals will collectively provide a progressive operation.	

Warrant 7: Crash Experience 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria				Fulfilled?
1	Adequate trial of other remedial measures has failed to reduce crash frequency.			
	Measures Tried:			
2	Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12 month period.	# of crashes per 12 months		
3	Warrant 1, Condition A (80%)		No	No
	Warrant 1, Condition B (80%)		No	
	Warrant 4, Criterion A (80%)		No	
	Warrant 4, Criterion B (80%)		No	

Warrant 8: Roadway Network 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria					Met?	Fulfilled?
1	Total entering volume of at least 1,000 veh/h during typical weekday peak hour			889	No	No
	Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.				No	
2	Total entering vol. of at least 1,000 veh/h for each of any 5 hrs of non-normal business day (Sat. or Sun.)					
	Hour					
	Volume					

Characteristics of Major Routes - Select yes if all intersecting routes have characteristic		Fulfilled?
1	Part of the road or highway system that serves as the principal roadway network for through traffic flow	
2	Rural or suburban highway outside of, entering, or traversing a city	
3	Appears as a major route on an official plan	

Warrant 9: Intersection Near a Grade Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Adjustment Factors			Manually Set Peak Hour?				
Rail Traffic per Day	% High Occupancy Buses on Minor Road	% Tractor-Trailer Trucks on Minor Road	D	Peak Hour	Major Road Vol.	Minor Road Vol.	Adjusted Minor Vol.
1	0	0% to 2.5%	660	16:00	873	16	5.36

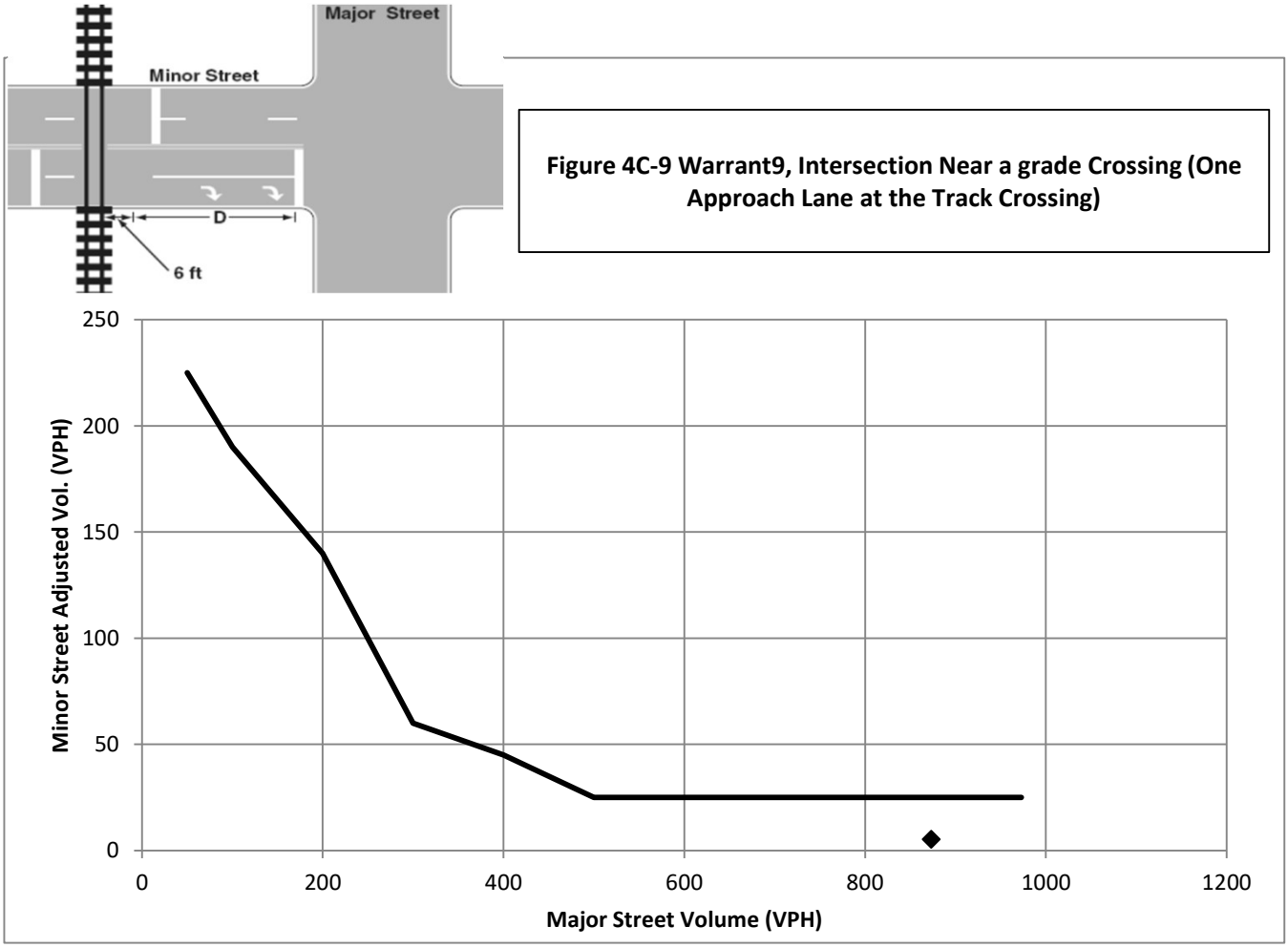


Figure 4C-9 Warrant9, Intersection Near a grade Crossing (One Approach Lane at the Track Crossing)

Conclusions/Comments:

Warrant #9 was not evaluated due the intersection does not meet WMUTCD criteria for this type of warrant - Watertown Road does not have a stop condition.

Updated: 12/6/2017

Year 2024 Projected
EB LT with WB Through

Wisconsin Department of Transportation Traffic Signal Warrant Summary Worksheet

70%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Watertown Road & North Avenue
County: Waukesha
City: Pewaukee

Major Street: Watertown Road
Critical Approach Speed: 45 mph
Lanes: 1 lane

Minor Street: North Ave.
Critical Approach Speed: 45 mph
Lanes: 1 lane

% Right Turns Included
From North (SB) 0%
From East (WB) 100%
From South (NB) 100%
From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 4 or more
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level? No

Analysis based on PROJECTED volume data.

Forecast Year	Within 5 Years of Construction?	Time (HH:MM)			
		From	AM / PM	To	AM / PM
2024	Yes	6:00	AM	6:00	PM

Warrant Evaluation Summary	Warrant Met:
Warrant 1: Eight - Hour Vehicular Volume	**No**
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
Warrant 2: Four-Hour Volume	**No**
Warrant 3: Peak Hour Volume	**N/A**
Warrant 4: Pedestrian Volume	**N/A**
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
Warrant 5: School Crossing	**N/A**
Warrant 6: Coordinated Signal System	**N/A**
Warrant 7: Crash Experience	**N/A**
Warrant 8: Roadway Network	**N/A**
Warrant 9: Intersection Near a Grade Crossing	**N/A**

Warrant Analysis Conducted By:

Name: DCB
Agency: TADI
Date: 11/22/2023

Warrant 1: Eight - Hour Vehicular Volume 70%

Warrant Evaluated? Yes **Warrant Satisfied? No** **Manually Set To:**

Condition A : Min. Veh. Volume		
Volume Level	70%	56%
Major Rd. Req	350	280
Minor Rd. Req	105	84
Number of Hours	0	4

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	70%	56%
Major Rd. Req	525	420
Minor Rd. Req	53	42
Number of Hours	0	0

Satisfied? No

Condition C: Combination of A & B at 56%

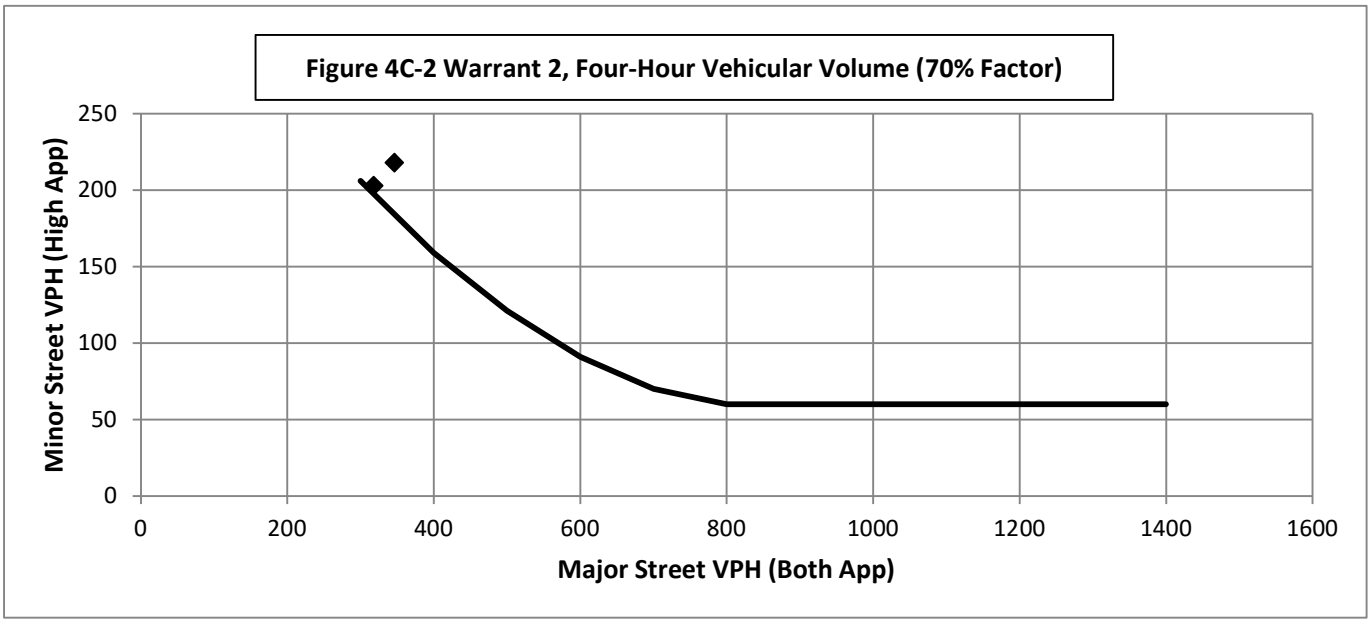
Satisfied? No

6:00 AM	Enter Start Time (Military Time) (HH:MM)				
Time Period	**From**	**To**	**Major Road: Both App. (VPH)**	**Minor Road: High App. (VPH)**	**Total**
1	6:00	7:00	115	36	151
2	7:00	8:00	210	133	343
3	8:00	9:00	156	133	289
4	9:00	10:00	148	73	221
5	10:00	11:00	155	77	232
6	11:00	12:00	198	128	326
7	12:00	13:00	293	146	439
8	13:00	14:00	246	120	366
9	14:00	15:00	243	123	366
10	15:00	16:00	293	202	495
11	16:00	17:00	346	218	564
12	17:00	18:00	318	203	521
13	18:00	19:00	0	0	0
14	19:00	20:00	0	0	0
15	20:00	21:00	0	0	0
16	21:00	22:00	0	0	0

Warrant 2: Four-Hour Volume 70%

Warrant Evaluated? Yes
Warrant Satisfied? No
Manually Set To:

Hour Start	16:00	17:00	#N/A	#N/A
Major Road Vol.	346	318	#N/A	#N/A
Minor Road Vol.	218	203	#N/A	#N/A



Warrant 3: Peak Hour Volume 70%

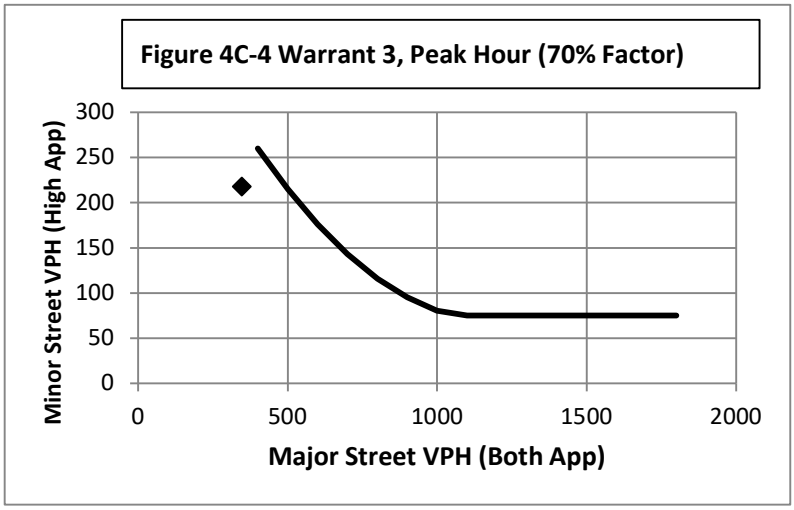
Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	4	
Volume on Minor Approach	100	
Total Entering Volume (veh/h)	800	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
16:00	346	218



Warrant 4: Pedestrian Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

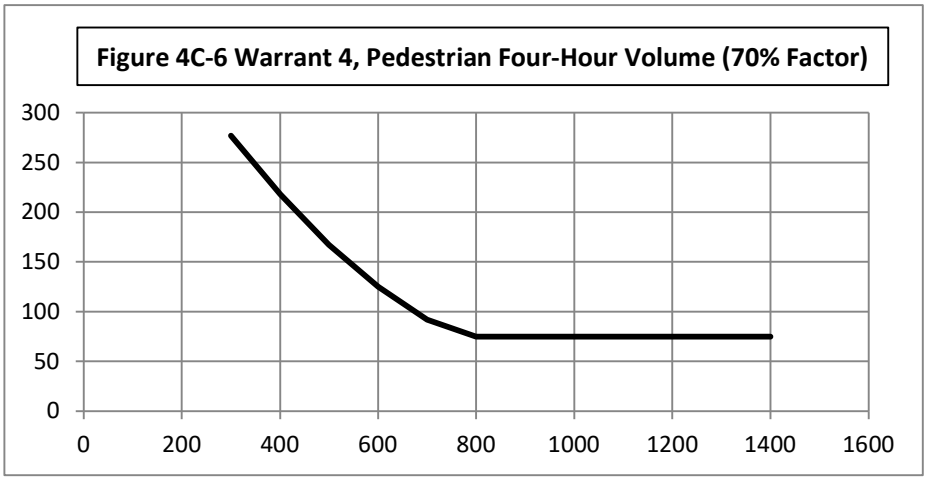
Criterion A: Four Hour

Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?

Avg. walk speed less than 3.5 ft/s?

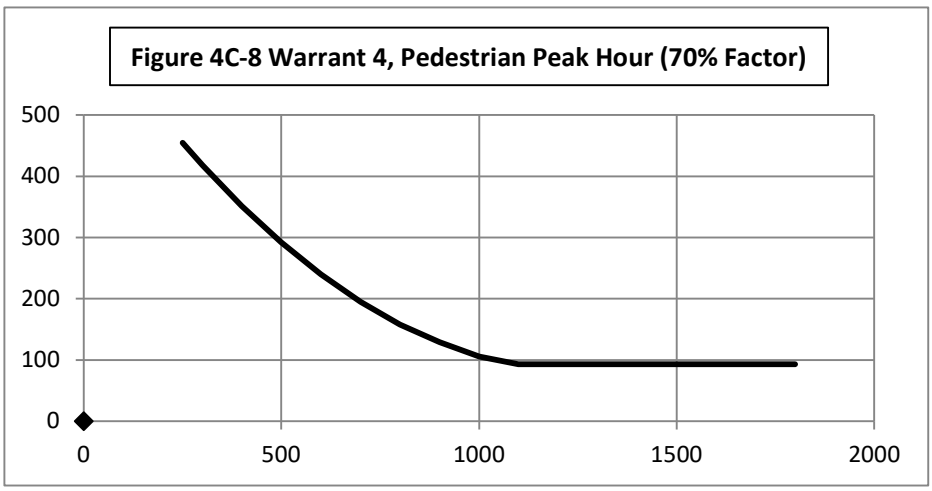
Criterion A Satisfied?



Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?



Warrant 5: School Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria		Fulfilled?
1	There are a MINIMUM of 20 school children during the highest crossing hour.	
2	There are fewer adequate gaps in the major road traffic stream during the period when the school children are using the crossing than the number of minutes in the same period.	
3	The nearest traffic signal along the major road is located more than 300 ft away. Or, the nearest traffic signal is within 300 ft but the proposed traffic signal will not restrict the progressive movement of traffic.	

Warrant 6: Coordinated Signal System 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria		Fulfilled?
1	Signal spacing > 1000 ft	
2	On a one-way road or a road that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.	
3	On a two-way road, adjacent signals do not provide the necessary degree of platooning and the proposed and the adjacent signals will collectively provide a progressive operation.	

Warrant 7: Crash Experience 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria				Fulfilled?
1	Adequate trial of other remedial measures has failed to reduce crash frequency.			
	Measures Tried:			
2	Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12 month period.	# of crashes per 12 months		
3	Warrant 1, Condition A (80%)	No		No
	Warrant 1, Condition B (80%)	No		
	Warrant 4, Criterion A (80%)	No		
	Warrant 4, Criterion B (80%)	No		

Warrant 8: Roadway Network 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria				Met?	Fulfilled?
1	Total entering volume of at least 1,000 veh/h during typical weekday peak hour		564	No	No
	Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.			No	
2	Total entering vol. of at least 1,000 veh/h for each of any 5 hrs of non-normal business day (Sat. or Sun.)				
	Hour				
	Volume				

Characteristics of Major Routes - Select yes if all intersecting routes have characteristic		Fulfilled?
1	Part of the road or highway system that serves as the principal roadway network for through traffic flow	
2	Rural or suburban highway outside of, entering, or traversing a city	
3	Appears as a major route on an official plan	

Warrant 9: Intersection Near a Grade Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Adjustment Factors			Manually Set Peak Hour?				
Rail Traffic per Day	% High Occupancy Buses on Minor Road	% Tractor-Trailer Trucks on Minor Road	D	Peak Hour	Major Road Vol.	Minor Road Vol.	Adjusted Minor Vol.
1	0	0% to 2.5%	660	16:00	346	218	73.03

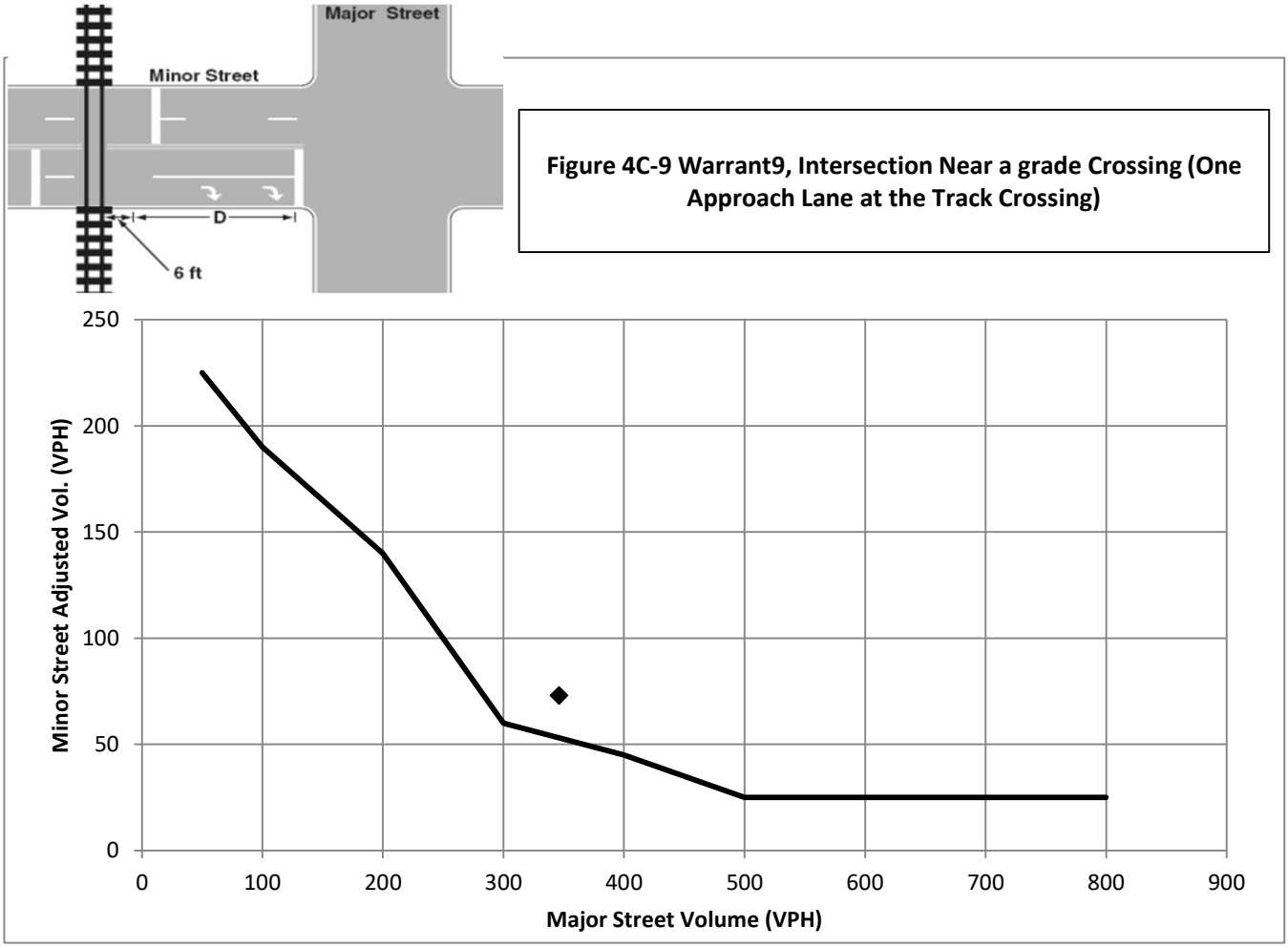


Figure 4C-9 Warrant9, Intersection Near a grade Crossing (One Approach Lane at the Track Crossing)

Conclusions/Comments:

Warrant #9 was not evaluated due the intersection does not meet WMUTCD criteria for this type of warrant - Watertown Road does not have a stop condition.

Updated: 12/6/2017

Wisconsin Department of Transportation Traffic Signal Warrant Summary Worksheet

70%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Watertown Road & North Avenue
County: Waukesha
City: Pewaukee

Major Street: Watertown Road
Critical Approach Speed: 45 mph
Lanes: 1 lane

Minor Street: North Ave.
Critical Approach Speed: 45 mph
Lanes: 1 lane

% Right Turns Included
From North (SB) 0%
From East (WB) 100%
From South (NB) 100%
From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 4 or more
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level? No

Analysis based on PROJECTED volume data.

Forecast Year	Within 5 Years of Construction?	Time (HH:MM)			
		From	AM / PM	To	AM / PM
2024	Yes	6:00	AM	6:00	PM

Warrant Evaluation Summary	Warrant Met:
Warrant 1: Eight - Hour Vehicular Volume	**No**
Condition A: Minimum Vehicular Volume	No
Condition B: Interruption of Continuous Traffic	No
Condition C: Combination: 80% of A and B	No
Warrant 2: Four-Hour Volume	**No**
Warrant 3: Peak Hour Volume	**N/A**
Warrant 4: Pedestrian Volume	**N/A**
Criterion A: Four-Hour	
Criterion B: Peak-Hour	
Warrant 5: School Crossing	**N/A**
Warrant 6: Coordinated Signal System	**N/A**
Warrant 7: Crash Experience	**N/A**
Warrant 8: Roadway Network	**N/A**
Warrant 9: Intersection Near a Grade Crossing	**N/A**

Warrant Analysis Conducted By:

Name: DCB
Agency: TADI
Date: 11/22/2023

Warrant 1: Eight - Hour Vehicular Volume 70%

Warrant Evaluated? Yes **Warrant Satisfied? No** **Manually Set To:**

Condition A : Min. Veh. Volume		
Volume Level	70%	56%
Major Rd. Req	350	280
Minor Rd. Req	105	84
Number of Hours	2	4

Satisfied? No

Condition B: Interruption of Continuous Traffic		
Volume Level	70%	56%
Major Rd. Req	525	420
Minor Rd. Req	53	42
Number of Hours	0	0

Satisfied? No

Condition C: Combination of A & B at 56%

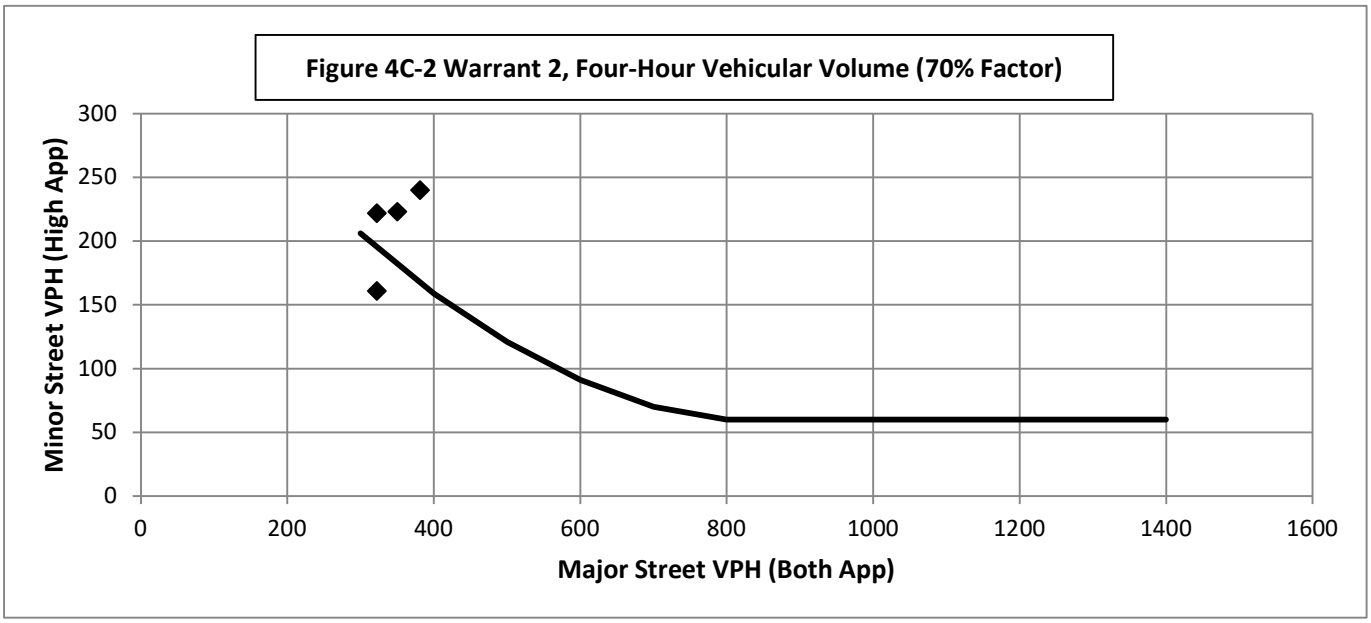
Satisfied? No

6:00 AM	Enter Start Time (Military Time) (HH:MM)				
Time Period	**From**	**To**	**Major Road: Both App. (VPH)**	**Minor Road: High App. (VPH)**	**Total**
1	6:00	7:00	126	40	166
2	7:00	8:00	231	146	377
3	8:00	9:00	172	146	318
4	9:00	10:00	163	80	243
5	10:00	11:00	170	85	255
6	11:00	12:00	218	141	359
7	12:00	13:00	322	161	483
8	13:00	14:00	270	132	402
9	14:00	15:00	268	135	403
10	15:00	16:00	322	222	544
11	16:00	17:00	381	240	621
12	17:00	18:00	350	223	573
13	18:00	19:00	0	0	0
14	19:00	20:00	0	0	0
15	20:00	21:00	0	0	0
16	21:00	22:00	0	0	0

Warrant 2: Four-Hour Volume 70%

Warrant Evaluated? Yes
Warrant Satisfied? No
Manually Set To:

Hour Start	16:00	17:00	15:00	12:00
Major Road Vol.	381	350	322	322
Minor Road Vol.	240	223	222	161



Warrant 3: Peak Hour Volume 70%

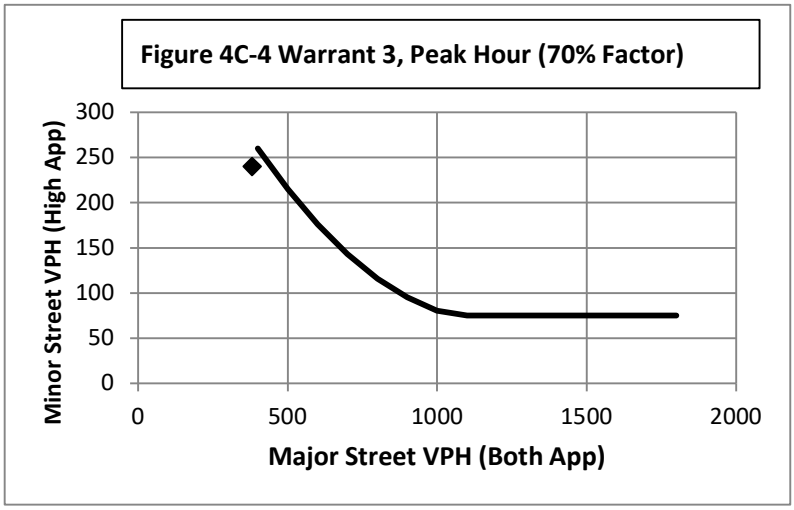
Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Condition justifying use of warrant:

Criteria		Met?
Delay on Minor Approach	4	
Volume on Minor Approach	100	
Total Entering Volume (veh/h)	800	

Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
16:00	381	240



Warrant 4: Pedestrian Volume 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

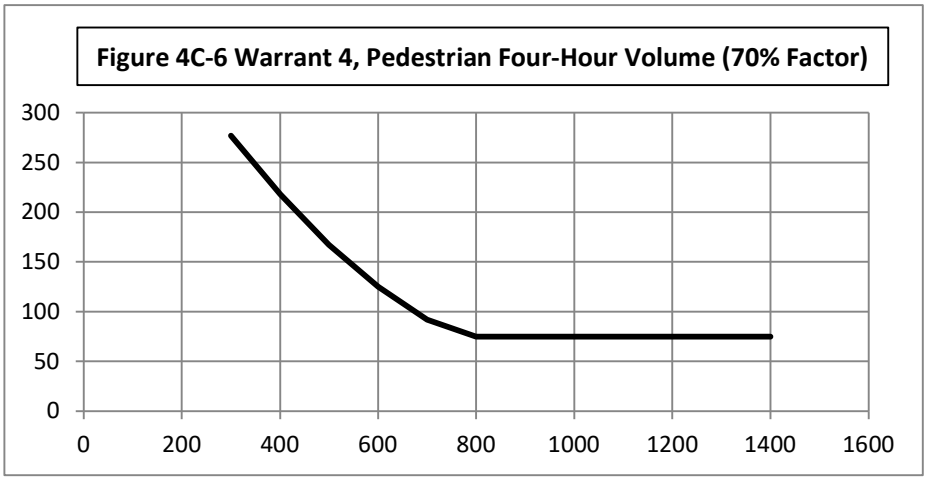
Criterion A: Four Hour

Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?

