

WACONIA CITY COUNCIL MEETING AGENDA



Monday, October 16, 2023
6:00 PM

VISION STATEMENT

A thriving, connected community with deep roots: a great place to live for a lifetime.

MISSION STATEMENT

A city that leads, serves, and governs to enhance the quality of life for all community members.

MAYOR: NICOLE WALDRON
COUNCIL MEMBER : RANDY SORENSEN
COUNCIL MEMBER: STEVE YETZER
COUNCIL MEMBER: NICK GLEASON
COUNCIL MEMBER: JEFF GRENGS

NOTE: TO ENSURE THAT YOU ARE PRESENT FOR ITEMS OF INTEREST, PLEASE BE PRESENT AT 6:00 P.M.

Those with items on the agenda should reach out to their staff contact. Others who wish to participate in the meeting, please contact the City Administrator at 952-442-3100 or sfineran@waconia.org to make certain that you are called upon during the meeting.

1. CALL MEETING TO ORDER AND ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. PUBLIC HEARING

- 1) [2023 Downtown Reconstruction Project Assessment Public Hearing](#)
Conduct Public Hearing
Adopt Resolution #2023-219, Approving Assessment Roll
- 2) [Certification of Delinquent Charges for Payment with Taxes - Pay 2024](#)

Call Public Hearing to Order and Accept Comments

Motion to Close the Public Hearing

Adopt Resolution #2023-224, Adopting Certification of Delinquent Utility and Other Charges for Services for Payment with Taxes in 2024

4. ADOPT AGENDA

5. VISITOR'S PRESENTATIONS, PETITIONS, AND CORRESPONDENCE

- Mark Metz - Carver County Attorney
- Stephanie Alexander - WeCAB Executive Director

6. ADOPT CONSENT AGENDA *The items listed on the Consent Agenda are considered routine and non-*

controversial by the Council and will be approved by one motion. There will be no separate discussion of these items unless a Councilmember, City Staff, or Citizen so requests; in which case, the item will be removed from the Consent Agenda and considered at the end of the Regular Agenda.

- 1) [October 2, 2023 Minutes](#)
Approve minutes from October 2, 2023 City Council Meeting
- 2) [October 16, 2023 Expenditures](#)
Payment of October 16, 2023 Expenditures
- 3) [Rink Management Services Corporation Waconia Ice Arena Expenditures Incurred September 2023](#)
Motion to Approve Rink Management Corporation Expenditures for Waconia Ice Arena Incurred in September 2023
- 4) [Rink Management Services Corporation Safari Island Community Center Expenditures Incurred September 2023](#)
Motion to Approve Rink Management Corporation Expenditures for Safari Island Community Center Incurred in September 2023
- 5) [Contractor Pay Request #13 - New Fire Station](#)
Motion to Approve Contractor Payment Request for the New Fire Station Project
- 6) [Kraus Anderson Contractor Pay Request - New Fire Station](#)
Motion to Approve Contractor Payment Request for the New Fire Station Project
- 7) [Contractor Pay Request #5 - Waconia Downtown Reconstruction - Phase 1](#)
Motion to approve pay estimate No. 5 to GMH Asphalt, Inc. for the Waconia Downtown Reconstruction - Phase 1
- 8) [Contractor Pay Request #1-Final - Lakeview Terrace & Industrial Blvd Storm Sewer Project](#)
Motion to approve pay estimate No. 1 to Schneider Excavating & Grading, Inc. for the Lakeview Terrace & Industrial Blvd Storm Sewer Project.
- 9) [Call Public Hearing - Revision to City's Fee Schedule : Waconia City Code - Chapter 1100](#)
Motion to Call a Public Hearing - Revision to City's Fee Schedule: Waconia City Code - Chapter 1100
- 10) [Application for Exempt Permit for Waconia Hockey Association](#)
Adopt Resolution #2023-220, Approving Application for Exempt Permit, Waconia Hockey Association
- 11) [Interlaken Village 3rd Addition - Development Agreement](#)
Adopt Resolution #2023-221 approving the Development Agreement for Interlaken Village 3rd Addition.
- 12) [200 & 10250 10th Street East - Quit Claim Deed](#)
Adopt Resolution #2023-222, approving the Quit Claim Deed for 200 and 10250 10th Street East

7. COUNCIL BUSINESS

- 1) [Ordering Improvements for the 2024 Downtown Reconstruction Project](#)
Adopt Resolution #2023-223, Ordering Improvements & Preparation of Plans
- 2) [Closed Session](#)
Motion to convene in closed session.

8. ITEMS REMOVED FROM CONSENT AGENDA

9. STAFF REPORTS

10. BOARD REPORTS

- 1) Councilmember Sorensen
- 2) Councilmember Yetzer
- 3) Councilmember Gleason
- 4) Councilmember Grengs
- 5) Mayor Waldron

11. ANNOUNCEMENTS

12. ADJOURN REGULAR MEETINGOFFICE OF THE CITY ADMINISTRATOR

Shane Fineran

Work Session: Falk/Saltire Sketch Plan, Enterprise Fund Budget, Winter Maintenance Policy Updates

UPCOMING CALENDAR OF EVENTS/MEETINGS:

Park Board - October 26th at 6:30 p.m.

Planning Commission - November 2nd at 6:30 p.m.

City Council - November 6th at 6:00 p.m.

Veterans Day - November 10th (Observed)



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		2023 Downtown Reconstruction Project Assessment Public Hearing					
Originating Department:		Administration					
Presented by:		Shane Fineran					
Previous Council Action (if any):							
Item Type (X only one):	☐ Consent	☐	☐ Regular Session	☒ X	☐ Discussion Session	☐	☐
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Conduct Public Hearing Adopt Resolution #2023-219, Approving Assessment Roll							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
The 2023 Downtown Reconstruction Project is substantially complete and included the reconstruction of street surface, utilities including, sewer, water, storm sewer, street lighting, and sidewalks. As part of the project financing a portion of the project costs were to be assessed to benefitting properties. The final costs have been tallied and apportioned based upon the as bid costs and per the City's assessment process. Included in the work associated with the assessment process was the special benefit evaluation completed by an independent 3rd party to determine final valuations of special benefit to affected properties and the final assessment tally. Final assessment totals have been reduced from those provided during the feasibility study phase per the as bid costs and the special benefit report. The final interest rate applied to unpaid assessment balances to be certified to property taxes at a 10 year term will be 3.94% unless paid in full within 30 days of adoption. Assessed properties have been notified of the proposed final assessment and the opportunity present at the public hearing scheduled for this evening. <u>Attachments:</u> 1. 2023-219 Approving Final Assessments 2. 2023-10-16 Downtown Ph 1 Final Assmt Roll - revised (002).pdf							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information:				Planning Commission			
☒ Budgeted				Parks and Recreation Board			
☐ Non Budgeted				Safari Island Advisory Board			
☐ Amendment Required				Other			

**CITY OF WACONIA
RESOLUTION NO. 2023-219**

RESOLUTION ADOPTING PROPOSED ASSESSMENT

WHEREAS, pursuant to proper notice duly given as required by law, the Waconia City Council has met and heard and passed upon all objections to the proposed assessment for the making of public improvements to the infrastructure of the City of Waconia by the installation of streets, curb and gutter, storm sewer, watermain, sanitary sewer, and sidewalks according to the plans and specifications for such improvements; and

WHEREAS, the Downtown Reconstruction, Phase 1 Project consists of street, sidewalk, drainage, and utility improvements on Main Street W between Maple Street and approximately 100 feet east of Olive Street and on Olive Street S between Main Street and First Street.

NOW THEREFORE, BE IT RESOLVED THAT

1. Such proposed assessment, a copy of which is attached hereto and made a part hereof, is hereby accepted and shall constitute the special assessment against the lands named therein, and each tract of land therein included is hereby found to be benefited by the proposed improvement in the amount of the assessment levied against it.
2. Such assessment shall be payable in equal annual installments extending over a period of 10 years, and shall bear interest at the rate of 3.94 percent per annum from the date of the adoption of this assessment resolution. To the first installment shall be added interest on the entire assessment from the date of this resolution until December 31, 2023. To each subsequent installment, when due, shall be added interest for one year on all unpaid installments.
3. The owner of any property so assessed may, at any time prior to certification of the assessment, pay the entire assessment on such property, with interest accrued to the date of payment, to the City of Waconia, except that no interest shall be charged if the entire assessment is paid within 30 days from the adoption of this resolution; and he/she may, at any time thereafter, pay the entire amount of the assessment remaining unpaid, with interest accrued to December 31 of the year in which such payment is made. Such payment must be made before November 15 or interest will be charged through December 31 of the next succeeding year.
4. The Waconia City Clerk shall forthwith transmit a certified duplicate of this assessment to Carver County to be extended on the property tax lists of Carver County. Such assessments shall be collected and paid in the same manner as other municipal taxes.