Avg. walk speed less than 3.5 ft/s?

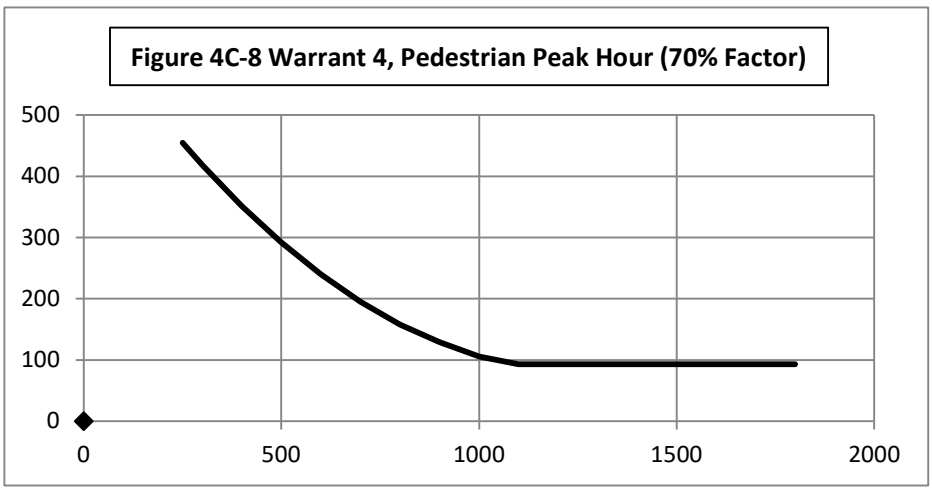
Criterion A Satisfied?



Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?



Warrant 5: School Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria		Fulfilled?
1	There are a MINIMUM of 20 school children during the highest crossing hour.	
2	There are fewer adequate gaps in the major road traffic stream during the period when the school children are using the crossing than the number of minutes in the same period.	
3	The nearest traffic signal along the major road is located more than 300 ft away. Or, the nearest traffic signal is within 300 ft but the proposed traffic signal will not restrict the progressive movement of traffic.	

Warrant 6: Coordinated Signal System 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria		Fulfilled?
1	Signal spacing > 1000 ft	
2	On a one-way road or a road that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.	
3	On a two-way road, adjacent signals do not provide the necessary degree of platooning and the proposed and the adjacent signals will collectively provide a progressive operation.	

Warrant 7: Crash Experience 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria			Met?	Fulfilled?
1	Adequate trial of other remedial measures has failed to reduce crash frequency.			
	Measures Tried:			
2	Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12 month period.	# of crashes per 12 months		
3	Warrant 1, Condition A (80%)		No	No
	Warrant 1, Condition B (80%)		No	
	Warrant 4, Criterion A (80%)		No	
	Warrant 4, Criterion B (80%)		No	

Warrant 8: Roadway Network 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Criteria					Met?	Fulfilled?
1	Total entering volume of at least 1,000 veh/h during typical weekday peak hour			621	No	No
	Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.				No	
2	Total entering vol. of at least 1,000 veh/h for each of any 5 hrs of non-normal business day (Sat. or Sun.)					
	Hour					
	Volume					

Characteristics of Major Routes - Select yes if all intersecting routes have characteristic		Fulfilled?
1	Part of the road or highway system that serves as the principal roadway network for through traffic flow	
2	Rural or suburban highway outside of, entering, or traversing a city	
3	Appears as a major route on an official plan	

Warrant 9: Intersection Near a Grade Crossing 70%

Warrant Evaluated? No **Warrant Satisfied? N/A** **Manually Set To:**

Adjustment Factors			Manually Set Peak Hour?				
Rail Traffic per Day	% High Occupancy Buses on Minor Road	% Tractor-Trailer Trucks on Minor Road	D	Peak Hour	Major Road Vol.	Minor Road Vol.	Adjusted Minor Vol.
1	0	0% to 2.5%	660	16:00	381	240	80.4

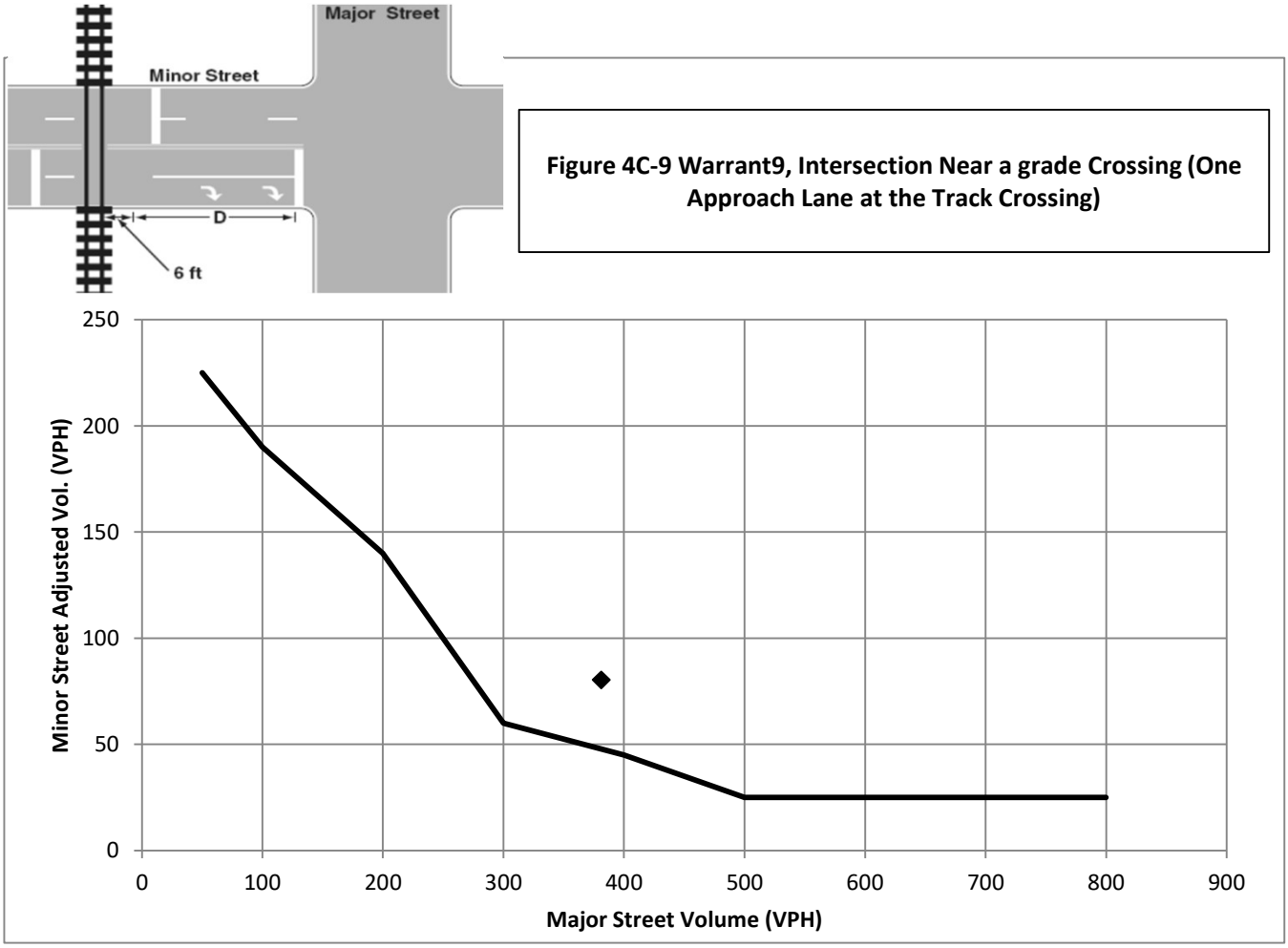


Figure 4C-9 Warrant9, Intersection Near a grade Crossing (One Approach Lane at the Track Crossing)

Conclusions/Comments:

Warrant #9 was not evaluated due the intersection does not meet WMUTCD criteria for this type of warrant - Watertown Road does not have a stop condition.

Updated: 12/6/2017

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 5.

DATE: December 4, 2023

DEPARTMENT: Planning

PROVIDED BY: Nick Fuchs

SUBJECT:

Discussion and Possible Action Regarding **Ordinance 23-10** Rezoning the Lawrence Marincic / Carity Land Corporation / Ancient Oaks Property Located at N18 W22670 Watertown Road (PWC 0958-990-005 & PWC 0958-990-006) from A-2 Agricultural and LC Lowland Conservancy to Rm-1 Multiple-Family Residential Planned Unit Development, LC Lowland Conservancy, and UC Upland Conservancy for the Purpose of Developing Four-Family and Duplex Owner-Occupied Condominiums [Fuchs]

BACKGROUND:

At their November 16, 2023 meeting, the Plan Commission recommended approval of the request to rezone properties located at approximately N18W22670 Watertown Road from A-2 Agricultural and LC Lowland Conservancy to Rm-1 Multiple-Family Residential Planned Unit Development, LC Lowland Conservancy, and UC Upland Conservancy. The motion passed with five in favor and one opposed.

Note that protected natural resources will be rezoned based upon the field delineations completed by the applicant.

FINANCIAL IMPACT:

RECOMMENDED MOTION:

A motion to rezone properties located at approximately N18W22670 Watertown Road from A-2 Agricultural and LC Lowland Conservancy to Rm-1 Multiple-Family Residential Planned Unit Development, LC Lowland Conservancy, and UC Upland Conservancy.

ATTACHMENTS:

Description

Ordiance 23-10

Ancient Oaks staff report 11.16.23

Ancient Oaks narrative

SECTION 3 – ACTION

This Ordinance shall take effect upon passage and posting.

Dated this 4th day of December, 2023

COMMON COUNCIL OF THE CITY OF PEWAUKEE

WAUKESHA COUNTY, WISCONSIN

Attest: Steve Bierce, Mayor

Kelly Tarczewski, Clerk/Treasurer

Office of the Planner & Community Development Director
W240 N3065 Pewaukee Road
Pewaukee, Wisconsin 53072
Phone (262) 691-0770 Fax (262) 691-1798
fuchs@pewaukee.wi.us

REPORT TO THE PLAN COMMISSION

Meeting of November 16, 2023

Date: November 9, 2023

Project Name: Ancient Oaks Condominium development

Project Address/Tax Key No.: Approximately N18W22670 Watertown Road/PWC 0958990005 & 0958990006

Applicant: Marincic Family LLC/Carity Land Corporation

Property Owner: Marincic Family LLC

Current Zoning: A-2 Agricultural District and LC Lowland Conservancy District

2050 Land Use Map Designation: Medium Density Residential (6,500 Sq. Ft. – 1/2 Ac./D.U.) and Flood Plains, Lowland & Upland Conservancy, and other natural areas

Use of Surrounding Properties: Single-family residential to the north and east and agricultural land to the south and west

Introduction

The applicant has applied for a Rezoning, Certified Survey Map, Conditional Use, and Site & Building Plan Review for a multi-family condominium development upon land located at the northwest corner of North Avenue and Watertown Road, approximately N18W22670 Watertown Road.

The subject proposal was previously before the Plan Commission for a conceptual review at their July 20, 2023, meeting. The development includes a total of 96 units within 25 buildings.

The total acreage of the two sites is 32.66 acres. This results in a gross density of 2.94 units per acre. The net acreage of the site, which does not include lowland conservancy areas, is 25.2 acres. This results in a net density of 3.77 units per acre.

Rezoning

The applicant is requesting to rezone the subject properties from A-2 Agricultural District and LC Lowland Conservancy District to Rm-1 Multiple-Family Residential District, LC Lowland Conservancy District, and UC Upland Conservancy District to accommodate the proposed development. The LC District and UC District will match the current wetland and environmental corridor delineations as illustrated on the rezoning exhibit submitted as part of the Rezoning Application.

The Rm-1 District allows 6.00 dwelling units per net acre; therefore, the development is in conformance with this standard at 3.77 units per acre. It can be further noted that even if all 9.46 acres of lowland and upland conservancy areas were excluded, the density would still be in compliance with the Rm-1 District at 4.14 units per acre.

The land is designated as Medium Density Residential (6,500 SQ. FT. - 1/2 AC. / D.U.) and Flood Plains, Lowland & Upland Conservancy, and Other Natural Areas. Medium Density Residential allows anywhere between 52 units (1/2 acre) to 176 units (6,500 square feet) for this property. As such, the proposed rezoning to the Rm-1 District is consistent with the City's Comprehensive Master Plan.

Certified Survey Map

The proposed Certified Survey Map dedicates a public right-of-way that extends from North Avenue to an Elmwood Drive access point to the north. This right-of-way also abuts the west property line for potential future connection to the property to the west.

The CSM contains three lots. Lot 1 is the southernmost lot and has an area of about 6 acres. Lot 2, to the north, has an area of about 12.6 acres, and Lot 3 has an area of approximately 10.1 acres.

Staff also reviewed density calculations for these individual lots. Lot 1 consists of 32 units, Lot 2 includes 28 units, and lot 3 has 36 units. All lots individually conform to Rm-1 District minimum net density requirements.

Note that if the project is approved, the applicant will draft a Condominium Plat for recording with the Waukesha County Register of Deeds.

Related to the CSM, staff recommends the following:

1. *After the approval of the rezoning and Conditional Use Permit, the CSM shall be updated to include required setback lines in accordance with Section 18.0603B.(2), including showing the 25-foot wetland setback, the stream, and 75-foot setback from the OHWM of the stream.*
2. *Following DNR approval of wetland impacts, the CSM must be updated to reflect that approval and show the road outside of the wetland and wetland setback areas.*
3. *Prior to recording, the CSM shall be updated to include all easements.*

Conditional Use

The Rm-1 District allows cluster developments as a Conditional Use, subject to the Residential planned unit development standards of Section 17.0414c. The applicant is utilizing the Conditional Use PUD option to reduce front and rear setbacks by 30%. The Permitted front and rear yard setbacks are 35 feet. With the 30% reduction, the applicant is utilizing setbacks of 24.5-feet.

In review of the plans, all Conditional Use standards are met.

Site & Building Plan Review

The properties are currently used for agricultural purposes. The easternmost property is vacant, and the westernmost property contains a single-family home. The subject properties are bisected by wetlands and a SEWRPC Secondary Environmental Corridor (SEC). SEWRPC was contacted and reviewed the proposed development. The applicant utilized GIS mapping of the environmental corridor. If preferred, the City may request that SEWRPC field delineate this boundary and review the site to confirm its SEC status. Staff has not made this request to SEWRPC at this time.

The northern half of the site includes 14 four-unit buildings and 1 two-unit building for a total of 58 units. The southern portion of the site includes 9 four-unit buildings and 1 two-unit building for a total of 38 units.

The site plan also includes a two-rail vinyl fence extending along the entire length of Watertown Road and along North Avenue to the south end of the North Avenue entrance drive.

There are two proposed storm water ponds, one on the south side of the development and one in the middle of the development, partially within the SEC. *Final utility, grading, erosion control and storm water management plans will require Engineering Department approval prior to any land disturbance*.

The site plan does take into account the potential modifications of this intersection proposed by the County.

Access

The development includes a proposed public road that extends from North Avenue through the development to Elmwood Drive. There is an existing 66-foot-wide strip of right-of-way extending from Elmwood Drive between two existing single-family properties, which was dedicated to the City via CSM No. 9269.

The public street connects the north and south development areas; however, *construction of the road and approval of this site plan is contingent upon Wisconsin Department of Natural Resources approval of the wetland impacts*.

Environmental

As noted, the property contains wetlands and a Secondary Environmental Corridor, primarily located within the center of the property and extending north to the rear property boundary. There are also two small pocket wetlands located on the west side of the property. The wetlands were delineated in 2020 by Dave Mayer, who is a WDNR Assured Delineator.

The applicant is proposing to disturb approximately 13,119 square feet of wetland area onsite. This includes filling 9,615 square feet of the larger wetland complex to allow the drive that extends through the entire development, connecting the north and south portions of the site. The applicant is then proposing to completely fill the two smaller wetlands. The wetland area furthest south is 1,400 square feet and the one to the north of that is 2,104 square feet.

Again, the wetland disturbance will require separate Wisconsin Department of Natural Resources review and approval prior to any land disturbance activities taking place.

Parking

The Rm-1 District requires that "a minimum of two and one-half (2-1/2) 200-square-foot off-street parking spaces provided for each residential unit, of which at least two (2) must be located in a garage as defined in sub-section 17.1402 (Also see Section 17.0600)."

With 96 units, 192 garage stalls with an additional 48 exterior parking spaces are required. As each unit will contain a two-car attached garage and parking available on the driveway in front of the

garage, this standard is met. As noted on the plans, there are 192 interior parking spaces and 192 exterior parking spaces provided.

Lighting
The applicant is only intending to have low level, decorative and pedestrian style lighting. *It is recommended that a Lighting Plan consisting of light and fixture details be provided to Community Development staff for review and approval, prior to permitting and installation*.

Landscaping
The applicant has provided landscaping plans that illustrate plantings throughout the site. A row of over 50 Juniper trees is located behind the fence along Watertown Road and North Avenue. The plan also includes four trees and foundation plantings around each individual building. There is also a row of landscaping to enhance the buffer between the proposed condos and the existing single-family homes along Elmwood Drive.

Note staff suggested that the row of landscaping along Watertown Road and North Avenue include staggered plantings of a greater variety of evergreen trees.

Also note that an agreement is needed for the cul-de-sac landscaping within the public rights-of-way. Additionally, a note is recommended to be placed on the Certified Survey Map and Condominium Plat indicating that plantings within the right-of-way are not the responsibility of the City and the City is not responsible for maintenance or damage to plantings or replacement of plantings.

Architecture
The buildings consist of a mix of shingle siding, Lannon stone veneer, and wall panels. The duplex units will have a similar look and appearance as the four-unit buildings.

Mechanical Plan
Ground mechanicals are proposed and will be screened to the furthest extent practicable as part of the landscape plan.

Signage
Two signs are proposed for the development. There is a sign located at the corner of Watertown Road and North Avenue as well as one at the North Avenue entrance drive. Details of the signs have been provided and, unless the Plan Commission objects to the proposed signage as shown, a Sign Permit shall be submitted and approved by staff that is in substantial conformance with the signs shown on the Site Plan and Sheets LSP1.6 and LSP1.7, prior to installation.

Recommendation

Staff recommends approval of the subject applications to allow the construction of a 96-condominium unit development located at approximately N18W22670 Watertown Road (Tax Key Nos. 0958990005 & 0958990006).

ANCIENT OAKS CONDOMINIUM

PROPERTY NARRATIVE

(Marincic Property)

N18 W 22670 Watertown Road

Pewaukee, WI 53072

The Marincic property consists of 32.45 ACRES of land located on the Northwest corner of Watertown Road and North Avenue in the City pf Pewaukee, Wisconsin.

Our Proposal is as follows:

- Current Zoning : A-2 Agricultural Zoning
- Land use recommendation : 6.0 units per Acre (or 198 units)
- Proposed Zoning Request : Rm-1 Planned Unit Development (PUD)
- Proposed number of units : 96 total Owner occupied residential units
- Unit Ownership : Owner Occupied Condominiums
- Proposed Units Per Acre : 2.95 Dwelling Units Per Acre
- Building style : 23 - 4 Family Condominiums
  : 2 - 2 family Condominiums
- Estimated Selling Price : $650,000.00 per unit
- Site plans, preliminary storm : See Attached
- Exterior Elevation, Rendering : See Attached
- Landscaping, delineations : See Attached

SITE SPECIFIATIONS

- Public Right of Way : 60’ wide as shown on plans
- Typical road section : 28’ wide – back of curb – w/ Mountable curbs
- Building setbacks : 24’-6” setback off of Public Right of Way
  : 45’ setback at Elmwood drive side Property Line
  : 24’-6”setback of all other Property lines
  : 25’ setback off Wetlands
- Distance between buildings : 40 distance between all Buildings

Slab on Grade Construction

Due to the high ground water table, this Site necessitates Slab on Grade Construction. To compensate for this condition, there will be stairs from the Garage to an upper Garage storage area creating approximately 650 square feet of storage.

DEVELOPMENT SCHEDULE

When we receive Approvals and rezoning at the December 04, 2023 Common Council meeting, we can continue with the finalization of other required permits, approvals and scheduling.

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 6.

DATE: December 4, 2023

DEPARTMENT: Planning

PROVIDED BY: Nick Fuchs

SUBJECT:

Discussion and Possible Action Regarding a Preliminary Certified Survey Map for Lawrence Marincic / Carity Land Corporation / Ancient Oaks for Property Located at N18 W22670 Watertown Road (PWC 0958-990-005 & PWC 0958-990-006) for the Purpose of Developing Four-Family and Duplex Owner-Occupied Condominiums [Fuchs]

BACKGROUND:

At their November 16, 2023 meeting, the Plan Commission recommended approval of a Preliminary Certified Survey Map for Lawrence Marincic/Carity Land Corporation/Ancient Oaks for Properties located at approximately N18W22670 Watertown Road. The motion passed with five in favor and one opposed.

FINANCIAL IMPACT:

RECOMMENDED MOTION:

A motion to approve the Preliminary Certified Survey Map for Lawrence Marincic/Carity Land Corporation/Ancient Oaks for Properties located at approximately N18W22670 Watertown Road.

ATTACHMENTS:

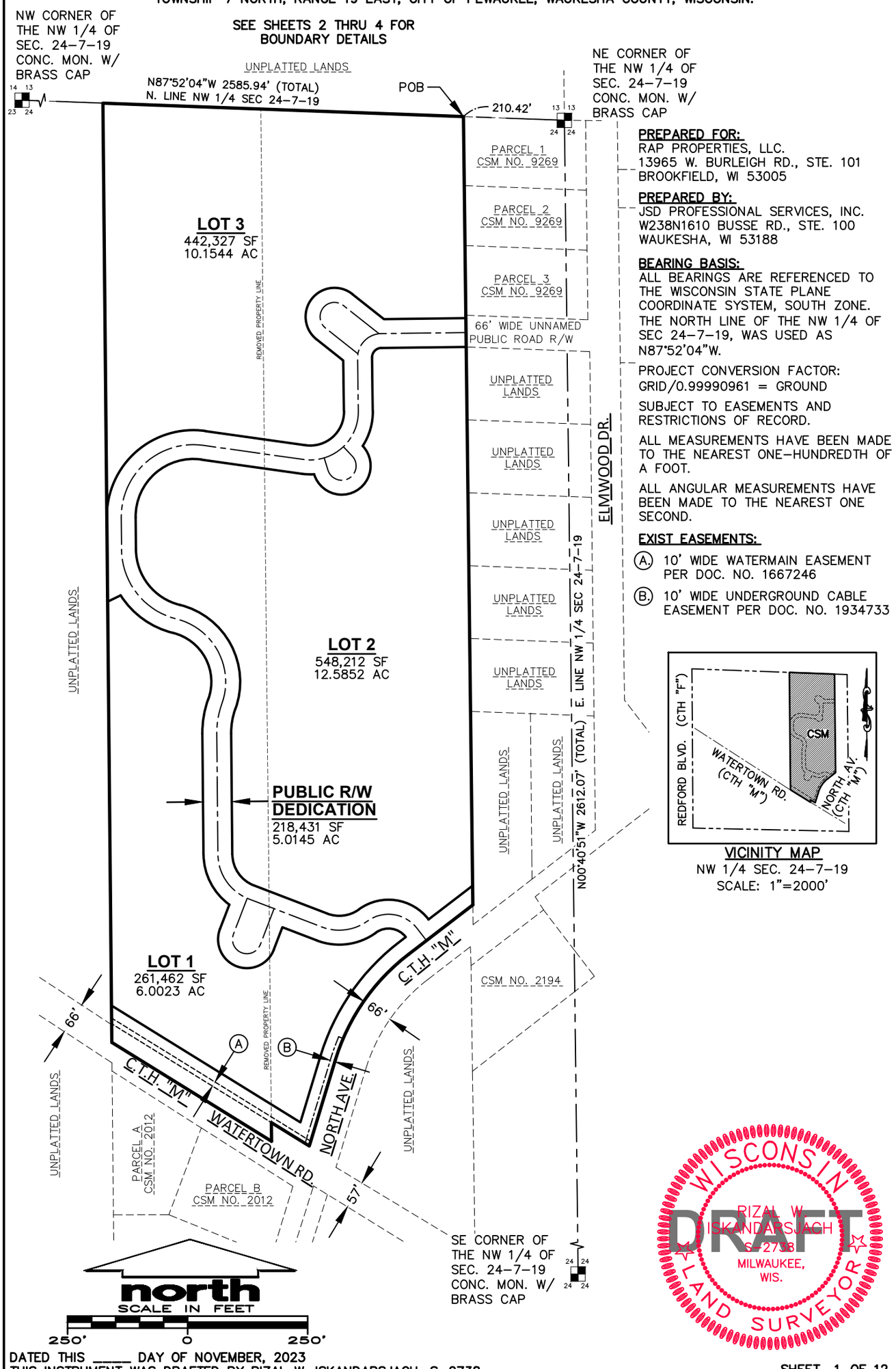
Description

Ancient Oaks CSM

PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.



PREPARED FOR:
RAP PROPERTIES, LLC.
13965 W. BURLEIGH RD., STE. 101
BROOKFIELD, WI 53005

PREPARED BY:
JSD PROFESSIONAL SERVICES, INC.
W238N1610 BUSSE RD., STE. 100
WAUKESHA, WI 53188

BEARING BASIS:
ALL BEARINGS ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. THE NORTH LINE OF THE NW 1/4 OF SEC 24-7-19, WAS USED AS N87°52'04"W.

PROJECT CONVERSION FACTOR: GRID/0.99990961 = GROUND

SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

ALL MEASUREMENTS HAVE BEEN MADE TO THE NEAREST ONE-HUNDREDTH OF A FOOT.

ALL ANGULAR MEASUREMENTS HAVE BEEN MADE TO THE NEAREST ONE SECOND.

EXIST EASEMENTS:

(A.) 10' WIDE WATERMAIN EASEMENT PER DOC. NO. 1667246

(B.) 10' WIDE UNDERGROUND CABLE EASEMENT PER DOC. NO. 1934733

VICINITY MAP
NW 1/4 SEC. 24-7-19
SCALE: 1"=2000'

DRAFT

RIZAL W. ISKANDARSJACH S-2738 MILWAUKEE, WIS.

WISCONSIN LAND SURVEYOR

DATED THIS ____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 1 OF 12

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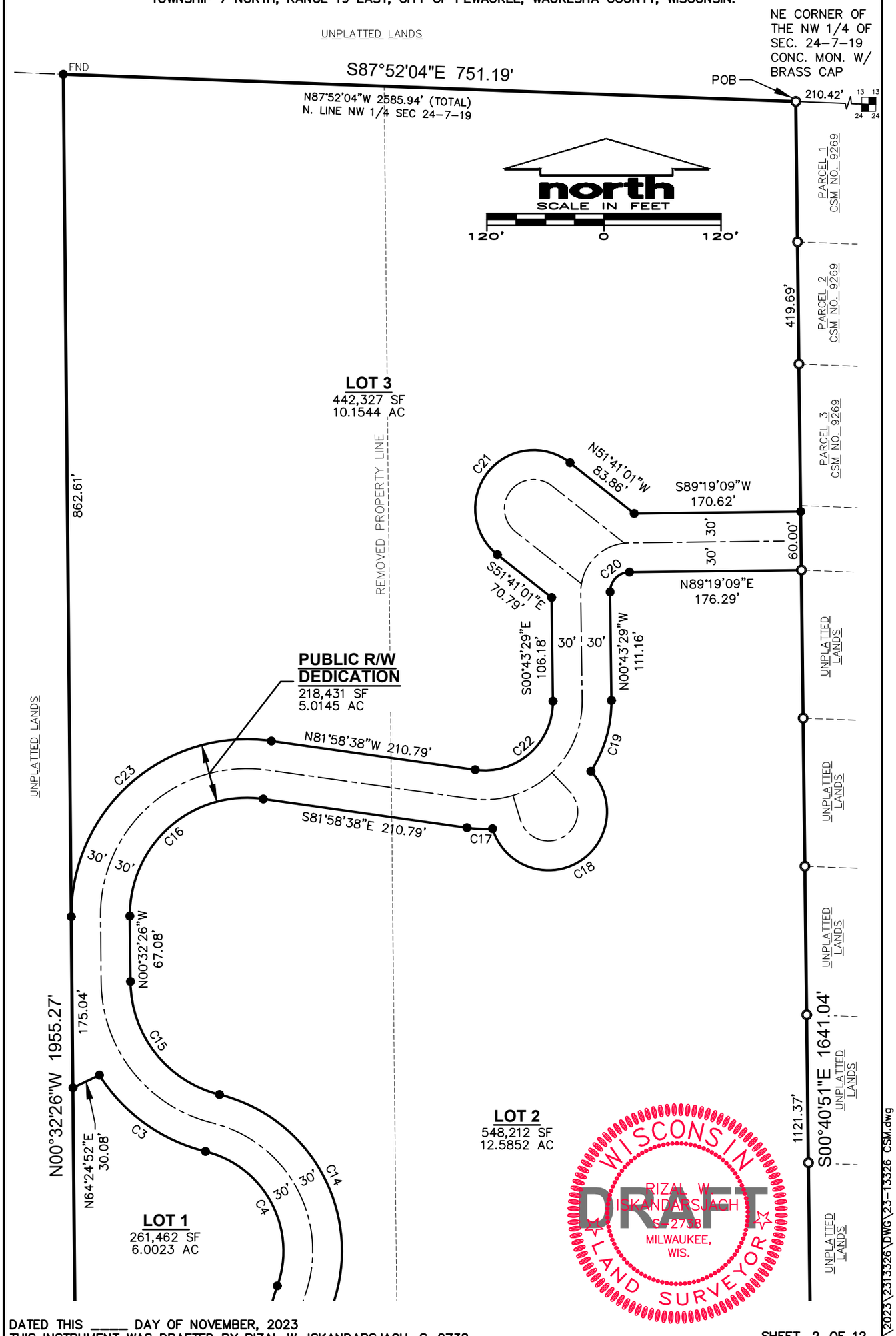
PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.



DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 2 OF 12

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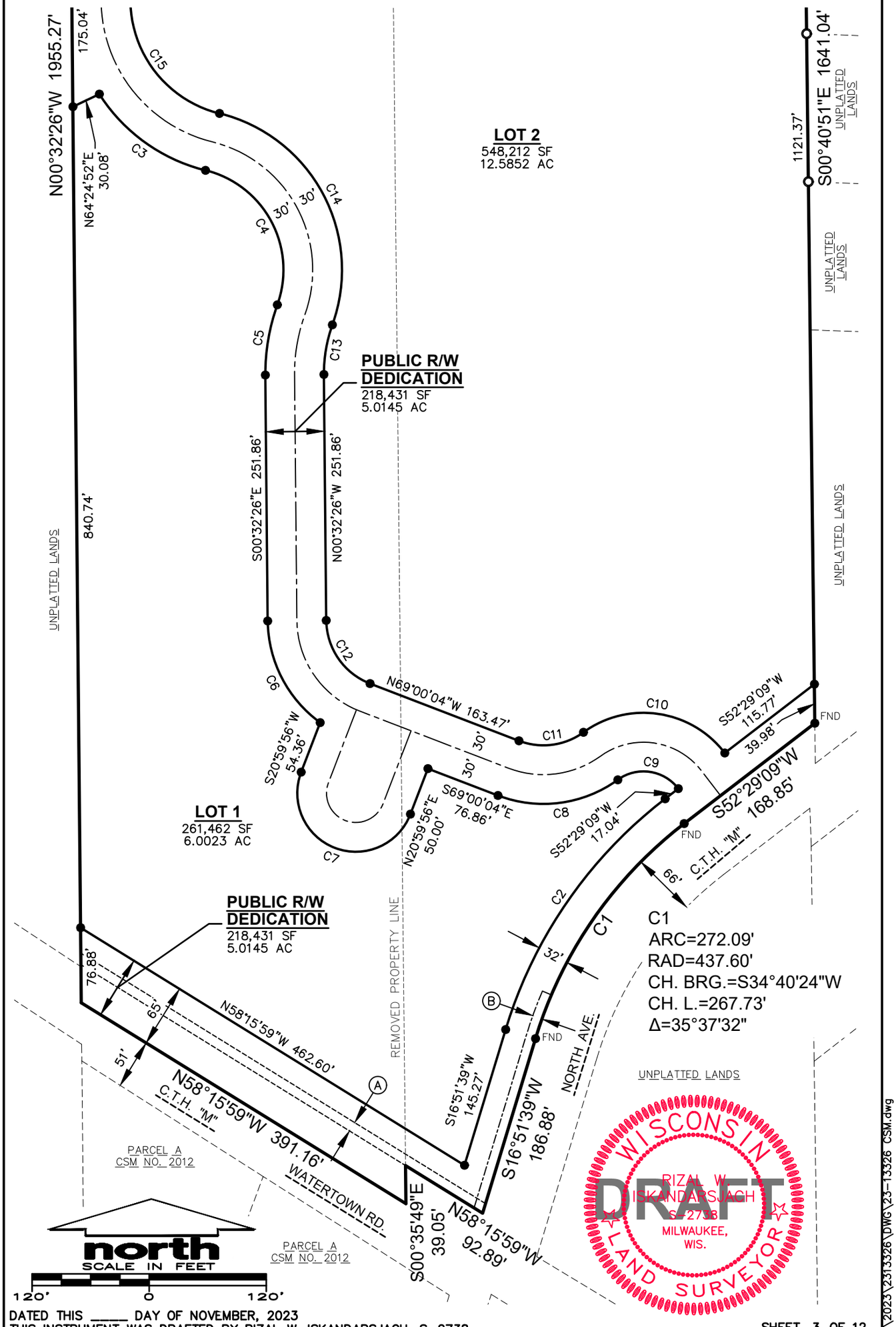
PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.



DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 3 OF 12

R:\2023\2313326\DWG\23-13326 CSM.dwg

PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

CURVE TABLE					
CURVE NO.	LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH	DELTA
C2	291.99'	469.60'	S34°40'24"W	287.31'	35°37'32"
C3	137.23'	180.00'	S54°19'17"E	133.93'	43°40'57"
C4	176.12'	105.00'	S28°06'34"E	156.19'	96°06'22"
C5	73.29'	205.00'	S09°42'05"W	72.90'	20°29'03"
C6	121.56'	130.00'	S27°19'45"E	117.18'	53°34'38"
C7	188.50'	60.00'	S69°00'04"E	120.00'	180°00'00"
C8	129.07'	130.00'	N82°33'24"E	123.83'	56°53'02"
C9	69.41'	45.00'	S81°41'59"E	62.73'	88°22'16"
C10	161.95'	105.00'	N81°41'59"W	146.37'	88°22'16"
C11	69.50'	70.00'	S82°33'25"W	66.68'	56°53'03"
C12	83.64'	70.00'	N34°46'15"W	78.75'	68°27'38"
C13	51.84'	145.00'	N09°42'05"E	51.56'	20°29'03"
C14	276.77'	165.00'	N28°06'34"W	245.44'	96°06'22"
C15	158.38'	120.00'	N38°21'06"W	147.13'	75°37'19"
C16	206.43'	120.00'	N48°44'28"E	181.90'	98°33'48"
C17	26.25'	130.00'	S87°45'44"E	26.21'	11°34'12"
C18	216.44'	60.00'	N59°46'05"E	116.76'	206°41'05"
C19	76.71'	130.00'	N16°10'45"E	75.60'	33°48'28"
C20	31.43'	20.00'	N44°17'50"E	28.30'	90°02'37"
C21	188.50'	60.00'	S38°18'59"W	120.00'	180°00'00"
C22	120.64'	70.00'	S48°38'57"W	106.26'	98°44'50"
C23	309.65'	180.00'	S48°44'28"W	272.85'	98°33'48"

LEGEND:

- 1" IRON PIPE FOUND & ACCEPTED
- FND 3/4" REBAR FOUND & ACCEPTED
- 3/4" REBAR SET WT. 1.13 LBS/LF
- WET — WET — WETLAND DELINEATION PER REPORT BY DAVE MEYER OF WETLAND & WATERWAY CONSULTING, LLC, DATED JANUARY 14, 2020.
- ..... SECONDARY ENVIRONMENTAL CORRIDOR DELINEATION BY HEARTLAND ECOLOGICAL GROUP, INC. DATED OCTOBER 2, 2023.
- ——W—— WATERMAIN
- ——FM—— SANITARY FORCE MAIN
- — —820— — MAJOR CONTOUR
- - - 816 - - - MINOR CONTOUR

WISCONSIN
RIZAL W. ISKANDARSJACH
S-2738
MILWAUKEE, WIS.
LAND SURVEYOR
DRAFT

DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 4 OF 12

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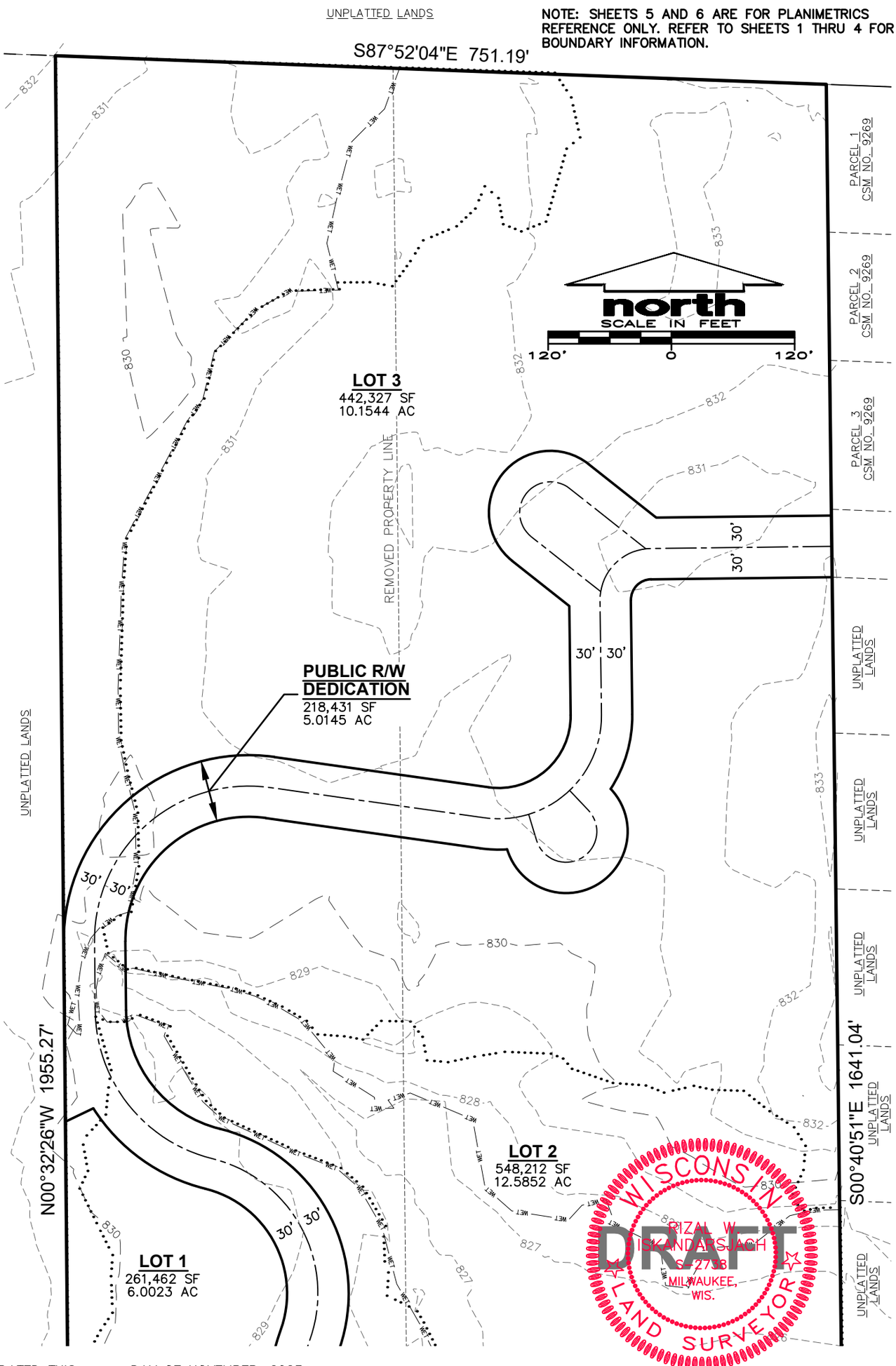
PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

NOTE: SHEETS 5 AND 6 ARE FOR PLANIMETRICS REFERENCE ONLY. REFER TO SHEETS 1 THRU 4 FOR BOUNDARY INFORMATION.



DRAFT

WISCONSIN RIZAL W. ISKANDARSJACH S-2738 MILWAUKEE, WIS. LAND SURVEYOR

DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 5 OF 12

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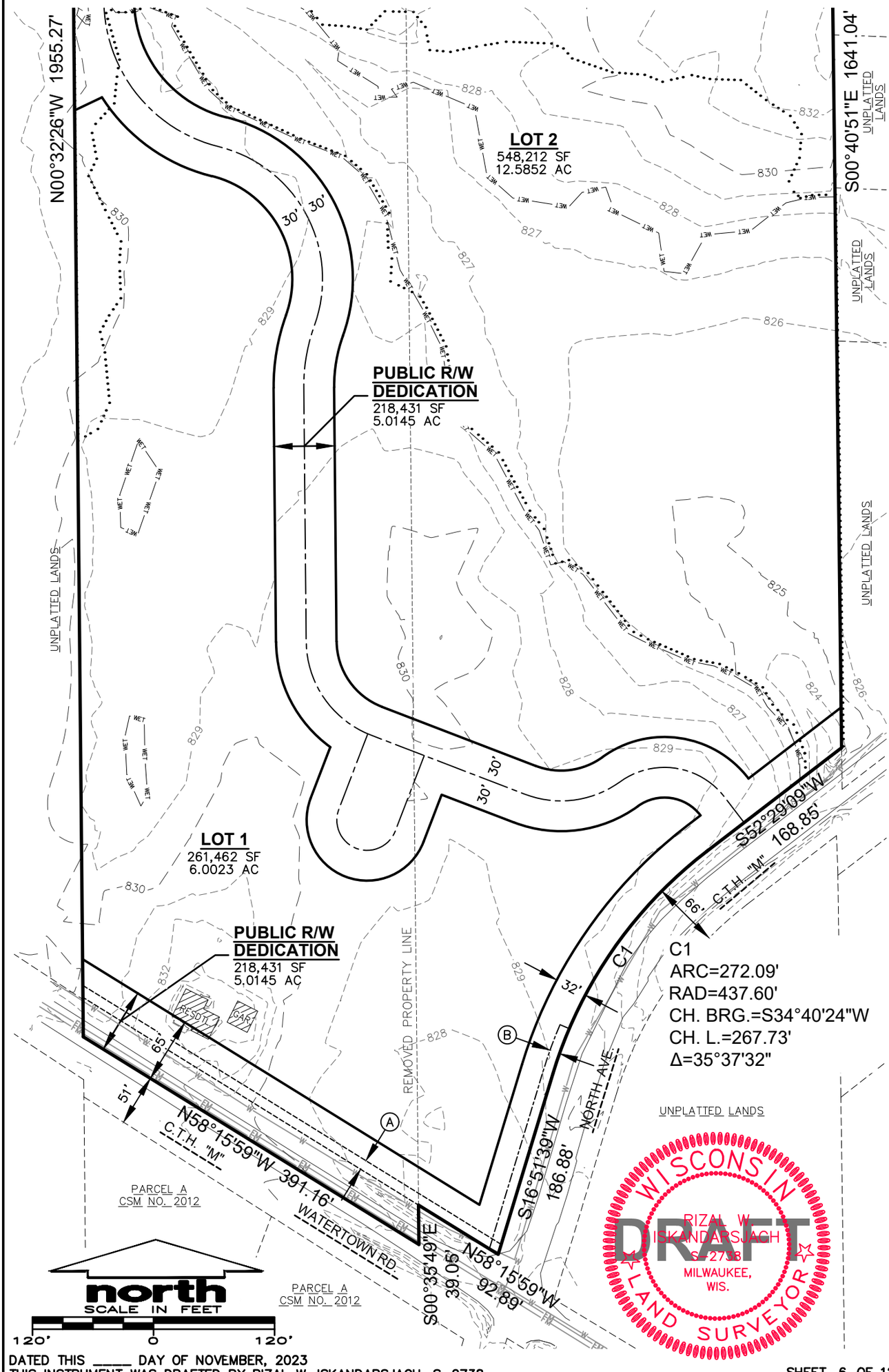
PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.



north
SCALE IN FEET
120' 0 120'

DRAFT

RIZAL W. ISKANDARSJACH S-2738 MILWAUKEE, WIS.
WISCONSIN LAND SURVEYOR

DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 6 OF 12

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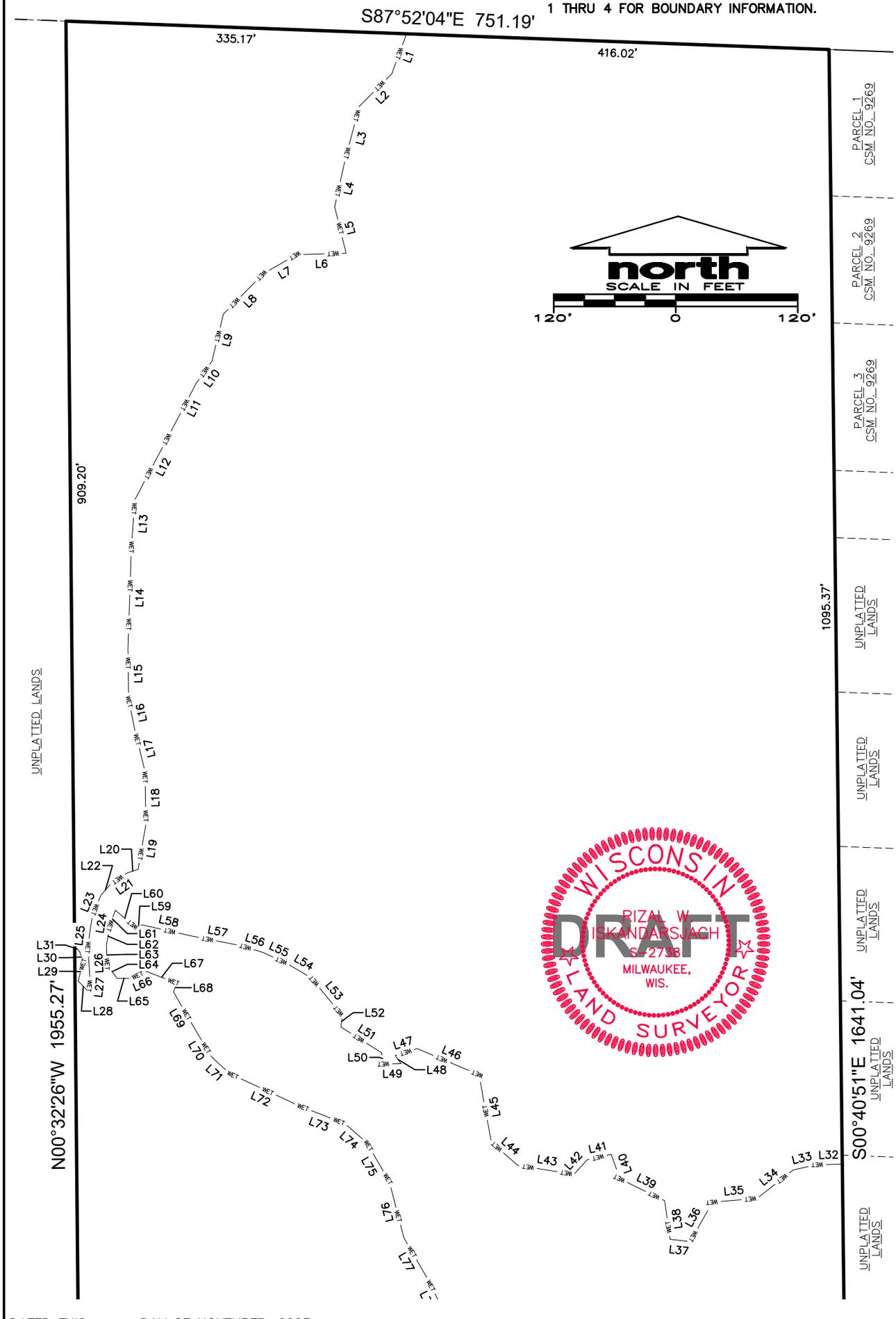
PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

NOTE: SHEETS 7 THRU 9 ARE FOR WETLAND DIMENSIONS REFERENCE ONLY. REFER TO SHEETS 1 THRU 4 FOR BOUNDARY INFORMATION.



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SHEET 7 OF 12

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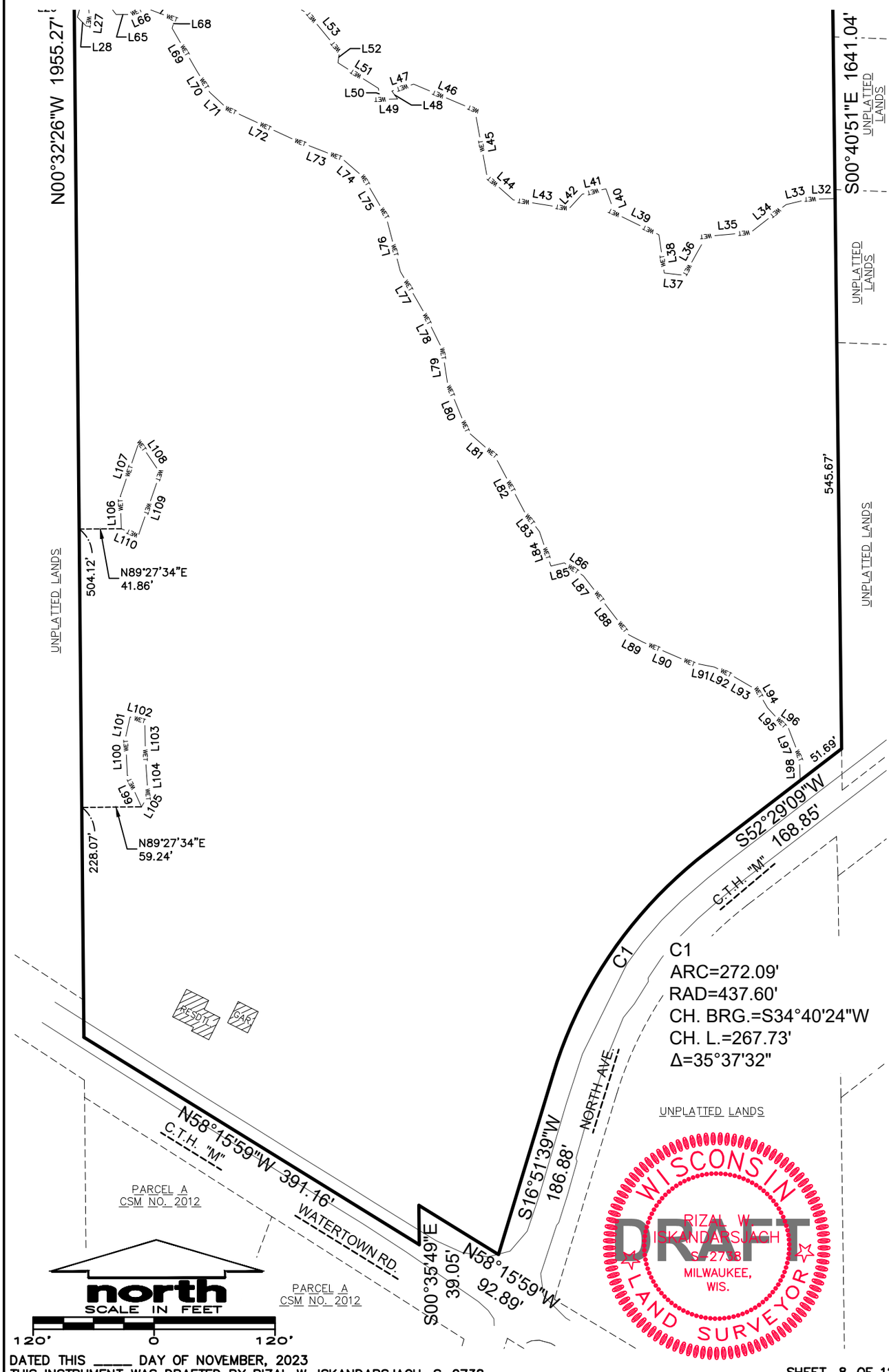

DATED THIS _____ DAY OF NOVEMBER, 2023
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SHEET 8 OF 12

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PRELIMINARY CERTIFIED SURVEY MAP

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ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

WETLAND LINE TABLE		
LINE NO.	BEARING	DISTANCE
L1	S20°21'10"W	41.56'
L2	S45°00'47"W	45.21'
L3	S14°39'39"W	59.33'
L4	S12°28'14"W	42.31'
L5	S13°54'50"E	47.04'
L6	S88°27'59"W	48.74'
L7	S60°14'23"W	37.73'
L8	S44°42'00"W	55.90'
L9	S13°39'49"W	47.56'
L10	S35°20'58"W	27.32'
L11	S27°43'45"W	45.43'
L12	S27°50'06"W	83.23'
L13	S04°16'11"W	45.79'
L14	S01°56'56"W	100.24'
L15	S00°46'28"E	50.44'
L16	S11°20'25"E	30.19'
L17	S13°54'12"E	42.28'
L18	S00°55'55"E	52.05'
L19	S09°43'55"W	45.07'
L20	S72°15'47"W	11.11'
L21	S55°27'58"W	20.82'
L22	S41°05'41"W	13.64'
L23	S22°11'58"W	21.63'
L24	S09°55'51"W	10.70'
L25	S07°29'57"W	20.20'
L26	S03°39'49"E	33.01'
L27	S06°38'08"W	11.41'
L28	N44°18'21"W	15.10'
L29	N16°10'17"E	18.94'
L30	N19°17'54"W	11.17'
L31	N42°53'31"W	7.18'
L32	S88°40'06"W	26.45'
L33	S76°39'26"W	22.76'
L34	S51°48'06"W	44.90'
L35	S85°07'01"W	44.08'
L36	S29°23'43"W	44.36'
L37	N83°32'39"W	20.02'

WETLAND LINE TABLE		
LINE NO.	BEARING	DISTANCE
L38	N07°53'43"W	38.26'
L39	N64°02'40"W	48.89'
L40	N19°46'32"W	25.70'
L41	S77°16'53"W	24.03'
L42	S42°39'35"W	19.52'
L43	N81°03'06"W	55.87'
L44	N48°32'04"W	34.81'
L45	N10°22'02"W	67.22'
L46	N67°06'04"W	65.90'
L47	S72°28'55"W	22.67'
L48	S35°33'01"E	9.79'
L49	S88°45'19"W	17.45'
L50	N07°51'25"W	11.10'
L51	N57°42'57"W	47.56'
L52	N07°51'25"E	11.10'
L53	N39°21'22"W	48.12'
L54	N59°28'54"W	27.56'
L55	N65°14'06"W	26.15'
L56	N72°33'37"W	22.34'
L57	N78°57'50"W	50.87'
L58	N77°17'04"W	48.21'
L59	S82°14'18"W	8.48'
L60	N50°05'33"W	24.40'
L61	S18°49'58"W	17.75'
L62	S10°05'06"W	17.45'
L63	S02°12'13"E	19.86'
L64	S36°54'04"E	16.23'
L65	S89°59'40"E	13.55'
L66	N67°07'51"E	16.89'
L67	S69°13'03"E	31.34'
L68	S17°15'08"W	9.62'
L69	S30°11'00"E	48.26'
L70	S31°09'37"E	25.55'
L71	S47°17'27"E	24.07'
L72	S65°08'47"E	76.55'
L73	S68°42'25"E	47.20'
L74	S49°14'58"E	27.99'

WETLAND LINE TABLE		
LINE NO.	BEARING	DISTANCE
L75	S30°13'04"E	44.23'
L76	S14°35'40"E	57.44'
L77	S29°59'35"E	44.48'
L78	S26°42'03"E	42.91'
L79	S08°46'54"E	34.22'
L80	S22°30'37"E	52.08'
L81	S48°45'02"E	35.31'
L82	S27°58'59"E	65.52'
L83	S37°53'16"E	22.91'
L84	S18°14'25"E	35.97'
L85	N76°22'45"E	13.65'
L86	S55°45'48"E	22.86'
L87	S37°45'34"E	15.76'
L88	S37°35'13"E	58.14'
L89	S62°47'40"E	15.93'
L90	S66°34'00"E	49.86'
L91	S79°03'03"E	25.56'
L92	S63°56'06"E	21.18'
L93	S59°40'08"E	27.52'
L94	S29°34'18"E	19.69'
L95	S43°02'17"E	20.98'
L96	S54°15'31"E	7.88'
L97	S21°11'08"E	30.41'
L98	S02°18'53"E	23.84'
L99	N24°14'15"W	34.21'
L100	N02°43'39"W	37.47'
L101	N12°16'13"E	20.98'
L102	S73°56'49"E	15.31'
L103	S00°44'22"E	34.54'
L104	S03°54'08"E	39.31'
L105	S30°07'31"W	12.88'
L106	N02°01'55"W	31.87'
L107	N18°59'19"E	57.55'
L108	S33°53'41"E	37.41'
L109	S19°11'14"W	66.24'
L110	N66°14'20"W	18.23'

WISCONSIN
RIZAL W. ISKANDARSJACH
S-2738
MILWAUKEE, WIS.
LAND SURVEYOR
DRAFT

DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 9 OF 12

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PRELIMINARY CERTIFIED SURVEY MAP

CERTIFIED SURVEY MAP No. _____

ALL THAT PART OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

SURVEYOR'S CERTIFICATE

State of Wisconsin)
) SS
Waukesha County)

I, Rizal W. Iskandarsjach, Professional Land Surveyor, do hereby certify that I have surveyed, divided, and mapped a that part the Northeast 1/4 and the Southeast 1/4 of the Northwest 1/4 of Section 24, Township 7 North, Range 19 East, City of Pewaukee, Waukesha County, Wisconsin, bounded and described as follows:

Commencing at the northeast corner of the Northwest 1/4 of said Section 24; thence North 87°52'04" West along the north line of said Northwest 1/4 section, 210.42 feet to the northwest corner of Parcel 1 of Certified Survey Map No. 9269 and the point of beginning;

Thence South 00°40'51" East along the west line of said Certified Survey Map No. 9269 and then along it's southerly extension, 1641.04 feet to the present northerly line of North Avenue (County Trunk Highway "M"); thence South 52°29'09" West along said northerly line, 168.85 feet to a point of curve; thence southwesterly 272.73 feet along said northerly line and along the arc of said curve to the left whose radius is 437.60 feet and whose chord bears South 34°40'24" West, 267.73 feet; thence South 16°51'39" West along said northerly line, 186.88 feet to the present northerly line of Watertown Road (County Trunk Highway "M"); thence North 58°15'59" West along said northerly line, 92.89 feet; thence South 00°35'49" East, 39.05 feet to the centerline of said Watertown Road; thence North 58°15'59" West along said centerline, 391.16 feet; thence North 00°32'26" West, 1955.27 feet to the north line of the Northwest 1/4 of said Section 24; thence South 87°52'04" East along said north line, 751.19 feet to the point of beginning.

Containing in all 1,470,432 square feet (33.7565 acres) of land, more or less.

All subject to easements and restrictions of record and potential future road widening and government restrictions, if any.

That I have made such survey, land division, and map by the direction of RAP PROPERTIES, LLC owner said lands.

That such map is a correct representation of all exterior boundaries of the land surveyed and the land division thereof made.

That I have fully complied with the provisions of Chapter 236 of the Wisconsin Statutes and the regulations of the City of Pewaukee in surveying, dividing and mapping the same.