Adopted by the City Council of the City of Waconia this 16th day of October 16, 2023.

Nicole Waldron, Mayor

ATTEST: _____
Jackie Schulze, City Clerk

FINAL ASSESSMENT ROLL - REVISED
DOWNTOWN RECONSTRUCTION, PHASE 1 PROJECT
10/16/2023

PROP. NO.	OWNER	PROPERTY ADDRESS	P.I.D.	OWNER ADDRESS			F/F	*STREET ASSESSMENT	WATERMAIN UNITS	WATERMAIN ASSESSMENT	SANITARY SEWER UNITS	SANITARY SEWER ASSESSMENT	TOTAL ASSESSMENT PER POLICY	TOTAL ASSMT PER BENEFIT EVALUATION	FINAL TOTAL ASSMT (LESSER OF POLICY OR EVALUATION)	**ANNUAL ASSESSMENT PAYMENT
1	KELLIE MOUNTAIN	17 N MAPLE STREET	750503540	17 N MAPLE STREET	WACONIA, MN	55387	0.00	\$0.00	1.0	\$8,600.86	0.0	\$0.00	\$8,600.86	\$1,000.00	\$1,000.00	\$122.92
2	MAPLE & MAIN LLC	246 MAIN ST W	750503530 / 750503520	5555 SYLVAN LN	EXCELSIOR, MN	55331	88.00	\$22,689.04	1.0	\$8,600.86	1.0	\$6,016.81	\$37,306.71	\$35,750.00	\$35,750.00	\$4,394.50
3	GAIL D & LUANN K SCHUETTE	222 MAIN ST W	750503510	11623 COUNTY ROAD 13 SE	WATERTOWN, MN	55388-8231	50.00	\$12,891.50	1.0	\$8,600.86	1.0	\$6,016.81	\$27,509.17	\$25,000.00	\$25,000.00	\$3,073.07
4	HUDINSKI LLC	212 MAIN ST W	750503501	3650 BIG WOODS BLVD	CHASKA, MN	55318-9235	52.00	\$13,407.16	1.0	\$8,600.86	1.0	\$6,016.81	\$28,024.83	\$14,000.00	\$14,000.00	\$1,720.92
5	HUDINSKI LLC	200 MAIN ST W	750503481	3650 BIG WOODS BLVD	CHASKA, MN	55318-9235	26.00	\$6,703.58	1.0	\$8,600.86	1.0	\$6,016.81	\$21,321.25	\$23,750.00	\$21,321.25	\$2,620.87
6	HUDINSKI LLC	N/A	750503740	3650 BIG WOODS BLVD	CHASKA, MN	55318-9235	29.00	\$7,477.07	0.0	\$0.00	0.0	\$0.00	\$7,477.07	\$4,250.00	\$4,250.00	\$522.42
7	JAMES RENTALS LLC	140 MAIN ST W	750503731	300 W LAKE ST	WACONIA, MN	55387-1016	52.00	\$13,407.16	3.0	\$25,802.58	3.0	\$18,050.43	\$57,260.17	\$25,500.00	\$25,500.00	\$3,134.54
8	JAMES RENTALS LLC	136 MAIN ST W	750503700	300 W LAKE ST	WACONIA, MN	55387-1016	22.00	\$5,672.26	1.0	\$8,600.86	1.0	\$6,016.81	\$20,289.93	\$14,250.00	\$14,250.00	\$1,751.65
9	PAMELA K HUCKY	132 MAIN ST W	750503690	132 MAIN ST W	WACONIA, MN	55387-1022	22.00	\$5,672.26	1.0	\$8,600.86	1.0	\$6,016.81	\$20,289.93	\$4,750.00	\$4,750.00	\$583.88
10	ROSS MEUFFELS	128 MAIN ST W	750503670	128 MAIN ST W	WACONIA, MN	55387-1022	22.00	\$5,672.26	1.0	\$8,600.86	1.0	\$6,016.81	\$20,289.93	\$11,500.00	\$11,500.00	\$1,413.61
11	LEIVERMANN PARTNERS LLP	124 MAIN ST W	750503660	124 MAIN ST W	WACONIA, MN	55387-1022	44.00	\$11,344.52	1.0	\$8,600.86	1.0	\$6,016.81	\$25,962.19	\$22,250.00	\$22,250.00	\$2,735.04
12	VICI L SCHEUBLE	116 MAIN ST W	750503640	715 OLD BEACH LN	WACONIA, MN	55387	22.00	\$5,672.26	0.0	\$0.00	0.0	\$0.00	\$5,672.26	\$5,500.00	\$5,500.00	\$676.08
13	VICI L SCHEUBLE	112 MAIN ST W	750503620	715 OLD BEACH LN	WACONIA, MN	55387	28.00	\$7,219.24	1.5	\$12,901.29	1.5	\$9,025.22	\$29,145.75	\$19,250.00	\$19,250.00	\$2,366.27
14	L S MANAGEMENT LLC	104 MAIN ST W	750503590	425 LAKE ST	WACONIA, MN	55387-1019	20.00	\$5,156.60	1.0	\$8,600.86	1.0	\$6,016.81	\$19,774.27	\$12,500.00	\$12,500.00	\$1,536.54
15	RYAN SUDHEIMER	100 MAIN ST W	750503610	11855 COUNTY ROAD 152	COLOGNE, MN	55322-9140	20.00	\$5,156.60	1.0	\$8,600.86	1.0	\$6,016.81	\$19,774.27	\$7,500.00	\$7,500.00	\$921.92
16	MARY ANN & RONALD C EVERSON	56 MAIN ST W	750503880	11030 NORTH SHORE RD	WACONIA, MN	55387-9659	10.83	\$2,792.30	0.0	\$0.00	0.0	\$0.00	\$2,792.30	\$1,850.00	\$1,850.00	\$227.41
17	DAVID R III & PEGGY C PHILP	48 MAIN ST W	750503860	10720 NORTH SHORE RD	WACONIA, MN	55387-9658	0.00	\$0.00	0.0	\$0.00	0.0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
18	WACONIA CITY	217 MAIN ST W	750503030	201 VINE ST S	WACONIA, MN	55387-1337	132.00	\$34,033.56	0.0	\$0.00	0.0	\$0.00	\$34,033.56	\$41,000.00	\$34,033.56	\$4,183.51
19	STATEWIDE GAS INVESTMENTS LLC	201 MAIN ST W	750503040	201 MAIN ST W	WACONIA, MN	55387-1025	33.00	\$8,508.39	1.0	\$8,600.86	1.0	\$6,016.81	\$23,126.06	\$11,000.00	\$11,000.00	\$1,352.15
20	CHARLES H & JULIE STEINHAGEN	155 MAIN ST W	750502840	8075 AIRPORT RD	WACONIA, MN	55387-9631	32.00	\$8,250.56	1.0	\$8,600.86	1.0	\$6,016.81	\$22,868.23	\$17,750.00	\$17,750.00	\$2,181.88
21	WACONIA CITY	141 MAIN ST W	750502860	201 VINE ST S	WACONIA, MN	55387-1337	51.66	\$13,319.50	0.0	\$0.00	0.0	\$0.00	\$13,319.50	\$62,500.00	\$13,319.50	\$1,637.27
22	MAIN STREET EXCHANGE LLC	101 MAIN ST W	750502900	13911 RIDGEDALE DR	MINNETONKA, MN	55305-4739	143.03	\$36,877.42	1.0	\$8,600.86	1.0	\$6,016.81	\$51,495.09	\$57,250.00	\$51,495.09	\$6,329.93
23	AMBLARD ESTATES LLC	24 OLVIE ST S	750502930	PO BOX 144	WACONIA, MN	55387	85.28	\$21,987.74	1.0	\$8,600.86	1.0	\$6,016.81	\$36,605.41	\$18,250.00	\$18,250.00	\$2,243.34
24	JNIN LLC	100 1ST ST W	750502780	5930 BOULDER BRIDGE LN	SHOREWOOD, MN	55331	78.50	\$20,239.66	0.0	\$0.00	0.0	\$0.00	\$20,239.66	\$24,000.00	\$20,239.66	\$2,487.92
25	44W FIRST STREET LLC	44 1ST ST W	750502700	8925 HIGHVIEW CT	VICTORIA, MN	55386	78.50	\$20,239.66	0.0	\$0.00	0.0	\$0.00	\$20,239.66	\$23,750.00	\$20,239.66	\$2,487.92
26	FIRST NATL BANK OF WACONIA	53 MAIN ST W	750502720	PO BOX 80615	INDIANAPOLIS, IN	46280	89.50	\$23,075.79	0.0	\$0.00	0.0	\$0.00	\$23,075.79	\$41,750.00	\$23,075.79	\$2,836.54

*Cost per FF = \$257.83

**Based on a 3.94% Interest Rate and a 10 Year Term.

***Highlighted Items are Addresses and Footages/Units That Have Changed Since the Preliminary Assessment Roll.

TOTAL FRONT FOOTAGE:	Totals:	\$317,466.08	19.5	\$167,716.77	18.5	\$111,310.99	\$596,493.83	\$525,850.00	\$435,574.50	\$53,542.11
CORNER LOT CREDIT:	418.17									
ASSESSMENT BASIS FRONT FOOTAGE:	1,573.49									
NON-ASSESSABLE FRONT FOOTAGE:	342.19									
ASSESSMENT FRONT FOOTAGE:	1,231.30									

= 9/21/2023 Revisions

= 10/16/2023 Revisions



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:	October 16, 2023
Item Name:	Certification of Delinquent Charges for Payment with Taxes - Pay 2024
Originating Department:	Finance
Presented by:	Nicole Meyer
Previous Council Action (if any):	Resolution 2023-212 - Calling Hearing on Proposed Certification of Delinquent Utility and Other Charges for Services for Payment with 2024 Taxes - Dated: October 2, 2023

Item Type (X only one):	☐ Consent	☐	☐ Regular Session	☒ X	☐ Discussion Session	☐
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RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED *(Include motion in proper format.)*

Call Public Hearing to Order and Accept Comments

Motion to Close the Public Hearing

Adopt Resolution #2023-224, Adopting Certification of Delinquent Utility and Other Charges for Services for Payment with Taxes in 2024

EXPLANATION OF AGENDA ITEM *(Include a description of background, benefits, and recommendations.)*

Under Minnesota law, the City may certify for payment with tax collections, delinquent utility accounts and other charges for service that have not been paid during the course of normal collection procedures throughout each year.

A public hearing is required prior to certification of delinquent charges. Property owners have been notified of the past due amounts for goods or services that have benefited their property and have been notified of the public hearing opportunity.

A list of delinquent accounts will be provided just prior to the hearing; this including outstanding amounts paid up until the end of business on October 16, 2023.

Attachments:

1. [2023-224 Approving delinquent certifications UB-AR](#)
2. [2023 Certification list to Council.pdf](#)

FINANCIAL IMPLICATIONS: Funding Sources & Uses: All City Funds	ADVISORY BOARD RECOMMENDATIONS:	
Budget Information: ☒ Budgeted ☐ Non Budgeted ☐ Amendment Required	Planning Commission	
	Parks and Recreation Board	
	Safari Island Advisory Board	
	Other	

**CITY OF WACONIA
RESOLUTION NO. 2023-224**

**RESOLUTION ADOPTING CERTIFICATION OF DELINQUENT UTILITY AND OTHER
CHARGES FOR SERVICES FOR PAYMENT WITH TAXES IN 2024**

WHEREAS, Pursuant to notice duly given as required by law, the City Council has met, heard, and passed upon all objections to the proposed certification with taxes for delinquent utility charges and charges for services as provided by the City, and has amended such proposed certification as it deems just:

NOW, THEREFORE, BE IT RESOLVED, By the City Council of the City of Waconia, Minnesota, as follows:

1. Such proposed certification, a copy of which is attached hereto and made a part hereof is hereby accepted and shall constitute the certification for payment with taxes against the lands named therein, and each track of land therein is hereby found to be benefited by the proposed certifications.
2. Such Certification shall be as follows:
 - a. The certification for payment with taxes shall be payable in one annual installment to be collectible with real estate taxes payable in 2024.
 - b. To the installment shall be added interest at the rate of six percent (6.0%) per annum on the entire principal amount of the assessment from the date of this resolution until November 29 of the year in which such installment is payable.
 - c. The owner of any property so certified may at any time prior to the certification to the County Auditor, pay the whole of the principal amount of the certification on such property with interest accrued to the date of payment to the Finance Director until November 29, 2023.
3. The Finance Director shall forthwith transmit a certified duplicate copy of this certification to the County Auditor to be extended on the tax list of the County.

Adopted by the City Council of the City of Waconia this 16th day of October, 2023.

Nicole Waldron, Mayor

Attest: _____
Jacqueline Schulze, City Clerk



City of Waconia

2023 Certification List of Delinquent Utilities and Other Charges for Services

PID	Amount Due	Type
75.1040490	\$293.77	Utility Bill
75.2970020	\$221.13	Utility Bill
75.3190150	\$706.38	Utility Bill
75.4430810	\$560.72	Utility Bill
75.5020490	\$263.47	Utility Bill
75.5070040	\$485.07	Utility Bill
75.5790030	\$358.42	Utility Bill
75.0230800	\$1,252.77	Utility Bill
75.0242700	\$702.76	Utility Bill
75.0620180	\$470.82	Utility Bill
75.2700330	\$271.98	Utility Bill
75.2710110	\$214.59	Utility Bill
75.2710120	\$313.97	Utility Bill
75.2710130	\$520.94	Utility Bill
75.2740460	\$257.67	Utility Bill
75.2760220	\$255.53	Utility Bill
75.3130570	\$915.26	Utility Bill
75.3150432	\$1,046.34	Utility Bill
75.3180160	\$721.67	Utility Bill
75.3470180	\$405.95	Utility Bill
75.3810380	\$243.41	Utility Bill
75.4430190	\$620.51	Utility Bill
75.4510130	\$419.67	Utility Bill
75.4550030	\$454.04	Utility Bill
75.5020100	\$777.14	Utility Bill
75.5020180	\$315.66	Utility Bill
75.5020310	\$169.81	Utility Bill
75.5030090	\$1,069.18	Utility Bill
75.5240410	\$523.83	Utility Bill
75.5830060	\$705.26	Utility Bill
75.5830220	\$755.43	Utility Bill
75.5840150	\$92.38	Utility Bill
75.5850090	\$2,187.00	Building Permit
75.5850030	\$2,187.00	Building Permit
75.2920180	\$51.79	Building Permit
75.5000260	\$336.25	A/R Invoice
75.3160300	\$375.55	A/R Invoice
75.2610130	\$163.45	A/R Invoice
75.3230480	\$1,508.00	A/R Invoice



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		October 2, 2023 Minutes					
Originating Department:		Administration					
Presented by:		Jackie Schulze					
Previous Council Action (if any):							
Item Type (X only one):		Consent	X	Regular Session		Discussion Session	
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Approve minutes from October 2, 2023 City Council Meeting							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Minutes from October 2, 2023 City Council Meeting are included on subsequent pages.							
<u>Attachments:</u>							
1. 10.2.23 Minutes							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: _____ Budgeted _____ Non Budgeted _____ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			

CITY OF WACONIA
October 2, 2023

1) [CALL MEETING TO ORDER AND ROLL CALL](#)

Pursuant to due call and notice thereof, the regular meeting of the City Council of the City of Waconia was called to order by Mayor Waldron at 6:00 p.m. The following members were present:
Nicole Waldron, Randy Sorensen, Steve Yetzer, Nick Gleason, Jeff Grengs

Staff Present: Jackie Schulze, Lane Braaten, Justin Sorensen, Jake Saulsbury, Nicole Meyer, Mike Melchert, Tyler Stahn, Dan Montague, and Brenda Stein

2) [PLEDGE OF ALLEGIANCE](#)

3) [ADOPT AGENDA](#)

No changes to the agenda.

Motion by Sorensen, seconded by Gleason to adopt the agenda. **MOTION CARRIED.**

4) [VISITOR'S PRESENTATIONS, PETITIONS, CORRESPONDENCE](#)

Joel Knoor-826 Egret Lane, Waconia, MN 55387.

Nor is representing and speaking on behalf of the youth Hockey Association addressing appreciation for the partnership shown by the City Council, City Manager and Mayor. As the community grows so does the need for an additional arena. Asking for any creative way to partner with the city to make this happen.