DATED THIS _____ DAY OF NOVEMBER, 2023

_____
Rizal W. Iskandarsjach, P.L.S.
Professional Land Surveyor, S-2738

THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 10 OF 12

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PRELIMINARY CERTIFIED SURVEY MAP

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OWNER'S CERTIFICATE

RAP PROPERTIES, LLC, as owner, do hereby certify that said company caused the land described in the foregoing affidavit of Rizal W. Iskandarsjach, to be surveyed, divided, and mapped as represented on this map, in accordance with the provisions of Chapter 236 of the Wisconsin Statutes and the regulations of the City of Pewaukee in surveying, dividing and mapping the same.

RAP PROPERTIES, LLC

_____(sign) _____
_____(print) Date
_____(title)

State of Wisconsin)
) SS
_____ County)

Personally came before me this _____ day of _____, 202__ , the above named _____, as the _____ of the above named company and acknowledged that they executed the foregoing instrument as such officers as the deed of said company, as Manager, by its authority.

_____(sign)
_____(print)
Notary Public, _____ County, _____
My Commission Expires _____

DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 11 OF 12

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PRELIMINARY CERTIFIED SURVEY MAP

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PLAN COMMISSION APPROVAL

This Certified Survey Map is hereby approved by the Plan Commission of the City of Pewaukee, on this _____ day of _____, 202___.

_____ _____
Steve Bierce, Chairperson Date

_____ _____
Colleen Brown, Secretary Date

COMMON COUNCIL APPROVAL

This Certified Survey Map is approved and dedication accepted by the Common Council of the City of Pewaukee, on this ____ day of _____, 202___.

_____ _____
Steve Bierce, Mayor Date

_____ _____
Kelly Tarczewski, Clerk /Treasurer Date

DATED THIS _____ DAY OF NOVEMBER, 2023
THIS INSTRUMENT WAS DRAFTED BY RIZAL W. ISKANDARSJACH, S-2738

SHEET 12 OF 12

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CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 7.

DATE: December 4, 2023

DEPARTMENT: PW - Water/Sewer

PROVIDED BY: Magdelene Wagner/Jane Mueller

SUBJECT:

Presentation, Discussion and Possible Action Regarding the Final Sanitary Sewer Master Plan [Mueller / Wagner]

BACKGROUND:

The Water Utility and Sewer Utility have completed a Facility Plan Study. Our consultant, Strand & Associates, will be presenting the highlights of these facility plans.

Attached is an executive summary and their draft slides of their presentation.

FINANCIAL IMPACT:

RECOMMENDED MOTION:

ATTACHMENTS:

Description

Executive Summary

Presentation

STRAND ASSOCIATES®
Excellence in Engineering
Since 1946

Strand Associates, Inc.®
910 West Wingra Drive
Madison, WI 53715
(P) 608.251.4843
www.strand.com

November 29, 2023

Ms. Magdelene Wagner, P.E., Director of Public Works
City of Pewaukee
W240N3065 Pewaukee Road
Pewaukee, WI 53072

Re: Executive Summary
Water and Wastewater Master Plan–Phase 1 (Project)
City of Pewaukee, Wisconsin (City)

Dear Maggie,

This letter provides an executive summary of the objectives and findings of the Project efforts that were undertaken over the course of 2022 to 2023. Strand Associates, Inc.® (Strand) will be present at the December 4, 2023, City Council Meeting to make a presentation regarding the Project.

The Project started with the sanitary sewer and water portions on parallel tracks that jointly considered planned growth and the anticipated phasing of that growth (based on the City's Comprehensive Land Use Plan). The efforts then split off by specialty to consider the unique analysis and needs of both the sanitary sewer system and the water system. This resulted in two separate master plan documents, one specific to the sanitary sewer system and the other specific to the water system.

Overall Objectives

The purpose of the Project was to develop an overall plan for the management of the City's sanitary sewer and water infrastructure through the year 2050 and beyond, including the maintenance of existing infrastructure, improvements needed to address current deficiencies, and ways to serve anticipated growth.

The project deliverables prepare the City to address needs proactively and identify opportunities for efficient use of funds. They also provide confidence in system abilities and needs relative to growth and provide tools that staff can use moving forward.

Sanitary Sewer Master Plan (SSMP)

Projected future population growth and development in the City will result in an increase in flows within the sanitary service area, prompting the City to consider studying the capacity of the existing wastewater infrastructure, review allocated capacity in shared conveyance infrastructure with neighboring communities, and review allocations for treatment capacity at the Fox River Water Pollution Control Center (FRWPCC).

The City's sanitary sewer system was evaluated for three planning periods: present year, future development through 2035, and future development through 2050 (ultimate development). Specific plans for upgrades to the City's sanitary sewer infrastructure are recommended and supported by an evaluation of monetary costs, environmental impacts, and other nonmonetary factors.

1. Sanitary Sewer System Review

The City's existing sanitary sewer assets include 12 pumping stations, approximately 4 miles of force main, and approximately 77 miles of gravity sewer. The City owns its local collection system infrastructure, but works in conjunction with neighboring communities for wastewater treatment, and it relies on shared infrastructure to convey flows from most parts of the City to the FRWPCC. Intergovernmental agreements (IGAs) between the City and neighboring municipalities govern the requirements and flow allocations for interconnections between each municipality's sanitary sewer system. A summary of the IGAs in effect at the time of this report, a review of the connection points and IGAs between the City's system and neighboring communities, and a schematic of the City's wastewater system and service areas is included in Section 2 of the SSMP.

2. Lift Station Capacity Assessment

Lift station drawdown tests were conducted, and testing data was compared to City-provided historical flow metering data. This data was used to develop recommendations for site-specific calibration of existing metering equipment. Testing methodologies and results are presented in Section 3 of the SSMP.

3. Flow Monitoring Study

A total of nine flow monitors and two rain gauges were installed in nine locations throughout the City's sanitary sewer system for 12 weeks. The purpose of this monitoring was to evaluate flows throughout the City's sanitary sewer system to estimate existing dry and wet weather flows. In general, the results showed low to moderate inflow and infiltration entering the sewer system during wet weather events. A summary of the flow monitoring program is presented in Section 4 of the SSMP.

4. Future Flow Projections

Future flow projections within the City were developed for the specified planning periods in accordance with City-provided planning data and flow factors from the Southeast Wisconsin Regional Planning Committee (SEWRPC). For the 2050 planning period, flows generated within the City could increase by 100 percent compared to current levels. A summary of the existing and future flow projections and methodologies used in the development of these flows is presented in Section 5 of the SSMP.

5. Sanitary Sewer Hydraulic Modeling

An XP-SWMM hydraulic model of the City's wastewater system was developed as part of the SSMP efforts and used to analyze the system under dry weather, wet weather, and future development conditions, including septic system relief. Potential system improvements to address capacity deficiencies were evaluated. The existing system appears to have sufficient capacity to convey current flows during wet and dry weather. Select segments of the system will need to be upgraded to convey the projected 2035 and 2050 flows. A summary of the sanitary sewer model development and its findings are presented in Section 6 of the SSMP.

6. Focused Study Areas

Three focused study areas were identified by the City for detailed review. These areas included future sanitary sewer service for the Swan View and Broken Hill area development, the downstream sewers that could serve a future development at the Pewaukee Golf Course, and the existing Gun Club,

Jericho Lift Station, and associated force mains. Findings and recommendations for each study are presented in Section 7 of the SSMP and summarized below.

7. Capital Improvement Plan (CIP)

The projects identified as part of the efforts described above were used to prepare a list of potential CIP projects, prepare an opinion of probable construction cost (OPCC) for City-selected projects, and create the final SSMP.

8. Key Findings and Recommendations

   a. Drawdown testing showed that existing flow meter measurements at five of the 12 lift stations measured varied by greater than 25 percent when compared to the drawdown testing results. It is recommended that the City recalibrate all permanent flow meters (especially those used for billing purposes) on an annual basis. It is also recommended that the City install flow meters at all unmetered lift stations (Glacier Ridge, Spice Creek, and Trinity/Green).

   b. Modeling indicated that capacity exceedances are expected under the future wet weather scenarios at the Gun Club Lift Station. Design for the replacement of the Gun Club Lift Station is currently complete, with construction completion scheduled for November 2025.

   c. It is recommended that the Swan View and Broken Hill Lift Stations be abandoned and a new lift station with a deep wet well be constructed to convey flows generated in those subbasins in conjunction with continued development in the Swan View and Broken Hill neighborhoods.

   d. Overall, temporary flow monitoring indicated minimal inflow and infiltration in the City's sanitary sewer system. However, no large wet weather events with greater than a 2-year recurrence interval were observed during the study. The City may elect to conduct another temporary flow monitoring program in the following years to attempt to capture the system's response to a larger recurrence interval storm and to validate that increases in wastewater flows are in accordance with the assumptions made in the future flow projections developed for this report.

   e. The City should continue to monitor flows in shared infrastructure with neighboring municipalities. When flows exceed 75 percent of the City's allocated capacity, the City should begin to identify means to obtain additional capacity.

   f. The City may elect to continue with wastewater planning efforts to support ongoing preventative maintenance consisting of wastewater infrastructure condition assessments, an asset management program, and integrated planning services.

Water System Master Plan (WSMP)

The WSMP evaluated the water infrastructure from multiple perspectives to identify current deficiencies and to recommend improvements to address the water utility's needs.

1. Inventory and Condition Review of Above-Ground Assets

The City owns and operates 12 wells (eight facilities), six ground storage tanks, two elevated storage tanks, and approximately 530,000 feet of water mains, not including hydrants, water services, valves, and more. The replacement value of these assets is approximately $170 million to $200 million. A summary of the existing facilities is presented in Section 2 of the WSMP. A site visit and review of each of the above-ground water facilities was conducted by engineers with expertise in water supply, structural, electrical, and mechanical engineering. These findings are summarized in Section 3 of the WSMP and include an opinion on the remaining useful life of major components, deficiencies, and recommendations.

The primary recommendations of this effort are that control equipment should be updated regularly and that backup power setups at multiple facilities should be improved. These items help to keep the critical facilities operational and available to support system demands.

2. Supply and Storage Capacity Evaluation

The capacity of well supply and storage facilities was evaluated against the ability to satisfy the following demand conditions for the present year, 2035, and 2050 design years: average day, maximum day, and maximum day plus fire. This evaluation is presented in Sections 4 and 5 of the WSMP.

Existing storage capacity appears to be adequate for all design year demands. Elevated storage facilities maintain pressure in the system, as pressure at a particular location is determined by the ground elevation relative to the water surface elevation in the elevated storage facility. The City keeps the elevated storage facilities nearly full most of the time to support pressures, which can have a consequence of high water age if the stored water is not adequately mixed or turned over (not evaluated as part of the WSMP).

Existing supply capacity is adequate for present year demands if the Well No. 8 facility and the Well Nos. 11 and 12 facilities remain in operation. The availability of these facilities was called into question when the City received notice from the Wisconsin Department of Natural Resources (WDNR) that water quality in Well Nos. 8 and 12 exceeded the State's Hazard Index for perfluoroalkyl and polyfluoroalkyl substances (PFAS). The capacity of these facilities is needed to satisfy demands. The City has already authorized a preliminary engineering report to evaluate options to keep each of these facilities in service. Additional well supply capacity may be needed to meet projected 2035 and 2050 demands. Plans for growth should be coordinated with the water utility so that the utility can prepare for increased demands.

3. Future Service Area Analysis

Future service areas that consider extending municipal water service to areas in the northwest and southwest portions of the City were evaluated in Section 6 of the WSMP. Ground elevations in these areas are able to be served by existing infrastructure. This should be revisited as these areas grow.

4. Distribution System Hydraulic Model

The City's existing distribution system hydraulic model was updated and used to evaluate system performance under the aforementioned design year demand scenarios relative to target pressures and fire

flow availability defined by City staff. The water model is a dynamic tool that the City should use to evaluate planned capital improvements, operational changes, and new growth.

The only area with an existing pressure concern is Stoneridge Drive, which is an industrial area subject to higher instantaneous demands. The ground elevation in this area is high, which results in lower normal pressures (40 to 45 pounds per square inch [psi]) than the rest of the system (50 to 100 psi). Any changes in water use, such as a change in occupancy or a planned private fire suppression system, should be coordinated with the water utility in order to consider if the expected flow and pressure available to the customers is acceptable.

The target fire flow availability was categorized by land use with input from the Fire Chief. The modeled flow available at each hydrant in the system is information that staff can use when planning projects and operations.

5. CIP

The various recommendations were consolidated into a CIP spreadsheet that categorizes proposed improvements in 5-year increments over a planning period of 20 or more years. This is a dynamic tool that staff can use each year to plan, prioritize, and track progress.

6. Next Steps

   a. Complete the Well No. 8 and Well Nos. 11 and 12 preliminary engineering reports and expect one or two major treatment projects, pending WDNR finalization of PFAS regulations.

   b. Monitor growth, and revisit system capacity as growth occurs.

   c. Prioritize controls and backup power projects at existing facilities.

   d. Use the water model as a tool to prepare for future growth and operational changes.

   e. Establish an annual water main replacement budget to pace ahead system needs over time.

Strand has sincerely enjoyed the working relationship with the City and its staff, and Strand appreciates the trust placed in it to conduct this project. Do not hesitate to reach out with any questions at 414-271-0771.

Sincerely,

STRAND ASSOCIATES, INC.®

Sam Hocevar, P.E., Sanitary System Lead Engineer Ben Wood, P.E., Water System Lead Engineer

c: Jane Mueller, Utility Manager, City of Pewaukee

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Excellence in Engineering[SM]

Strand Associates, Inc.®

Sanitary Sewer and Water System Master Planning

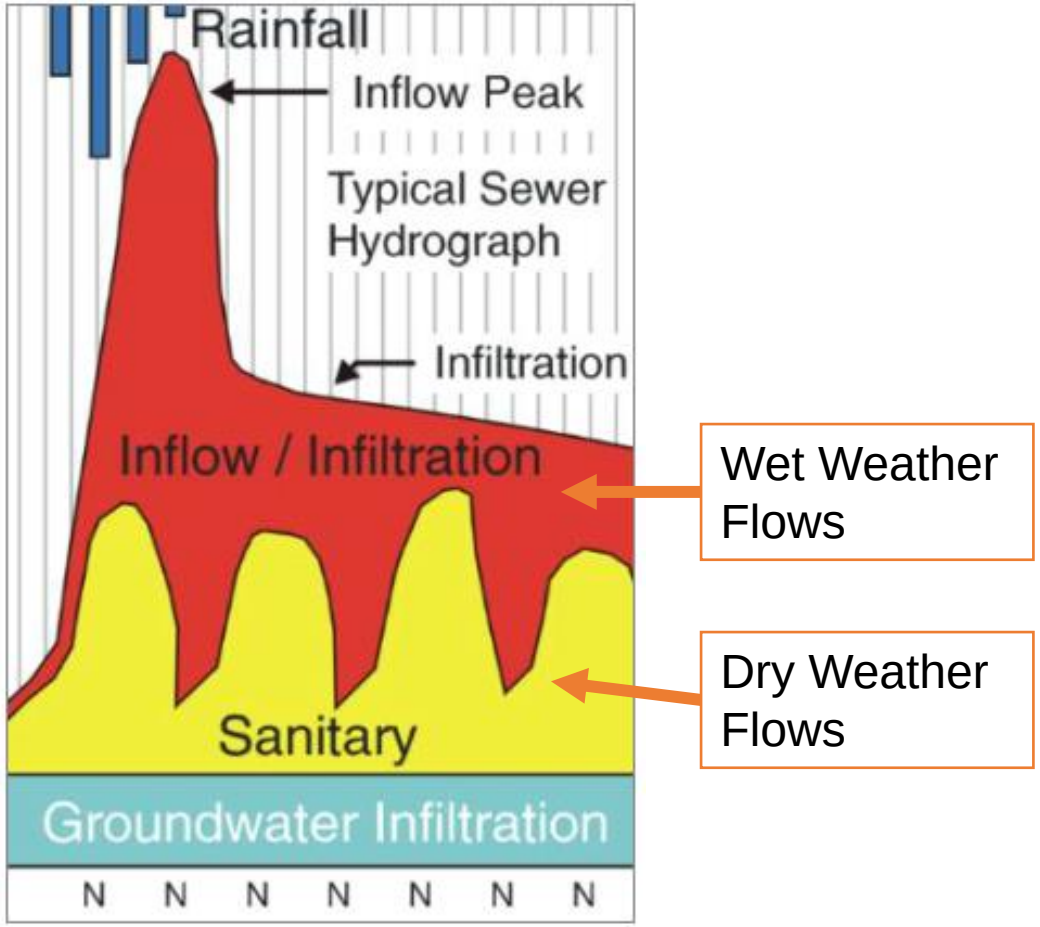
City of Pewaukee, WI

December 4, 2023

CITY OF PEWAUKEE WISCONSIN

Sanitary Sewer Master Planning Provides Answers to Critical Questions

- Is there available capacity…
  - During dry weather?
  - During wet weather?
  - In City infrastructure?
  - In shared infrastructure?
  - To convey existing flows?
  - To support future demands?
- How do we promote smart system growth?
- What aging facilities may need to be addressed?



Comprehensive Approach to Evaluate Sanitary Sewer System Produces Robust Results

1. Provide a **summary of the existing sanitary sewer system**, including the documentation of connection points and IGAs between the City's system and neighboring communities.
2. Analyze the **Focused Study Areas** provided by the City.
3. Conduct **lift station drawdown tests**.
4. Install **temporary flow monitors** and rain gauges to identify existing dry- and wet-weather flows.
5. Develop **future flow projections** within the City for the specified planning periods and **identify areas with potential future capacity concerns**.
6. Prepare a **dynamic hydraulic model** of the City's wastewater system and **evaluate potential system improvements** to address capacity deficiencies.
7. Combine the results of the preceding services to prepare a list of potential sanitary sewer **Capital Improvement Plan (CIP)** projects.

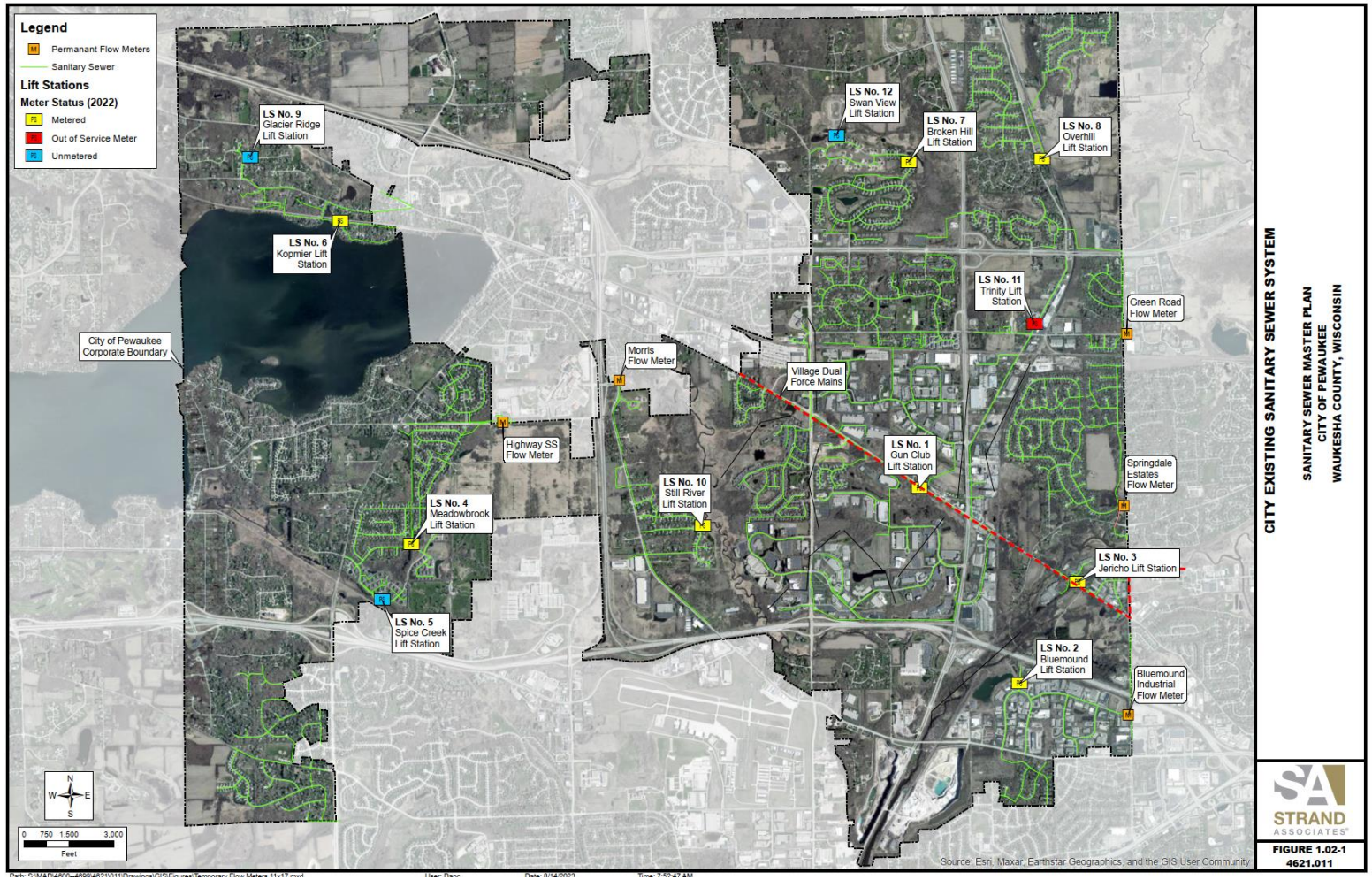
Existing Sanitary Sewer System Is a Combination of Local Infrastructure and Shared Assets

Local Infrastructure:

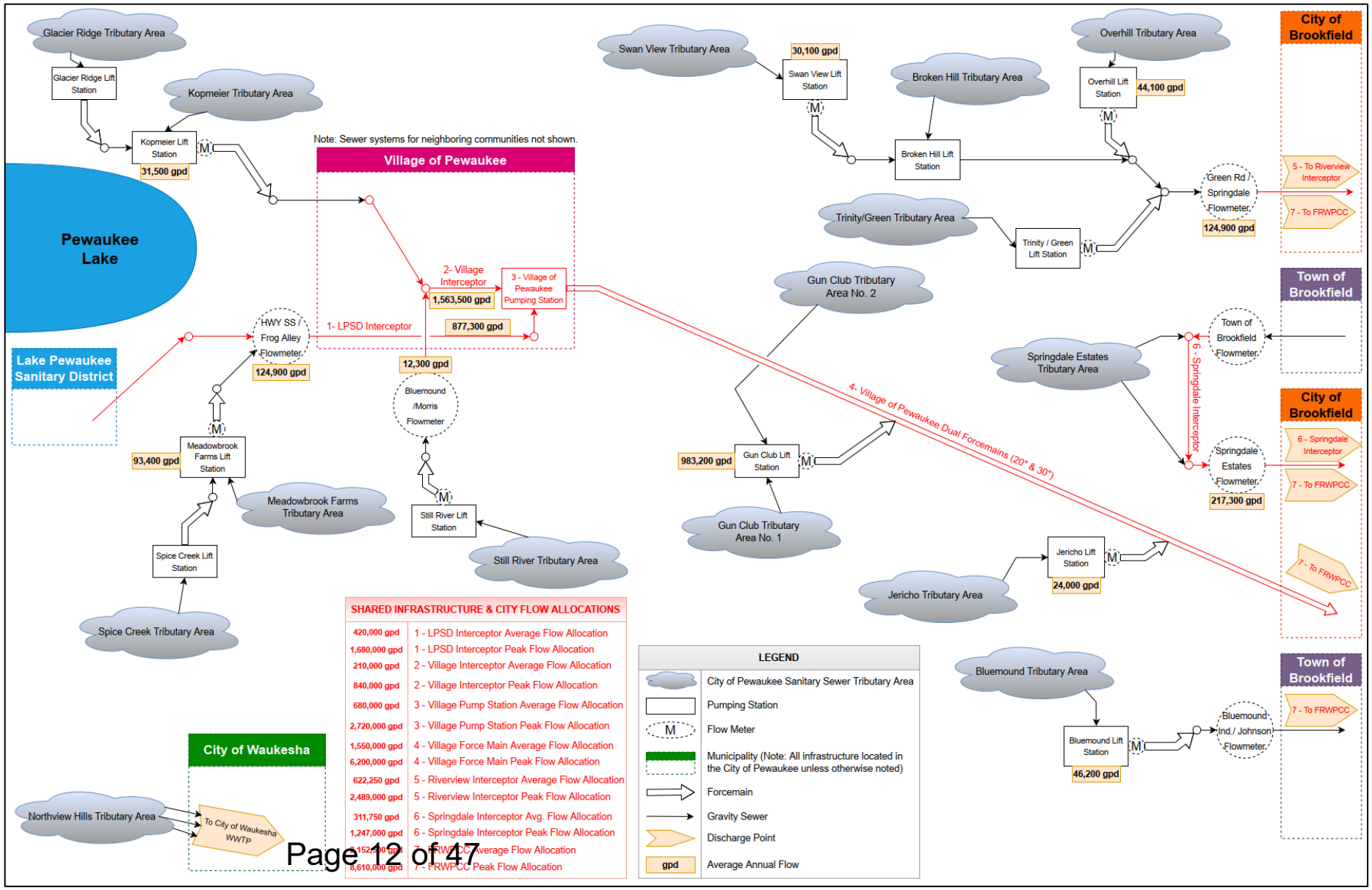
- 77 miles of sewer
- 12 pumping stations
- 4 miles of force main

Partners with Shared infrastructure:

- Lake Pewaukee Sanitary District
- Village of Pewaukee
- Town of Brookfield
- City of Waukesha
- FRWPCC



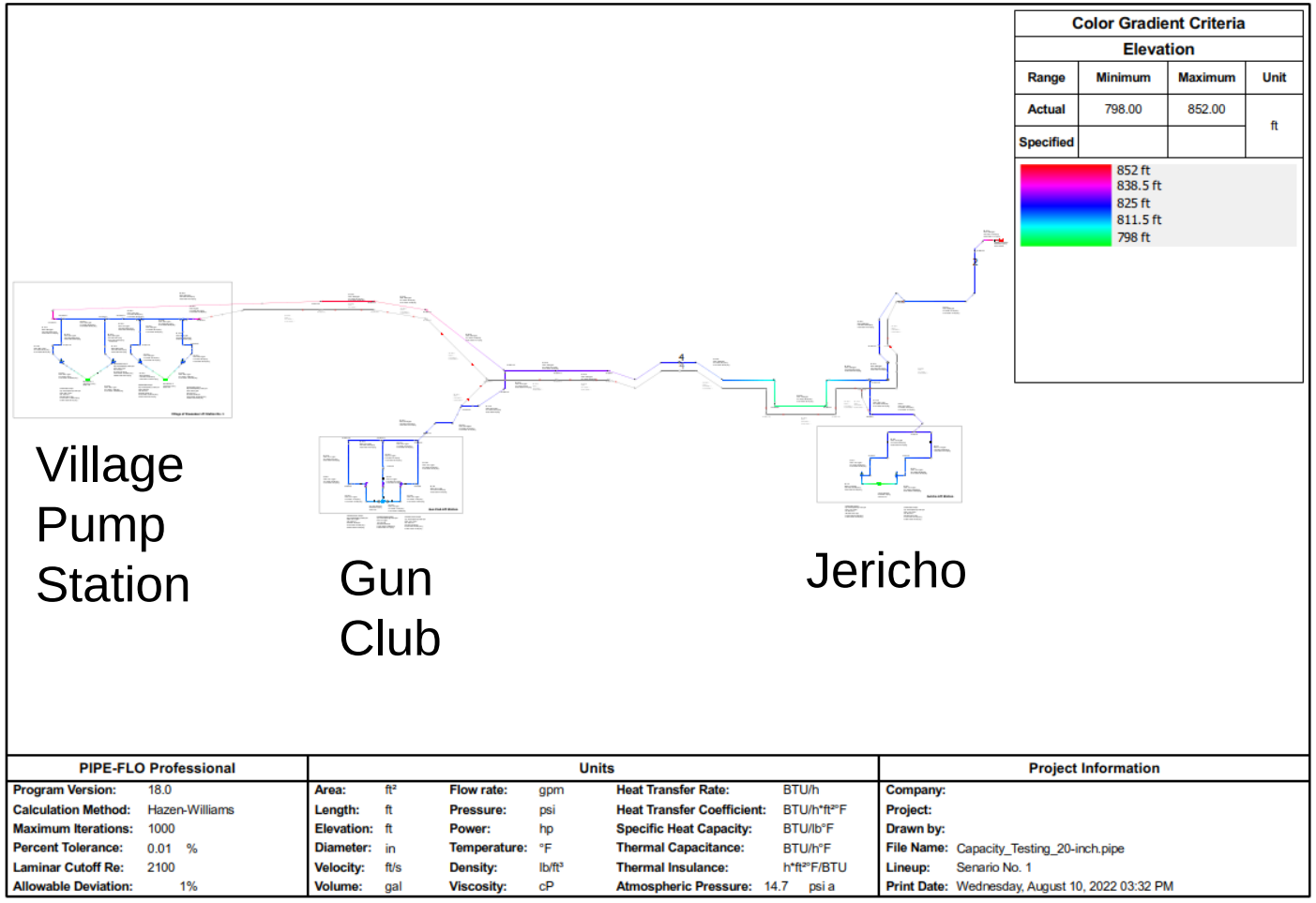
Schematic Summarizes Key Sanitary Sewer Asset Data in One Location



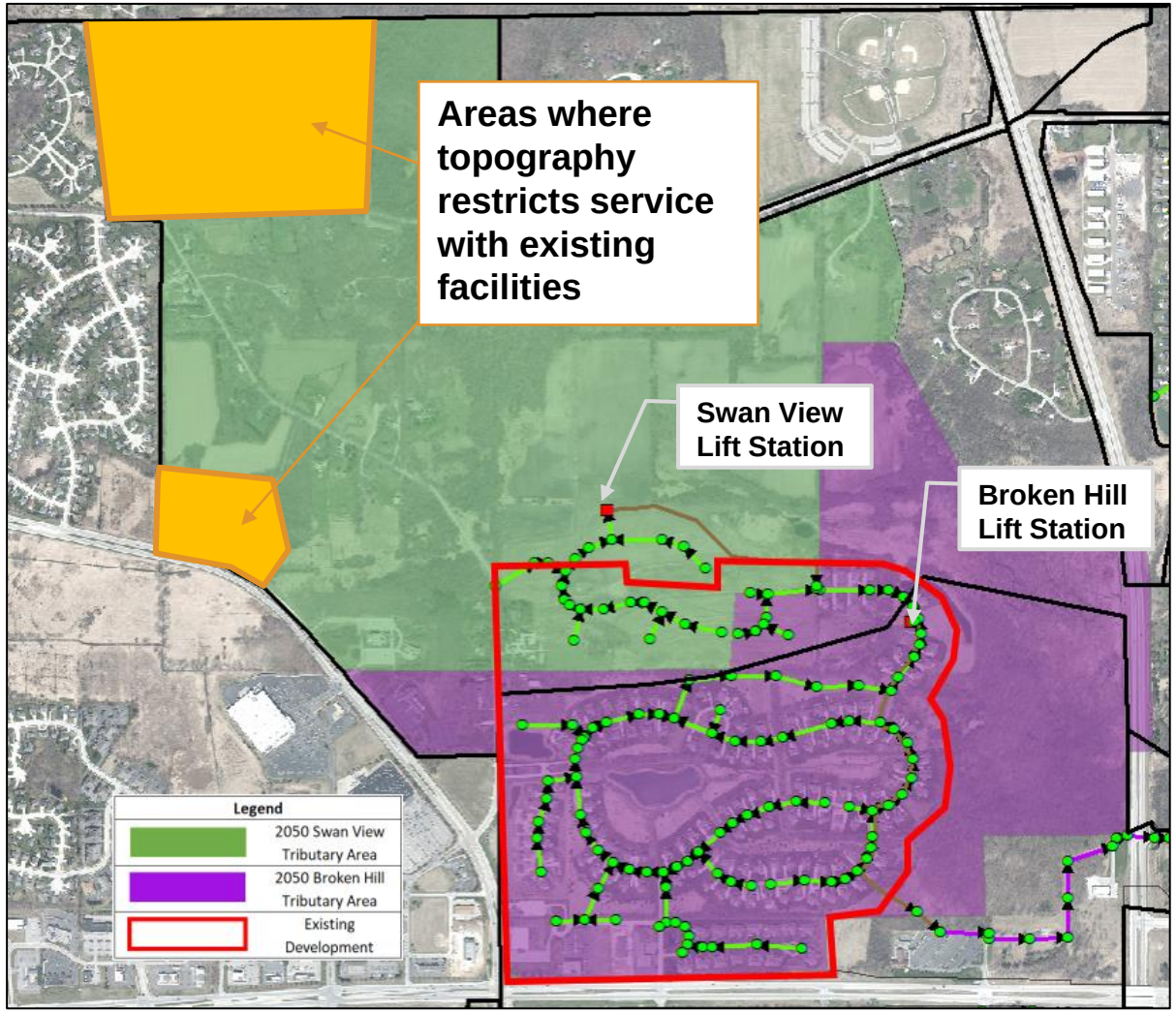
Focused Study Areas Address High-Priority Needs Expected In Near-Term

- Gun Club pumping station and Pipe-Flo model
- Swan View and Broken Hill Neighborhoods
- Pewaukee Golf Club property redevelopment

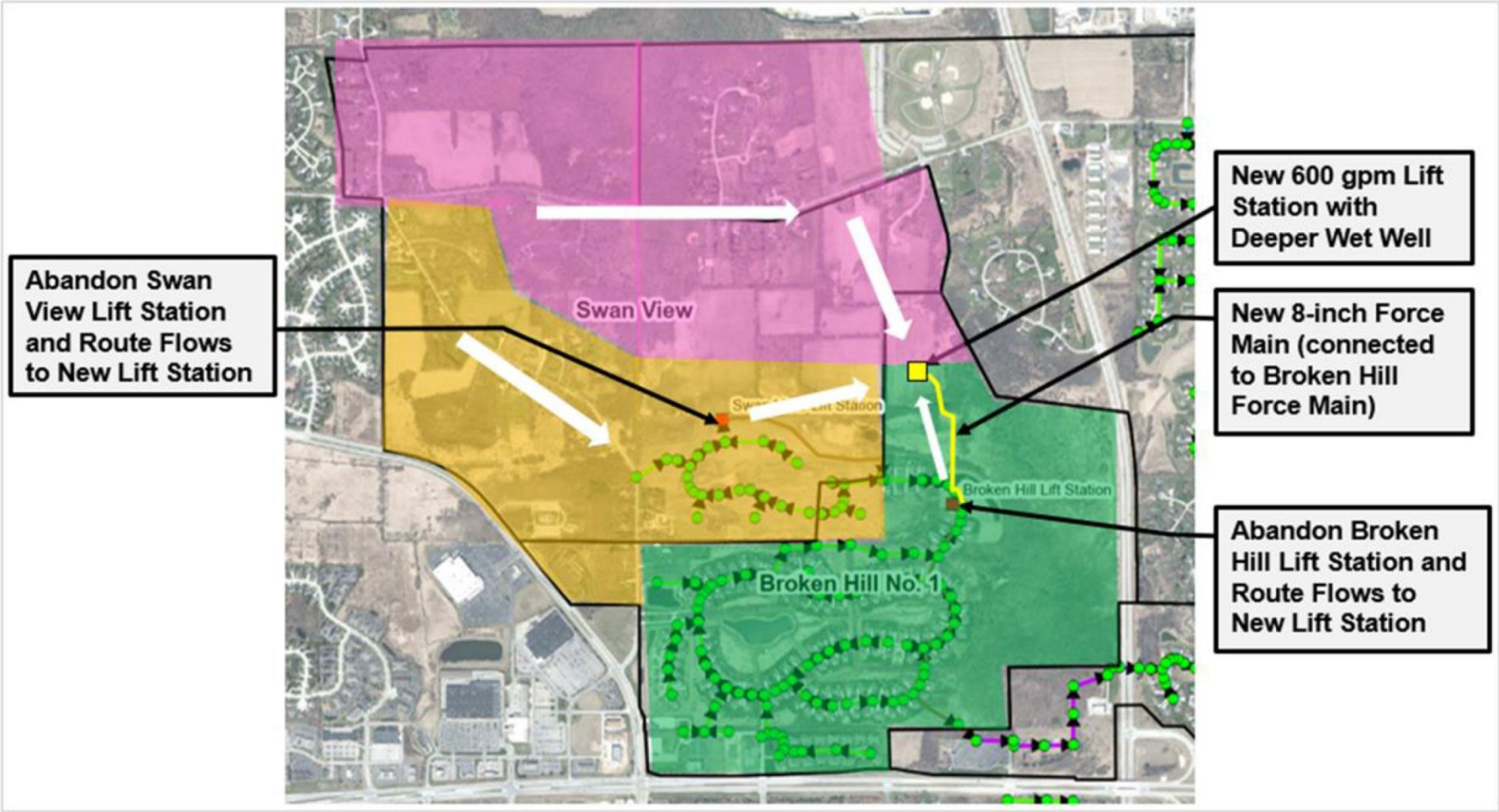
Pipe-Flo Hydraulic Modeling Show Gun Club Upgrades Needed to Convey Peak Flows



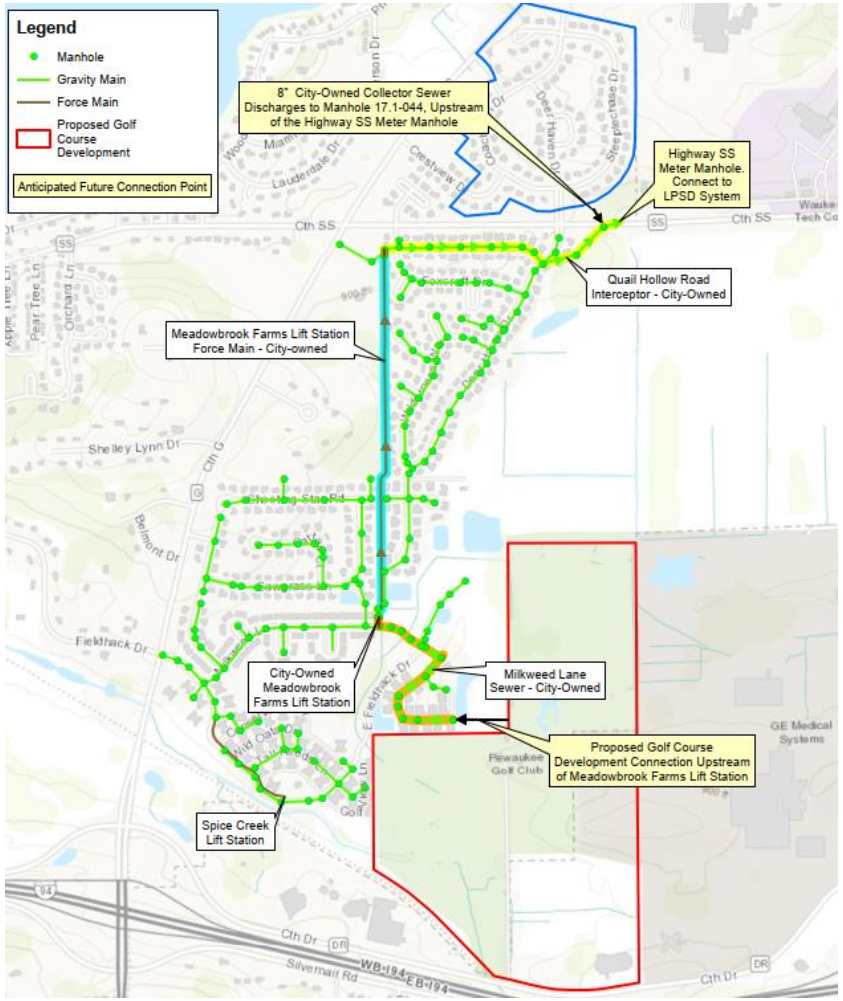
Swan View Pump Station Service Area Limited By Wet Well Depth



Proposed Alternative Consolidates Pumping Into New Station



Downstream Sewer Infrastructure Constrains Potential Golf Course Development



Component	Total Capacity (gpm)	Available Capacity (gpm)	Percent Available[1]
Milkweed Lane Interceptor – Segment 1	380	327	86%
Milkweed Lane Interceptor – Segment 2	580	528	91%
Lift Station	735	478	65%
Force Main[2]	940	686	73%
Quail Hollow Road Interceptor – Segment 1	1,350	1,080	80%
Quail Hollow Road Interceptor – Segment 2	440	281	64%
Quail Hollow Road Interceptor – Segment 3	2,500	2,225	89%
LPSD Interceptor (Peak)	1,167	875	75%

[1]Capacity at 2050 ultimate buildout planning period
[2] Assuming a maximum force main velocity of 6 fps.

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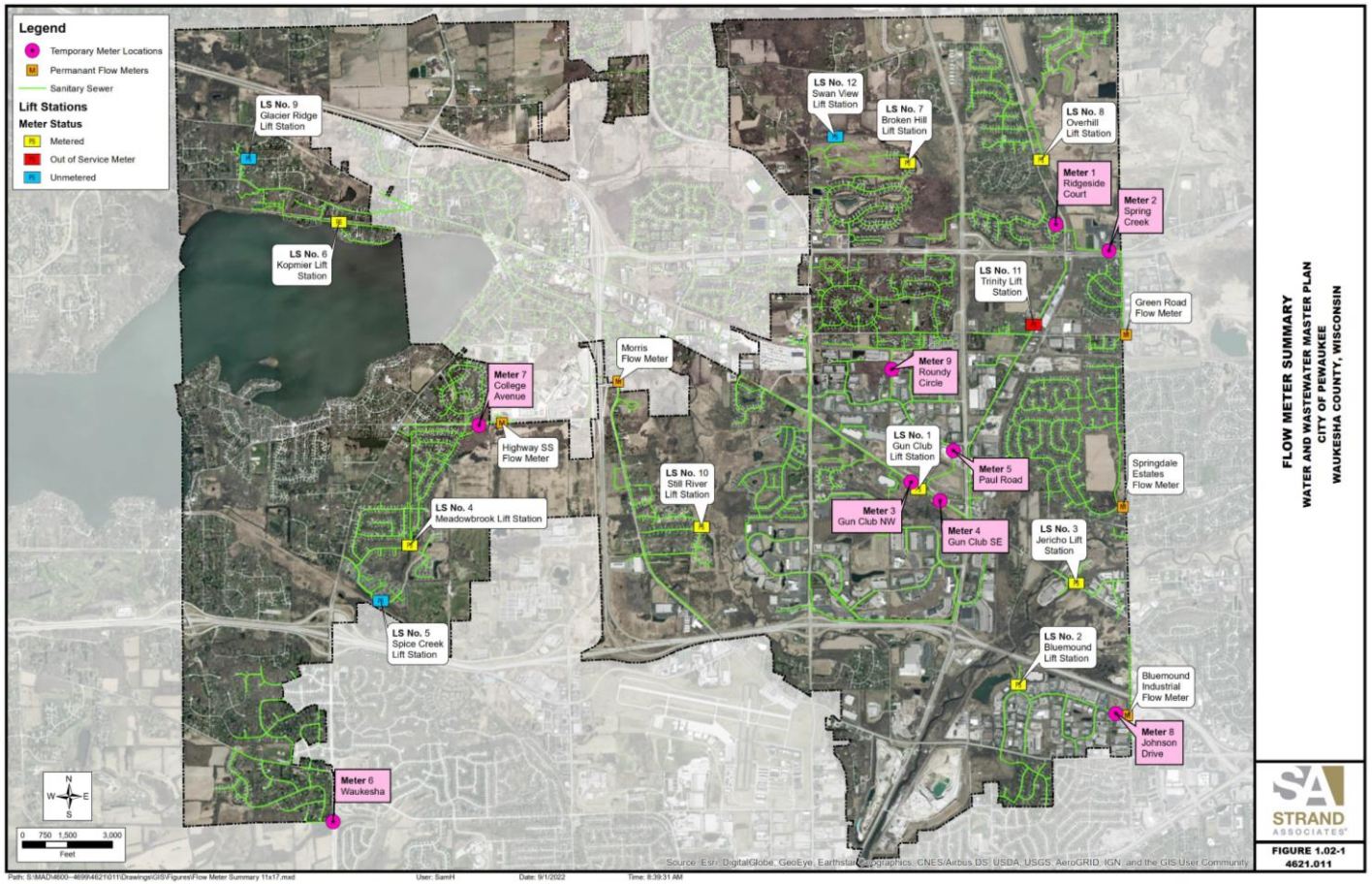
Golf Course – Alternatives Analysis – OPCC Summary

Alternative	OPCC	Allowable Development
Alternative 1 – Existing system	NA	74%
Alternative 2 – Increase pipe capacities	$361,000	100%
Alternative 3 – New Lift Station construction	$1,985,000	100% *(or more if needed)

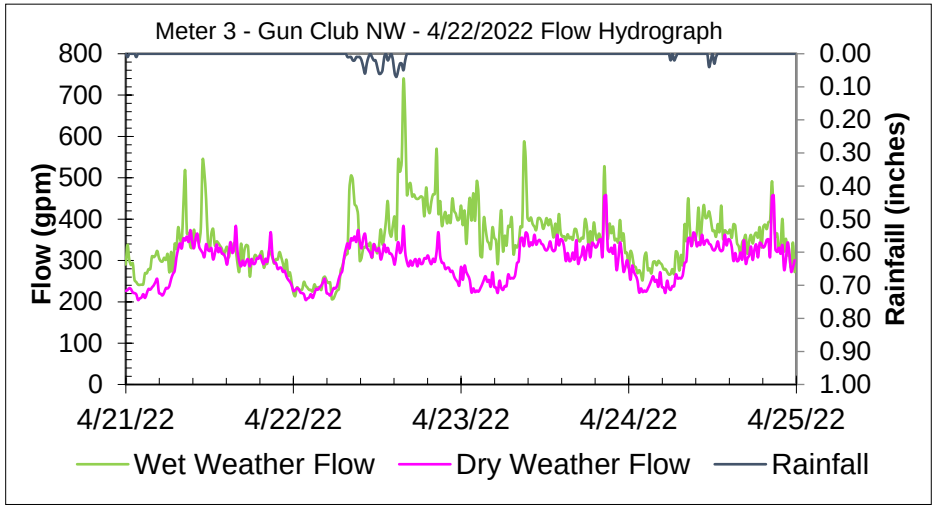
*Up to 200% of proposed development based on LPSD Interceptor Allocation (assuming no other future development in LPSD tributary area)

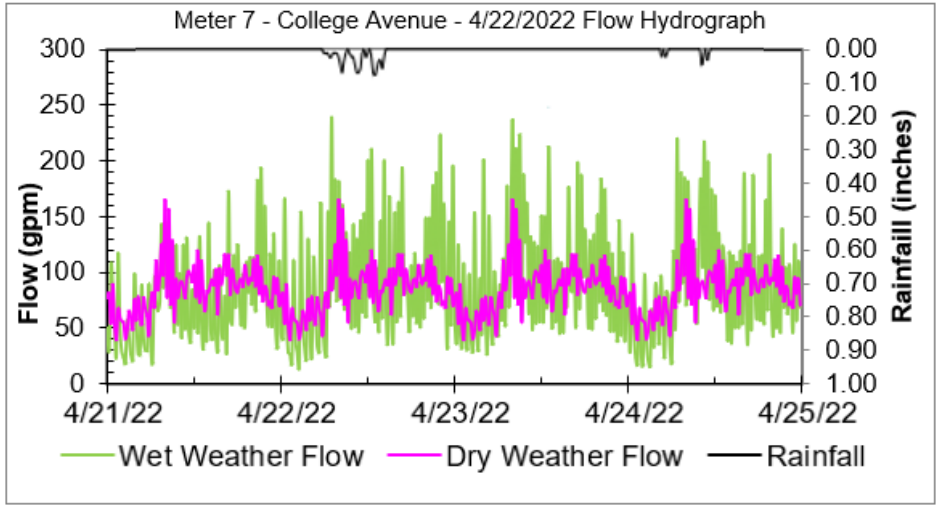
Sanitary Sewer Master Planning Process and Tools

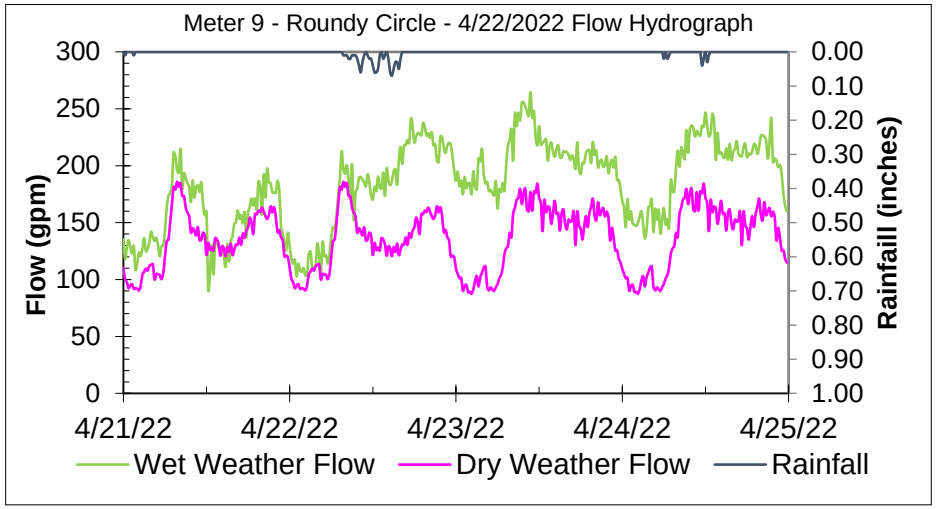
- Drawdown Testing at Pump Stations
- Temporary Flow Monitoring
  - Nine flow monitors and two rain gauges for a 12-week period
- Future flow projections
- Hydraulic modeling

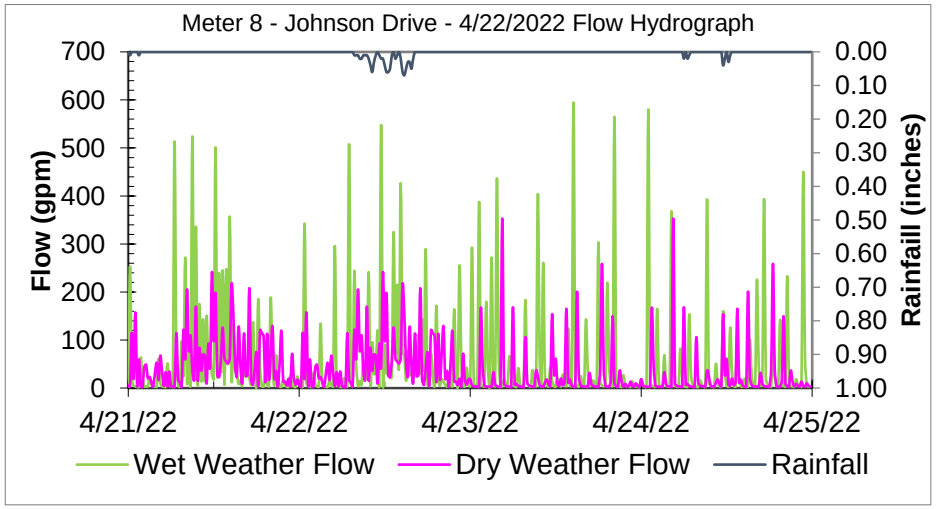


Wet Weather Data Show Low I/I Flows for Regular Storm Events









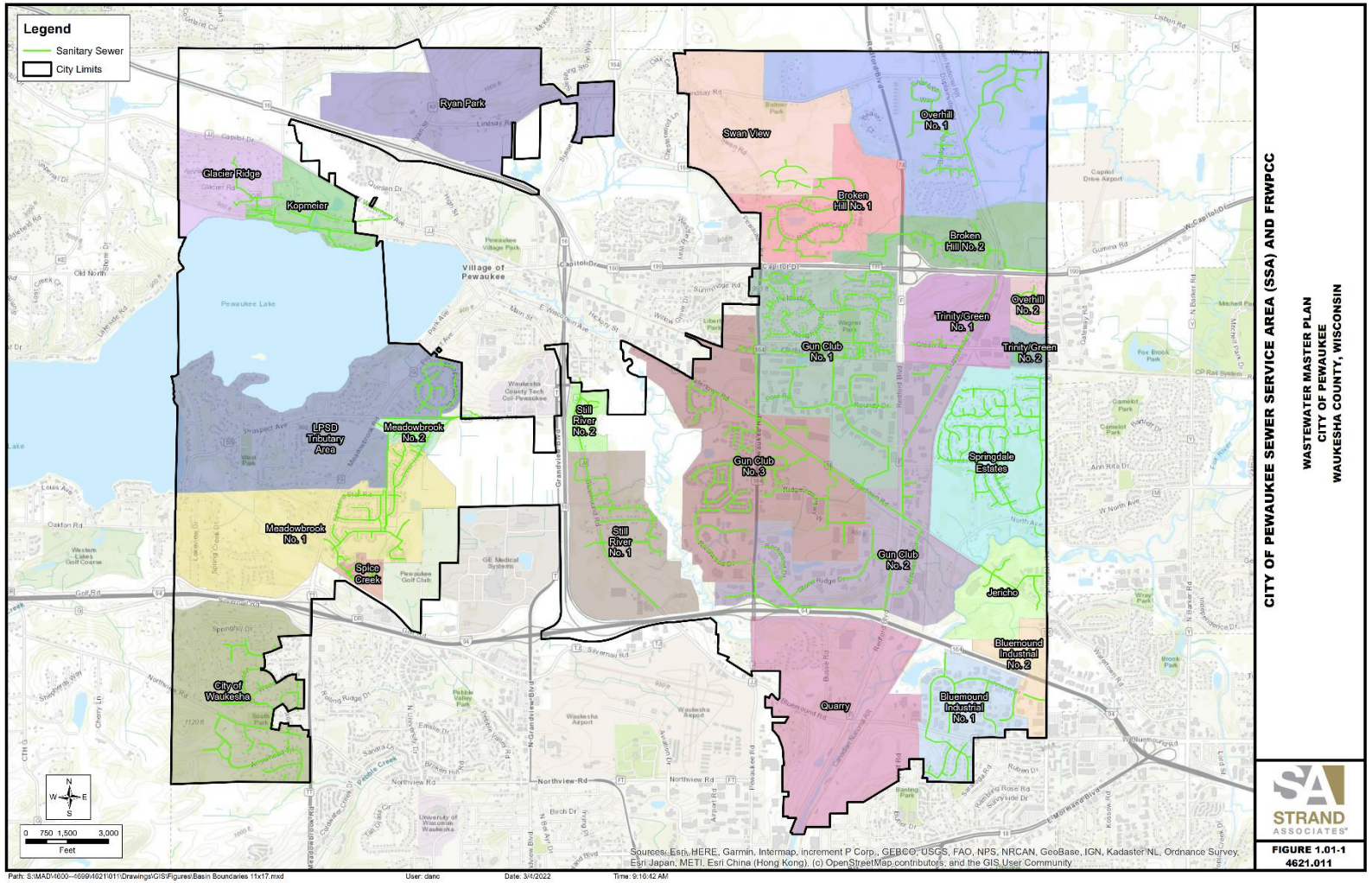
Valuable Data from City Planning Documents Used to Project Future Growth

- Planning Periods
  - Existing
  - 2035
  - 2050

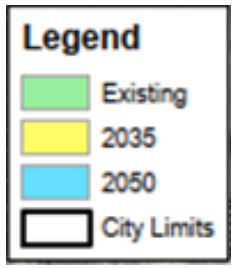
- Data Utilized
  - Sanitary Sewer Basins
  - Neighborhood Plan
  - Future Land Use Mapping
  - Southeast Wisconsin Regional Planning Commission Flow Factors

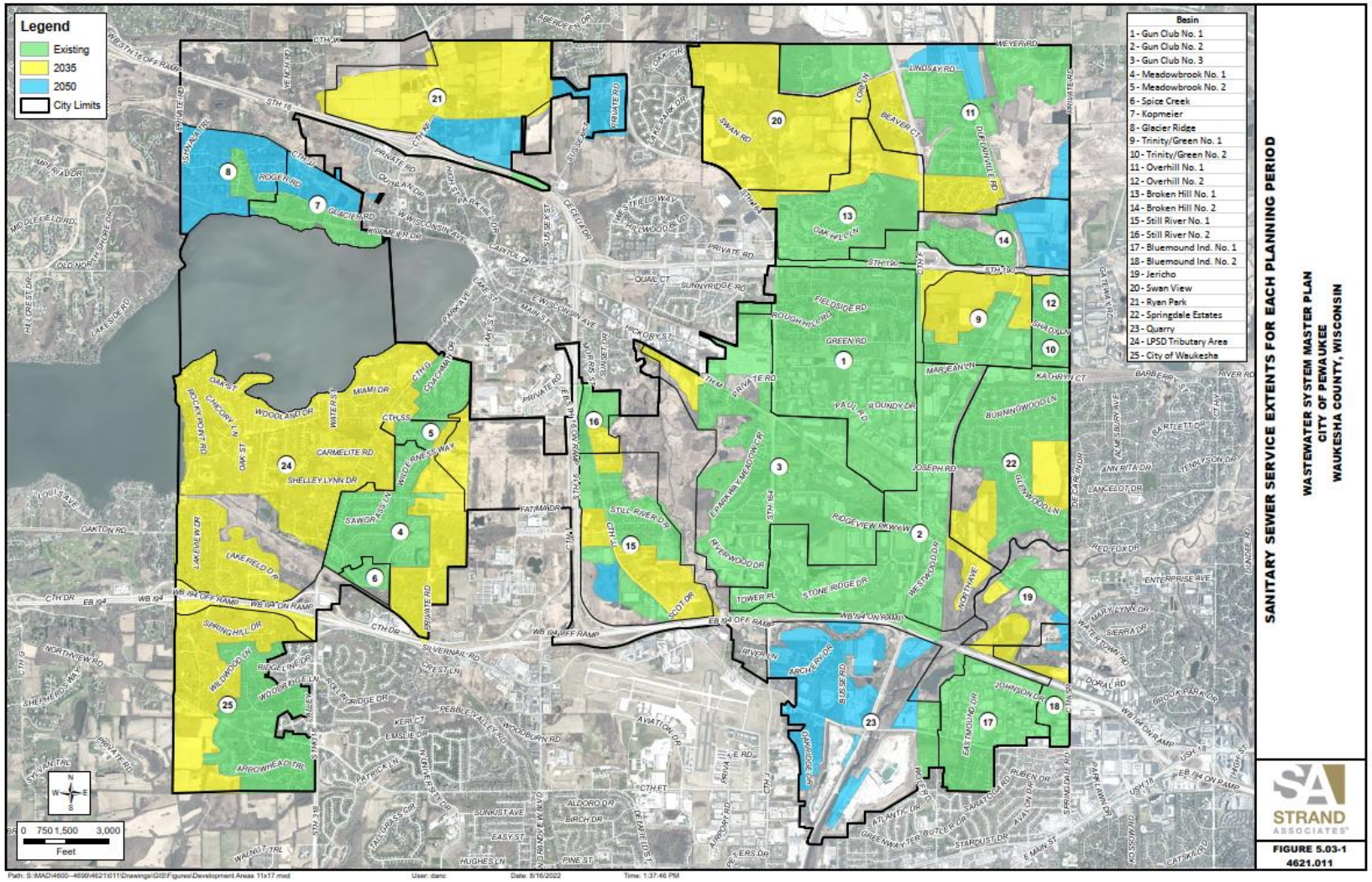
Land Use Type	Flow Factor	Units
Low Density Residential	158	gpd/acre
Low to Medium Density Residential	252	gpd/acre
Medium Density Residential	955	gpd/acre
High Density Residential	2,100	gpd/acre
Industrial	1,000	gpd/acre
Commercial	1,200	gpd/acre
Governmental/Institutional	1,200	gpd/acre