5) [ADOPT CONSENT AGENDA](#)

5.1 September 18, 2023 Minutes

[Cover Page](#)

[City Council 09.18.2023.docx](#)

5.2 October 2, 2023 Expenditures

[Cover Page](#)

[Council_List-Expenditures_10.02.23.pdf](#)

5.3 Certification for Payment with Taxes - Pay 2024

[Cover Page](#)

[Resolution 2023-212 Call Public Hearing for UB and AR.docx](#)

- 5.4 Ordinance 765 Amending Section 680.04 of Special Vehicle Ordinance
- [Cover Page](#)
- [Ord_765_Ordinance_Amendment_Special_Vehicles.doc](#)
- [2023-213 Summary Pub Special Vehicles.docx](#)
- [Ord_765_Special_Vehicles_Ordinance_Update_Redlined.pdf](#)
- 5.5 Cellular Equipment Water Tower Lease - Dish Wireless
- [Cover Page](#)
- [2023-214_Dish_Wireless_Lease.docx](#)
- [MNMSP00413C PE LEASE - 09-25-2023.pdf](#)
- 5.6 NC Waconia Addition Final Plat
- [Cover Page](#)
- [2023-215 NC Waconia Final Plat.docx](#)
- [2. Location Map \(1 Page\)](#)
- [3. NC Waconia Addition Final Plat \(1 Page\)](#)
- 5.7 Air Condensing Unit and Evaporator Coil Replacement
- [Cover Page](#)
- [Res 2023-216 Air Conditioning Unit.docx](#)
- [AC Unit Replacement Proposal.pdf](#)
- 5.8 First Amendment to Declaration Creating Watermain Easement - TCO Expansion Project
- [Cover Page](#)
- [2023-217 Resolution_Approving_Amended_Watermain_Easement.pdf](#)
- [TCO_Waconia - First Amendment to Watermain Easement.DOCX](#)

Motion by Yetzer, seconded by Grengs 5) ADOPT CONSENT AGENDA
MOTION carried

6) COUNCIL BUSINESS

6.1 Roadside Memorial Policy

Cover Page

Res 2023-218 Roadside Memorial.docx

Roadside Memorial Policy

Schulze presented the Roadside Memorial Policy expressing how devastating loss of life can be from a vehicular accident. Many times, families, and friends place memorials in the rights-of-way to express a life lost. The policy will allow temporary roadside memorials to remain in place for up to 6 months. At that time the city will remove the items and store them for 30 days so the items can be retrieved. For individuals that wish to have a more permanent memorial should contact the city.

Yetzer wondered about the process for memorials ending up on private property. Schulz stated it would be up to the private property owner to leave the memorial or to remove. The city would help facilitate the conversion with the family of the victim if a memorial is on private property.

Motion by Yetzer, second by Grengs to approve the Roadside Memorial Policy with the addition of an addendum recognizing that the City would help a private property owner to facilitate the removal of the memorial. **MOTION carried.**

7) ITEMS REMOVED FROM CONSENT AGENDA

No items removed from the consent agenda.

8) STAFF REPORTS

Schulz has no updates.

9) BOARD REPORTS

Sorensen mentioned the Planning Commission meeting, the pickle ball courts by the Otto apartments along with the Falk property.

Yetzer summarized his trip to DC for the Southwest Transit Commission.

Grengs has no updates.

Waldron mentioned the Mayo breakfast this month.

Gleason commented on the Industrial Tech presentation from the School Board meeting.

10) ANNOUNCEMENTS

11) ADJOURN REGULAR MEETING

Motion by Sorensen, seconded by Gleason Adjourn the regular meeting at 6:15pm.

Work Session: Waconia Hockey Association & Safari Island/Ice Arena Operating Budgets

UPCOMING CALENDAR OF EVENTS/MEETINGS:

- Planning Commission – October 12 at 6:30 PM
- City Council – October 16 at 6:00 PM
- Park Board – October 26 at 6:00 PM

Nicole Waldron, Mayor

ATTEST: _____

Brenda Stein, Office Assistant



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		October 16, 2023 Expenditures					
Originating Department:		Finance					
Presented by:		Nicole Meyer					
Previous Council Action (if any):							
Item Type (X only one):		Consent	X	Regular Session		Discussion Session	
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Payment of October 16, 2023 Expenditures							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Attached is the claim and disbursements registers for the City of Waconia as of October 16, 2023. Payments are made to vendors via check, electric payment, and through the City's purchasing card program.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: _____ Budgeted _____ Non Budgeted _____ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Rink Management Services Corporation Waconia Ice Arena Expenditures Incurred September 2023					
Originating Department:		Finance					
Presented by:		Amanda Ortloff					
Previous Council Action (if any):							
Item Type (X only one):	Consent	☒ X	Regular Session		Discussion Session		
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to Approve Rink Management Corporation Expenditures for Waconia Ice Arena Incurred in September 2023							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Rink Management Services Corporation has provided the attached report for expenditures paid in September 2023. Per the City's contract with Rink Management, these expenditures are paid by Rink Management for the City's operation of the Waconia Ice Arena.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses: Ice Arena Fund (678)							
Budget Information:				Planning Commission			
☒ X Budgeted				Parks and Recreation Board			
☐ Non Budgeted				Safari Island Advisory Board			
☐ Amendment Required				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Rink Management Services Corporation Safari Island Community Center Expenditures Incurred September 2023					
Originating Department:		Finance					
Presented by:		Amanda Ortloff					
Previous Council Action (if any):							
Item Type (X only one):	Consent	☒ X	Regular Session	☐	Discussion Session	☐	
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to Approve Rink Management Corporation Expenditures for Safari Island Community Center Incurred in September 2023							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Rink Management Services Corporation has provided the attached report for expenditures paid in September 2023. Per the City's contract with Rink Management, these expenditures are paid by Rink Management for the City's operation of the Safari Island Community Center. <u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses: Safari Island Fund (231)							
Budget Information: ☒ X Budgeted ☐ Non Budgeted ☐ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Contractor Pay Request #13 - New Fire Station					
Originating Department:		Finance					
Presented by:		Amanda Ortloff					
Previous Council Action (if any):							
Item Type (X only one):	Consent	☒	X	Regular Session	☐	Discussion Session	☐
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to Approve Contractor Payment Request for the New Fire Station Project							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Kraus-Anderson Construction Co. has reviewed the contractor pay request #13 for the new fire station project. The contractors requesting payment are as follows: Ebert Construction \$151,578.90 Ben's Structural Fabrication, Inc. \$95,000.00 Berwald Roofing Company, Inc. \$57,380.00 Gag Sheet Metal, Inc. \$21,509.14 Sentra-Sota Sheet Metal, Inc. \$22,347.04 Electrical Production Services, Inc. \$89,053.00 Northwest Asphalt, Inc. \$67,095.65 The total amount of the contractor payments for this request is \$503,963.73. Retainage remains due for each contractor until the project is complete and upon review of liquidated damages. <u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
PIR Fund							
Budget Information:				Planning Commission			
☒ Budgeted				Parks and Recreation Board			
☐ Non Budgeted				Safari Island Advisory Board			
☐ Amendment Required				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Kraus Anderson Contractor Pay Request - New Fire Station					
Originating Department:		Finance					
Presented by:		Amanda Ortloff					
Previous Council Action (if any):							
Item Type (X only one):		Consent	X	Regular Session		Discussion Session	
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to Approve Contractor Payment Request for the New Fire Station Project							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Kraus-Anderson Construction Co. has requested payment in the amount of \$56,801.92 for construction management services through September 30, 2023.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses: PIR Fund							
Budget Information: X Budgeted ____ Non Budgeted ____ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Contractor Pay Request #5 - Waconia Downtown Reconstruction - Phase 1					
Originating Department:		Finance					
Presented by:		Amanda Ortloff					
Previous Council Action (if any):							
Item Type (X only one):	Consent	☒	X	Regular Session	☐	Discussion Session	☐
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to approve pay estimate No. 5 to GMH Asphalt, Inc. for the Waconia Downtown Reconstruction - Phase 1							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Staff has reviewed the contractor pay request for the Waconia Downtown Reconstruction - Phase 1 and recommends payment of \$423,275.35 based on the engineering request for payment. This payment represents approximately 83% of the total approved contract for the project.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses: PIR Capital, Water, Sewer, Storm Water							
Budget Information:				Planning Commission			
☒ Budgeted				Parks and Recreation Board			
☐ Non Budgeted				Safari Island Advisory Board			
☐ Amendment Required				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Contractor Pay Request #1-Final - Lakeview Terrace & Industrial Blvd Storm Sewer Project					
Originating Department:		Finance					
Presented by:		Amanda Ortloff					
Previous Council Action (if any):							
Item Type (X only one):	Consent	☒	X	Regular Session	☐	Discussion Session	☐
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to approve pay estimate No. 1 to Schneider Excavating & Grading, Inc. for the Lakeview Terrace & Industrial Blvd Storm Sewer Project.							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Staff has reviewed the contractor pay request for the Lakeview Terrace & Industrial Blvd Storm Sewer Project and recommends payment of \$118,796.00 based on the engineering request for payment. This payment represents approximately 101% of the total approved contract for the project.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses: Storm Water							
Budget Information:				Planning Commission			
☒ Budgeted				Parks and Recreation Board			
☐ Non Budgeted				Safari Island Advisory Board			
☐ Amendment Required				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Call Public Hearing - Revision to City's Fee Schedule : Waconia City Code - Chapter 1100					
Originating Department:		Finance					
Presented by:		Nicole Meyer					
Previous Council Action (if any):							
Item Type (X only one):	☐ Consent	☐	☐ Regular Session	☒ X	☐ Discussion Session	☐	☐
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to Call a Public Hearing - Revision to City's Fee Schedule: Waconia City Code - Chapter 1100							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
The City Council will hold a public hearing in the Council Chambers located at 201 South Vine Street, Waconia, Minnesota, at 6:00 p.m. on December 4, 2023, to receive public input regarding proposed revisions to the City's fee schedule (Waconia City Code, Chapter 1100). The fee schedule includes the rates charged by the City for licenses, permits, municipal utilities, services, land use applications, penalties, and other items. You can view the proposed fee schedule at City Hall (same address as above) or on the City's website: www.waconia.org. The City invites comments in person at the hearing or written comments can be sent prior to the hearing to Nicole Meyer, Finance Director, via U.S. Mail at 201 South Vine Street, Waconia, MN 55387, or via email at nmeyer@waconia.org.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: ☐ Budgeted ☐ Non Budgeted ☐ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Application for Exempt Permit for Waconia Hockey Association					
Originating Department:		Administration					
Presented by:		Jackie Schulze					
Previous Council Action (if any):							
Item Type (X only one):		Consent	X	Regular Session		Discussion Session	
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Adopt Resolution #2023-220, Approving Application for Exempt Permit, Waconia Hockey Association							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
The Waconia Hockey Association has submitted an application for an Exempt Permit to conduct a raffle at the Waconia Ice Arena, 1250 Oak Avenue, Waconia, MN 55387 on February 20, 2024.							
<u>Attachments:</u>							
1. 2023-220 Waconia Hockey Association Exempt Permit.doc							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: _____ Budgeted _____ Non Budgeted _____ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			