Future Flow Projections Methodology – Delineation of Sewer Basins

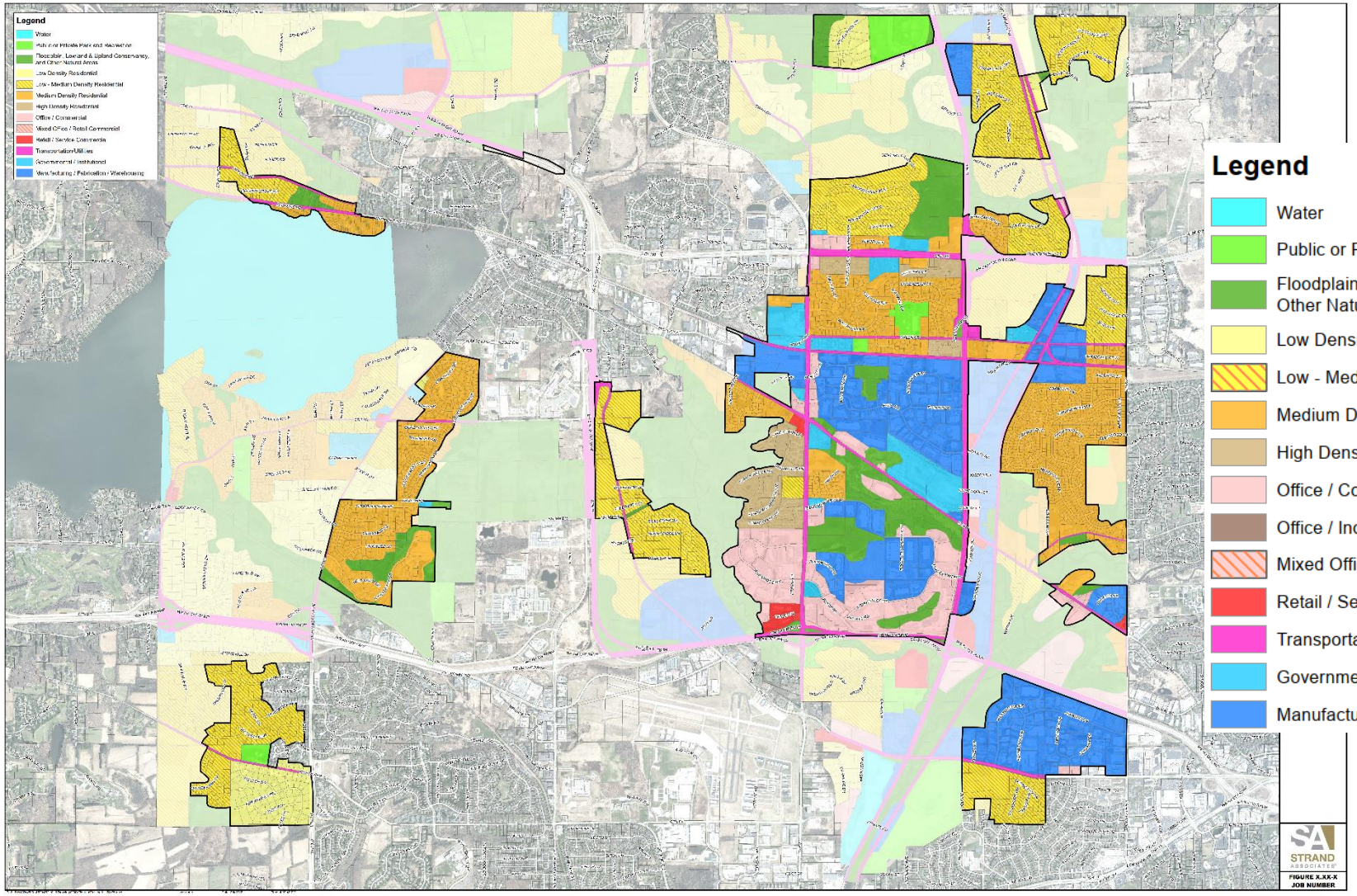


Timing of Development Extracted from Neighborhood Plan

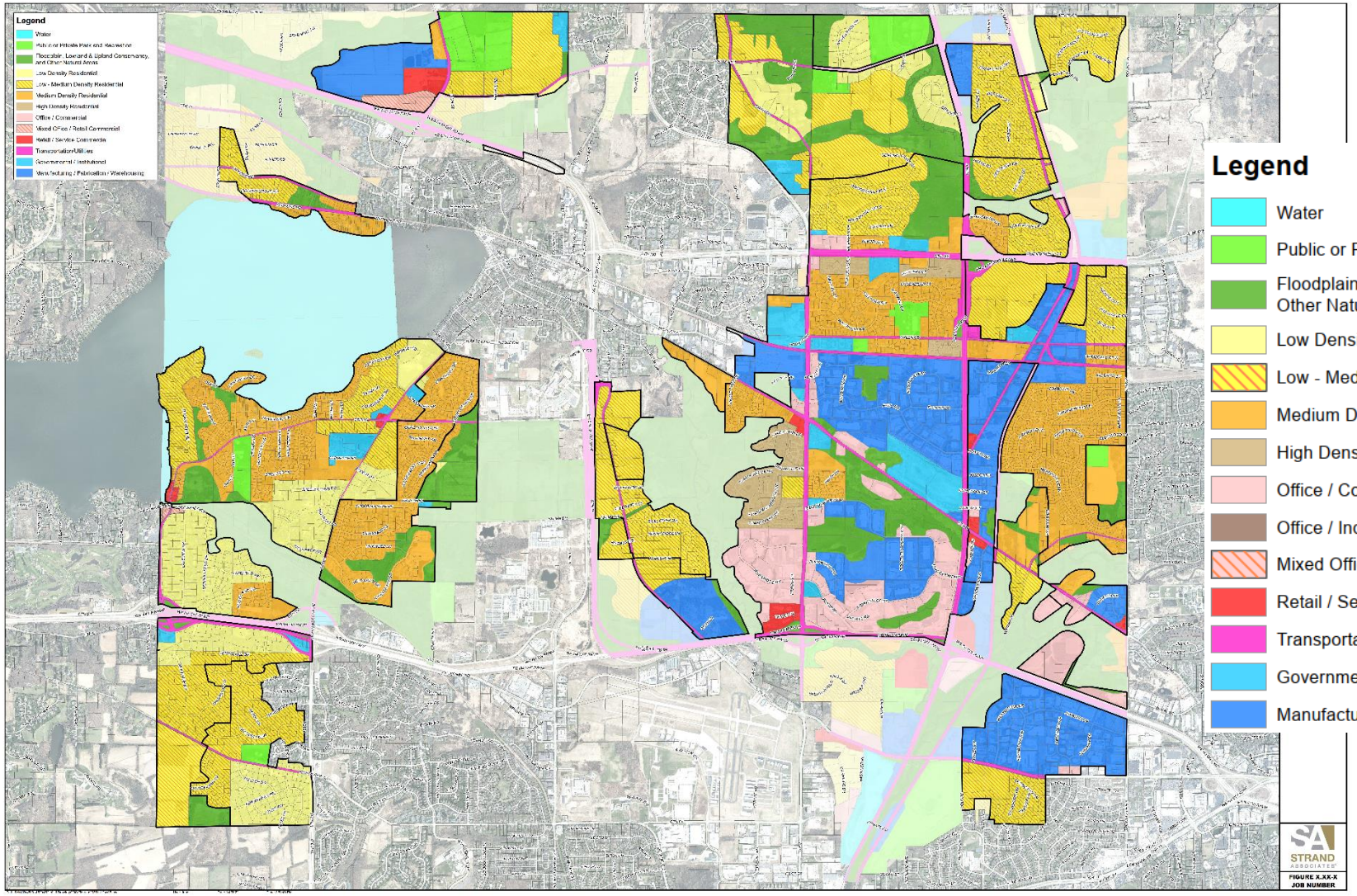




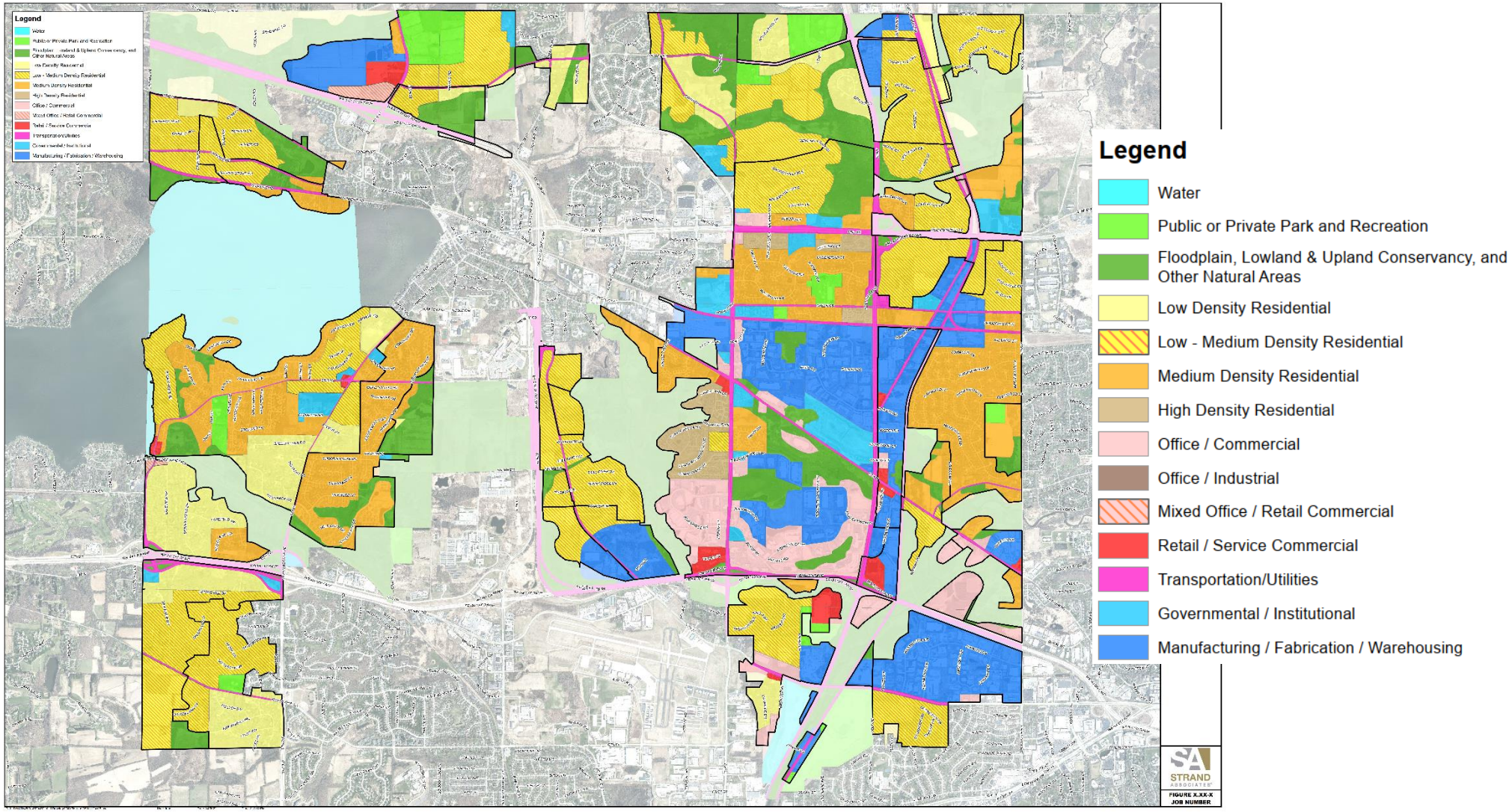
City Land Use and Information from Staff Used to Project Future Flows



2035 Planning Period Sanitary Sewer Service Boundaries and Land Use



2050 Planning Period Sanitary Sewer Service Boundaries and Land Use

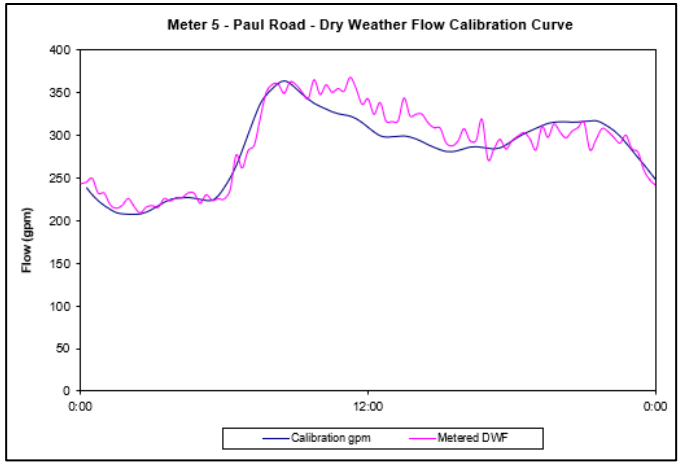


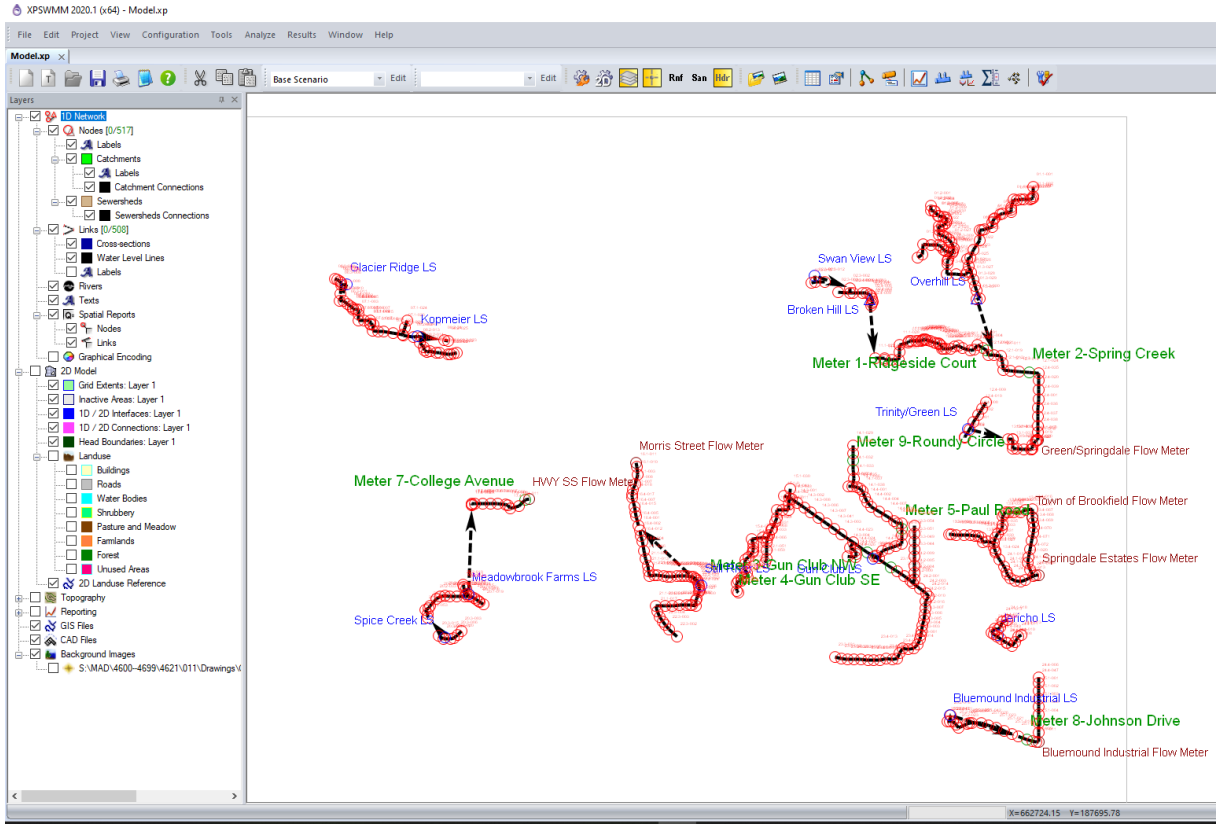
Future Flow Projections Show Strong Continued Growth in the Community

Planning Period	Projected City Flow to FRWPPC				
	Additional Flow (gal)		Total Flow (gal)		% Increase (to existing)
	Average	Peak	Average	Peak	
Existing	-	-	2,000,000	9,400,000	-
2035	1,100,000	4,280,000	3,100,000	13,680,000	54%
2050	230,000	1,250,000	3,330,000	14,930,000	66%

Sanitary Sewer Hydraulic Model Leveraged As Powerful Evaluation Tool

- Dynamic model accounts for time-varying nature of system flows:
  - Diurnal pattern during dry weather
  - Wet weather response
  - Pump station operation
  - Attenuation of peak flows





SWMM = Storm Water Management Model

Tabular Design Storm Simulation Summary Identifies Sanitary Sewer Infrastructure with Potential Capacity Concerns

Segment ID	Basin	Upstream Manhole ID	Downstream Manhole ID	Diameter (in)	Full Pipe Capacity (gpm)	2050 Peak Flow (gpm)						
							1-Hour Design Storm			24-Hour Design Storm		
						Dry Weather	2-Year RI	5-Year RI	10-Year RI	2-Year RI	5-Year RI	10-Year RI
1	Overhill No. 1	01.1-001	01.3-026	12	890	301	516	587	648	465	509	550
2	Overhill No. 1	01.2-001	01.3-006	12	950	71	137	158	176	118	130	142
3	Overhill No. 1	01.3-001	01.3-006	12	950	71	137	158	176	118	130	142
4	Overhill No. 1	01.3-006	01.3-026	12	1,180	301	516	587	648	465	509	550
5	Overhill No. 1	01.3-026	Overhill LS	15	1,350	511	796	897	981	745	808	870
6	Swan View	02.3-012	Swan View LS	8	370	118	118	118	119	118	119	121
7	Broken Hill No. 1	02.3-002	Broken Hill LS	8	420	649	649	649	940	653	655	667
8	Broken Hill No. 1	02.4-009	02.4-006	8	1,560	483	483	483	489	486	487	496
9	Broken Hill No. 2	11.1-022	11.1-031	15	4,760	643	643	644	926	648	657	667
10	Broken Hill No. 2	11.1-031	12.1-021	15	1,430	989	987	984	985	1,021	1,025	1,013
11	Overhill No. 2	12.1-021	Green Road Flow Meter	21	2,910	1,552	1,574	1,571	1,573	1,599	1,613	1,639
12	Trinity/Green No. 1	12.4-009	Trinity/Green LS	10	970	395	482	525	580	477	502	529
13	Trinity/Green No. 1	13.2-004	12.3-001	10	660	236	284	307	341	281	296	312
14	Trinity/Green No. 2	13.1-014	Green Road Flow Meter	12	1,830	402	483	526	579	480	504	531
15	Glacier Ridge	06.3-002	Glacier Ridge LS	8	720	283	283	283	283	284	284	284
16	Kopmeier	06.3-009	Kopmeier LS	8	1,000	29	30	32	34	33	34	36
17	Kopmeier	08.2-023	Kopmeier LS	8	400	29	30	32	34	33	34	36
18	Kopmeier	08.2-024	08.2-025	8	1,660	353	355	426	351	347	346	355
19	Spice Creek	20.3-015	Spice Creek LS	8	780	79	105	117	127	116	124	133
20	Spice Creek	20.3-003	20.3-016	8	430	41	45	50	54	55	58	61
21	Meadowbrook No. 1	20.2-053	Meadowbrook Farms LS	10	570	462	685	754	813	688	738	786
22	Meadowbrook No. 1	20.2-010	20.2-041	10	640	211	301	348	385	314	344	368
23	Meadowbrook No. 1	20.2-045	Meadowbrook Farms LS	10	850	462	685	754	813	688	738	786
24	Meadowbrook No. 1	20.1-019	20.2-042	8	320	388	567	623	669	571	614	653

Capacity

Projected Flows

City Shared Infrastructure Capacity – Dry Weather

Shared Infrastructure	City Peak Capacity Allocation (MGD)	Existing Dry Flow (MGD)	Existing Dry (% Capacity)	2035 Dry Flow (MGD)	2035 Dry (% Capacity)	2050 Dry Flow (MGD)	2050 Dry (% Capacity)
LPSD Interceptor	1.68	0.21	12%	1.12	67%	1.12	67%
Village Interceptor	0.84	0.35	42%	**0.97**	**115%**	**1.07**	**128%**
Village Pumping Station	2.72	0.56	21%	2.09	77%	2.19	80%
Village Force Mains	6.20	2.09	34%	4.09	66%	4.23	68%
Riverview Interceptor	2.489	0.24	9%	1.45	58%	2.24	90%
Springdale Interceptor	1.247	0.32	26%	1.24	99%	1.24	99%
FRWPCC	8.61	2.81	33%	7.00	81%	7.98	93%

Note: **Bold** values indicates a peak flow greater than 100 percent of the City's current peak flow allocation.

City Shared Infrastructure Capacity – Wet Weather

Shared Infrastructure	City Peak Capacity Allocation (MGD)	Existing 10Y1H Design Storm Flow (MGD)	Existing 10Y1H Design Storm (% Capacity)	2035 10Y1H Design Storm Flow (MGD)	2035 10Y1H Design Storm (% Capacity)	2050 10Y1H Design Storm Flow (MGD)	2050 10Y1H Design Storm (% Capacity)
LPSD Interceptor	1.68	1.19	71%	**2.01**	**119%**	**2.01**	**119%**
Village Interceptor	0.84	0.55	65%	**0.98**	**116%**	**1.09**	**130%**
Village Pumping Station	2.72	1.74	64%	2.98	110%	**3.10**	**114%**
Village Force Mains	6.20	5.27	85%	**6.96**	**112%**	**7.11**	**115%**
Riverview Interceptor	2.489	0.86	34%	1.87	75%	2.27	91%
Springdale Interceptor	1.247	1.24	99%	**1.92**	**154%**	**1.92**	**154%**
FRWPCC	8.61	8.60	100%	**12.04**	**140%**	**12.65**	**147%**

Note: **Bold** values indicates a peak flow greater than 100 percent of the City's current peak flow allocation.

Summary of Sanitary Sewer Master Plan Recommended Improvements

- **Phase 1 improvements and recommendations:**
  - Calibrate all permanent flow meters
  - Install flow meters at all unmetered lift stations
  - Gun Club Pumping Station replacement
- **Phase II improvements and recommendations:**
  - New lift station to replace Swan View and Broken Hill Lift Stations
  - Golf course development – Monitor flows and proposed developments
  - Continue to monitor flow in critical local sewers and infrastructure governed by IGA's
  - Phase II Master Planning - condition assessments, an asset management program, and integrated planning services

Questions?

Water System Master Plan Objectives Chart a Course for System Vitality

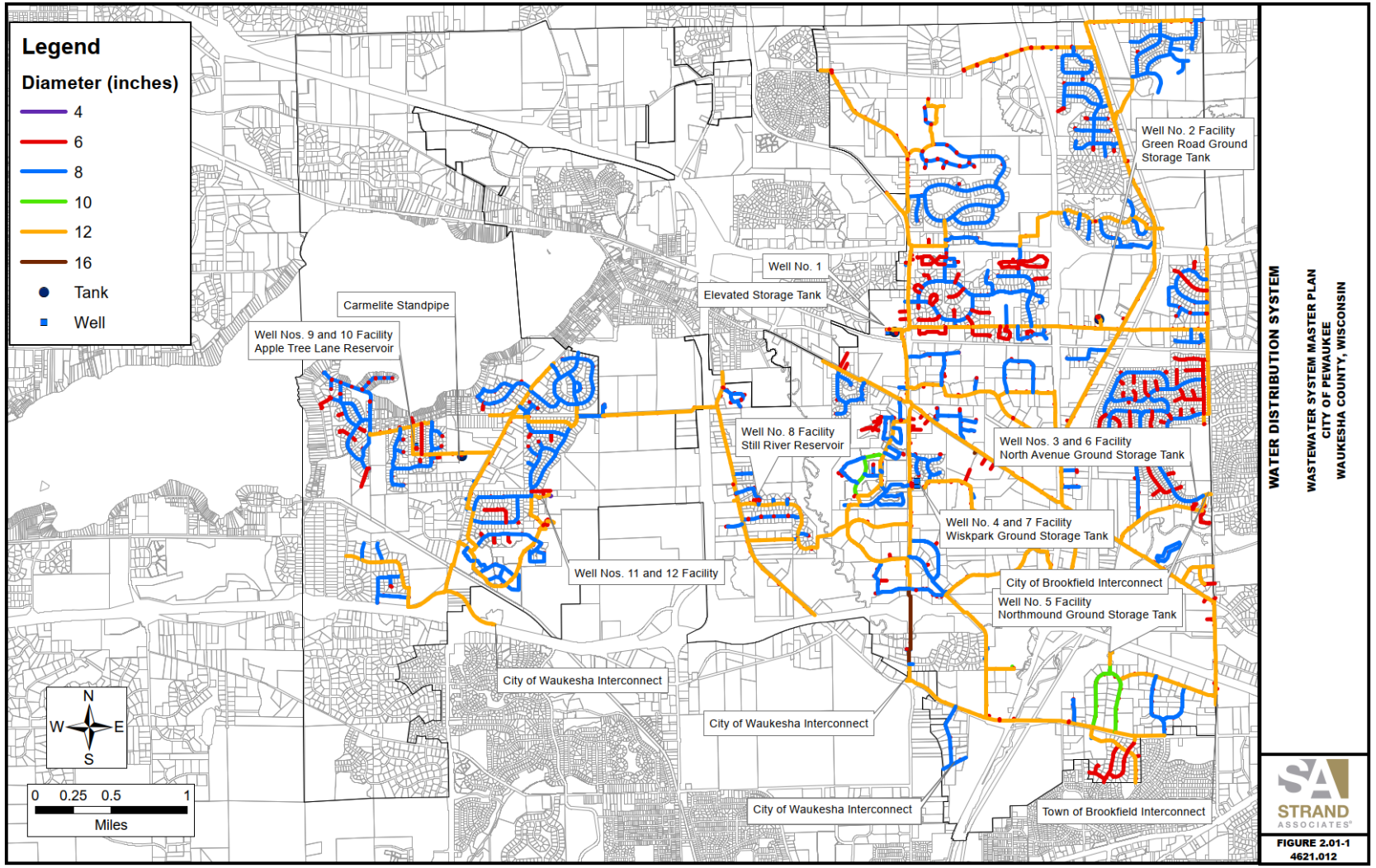
- Prepares the City to address needs proactively
- Identifies opportunities for efficient use of funds
- Provides confidence in system abilities and needs relative to growth
- Yields a tool staff can use moving forward

Today's Agenda will Summarize Key Findings from the Water System Study

- Supply Capacity
- Storage Capacity
- Distribution System Performance (Model)
- Condition of Above Ground Assets
- Capital Improvement Plan
- Summary and Next Steps

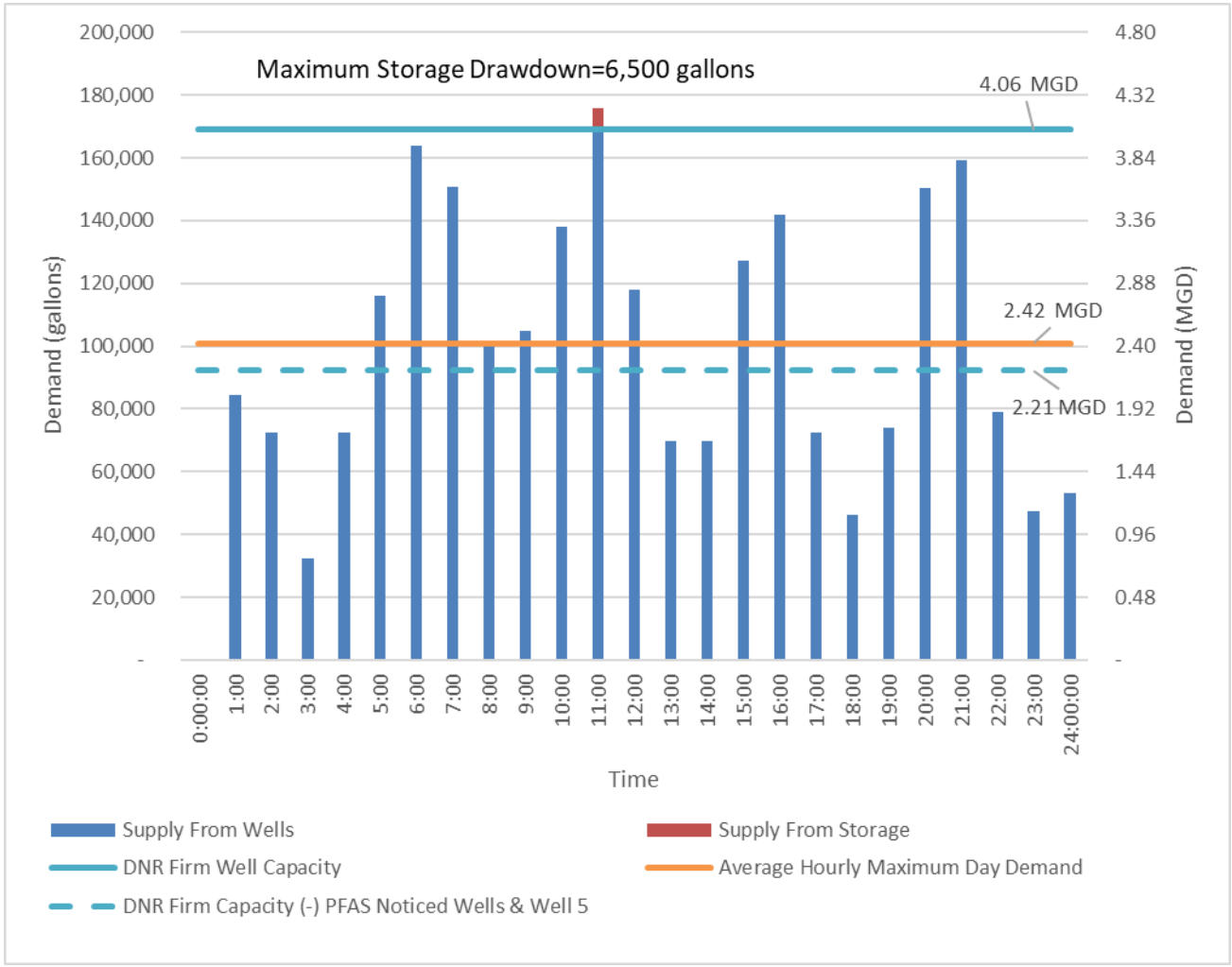
Planning Period and Current System Establish the Baseline

- 12 Wells (8 Facilities)
- 6 ground storage tanks
- 2 elevated storage facilities
- 530,000 feet of pipe
- ~$170-200M Replacement Value
- Design Years:
  - Present Year
  - 2035
  - 2050