**CITY OF WACONIA
RESOLUTION NO. 2023-220**

**A RESOLUTION APPROVING APPLICATION FOR EXEMPT PERMIT,
WACONIA HOCKEY ASSOCIATION**

WHEREAS, The City Council of the City of Waconia, Minnesota has received an Application for an Exempt Permit from the Waconia Hockey Association; and

WHEREAS, The Waconia Hockey Association has requested this application to conduct a raffle at the Waconia Ice Arena (1250 Oak Avenue, Waconia, MN 55387) as stated on the application for said exemption: and

WHEREAS, The City Council of the City of Waconia has no objection to the said application.

NOW, THEREFORE, BE IT RESOLVED That the City Clerk is hereby instructed to provide a copy of this Resolution to be included with the permit application to the Department of Gaming, Gambling Control Division, State of Minnesota.

Adopted by the City Council of the City of Waconia this 16th day of October, 2023.

Nicole Waldron, Mayor

ATTEST: _____
Jackie Schulze, City Clerk



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Interlaken Village 3rd Addition - Development Agreement					
Originating Department:		Community Development					
Presented by:		Lane Braaten					
Previous Council Action (if any):							
Item Type (X only one):	Consent	X	Regular Session		Discussion Session		
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Adopt Resolution #2023-221 approving the Development Agreement for Interlaken Village 3rd Addition.							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
The City Council, at their regular meeting on June 20th, 2023, approved the final plat of the Interlaken Village 3rd Addition in association with the approval of the Site Plan and Design Review application for the 35,500 square foot expansion of the TCO building at 820 Village Way. The Interlaken Village 3rd Addition final plat consists of one commercial parcel and one outlot. The City Council approved the final plat application via Resolution 2023-151 subject to certain conditions including Twin Cities Orthopedics entering into a development agreement with the City. City staff have prepared a proposed development agreement for the Interlaken Village 3rd Addition project, a copy of which is attached for the Council's review and consideration. City staff recommend approval of the development agreement language as proposed.							
Attachments:							
1. 2023-221 Interlaken Village 3rd Addition DA 2. Interlaken Village 3rd Addition Development Agreement for Lot 1 Block 1 (Draft 09-28-23).pdf							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: ☐ Budgeted ☐ Non Budgeted ☐ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			

**CITY OF WACONIA
RESOLUTION NO. 2023-221**

**RESOLUTION APPROVING DEVELOPMENT AGREEMENT
FOR LOT 1, BLOCK 1, INTERLAKEN VILLAGE 3RD ADDITION**

WHEREAS, TCO Real Estate-Fund 2, LLC (the “**Developer**”) owns real property in the City of Waconia (the “**City**”) described as Lot 1, Block 1, Interlaken Village 3rd Addition (the “**Property**”); and

WHEREAS, Developer desires to construct the second phase of the project consisting of a 35,500 square foot addition to the existing sports performance building (the “**Project**”); and

WHEREAS, in connection with its development of the Project, the City requires the Developer to enter into a Development Agreement with the City; and

WHEREAS, a proposed Development Agreement has been drafted and is attached to this resolution as Exhibit 1 (the “**Development Agreement**”); and

WHEREAS, the City Council finds it is in the best interests of the City to approve the Development Agreement.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Waconia, Minnesota, that:

1. The above recitals, including the findings contained therein, are incorporated into these resolutions.
2. The form of the Development Agreement attached as Exhibit 1 and of the proposed documents attached to such document as exhibits are approved in substantially the form attached as Exhibit 1, together with such modifications thereof, deletions therefrom, and additions thereto, as the City Administrator may deem appropriate.
3. The Mayor and City Clerk are hereby authorized to execute, acknowledge and deliver the Development Agreement and any other documents or instruments necessary or desirable to effectuate the transactions described in the Development Agreement. In the event of the absence or disability of the Mayor or the City Clerk, such officers of the City as, in the opinion of the City Attorney may act on their behalf shall, without further act or authorization of the City Council, do all things and execute all instruments and documents required to be done or executed by such absent or disabled officers. The execution of any document or instrument by the appropriate officer or officers of the City authorized herein shall be conclusive evidence of the approval of such document or instrument in accordance with the terms of this resolution.

Passed and adopted by the City Council of the City of Waconia this 16th day of October, 2023.

Nicole Waldron, Mayor

Attest: _____
Jacqueline Schulze, City Clerk

EXHIBIT 1
Development Agreement

**DEVELOPMENT AGREEMENT
FOR
LOT 1, BLOCK 1, INTERLAKEN VILLAGE 3rd ADDITION**

This agreement (the “**Agreement**”) is dated _____, 2023, and is between the City of Waconia, a Minnesota municipal corporation (the “**City**”) and TCO Real Estate-Fund 2, LLC, a Minnesota limited liability company (“**Developer**”). All plat names contained in this Agreement refer to plats in Carver County, Minnesota, and all references to recorded documents refer to documents recorded in the Office of the County Recorder, Carver County, Minnesota.

RECITALS

WHEREAS, concurrent with the filing of the plat for INTERLAKEN VILLAGE, Avalon-Interlaken, LLC, and the City entered into a Developer’s Agreement for Interlaken Village dated July 13, 2007 , which was recorded July 13, 2007, as Document No. A467971 (the “**Interlaken Village Developer’s Agreement**”); and

WHEREAS, a portion of the INTERLAKEN VILLAGE plat was replatted in 2018 as INTERLAKEN VILLAGE 2ND ADDITION; and

WHEREAS, concurrent with the filing of the INTERLAKEN VILLAGE 2ND ADDITION plat, the following documents were recorded:

First Amendment to Development Agreement for Interlaken Village between the City, Avalon II, LLC, and Waconia Interlaken OVA LLC (as successors to Avalon Interlaken, LLC) dated November 20, 2018, and recorded November 21, 2018, as Document No. A670399 (the “**First Amendment to Interlaken Village Developer’s Agreement**”)

Development Agreement for Lot 1, Block 1, Interlaken Village 2nd Addition between the City and the Developer dated November 20, 2018, and recorded November 21, 2018, as Document No. A670411 (the “**Existing TCO Development Agreement**”)

WHEREAS, the Developer and Interlaken OVA LLC previously petitioned the City to replat Lot

1, Block 1, and Outlot A, INTERLAKEN VILLAGE 2ND ADDITION as INTERLAKEN VILLAGE 3RD ADDITION; and

WHEREAS, the proposed final plat for INTERLAKEN VILLAGE 3RD ADDITION is attached for reference as Exhibit A; and

WHEREAS, on June 20, 2023, the City Council passed the following resolutions:

Resolution No. 2023-151, Resolution Approving the Interlaken Village 3rd Addition Preliminary & Final Plat;