Supply Capacity Evaluation – Present Day

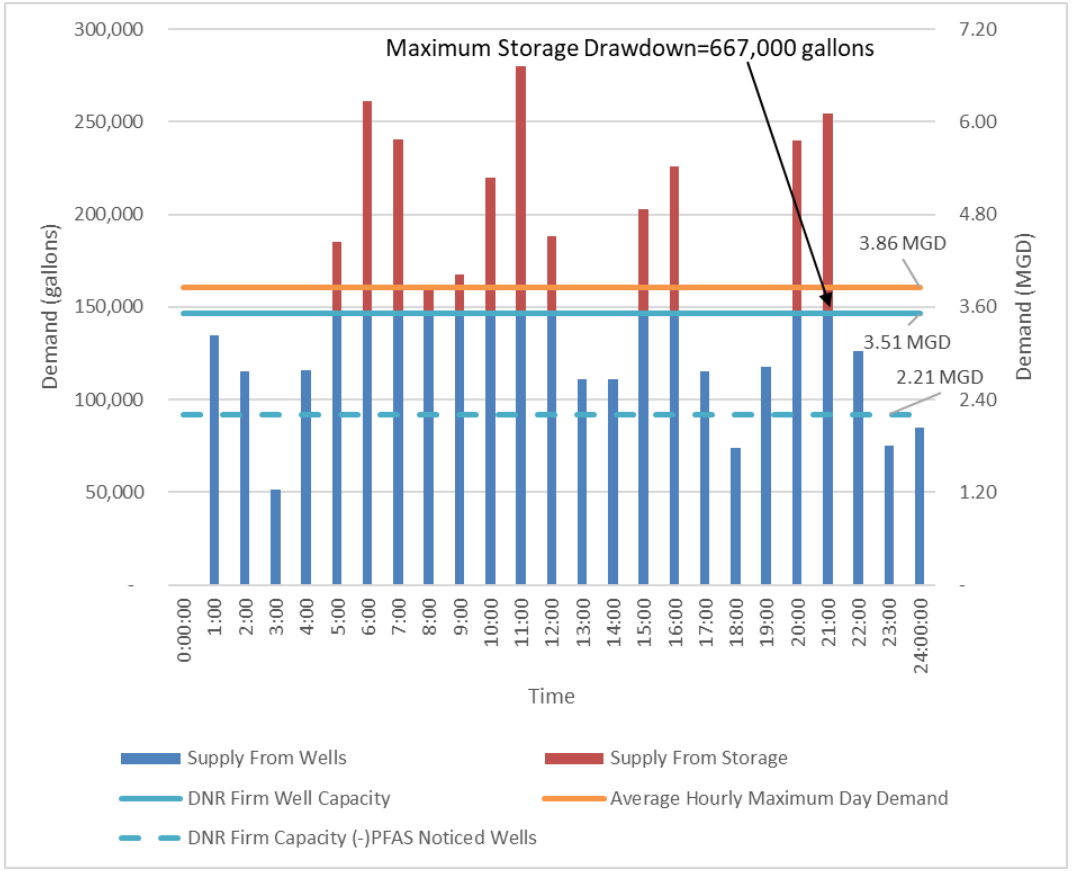
- Criteria:
  - Maximum Day Demand
  - Largest well facility out of service
  - Wells operating 18 hours per day
- Capacity from Wells 8 & 11/12 is meaningful and needed



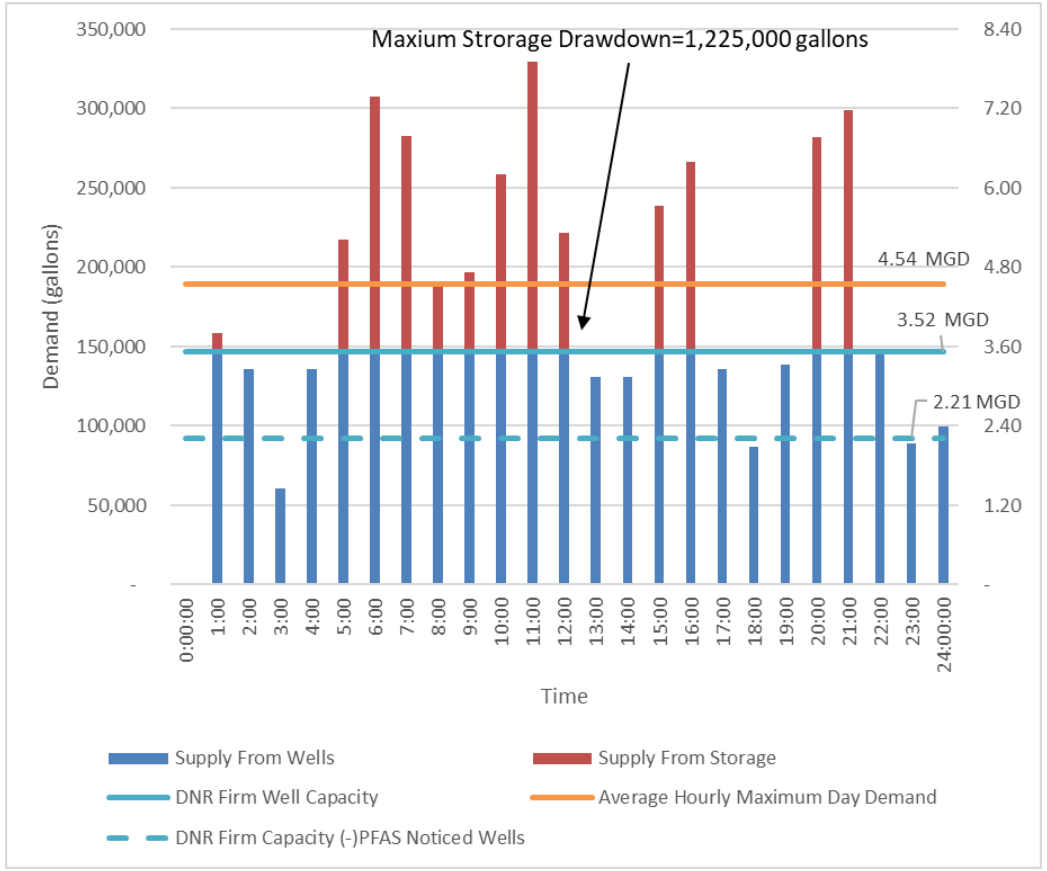
Present Day Demands

Supply Capacity Evaluation – Future Design Years

- Additional well supply may be needed by 2035 pending actual demand growth



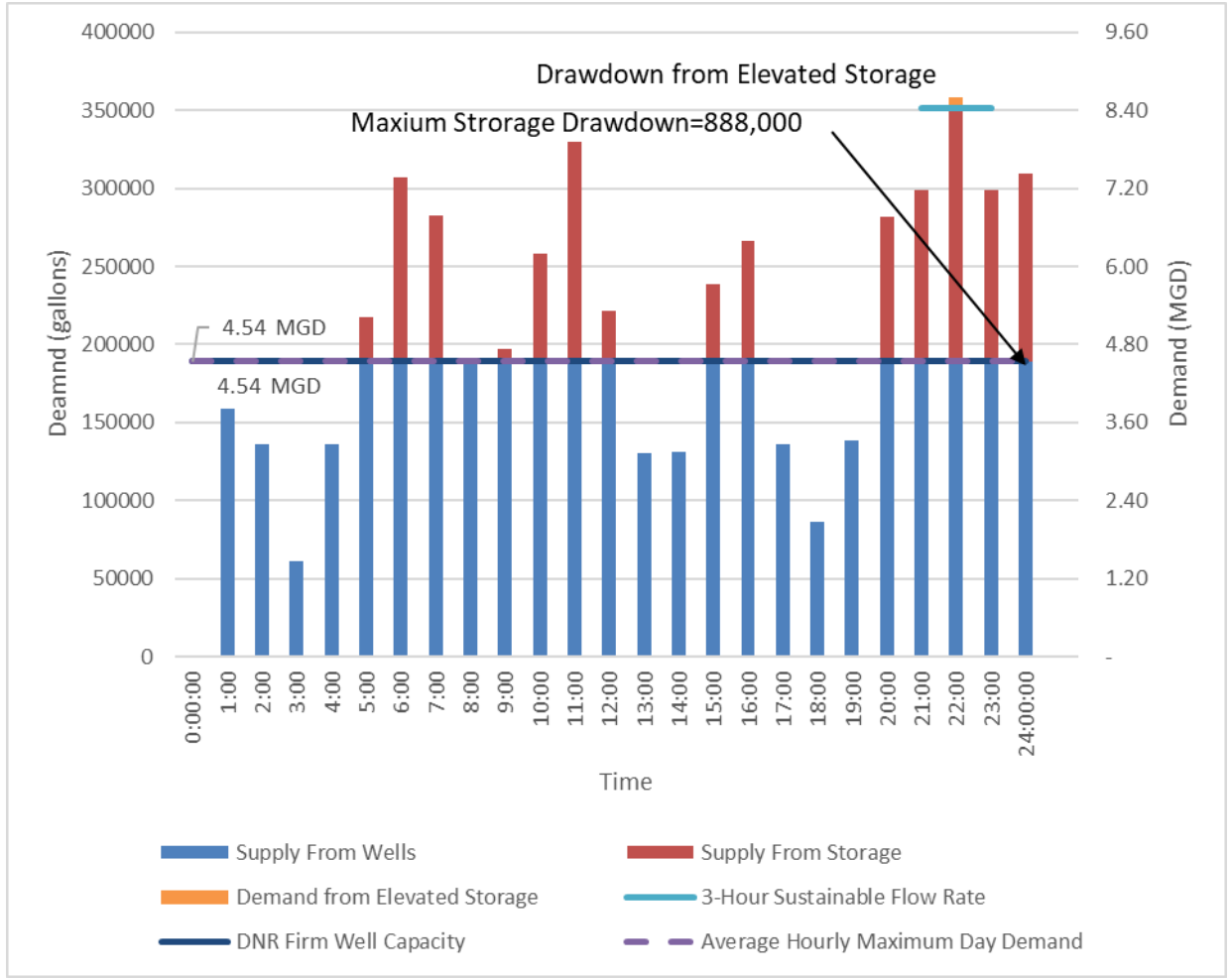
2035 Demands



2050 Demands

Storage Capacity Evaluation

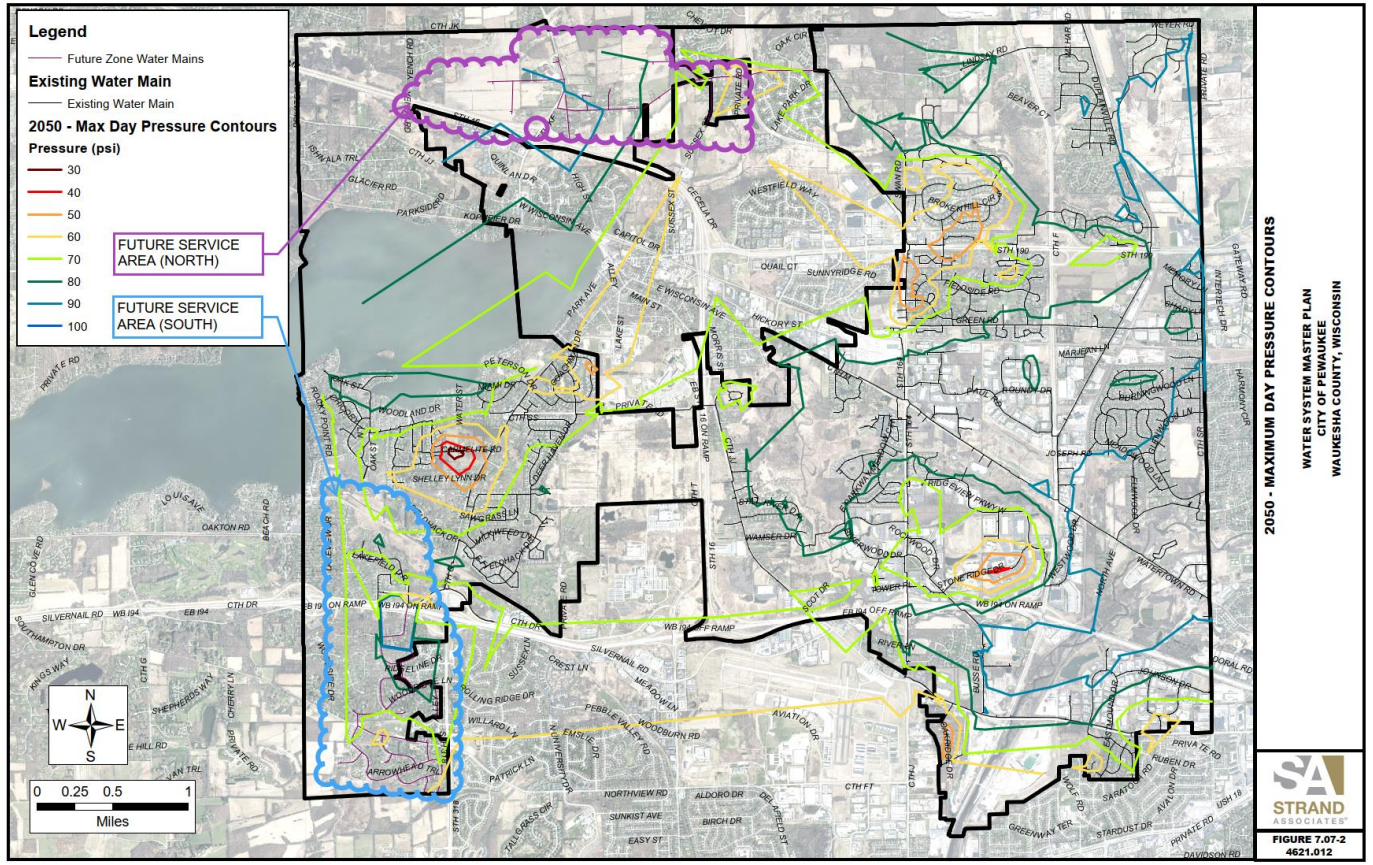
- Criteria:
  - Buffer hourly peaks
  - Emergency demands (3,500 gpm for 3 hours)
  - Water level maintains pressure in the system
    - 35 psi minimum (normal operations)
    - 20 psi minimum (emergencies)
- Existing storage volume is adequate
  - 1.04 MG for normal operations
  - 1.82 MG for emergency operations



2050 Demands with Future Added Supply

Distribution System Performance – Pressures

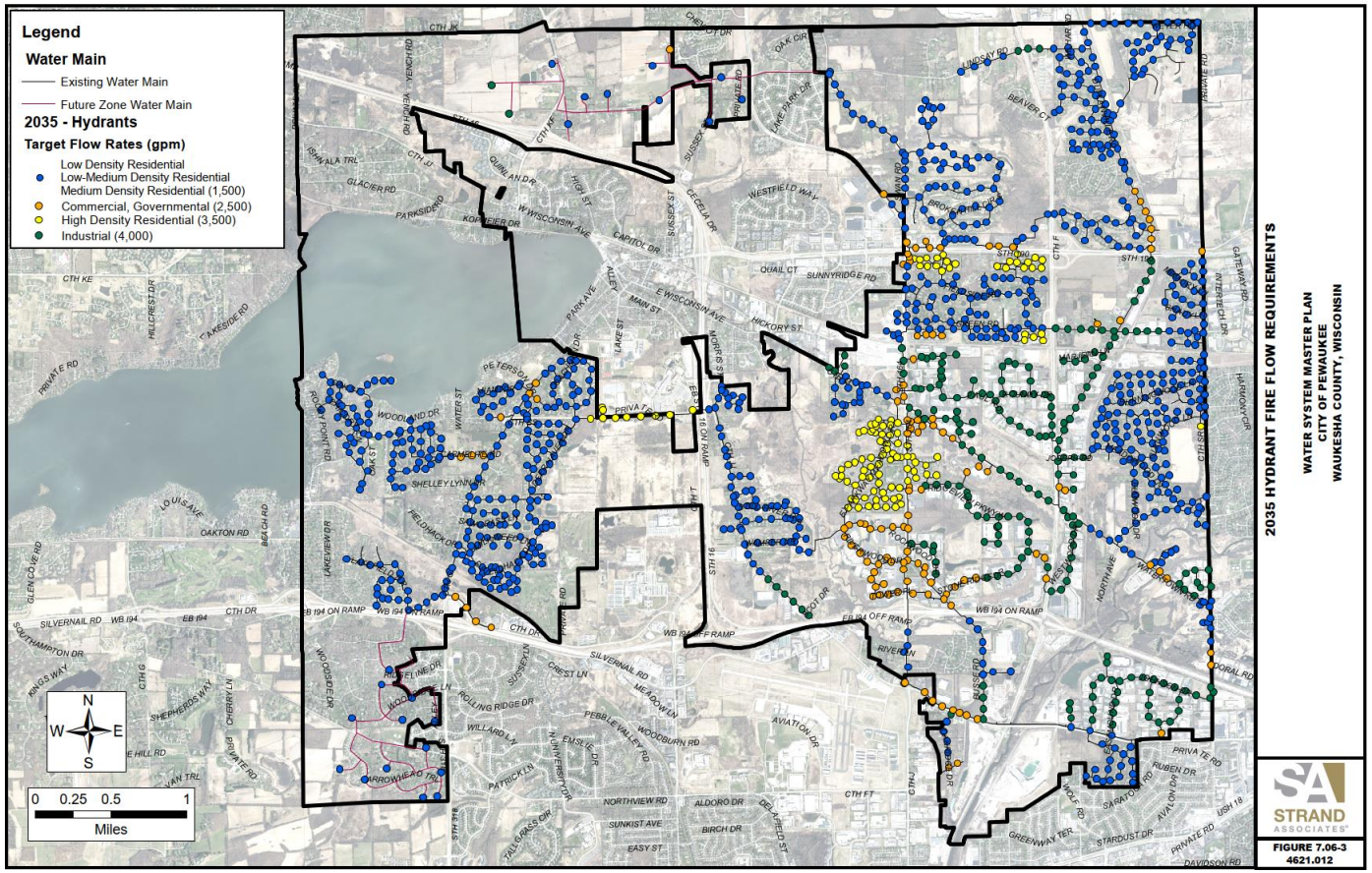
- Carmelite – not a customer yet; will need to be boosted
- Stoneridge – experiences low pressures depending on operations
  - *Sensitive to instantaneous demands*
  - *Growth and uses should be coordinated with the Utility*
- Future North/South service areas can be served at same hydraulic gradient as the current system
- Ground elevations restrict storage operation and may lead to water age issues



2050 Pressure Contours

Distribution System Performance – Fire Flow Criteria

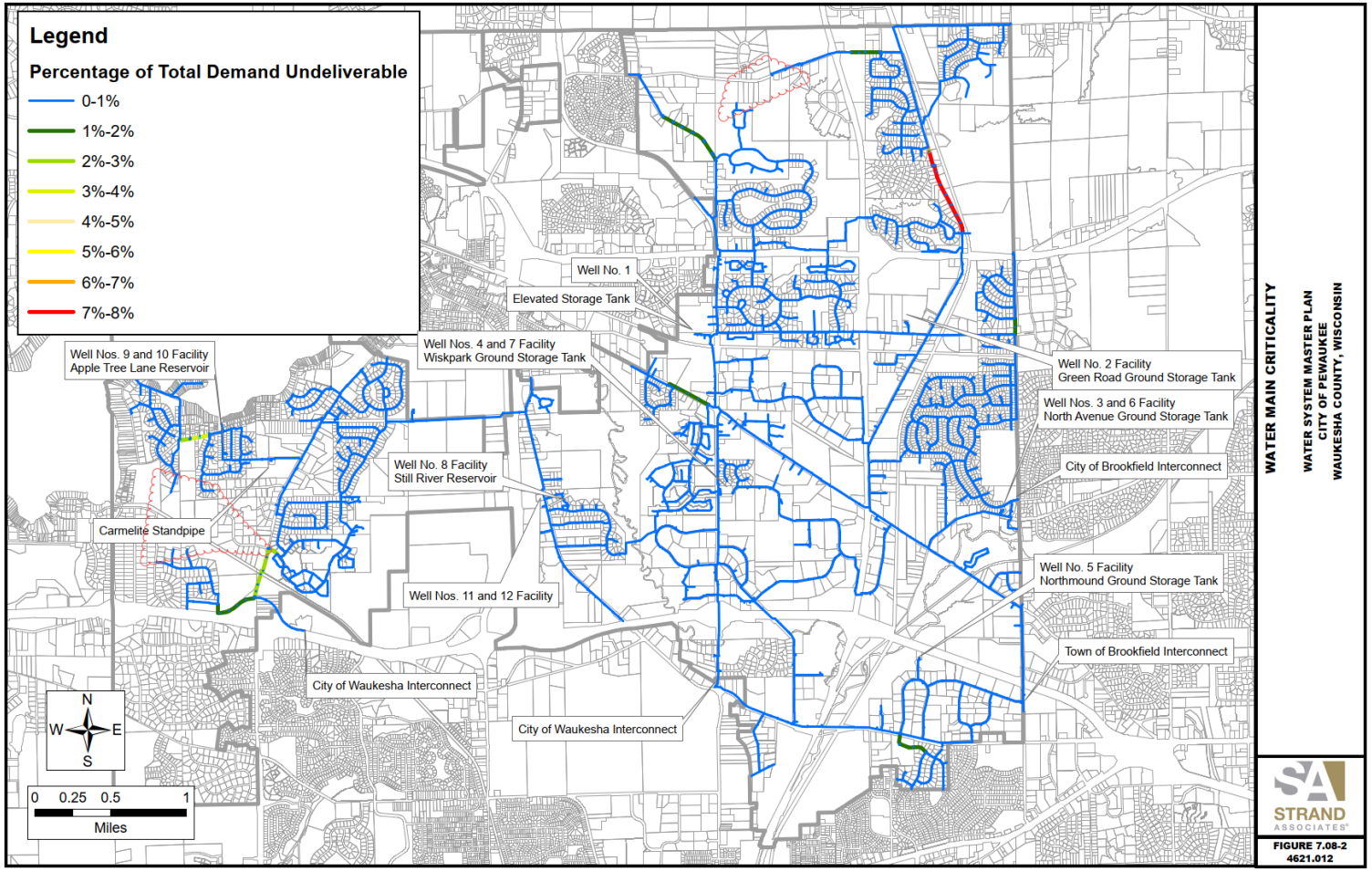
- DNR Minimum: 500 gpm
- Targets established with the Fire Chief
- Compare modeled fire flow availability to target flow
- Use as a tool for staff when reviewing potential improvements



Fire Flow Availability Target Criteria

Distribution System Performance – Pipeline Criticality

- % of customers out of service during water main break
- Staff normally restore service within ~3 hours
- Looping through new service areas will address western portions
- A loop on Lindsay Rd. through Balmer Park is recommended
- These improvements also improve fire flow



Future Loops can Address Most Critical Pipes

Above Ground Facilities – Condition Review

- “Boots on the ground” review
  - Water Supply engineer
  - Structural engineer
  - Electrical engineer
  - Mechanical engineer
- Typical remaining life of major components
- Deficiencies and recommendations developed for each facility
- Controls (SCADA) and backup power projects will be vital to maintaining system capacity

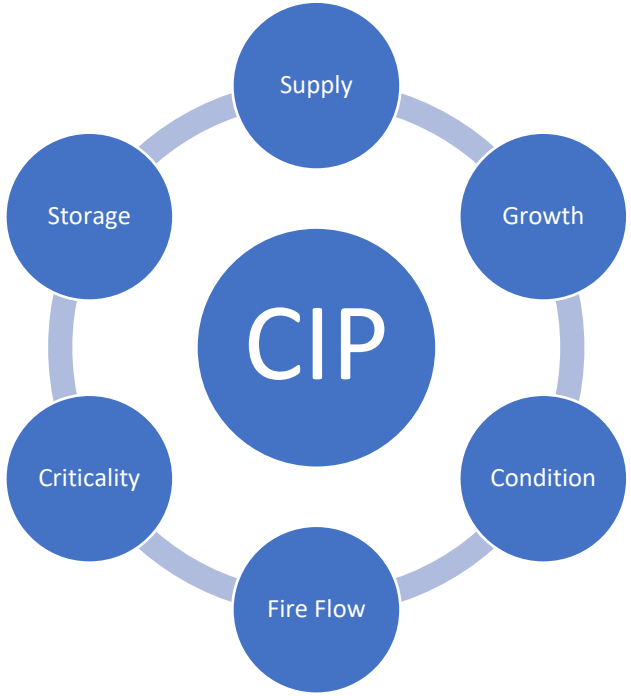
Well No. 11 Facility

Item	Deficiency	Recommendation
Process Piping and Equipment		
Well No. 12 Process Piping Coatings	Poor	Surface prepare to SSPC-SC10 and recoat corroded areas.
Electrical Systems		
Well No. 11 Control Panel PLC	Allen Bradley MicroLogix 1500 PLC Discontinued and past typical life expectancy	Replace in the near future.
Well No. 11 Control Panel 3-Phase Monitor	Shows signs of arc flash/fault on 3-Phase Monitor Upstream Fuses	Investigate for damage and repair. Find source of arc flash and repair.
Well 11 Lighting	Fluorescent T8 lamps installed	Replace with LED lighting to improve efficiency during next building upgrade.
Well No. 11 Chemical Area Electrical Devices	Corroded by chemical in room	Replace corroded electrical devices with new NEMA 4X devices.
Well No. 11 Pump RVSS Starter	Nearing end of typical life expectancy	Monitor and replace when failure occurs.
Well No. 11 Power Meter	Does not function correctly	Owner to repair during maintenance activities.
Well No .12 Electrical Panels	Panel exteriors are corroded	Panel interior components appear okay. Eliminate source of corrosion and monitor enclosures for additional corrosion; close enclosures tightly at all times to avoid interior panel corrosion.
Mechanical Systems		
Dehumidifier	Freezes in winter, and metal components within building are corroding	Replace with model with more efficient drainage.
Unit Heater	Fails in the winter	Replace with larger model.
Building and Site		
Well No. 11 Interior Slab	Concrete slab on grade is displaying significant cracking especially around filter vest.	Monitor for additional degradation and settling of the filter vessel. Replace affected slab areas.
Doors, Windows, and Hardware	Corrosion observed on overhead door, sealant at windows deteriorating	Repaint/repair.

Table 3.09-3 General Deficiencies and Recommendations–Well Nos. 11 and 12

Water System Master Plan Capital Improvement Plan

- Recommendations consolidated into a Master CIP table for staff use
  - 20-year plan in 5-year increments
  - Project justification, study reference, cost opinion, budget

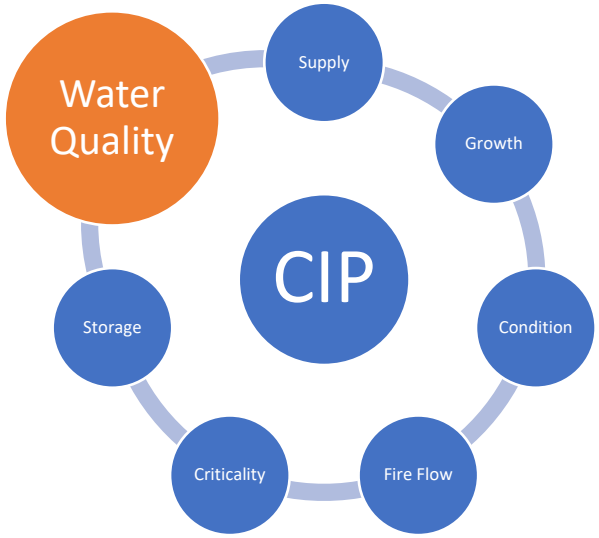


Project Number	Term	Facility Name	Project Name/Description	Justification	Water System Master Plan Reference (2023)	Opinion of Probable Construction Cost	Construction Contingency	Professional Services (Admin, Engineering, Legal)	Capital Budget
1	0-5	Well No. 8	Preliminary Engineering Evaluation and PFAS Treatment and Building Addition	Shallow well water quality exceeds hazard index for PFAS. Conduct preliminary engineering analysis and potentially add treatment subject to WDNR and EPA rulemaking.	Table 3.07-3	$2,500,000	$750,000	$820,000	$4,100,000
2	0-5	Well No. 11 & 12	Preliminary Engineering Evaluation and Treatment Addition	Shallow well water quality exceeds hazard index for PFAS. Conduct preliminary engineering analysis and potentially add treatment subject to WDNR and EPA rulemaking.	Section 3.09	$2,500,000	$750,000	$820,000	$4,100,000
3	0-5	Well No. 11 & 12	Electrical & Backup Popwer Upgrades - Replace Well 11 RVSS starter, electrical devices and wiring, and upgrade lighting. Replace MCC and generator. Replace Well 11 unit heater and dehumidifier.	Well pump RVSS starter is nearing expected useful life. Electrical devices in chemical room are corroded. Electrical wiring and devices and MCC in rest of facility are nearing the expected useful life. Dehumidifier freezes in winter leading to corrossion. Unit heater fails in winter and should be upsized. Upgrade Well 11 lighting to LED. Diesel generator is nearing the	Table 3.09-1 Table 3.09-2 Table 3.09-3	$400,000	$120,000	$130,000	$650,000

CIP Intended to be a Dynamic Tool

Waster System Master Plan Summary and Next Steps

- **Most Pressing Needs**
  - Short term capacity – dependent on water quality, preliminary engineering is in progress
    - Potentially 1 or 2 major treatment projects pending EPA rule finalization
  - Long term capacity – revisit as growth occurs
  - SCADA & Backup Power – Keep crucial operating equipment current
- **Strategies Moving Forward**
  - Use the model for regular review of proposed growth
  - Evaluate interim operations in a future modeling phase
  - Recognize that growth offers opportunities to accomplish multiple objectives (i.e., looping)
  - Budget an annual amount to address water main projects over time



Questions?

Excellence in Engineering[SM]

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 8.

DATE: December 4, 2023

DEPARTMENT: PW - Engineering

PROVIDED BY: Magdelene Wagner

SUBJECT:

Discussion and Possible Action to approve the Fourth Reduction of Woodleaf Reserve Phase 5 Development Letter of Credit from $610,525.21 to $50,000 (A Reduction of $560,525.21) [Wagner]

BACKGROUND:

Woodleaf Reserve Phase 5 has completed all the required improvements including the surface course of asphalt. The remaining letter of credit will guarantee the surface course for the 1 year warranty period.