Resolution No. 2023-152, Resolution Approving Site Plan & Design Review for the Property Located at 820 Village Way

(collectively, the “**City Resolutions**”); and

WHEREAS, INTERLAKEN VILLAGE 3RD ADDITION, as platted, will contain:

1. Lot 1, Block 1, INTERLAKEN VILLAGE 3RD ADDITION (the “**TCO Property**”), which Developer will own after the plat for INTERLAKEN 3RD ADDITION is recorded;
2. Outlot A, , INTERLAKEN VILLAGE 3RD ADDITION (“**Outlot A**”), which Waconia Interlaken OVA LLC will own after the plat for INTERLAKEN 3RD ADDITION is recorded; and
3. Certain other land dedicated to public use;

and

WHEREAS, this Agreement addresses the development of the TCO Property; and

WHEREAS, City staff has reviewed and conditionally approved the following plans for the improvements the Developer desires to construct on the TCO Property:

1. TCO Waconia Expansion – TCO Waconia Phase II Construction Plans prepared by Westwood Professional Services, Inc. dated June 30th, 2023; and

(collectively, the “**Improvement Plans**”); and

WHEREAS, City staff has also reviewed and conditionally approved the landscaping plans prepared by Westwood Professional Services, Inc. dated June 30th, 2023 attached for reference as Exhibit B (the “**Landscape Plans**”); and

WHEREAS, the Improvement Plans and the Landscape Plans are, collectively, referred to in this Agreement as the “**Plans**”; and

WHEREAS, the Plans show a significant addition (approximately 35,500 square feet in size) to the existing building on the TCO Property, along with related expansion of parking areas, driveways, sidewalks, and other improvements; and

WHEREAS, this Agreement sets forth and memorializes for the parties and subsequent

owners the understandings and agreements of the parties concerning the development of the TCO Property;

NOW, THEREFORE, the City and the Developer agree as follows:

TERMS

1. INTRODUCTORY MATTERS.

- 1.1. **Incorporation.** Except as expressly provided in this Agreement to the contrary, the following are incorporated by reference as agreements of the City and the Developer:
 - 1.1.1. The Recitals set forth above; and
 - 1.1.2. The City Resolutions.
- 1.2. **Interlaken Village Developer's Agreement.** The TCO Property is hereby released from the Interlaken Village Developer's Agreement and the First Amendment to Interlaken Village Developer's Agreement. This release only applies to the TCO Property, and nothing herein releases Outlot A from such agreements.
- 1.3. **Existing TCO Development Agreement.** If the any provision of the Existing TCO Development Agreement conflicts with a provision in this Agreement, the provision found in this Agreement shall control. Nothing herein releases the portion of the Property subject to the Existing TCO Development Agreement from such agreement.

2. DEFINITIONS.

"City Building Inspector" means the then current building official for the City, as designated by the City Council, or such person's designee.

"City Community Development Director" means Lane Braaten, City of Waconia, 201 South Vine Street, Waconia, MN 55387, or his designee or successor.

"City Engineer" means Jake Saulsbury, Bolton & Menk, Inc., 2638 Shadow Lane, Suite 200, Chaska, MN 55318-1172, or his designee or successor.

"City Public Services Director" means Craig Eldred, City of Waconia, 310 East 10th Street, Waconia, MN 55387, or his designee or successor.

"Governmental Entities" means, collectively, the City, Carver County, the State of Minnesota, the United States of America, or any subdivision or department thereof including: the Minnesota Department of Transportation; the Carver County Highway Department; the appropriate watershed district; the Board of Soil and Water Resources; the Minnesota Department of Natural Resources; the Army Corps of Engineers; the Minnesota Pollution Control Agency; the Metropolitan Council; the Minnesota Department of Health; and any other regulatory or jurisdictional agency affected by or having jurisdiction over the Improvements required for the development of the TCO Property. Any reference to a **"Governmental Entity"** means any of the above.

Additional terms are defined in the introductory paragraph, the Recitals and later in this Agreement. All defined terms, when capitalized, shall have the meanings ascribed to them unless the context clearly requires otherwise.

3. **RIGHT TO PROCEED; CONSTRUCTION.** Unless separate written approval has been given by the City, the Developer may not grade the TCO Property or otherwise start construction of any improvement thereon until the following conditions have been met to the satisfaction of the City: i) this Agreement has been fully executed by all parties and filed with the City Clerk; ii) the required security has been received by the City; iii) the final plat for INTERLAKEN VILLAGE 3RD ADDITION and all documents required by this Agreement to be recorded have been recorded with the Carver County Recorder's Office or Registrar of Titles; iv) the Developer has provided the City with recording information for all instruments required to be recorded; v) the Developer is not in default under any agreement with the City related to the TCO Property or any other property within the City limits that is owned by any of the Developer or within the Developer's control; vi) the Developer is not in violation of any federal, state or local regulation as to the TCO Property; vii) the City Administrator or the City Community Development Director has issued a letter that the Developer may proceed; and viii) the Developer has acquired fee title ownership of the TCO Property. Construction on the TCO Property shall proceed in accordance with the preliminary and final plats for INTERLAKEN VILLAGE 3RD ADDITION, the Plans, the City Resolutions, the Waconia City Code and this Agreement.

4. **ENGINEERING AND PLANNING REQUIREMENTS.**

- 4.1. **Developer's Engineer.** The Developer warrants it has engaged, at the Developer's expense, a duly registered professional civil engineer authorized to practice within the State of Minnesota to prepare the Plans and that such engineer has made representations to the Developer that the same have been prepared in accordance with the City's standard specifications for the complete installation of all Improvements (as defined below).
- 4.2. **Requirements.** The City shall have no obligation to release the final plat for INTERLAKEN VILLAGE 3RD ADDITION until the following engineering and planning requirements have been met to the City's satisfaction:
 - 4.2.1. **Erosion and Sediment Control Plan.** The Developer shall submit an erosion and sediment control plan to Carver County for review and approval. Further, any wetland mitigation that requires approval from the Minnesota DNR and/or Carver County is subject to the review and approval of such entities. The Developer shall follow and comply with the erosion and sediment control plan. Further, during the development of the TCO Property, the Developer shall follow all measures to protect any wooded areas and steep slopes on the TCO Property, as determined and directed by the City Engineer.
 - 4.2.2. **Wetlands.** The Developer shall apply for and receive approval of any wetland alterations on the TCO Property, or any portion thereof, all of which shall comply with the Waconia City Code, State statutes and the Wetland Conservation Act.

- 4.2.3. **Approvals from other Governmental Entities.** The Developer shall cause the final plat for INTERLAKEN VILLAGE 3RD ADDITION and the Plans to be submitted to all Governmental Entities that require submission and shall cause the same to be modify as required by such Governmental Entities. The Developer shall further comply with the requirements of all Governmental Entities having jurisdiction to their satisfaction and cause dedications of right-of-way or other dedications as required by such Governmental Entities. Any modifications to the final plat for INTERLAKEN VILLAGE 3RD ADDITION or the Plans are subject to the review and approval of the City Council. The Developer shall comply with any further requirements of the City Council based on its additional review.
- 4.2.4. **Plan for Construction Access.** Before construction activities begin on the TCO Property, the Developer shall submit a plan for construction access to the City Engineer for review and approval.
- 4.2.5. **Public Easements.** The Developer shall submit, or cause to be submitted, any public easements reasonably required by the City (e.g., trail, drainage and utility easements) in addition to those that are dedicated on the final plat for INTERLAKEN VILLAGE 3RD ADDITION.
- 4.2.6. **Storm Water Management.** The TCO Property was part of a previously approved project with existing, functioning storm water treatment improvements. If construction of the Improvements, the building on the property, or other hard surface brings the total impervious area of the TCO Property over that permitted by a governmental entity, additional storm water management shall be required at the Developer's sole expense.
- 5. **GRADING.** The TCO Property shall be graded in accordance with the approved grading, drainage and erosion control portion of the Plans. Within sixty (60) days after completion of the grading, the Developer shall provide the City with a "record" grading plan certified by a registered land surveyor or engineer showing that all ponds, swales and ditches have been constructed on public easements or land owned by the City. The "record" plan shall further depict field verified locations, site grades and elevations of the following: ponds, swales, emergency overflows, wetlands, wetland mitigation areas, ditches, borrow areas, stockpiles, lot corners, house pads, and tops and bottoms of retaining walls. The cross sections of the pond shall be obtained after the entire site is completely graded, the pond has been pumped down, all sediment has been removed, and the pond elevations have been restored to the approved design elevations.
- 6. **IMPROVEMENTS.**
 - 6.1. **Improvements.** For purposes of this Agreement, the "Improvements" are the Municipal Improvements, the Private Improvements, and the Landscaping Improvements, all as described in this Section 6.
 - 6.2. **Municipal Improvements.** The Developer shall, at its expense, construct and install public improvements on the TCO Property in conformance with the preliminary and

final plats for INTERLAKEN 3RD ADDITION, the Plans, the Waconia City Code and this Agreement (the “**Municipal Improvements**”). The Municipal Improvements shall include:

- 6.2.1. boulevard sodding/seeding and blanket as required for restoration of areas disturbed during construction activities for the TCO Property;
 - 6.2.2. sanitary sewer laterals or extensions to City-supplied stubs, including but not limited to all necessary services, lift stations and other appurtenances;
 - 6.2.3. water main laterals or extensions to City-supplied stubs, including but not limited to all necessary building services, hydrants, valves and other appurtenances; and
 - 6.2.4. ADA accessible pedestrian curb cuts into existing sidewalks per the Plans or as reasonably required by the City.
- 6.3. **Private Improvements.** The Developer shall, at its expense, also install private improvements on the TCO Property and easement areas adjacent thereto (the “**Private Improvements**”) in conformance with the preliminary and final plats for INTERLAKEN 3RD ADDITION, the Plans, the Waconia City Code and this Agreement, including, but not limited to:
- 6.3.1. grading of the TCO Property;
 - 6.3.2. construction of corrected soil areas;
 - 6.3.3. storm sewer and drainages systems to connect to the existing storm water pond located on Outlot B, INTERLAKEN VILLAGE, including but not limited to, all necessary catch basins, inlets, supportive restoration systems for water quality, and other appurtenances;
 - 6.3.4. construction of internal driveways, sidewalks and parking areas that are paved, have concrete curb and gutter, and meet ADA accessibility requirements, including the shared driveway and sidewalk improvements shown on the Plans;
 - 6.3.5. internal site lighting; and
 - 6.3.6. construction of the pedestrian amenity previously approved by the City Council on May 15, 2023.
- 6.4. **Landscaping Improvements.**
- 6.4.1. **Landscaping Improvements.** The Developer shall, at its expense, install all landscaping improvements called for in the Landscape Plans in conformance with the Landscape Plans (the “**Landscaping Improvements**”).
 - 6.4.2. **Maintenance and Repair.** The Developer shall cause the future tenants/property owners of the TCO Property to assume maintenance, repair, and replacement of all Landscaping Improvements on the TCO Property. The City shall have no obligation to maintain, repair or replace any Landscaping

Improvements.

- 6.5. **Permits.** Prior to any grading or foundation work occurring on the TCO Property, the Developer shall determine and obtain all necessary approvals, permits, and licenses required by Governmental Entities for grading and foundation work on the TCO Property, as contemplated by the Plans and this Agreement. Prior to any further work occurring on the TCO Property, the Developer shall determine and obtain all necessary approvals, permits, and licenses required by Governmental Entities for construction on the TCO Property as contemplated by the Plans and this Agreement other than the Department of Labor permits related to mechanical/plumbing design on the TCO Property, which permits Developer shall obtain prior to commencing any mechanical/plumbing design work on the TCO Property. Any design requirements of such agencies shall be determined prior to completion and incorporated into the plans and specifications. All costs incurred to obtain such approvals, permits, and licenses and all fines or penalties levied by any Governmental Entity due to the failure of the Developer to obtain or comply with the conditions of such approvals, permits, and licenses shall be the sole responsibility of the Developer. The Developer agrees to defend and hold the City, its officers, employees and agents harmless from any action initiated by any Governmental Entity resulting from any failure of the Developer to acquire the permits and approvals required herein.
- 6.6. **Licenses.** The Developer hereby grants the City, its agents, employees, officers and contractors a license to enter the TCO Property to perform all work and inspections deemed appropriate by the City in conjunction with the TCO Property. The City hereby grants the Developer a license to enter onto the portions of the TCO Property dedicated for public use to construct the Municipal Improvements.
- 6.7. **Standard of Performance.** All labor and work shall be done and performed in the best and most workmanlike manner and in strict conformance with the preliminary and final plats for INTERLAKEN 3RD ADDITION, the Plans, the Waconia City Code and this Agreement, unless approved in writing to the contrary by the City Engineer. In the event there are contradictions between the preliminary and final plats for INTERLAKEN 3RD ADDITION, the final plat for INTERLAKEN VILLAGE 3RD ADDITION shall control.
- 6.8. **Deadlines for Completion.** The Developer shall install all Municipal Improvements and Private Improvements by November 1st, 2024, except for the final lift of pavement on the driveways and parking areas. The final lift of pavement on the driveways and parking areas shall be completed no later than November 30th, 2024. All Landscape Improvements shall be installed no later than November 30th, 2024. The Developer may request an extension of time from the City regarding any deadline, which the City may grant or deny in its sole discretion. If an extension is granted, it shall be conditioned upon updating the security posted by the Developer to reflect cost increases and the extended completion date.
- 6.9. **Construction Times.** The Developer shall conduct all construction activities in conformance with the City's noise ordinance (Chapter 740 of the Waconia City Code).

Construction activities shall be allowed between 7:00 a.m. and 10:00 p.m. on weekdays (excepting holidays) and between 9:00 a.m. and 10:00 p.m. on Saturdays. Any deviation from the allowed construction times must be approved by the Public Services Director or the City Engineer.

- 6.10. **Public Property Damage.** The Developer shall pay all costs required to repair streets and/or utility systems damaged or cluttered with debris when occurring as a direct or indirect result of the construction that takes place on the TCO Property. If Developer fail to maintain or repair such damage within ten (10) days after receiving written notice from the City requesting repair, then the City may undertake such repairs itself and bill the Developer for all associated costs.
- 6.11. **Street Cleaning.** During the development of the TCO Property, the Developer shall keep the streets adjoining the TCO Property free of dirt and debris caused by its development. In the event dirt and/or debris has accumulated on streets within or adjacent to the TCO Property, the City is hereby authorized to immediately commence a street cleaning operation if streets are not cleaned by the Developer after forty-eight (48) hours of receiving notice of the violation from the City. Street cleaning shall be defined as the use of any equipment specifically designed for sweeping, necessary for cleaning dirt, mud and debris from the City right-of-way. If conditions are such that a street cleaning operation is immediately necessary, the City may perform the necessary street cleaning. The City will then bill the Developer for all associated street cleaning costs.
- 6.12. **Inspection.** The Developer shall provide adequate field inspection personnel to assure an acceptable level of quality control to the extent that the Developer's engineer will be able to certify that the construction work meets the approved City standards as a condition of the City's acceptance. In addition, the City may, at the City's discretion and at the Developer's expense, have one (1) or more City inspectors and a soil engineer inspect the work on a full or part-time basis. The Developer, its contractors and subcontractors, shall follow all instructions received from the City's inspectors. The Developer shall provide on-site project management. The Developer must also provide all surveying and construction staking necessary to ensure that the construction conforms to the Plans. The Developer or its engineer shall schedule a pre-construction meeting at a mutually agreeable time at the City Hall with all parties concerned, including the City staff, to review the program for the construction work.
- 6.13. **"As-Built Plans."** Promptly upon completion of the Improvements, the Developer shall provide the City with as-built plans of the Municipal Improvements in both paper and electronic format, which electronic format shall be acceptable to the City Public Services Director (the **"Inspection Deliverables"**).
- 6.14. **Final Inspection/Acceptance by City.** All the Municipal Improvements are subject to final inspection by the City Engineer, the City Public Services Director, the City Community Development Director and the City Building Inspector (collectively, the **"City Staff Inspectors"**). If any of the City Staff Inspectors determine corrective action is needed to conform any of the Municipal Improvements to the Plans, this

Agreement, any requirement of a Governmental Entity, or to correct defective or damaged work (including, but not limited to, pavement and sidewalk cracks and damage), the City shall inform the Developer of the corrective action needed. Upon receiving notice from the City of any corrective action needed, the Developer shall, at the Developer's expense, promptly complete the corrective action to the satisfaction of the City Staff Inspectors. Further, within sixty (60) days of the City's receipt of the Inspection Deliverables, the City shall either accept, by resolution of the City Council, the Municipal Improvements or inform the Developer of corrective action needed. Regarding Municipal Improvements, the City's failure to act as stated above within the sixty (60) day period shall be deemed acceptance. Upon acceptance by the City, the Municipal Improvements shall become City property without further action.