FINANCIAL IMPACT:

RECOMMENDED MOTION:

Council approve the Fourth Reduction of Woodleaf Reserve Phase 5 Development Letter of Credit from $610,525.21 to $50,000 (A Reduction of $560,525.21)

ATTACHMENTS:

Description

LOC Reduction Request

Point
REAL ESTATE
HOMES • LAND • INVESTMENTS

November 3, 2023

Magdelene Wagner
City of Pewaukee
Director of Public Works/City Engineer
W240 N3065 Pewaukee Road
Pewaukee, WI 53072

RE: Woodleaf Reserve Phase V - Letter of Credit Reduction #5 & Surface Course Final Acceptance

Dear Ms. Wagner:

On behalf of Woodleaf Investments LLC, please accept this request for the City of Pewaukee to inspect the completed improvements in Woodleaf Reserve Phase V, to reduce the letter of credit per the costs outlined below and to accept the surface course of asphalt:

Starting Letter of Credit Balance	**$473,535.08**
-Less Requested Reductions-	
Grading and Erosion Control	$49,429.50
Surface Course Paving	$72,100.00
Contingency	$337,585.58
Total Reduction	**$459,115.08**
Remaining Letter of Credit Balance	**$14,420.00**

The guarantee period for the Woodleaf Phase 5A improvements expired on August 15, 2023, and the guarantee period for the Woodleaf Phase 5B improvements is scheduled to expire on November 21, 2023, therefore, Woodleaf Investments is requesting the contingency be reduced by the above amount, so the remaining letter of credit is equal to 20% of the surface course paving cost for the one year surface course guarantee. Enclosed herewith is a copy of Super Western's Pay Application No. 8, final lien waivers from Super Western, Inc, Super Excavators, Inc and Stark Pavement Corporation and a letter of credit worksheet which tracks the letter of credit draws and balances. Please review this request and include the letter of credit reduction and final acceptance of the surface course paving on the December 4th City Council agenda for review and action, if possible. If you have any questions or concerns regarding this request, please call me at (262) 424-5997. Thank you for your assistance with this request.

Respectfully Submitted,

Joseph A. Bukovich

Joseph A. Bukovich, P.E.
Owner's Authorized Representative

Enclosures

APPLICATION AND CERTIFICATE FOR PAYMENT

Invoice #: 2021222-8

To Owner: Woodleaf Investments LLC
Project: 21.02.022 Woodleaf Phase 5
Application No.: 8
Distribution to: ☐ Owner ☐ Architect ☐ Contractor ☐ ☐
Period To: 9/30/2023

From Contractor: Super Western361
N59W14601 Bobolink Ave.
Menomonee Falls, WI 53051
Via Architect:

Project Nos:

Contract For:
Contract Date:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet is attached.

1. Original Contract Sum		$1,861,479.25
2. Net Change By Change Order		$24,852.26
3. Contract Sum To Date		$1,886,331.51
4. Total Completed and Stored To Date		$1,886,331.51
5. Retainage:		
0.00% of Completed Work	$0.00	
0.00% of Stored Material	$0.00	
Total Retainage		$0.00
6. Total Earned Less Retainage		$1,886,331.51
7. Less Previous Certificates For Payments		$1,771,395.25
8. Current Payment Due		$114,936.26
9. Balance To Finish, Plus Retainage		$0.00

CHANGE ORDER SUMMARY	Additions	Deductions
Total changes approved in previous months by Owner	$0.00	$0.00
Total Approved this Month	$24,852.26	$0.00
TOTALS	$24,852.26	$0.00
Net Changes By Change Order	**$24,852.26**	

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information, and belief, the work covered by this Application for Payment has been completed in accordance with the Contract Documents. That all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: Super Western361

By: _____ Date: 10/9/23

State of: Wisconsin
County of: Waukesha
Subscribed and sworn to before me this 9th day of October
Notary Public: MaryEllen Klaver
My Commission expires: 9-5-2023

MARY ELLEN KLAVER NOTARY PUBLIC STATE OF WISCONSIN

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information, and belief, the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED $ 114,936.26

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: Joseph A. Burkard Date: 11/3/23

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment, and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CONTINUATION SHEET

Application and Certification for Payment, containing
Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

Application No. : 8
Application Date : 09/30/23
To: 09/30/23
Architect's Project No.:

Invoice # : 2021222-8 **Contract :** 21.02.022 Woodleaf Phase 5

A	B	C	D	E	F	G		H	I
Item No.	Description of Work	Scheduled Value	Work Completed		Materials Presently Stored	Total Completed and Stored To Date	% (G / C)	Balance To Finish (C-G)	Retainage
			From Previous Application (D+E)	This Period In Place	(Not in D or E)	(D+E+F)			
5	Mobilization	55,025.00	55,025.00	0.00	0.00	55,025.00	100.00%	0.00	
10	Tracking Pad	2,765.00	2,765.00	0.00	0.00	2,765.00	100.00%	0.00	
20	Strip Topsoil	67,200.00	67,200.00	0.00	0.00	67,200.00	100.00%	0.00	
30	Cut/Fill	160,050.00	160,050.00	0.00	0.00	160,050.00	100.00%	0.00	
40	Handle Sewer Spoil	59,250.00	59,250.00	0.00	0.00	59,250.00	100.00%	0.00	
50	Handle Borrow	155,200.00	155,200.00	0.00	0.00	155,200.00	100.00%	0.00	
60	Subgrade Road	9,962.00	9,962.00	0.00	0.00	9,962.00	100.00%	0.00	
70	Backfill Curb	4,196.00	4,196.00	0.00	0.00	4,196.00	100.00%	0.00	
80	Sand for Pond Bottom	27,150.00	27,150.00	0.00	0.00	27,150.00	100.00%	0.00	
90	Replace Topsoil	33,110.00	33,110.00	0.00	0.00	33,110.00	100.00%	0.00	
300	8" Sanitary	248,775.00	248,775.00	0.00	0.00	248,775.00	100.00%	0.00	
305	6" Sanitary Lateral	177,930.00	177,930.00	0.00	0.00	177,930.00	100.00%	0.00	
310	6" Risers	4,830.00	4,830.00	0.00	0.00	4,830.00	100.00%	0.00	
315	48" Sanitary MH	35,650.00	35,650.00	0.00	0.00	35,650.00	100.00%	0.00	
320	8" Watermain	142,800.00	142,800.00	0.00	0.00	142,800.00	100.00%	0.00	
325	8" Gate Valve	14,000.00	14,000.00	0.00	0.00	14,000.00	100.00%	0.00	
330	Hydrant Assembly	33,000.00	33,000.00	0.00	0.00	33,000.00	100.00%	0.00	
335	6" Hydrant Lead	7,380.00	7,380.00	0.00	0.00	7,380.00	100.00%	0.00	
340	1.25" PE WS	97,020.00	97,020.00	0.00	0.00	97,020.00	100.00%	0.00	
345	12" RCP Storm	66,294.00	66,294.00	0.00	0.00	66,294.00	100.00%	0.00	
350	24" RCP Storm	56,238.00	56,238.00	0.00	0.00	56,238.00	100.00%	0.00	
355	RCP Ends	4,400.00	4,400.00	0.00	0.00	4,400.00	100.00%	0.00	
360	Curb Inlets	59,625.00	59,625.00	0.00	0.00	59,625.00	100.00%	0.00	
365	Storm Manhole	20,925.00	20,925.00	0.00	0.00	20,925.00	100.00%	0.00	
370	8" Perforated Pipe	16,800.00	16,800.00	0.00	0.00	16,800.00	100.00%	0.00	
400	5" Base Course (3/4" TB)	24,225.00	24,225.00	0.00	0.00	24,225.00	100.00%	0.00	
410	5" Base Course (1.25" TB)	37,050.00	37,050.00	0.00	0.00	37,050.00	100.00%	0.00	
420	30" Mountable Curb and Gutter	58,169.25	58,169.25	0.00	0.00	58,169.25	100.00%	0.00	
430	Asphalt Binder	67,260.00	67,260.00	0.00	0.00	67,260.00	100.00%	0.00	
440	30VF Curb and Gutter Islands	13,970.00	13,970.00	0.00	0.00	13,970.00	100.00%	0.00	
450	Asphalt Surface Course	39,900.00	0.00	39,900.00	0.00	39,900.00	100.00%	0.00	
460	Interim Inlet	25,000.00	0.00	25,000.00	0.00	25,000.00	100.00%	0.00	

CONTINUATION SHEET

Application and Certification for Payment, containing
Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

Application No. : 8
Application Date : 09/30/23
To: 09/30/23
Architect's Project No.:

Invoice # : 2021222-8 **Contract :** 21.02.022 Woodleaf Phase 5

A	B	C	D	E	F	G		H	I
Item No.	Description of Work	Scheduled Value	Work Completed		Materials Presently Stored	Total Completed and Stored To Date	% (G / C)	Balance To Finish (C-G)	Retainage
			From Previous Application (D+E)	This Period In Place	(Not in D or E)	(D+E+F)			
470	Asphalt Wedge Removal	7,200.00	0.00	7,200.00	0.00	7,200.00	100.00%	0.00	
800	Undercut Allowance	23,000.00	16,146.00	6,854.00	0.00	23,000.00	100.00%	0.00	
810	Cleanup After Utilities	6,130.00	0.00	6,130.00	0.00	6,130.00	100.00%	0.00	
EXTRA-1	Televise & Clean Sanitary & Storm Sewers-VISU	8,700.00	0.00	8,700.00	0.00	8,700.00	100.00%	0.00	
EXTRA-2	Repairs to manholes and water valves	3,336.96	0.00	3,336.96	0.00	3,336.96	100.00%	0.00	
EXTRA-3	Raising 2 Sanitary Manholes & Repair Valve Box	3,609.65	0.00	3,609.65	0.00	3,609.65	100.00%	0.00	
EXTRA-4	Concrete repairs	9,205.65	0.00	9,205.65	0.00	9,205.65	100.00%	0.00	
	Grand Totals	1,886,331.51	1,776,395.25	109,936.26	0.00	1,886,331.51	100.00%	0.00	0.00

SUPER WESTERN, INC.

An Equal Opportunity Employer

FINAL WAIVER OF LIEN

October 5, 2023

For value received, I/we hereby waive all rights and claims for lien on land and on buildings about to be erected, being erected, erected, altered or repaired and to the appurtenances thereunto,

for: Woodleaf Investments LLC (Owner),

by: Super Western, Inc (Contractor),

for: Labor, equipment, and/or materials

same being situated in Waukesha County, State of Wisconsin, described as:

Woodleaf Reserve Phase 5

SWI #21-02-022

for all labor performed, and for all material furnished for the erection, construction, alteration or repair of said buildings and appurtenance, upon receipt of payment in full $1,886,331.51

Mary Ellen Klaver

Super Western, Inc

SUPER WESTERN, INC.

An Equal Opportunity Employer

FINAL WAIVER OF LIEN

October 5, 2023

For value received, I/we hereby waive all rights and claims for lien on land and on buildings about to be erected, being erected, erected, altered or repaired and to the appurtenances thereunto,

for: Woodleaf Investments LLC (Owner),

by: Super Excavators, Inc (Contractor),

for: Labor, equipment, and/or materials

same being situated in Waukesha County, State of Wisconsin, described as:

Woodleaf Reserve Phase 5

SWI #21-02-022

for all labor performed, and for all material furnished for the erection, construction, alteration or repair of said buildings and appurtenance, upon receipt of payment in full $997,059.59

Super Excavators, Inc

CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information

Name of Claimant: Stark Pavement Corporation

Contractor: Super Western, Inc

Job/Location: Town Line Road S of Lisbon Road

Owner: Woodleaf Investments, LLC

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check: Super Western361

Amount of Check: $ 95,474.17

Check Payable to: Stark Pavement Corporation

Exceptions

This document does not affect any of the following:
Disputed claims for extras in the amount of: $ NONE

Signature

Claimant's Signature:

Claimant's Title: VP of Finance

Date of Signature: 10/13/2023

Woodleaf Reserve Addn. No. 4 Letter of Credit

	ITEM	ORIGINAL BID LOC AMOUNT	Reduction #1 6/6/22	Reduction #2 7/18/22	Reduction #3 10/17/22	Reduction #4 11/29/22	Reduction #5 11/3/23	Reduction #6	BALANCE
1	Grading and erosion control	$ 472,456.63	$ -	$ -	$ 304,633.00	$ 118,394.13	$ 49,429.50	$ -	$ -
2	Sanitary sewer construction	$ 467,185.00	$ 316,590.00	$ -	$ 150,595.00	$ -	$ -	$ -	$ -
3	Water system construction	$ 294,200.00	$ 202,910.00	$ 5,499.25	$ 85,790.75	$ -	$ -	$ -	$ -
4	Storm sewer construction	$ 224,282.00	$ 156,061.00	$ -	$ 68,221.00	$ -	$ -	$ -	$ -
5	Road paving incl. stone base, curb and binder	$ 200,674.25	$ -	$ 130,012.00	$ 70,662.25	$ -	$ -	$ -	$ -
6	Surface course paving (2023)	$ 72,100.00	$ -	$ -	$ -	$ -	$ 72,100.00	$ -	$ -
7	Undercut and utility cleanup allowances	$ 29,130.00	$ -	$ 10,534.00	$ -	$ 18,596.00	$ -	$ -	$ -
8	Contingency (20%)	$ 352,005.58	$ -	$ -	$ -	$ -	$ 337,585.58	$ -	$ 14,420.00
	TOTAL	**$ 2,112,033.46**	**$ 675,561.00**	**$146,045.25**	**$ 679,902.00**	**$ 136,990.13**	**$459,115.08**	**$ -**	**$ 14,420.00**

Notes:

Phase 5A guarantee for improvements expires 8/15/2023.
Phase 5B guarantee for improvements expires 11/21/2023.

DATE: December 4, 2023

DEPARTMENT: PW - Engineering

PROVIDED BY: Magdelene Wagner

SUBJECT:

Discussion and Possible Action Regarding Westwood Drive and Corporate Court Road Rehabilitation and Related Improvements [Wagner]

BACKGROUND:

Westwood Drive and Corporate Court roads are in need of rehabilitation with some minor storm drainage and water/sewer repairs. This resolution authorizes work to begin on the project and allows for the costs to be special assessed.

There is a possibility the City may need to borrow for the project. The Comfort Resolution allows for expenditures to reimbursed by a future borrowing.

FINANCIAL IMPACT:

The 2024 Budget included $75,000 for design for this project.

RECOMMENDED MOTION:

Council approve the Preliminary Resolution and Comfort Resolution for the Westwood Drive and Corporate Court Road Rehabilitation and Related Improvements.

ATTACHMENTS:

Description

Location Map

Resolution 23.12.19

Resolution 23.12.20

MAP WAUKESHA county

Waukesha County GIS Map

Legend

- Civil Division Boundary
- Parks
- Assessment Data
- Parcels
- Plats
- Retired Parcels
- Retired Plats
- Municipal Boundary_2K
- FacilitySites_2K_Labels
- Parcel_Dimension_2K
- Note_Text_2K
- Lots_2K
  - Lot
  - Unit
  - General Common Element
  - Outlot
- SimultaneousConveyance
  - Assessor Plat
  - CSM
  - Condominium
  - Subdivision
- Cartoline_2K
  - EA-Easement_Line
  - PL-DA
  - PL-Extended_Tie_line
  - PL-Meander_Line
  - PL-Note
  - PL-Tie
  - PL-Tie_Line
  - <all other values>
- Road Centerlines_2K
- Railroad_2K
- TaxParcel_2K
- Waterbodies_2K_Labels
- Waterlines_2K_Labels
- Municipal Boundary_5K
- FacilitySites_5K_Labels

0 524.01 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 11/29/2023

STATE OF WISCONSIN CITY OF PEWAUKEE WAUKESHA COUNTY

RESOLUTION 23-12-19
PRELIMINARY RESOLUTION
DECLARING INTENT TO EXERCISE SPECIAL ASSESSMENT POWERS
AUTHORIZING THE CONSTRUCTION OF WESTWOOD DR AND CORPORATE CT REHABILITATION AND RELATED FACILITIES
UNDER SECTION 66.0703, WISCONSIN STATUTES

WHEREAS, The Common Council of the City of Pewaukee has determined that the pavement within the Westwood Drive and Corporate Court are in need of rehabilitation; and

WHEREAS, The Common Council of the City of Pewaukee has determined that all property owners abutting the Westwood Drive and Corporate Court Roads should share in the cost of such improvements.

NOW, THEREFORE, BE IT HEREBY RESOLVED: That the Common Council of the City of Pewaukee determines that it is in the best interest of the City and in the exercise of its police power under Section 66.0703, Wisconsin Statutes, to levy special assessments upon the following described property for special benefits conferred upon such properties by the improvements of the pavement reconditioning:

Westwood Drive, from Watertown Road (CTH M) southerly to Redford Boulevard (CTH F), approximately 2,820 feet and;

Corporate Court, from Ridgeview Parkway southerly to its termini, approximately 1,055 feet and,

Before such improvements are made, the City Engineer is directed to prepare a report consisting of:

a. Preliminary plans and specifications for said improvements.
b. An estimate of the entire cost of the proposed reconstruction improvements.
c. A schedule of the proposed assessment against each affected parcel and a statement that all property is benefited.
d. The formula for assessing.

The exact amount of the assessment and the method of permitted payments will be determined at the public hearing, prior to the Final Resolution.

Upon receiving the report of the City Engineer, the Clerk shall publish a Class I notice to be given stating the nature of the proposed work, the general boundary lines of the proposed assessment district, a small map and the place and time at which the report can be inspected and the time of the public hearing for interested parties to appear and comment. The Clerk shall also mail the notices to the post-office address of every interested party at least 10 days before the hearing. The public hearing shall be held at the City Hall, W240N3065 Pewaukee Road not less than 10 and not more than 40 days after such publication.

SEVERABILITY

The several sections of this Resolution shall be declared to be severable. If any section shall be declared by a decision of a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the other provisions of the Resolution.

ADOPTED THIS 4th Day of December, 2023.

CITY OF PEWAUKEE

_____

Steve Bierce, Mayor

ATTEST:

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Kelly M. Tarczewski, Clerk/Treasurer

STATE OF WISCONSIN CITY OF PEWAUKEE WAUKESHA COUNTY

RESOLUTION 23-12-20

RESOLUTION DECLARING OFFICIAL INTENT TO REIMBURSE EXPENDITURES WESTWOOD DRIVE AND CORPORATE COURT ROAD REHABILITATION, DRAINAGE IMPROVEMENTS, AND UTILITY IMPROVEMENTS

WHEREAS, the City of Pewaukee, Waukesha County, Wisconsin (the" City") owns and operates a roadway system, drainage system, water main system, and sanitary sewer system (the "System") as a public entity; and

WHEAREAS, the City expects to receive a loan (the "Loan") to finance the Project and expects to issue tax exempt bonds (the "Bonds") to the Program in evidence of the Loan; and

WHEREAS; it is necessary, desirable, and in the best interests of the city to seek interim financing to fund project costs until the Loan becomes available and the Bonds can be issued.

Section 1. Expenditure of Funds. The City shall make expenditures as needed from its funds on hand to pay the costs of the Project until Bond proceeds become available.

Section 2. Declaration of Official Intent. The City hereby officially declares its intent to reimburse said expenditures with proceeds of the Bonds for the Westwood Drive and Corporate Court Road Rehabilitation and Utility Project.

Section 3. Unavailability of Long-Term Funds. No funds for payment of the Project from sources other than the Bonds are, or are reasonable expected to be reserved, allocated on a long-term basis, or otherwise set aside by the City pursuant to its budget or financial policies.

Section 4. Public Availability of Official Intent Resolution. This Resolution shall be made available for public inspection at the City office within 30 days after its approval in compliance with applicable State law governing the availability of records of official acts including Subchapter II of Chapter 19 and shall remain available for public inspection until the bonds are issued.

Section 5. Effective Date. This Resolution shall be effective upon its adoption and approval.

Adopted this 4th day of December 2023.

CITY OF PEWAUKEE

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ATTEST: Steve Bierce, Mayor

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Kelly Tarczewski, Clerk/Treasurer

CITY OF PEWAUKEE
COMMON COUNCIL AGENDA ITEM 10.

DATE: December 4, 2023

DEPARTMENT: PW - Water/Sewer

PROVIDED BY: Magdelene Wagner

SUBJECT:

Discussion and Possible Action Regarding the Lindsay Road/Balmer Park Water Main Loop [Wagner]

BACKGROUND:

The northeast quandrant of the City is served by a long dead end water main along Duplainville Road. The future loop for this water main would be installed along Lindsay Road to Swan Road. The Utility has plans to install this main as part of a future road project.

A few years ago, Swan View Farms Subdivision installed water main in Farm Field Circle which abuts Balmer Park. The water main is currently located on the west end of the Pewaukee Sports Complex in Lindsay Road. Staff reviewed the proximity of these two locations and determined we could install a looping water main by extending water main through Balmer Park and a short section of Lindsay Road. Making this connection would provide a looping main for the Duplainville Road dead end which reduce the number of customers out of service should this main break. As such, we are proposing to complete this loop in 2024.

The preliminary resolution would authorize design on this loop and potential special assessments.

The comfort resolution would allow the Utility to borrow funds for the project if needed.

FINANCIAL IMPACT:

The 2024 budget proposed $700,000 for this project.

RECOMMENDED MOTION:

Council adopt the preliminary and comfort resolutions.

ATTACHMENTS:

Description

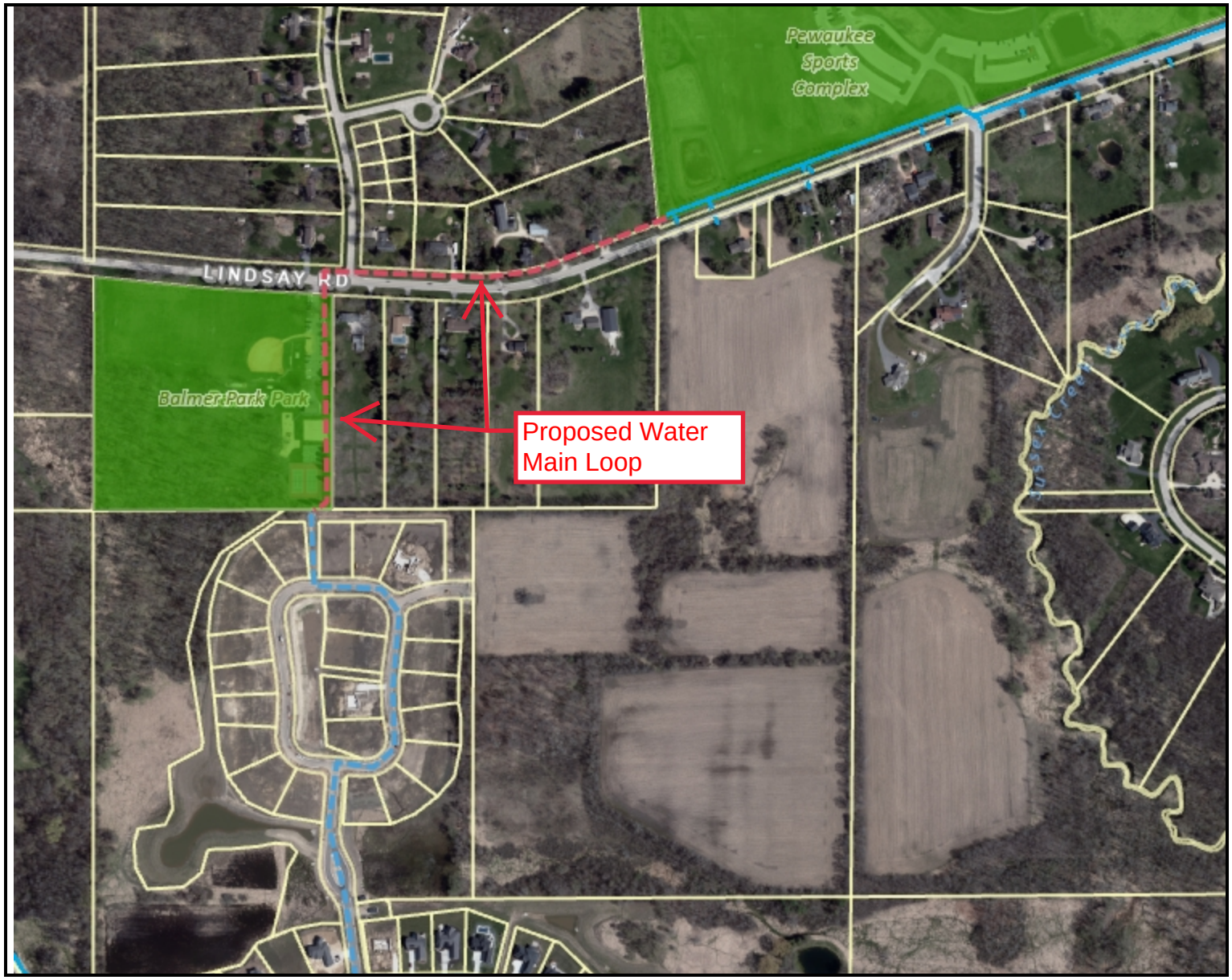
Location Map

Resolution 23-12-21

Resolution 23-12-22

MAP WAUKESHA county

Waukesha County GIS Map



Proposed Water Main

Legend

- Water Mains
  - Hydrant Lead
  - Lateral
  - Main
- Civil Division Boundary
- Parks
- Assessment Data
- Parcels
- Plats
- Retired Parcels
- Retired Plats
- Municipal Boundary_2K
- FacilitySites_2K_Labels
- Parcel_Dimension_2K
- Note_Text_2K
- Lots_2K
  - Lot
  - Unit
  - General Common Element
  - Outlot
- SimultaneousConveyance
  - Assessor Plat
  - CSM
  - Condominium
  - Subdivision
- Cartoline_2K
  - EA-Easement_Line
  - PL-DA
  - PL-Extended_Tie_line
  - PL-Meander_Line
  - PL-Note
  - PL-Tie
  - PL-Tie_Line
  - <all other values>
- Road Centerlines_2K
- Railroad_2K
- TaxParcel_2K
- Waterbodies_2K_Labels

0 524.01 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 11/29/2023

STATE OF WISCONSIN CITY OF PEWAUKEE WAUKESHA COUNTY

PRELIMINARY RESOLUTION 23-12-21
DECLARING INTENT TO EXERCISE SPECIAL ASSESSMENT POWERS
FOR THE CONSTRUCTION OF MUNICIPAL WATER,
AND APPURTENANCES
UNDER SECTION 66.0703, WISCONSIN STATUTES

WHEREAS, The Common Council of the City of Pewaukee has determined a loop from Lindsay Road (east boundary of the Pewaukee Sports Complex) west to Balmer Park south through Balmer Park and connecting to Farm Field Circle have been judged to be in need of municipal water and;

WHEREAS, The Common Council of the City of Pewaukee has determined that all property owners and developers abutting such streets should share in the cost of such improvements.

NOW, THEREFORE, BE IT HEREBY RESOLVED:

That the Common Council of the City of Pewaukee determines that it is in the best interest of the City and in the exercise of its police power under Section 66.0703, Wisconsin Statutes, to levy special assessments upon the following described property for special benefits conferred upon such properties by the improvements of municipal water in Balmer Park and Lindsay Road.

Before such improvements are made, the City Engineer is directed to prepare a report consisting of:

a. Preliminary plans and specifications for said improvements.
b. An estimate of the entire cost of the proposed reconstruction.
c. A schedule of the proposed assessment against each affected parcel and a statement that all property is benefited.
d. The formula for assessing.

The exact amount of the assessment and the method of permitted payments will be determined at the public hearing prior to the Final Resolution.

Upon receiving the report of the City Engineer, the Clerk shall publish a Class I notice to be given stating the nature of the proposed work, the general boundary lines of the proposed assessment district, a small map and the place and time at which the report can be inspected and the time of the public hearing for interested parties to appear and comment. The Clerk shall also mail the notices to the post-office address of every interested party at least 10 days before the hearing. The public hearing shall be held at the City Hall, W240 N3065 Pewaukee Road not less that 10 and not more than 40 days after such publication.

SEVERABILITY

The several sections of this Resolution shall be declared to be severable. If any section shall be declared by a decision of a court of competent jurisdiction to be invalid, such decision shall not effect the validity of the other provisions of the Resolution.

ADOPTED THIS 4th DAY OF December, 2023.

COMMON COUNCIL, CITY OF PEWAUKEE
WAUKESHA COUNTY, WISCONSIN

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Scott Klein, Mayor

ATTEST:

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Kelly M. Tarczewski, Clerk/Treasurer

STATE OF WISCONSIN CITY OF PEWAUKEE WAUKESHA COUNTY

RESOLUTION NO. 23-12-22

RESOLUTION DECLARING OFFICIAL INTENT TO REIMBURSE EXPENDITURES LINDSAY BALMER PARK LOOP WATER MAIN EXTENSION PROJECT

WHEREAS, the City of Pewaukee, Waukesha County, Wisconsin (the" City") owns and operates a municipal water system (the "System") as a public utility; and

WHEAREAS, the City expects to receive a loan (the "Loan") to finance the Project and expects to issue tax exempt bonds (the "Bonds") to the Program in evidence of the Loan; and

WHEREAS; it is necessary, desirable, and in the best interests of the city to seek interim financing to fund project costs until the Loan becomes available and the Bonds can be issued.

Section 1. Expenditure of Funds. The City shall make expenditures as needed from its funds on hand to pay the costs of the Project until Bond proceeds become available.

Section 2. Declaration of Official Intent. The City hereby officially declares its intent to reimburse said expenditures with proceeds of the Bonds for the Lindsay Balmer Park Loop Water Main Extension work.

Section 3. Unavailability of Long-Term Funds. No funds for payment of the Project from sources other than the Bonds are, or are reasonably expected to be reserved, allocated on a long-term basis, or otherwise set aside by the City pursuant to its budget or financial policies.

Section 4. Public Availability of Official Intent Resolution. This Resolution shall be made available for public inspection at the City office within 30 days after its approval in compliance with applicable State law governing the availability of records of official acts including Subchapter II of Chapter 19, and shall remain available for public inspection until the bonds are issued.

Section 5. Effective Date. This Resolution shall be effective upon its adoption and approval.

NOW, THEREFORE, BE IT RESOLVED, that the Common Council of the City of Pewaukee hereby authorizes the construction of the Lindsay Balmer Park Loop Water Main Extension Project.

Adopted this 4th day of December 2023.

CITY OF PEWAUKEE

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ATTEST: Steve Bierce, Mayor

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Kelly Tarczewski, City Clerk