7. **WARRANTIES.**

- 7.1. **Municipal Improvements.** The Developer agrees, or shall cause its prime contractor to agree, to guarantee and warrant all work performed and all materials supplied for the construction of the Municipal Improvements for a period of two (2) years from final acceptance by the City and to promptly repair or replace any portion of the Municipal Improvements found to be defective. Upon completion of the Municipal Improvements and acceptance thereof by the City Engineer, the Developer shall furnish the City with a two (2) year warranty bond for 100% of the cost of the Municipal Improvements.
- 7.2. **Landscaping Improvements.** The Developer agrees, or shall cause its prime contractor to agree, to guarantee and warrant all work performed and all materials supplied regarding the Landscaping Improvements for a period of one (1) year from the date installed. If any plant material dies or is not growing properly within one (1) year of the date it is installed, the Developer or the Developer's prime contractor shall promptly replace it. The Developer shall notify the Public Services Director or the Community Development Director when the Landscaping Improvements are substantially completed.

8. **INSURANCE AND INDEMNIFICATION.**

- 8.1. **Insurance.** The Developer shall furnish, or shall cause its prime contractor to furnish, proof of insurance prior to the commencement of construction of the Improvements and subject to the review and approval of the City, covering any public liability or property damage by reason of operation of the contractor's equipment, laborers and hazard caused by the Improvements at minimum policy amounts of \$1,000,000.00. The contractor shall keep the insurance in force at all times construction of the development is in progress. The insurance must name the City as an additional insured and must provide that the insurer shall give the City not less than thirty (30) days' written notice prior to cancellation or termination of the insurance policy.
- 8.2. **Indemnification.** Except claims arising out of the negligence of the City and/or its officers, employees, consultants or agents, all claims that arise or may arise against the Developer, its agents, servants, or employees while engaged in the performance of the development of the TCO Property shall in no way be the obligation of the City.

Furthermore, the Developer shall indemnify, hold harmless, and defend the City, its officers, employees, consultants and agents against any and all liabilities, losses, costs, damages, expenses, claims, actions, or judgments, including attorneys' fees, that the City, its officers, employees, consultants and agents may hereafter sustain, incur, or be required to pay, arising out of or by reason of any act or failure to act by the Developer, its agents, servants and/or employees. Notwithstanding anything to the contrary, the Developer's obligation to indemnify, hold harmless, and defend the City shall not extend to any claim, liability, loss, costs, damages, expenses, actions, or judgments, including attorneys' fees, which relate to, result from, or are caused by the City's violation of applicable law, this Agreement, or the negligence of the City and/or its officers, employees, consultants or agents.

9. **BUILDING PERMITS AND CERTIFICATES OF OCCUPANCY.**

9.1. **General Building Permit Requirements.** No building permit shall be issued for the TCO Property until:

- 9.1.1. site plans (if applicable) have been submitted and have been reviewed and approved by the City Council;
- 9.1.2. the plat for INTERLAKEN VILLAGE 3RD ADDITION has been recorded;
- 9.1.3. park dedication requirements have been met as required herein;
- 9.1.4. any outstanding amounts due the City under this Agreement have been paid;
- 9.1.5. all required financial guarantees have been given to the City;
- 9.1.6. the City Public Services Director has approved access and temporary construction access for the Property;
- 9.1.7. the Developer has paid all fees then required by the City or any other Governmental Entity in regard to the Property including any fees for: i) metro sewer availability; ii) sewer trunk; iii) sewer permit; iv) sewer hookup; v) water trunk; vi) water permit; vii) water hookup; iii) storm water trunk; and ix) storm water connection;
- 9.1.8. all Waconia City Code requirements for issuance of a building permit have been met; and
- 9.1.9. the Developer is not then in default of this Agreement beyond applicable notice and cure periods.

9.2. **Certificate of Occupancy Requirements.** No certificate of occupancy shall be issued for a structure until:

- 9.2.1. the Improvements have been substantially completed;
- 9.2.2. the City Public Services Director has approved an as-built final grade, topsoil inspection for the TCO Property, including six-inches of topsoil meeting Carver County topsoil requirements;
- 9.2.3. the City Public Services Director has approved a utility check for the TCO

Property;

9.2.4. the City Public Services Director has approved storm water infiltration compliance for the TCO Property; and

9.2.5. all Waconia City Code, building code and other requirements for issuance of a certificate of occupancy have been met.

10. **PARK DEDICATION AND CONVEYANCE OF ADDITIONAL PROPERTY.** The Developer shall provide payment in lieu of land dedication in the amount of \$11,500.00 (2.3 gross developable acres x \$5,000/acre).

11. **LOT REQUIREMENTS.** The TCO Property shall meet the requirements of the B-1, Highway Business District stated in Section 900.05, Subd. 2.F of the City Code and the Architectural Design Standards stated in Section 900.06, Subd. 9.

12. **PAYMENT OF COSTS AND EXPENSES.**

12.1. **General.** The Developer shall pay, upon demand of the City, all reasonable costs, expenses, charges and fees incurred or paid by the City in relation to this Agreement or the TCO Property. For example, the Developer shall reimburse the City for staff time, consulting fees, reasonable attorneys' fees and costs relating to: i) review of the Plans; ii) the negotiation and preparation of this Agreement; iii) reviews and inspections required or permitted by this Agreement; or iv) except as otherwise set forth in Section 8.2 and 18.7, any action or suit relating to this Agreement or the TCO Property.

12.2. **City Billing Procedure.** Whenever this Agreement permits the City to demand payment from the Developer or requires the Developer to reimburse the City, the City shall invoice the Developer for the amount due. Each amount invoiced by the City to the Developer shall be due and payable thirty (30) days after the date of the applicable invoice. If the Developer fail to pay any amount on before the date such amount is due, the Developer shall be deemed in default of this Agreement.

13. **FINANCIAL GUARANTEES.** Prior to release of the final plat for INTERLAKEN VILLAGE 3RD ADDITION, unless otherwise stated, the Developer shall provide the following financial guarantees.

13.1. **Guarantee for Municipal and Private Improvements.**

13.1.1. **Letter of Credit.** To assure the installation of all Municipal Improvements and Private Improvements in a good and workmanlike manner and the Developer's faithful performance of its obligations under this Agreement, the Developer shall provide the City with an irrevocable letter of credit from a U.S. bank with a physical branch location in the State of Minnesota, the form of which shall be reasonably satisfactory to City (the "**Letter of Credit for Municipal and Private Improvements**") in the amount of \$159,419.00 (which equals one hundred twenty percent (100%) of the cost of the Municipal Improvements and Private Improvements). In the event the Developer fail to install the Municipal Improvements and Private Improvements in accordance with the

provisions of this Agreement, fail to reimburse the City for the Municipal Improvements as required herein, or otherwise breaches its obligations under this Agreement, the City shall notify the Developer in writing of such breach. In the event the Developer fails to cure the breach within thirty (30) days of receipt of the City's written notice the City may declare a default under the Agreement. Thereafter the City may draw upon the Letter of Credit for Municipal and Private Improvements in such amount as is reasonably adequate to cure the breach. The Letter of Credit for Municipal and Private Improvements shall be renewable on an annual basis and shall require the issuer to give the City notice at least thirty (30) days prior to the date of renewal.

13.1.2. **Release/Reduction of Letter of Credit.** The Developer may apply to the City for release of all or a portion of the Letter of Credit for Municipal and Private Improvements as follows:

13.1.2.1. When another irrevocable letter of credit acceptable to the City is furnished to the City to replace the Letter of Credit for Municipal and Private Improvements.

13.1.2.2. When all of the Municipal and Private Improvements, including the wear course of pavement, have been completed and the warranty bond required by Section 7 of this Agreement has been provided to the City, the Developer may apply to have the Letter of Credit for Municipal and Private Improvements released in its entirety and the City shall grant such request.

13.2. **Guaranty for Landscape Improvements.**

13.2.1. **Letter of Credit.** To assure the installation of all Landscape Improvements in a good and workmanlike manner, the proper growth of all plants for the period of one (1) year after installation, and the Developer's faithful performance of its obligations under this Agreement, the Developer shall provide the City with an irrevocable letter of credit from a U.S. bank with a physical branch location in the State of Minnesota, the form of which shall be reasonably satisfactory to City (the "**Letter of Credit for Landscape Improvements**") in the amount of \$17,032.50 (which equals one hundred percent (100%) of the cost of the Landscape Improvements). In the event the Developer fail to install and maintain the Landscape Improvements in accordance with the provisions of this Agreement, fails to replace a plant not growing properly, or otherwise breaches this Agreement, the City shall notify the Developer in writing of such breach. In the event the Developer fails to cure the breach within thirty (30) days of receipt of the City's written notice the City may declare a default under the Agreement. Thereafter the City may draw upon the Letter of Credit for Landscape Improvements in such amount as is reasonably adequate to cure the breach. Such Letter of Credit for Landscape Improvements shall be renewable on an annual basis and shall require the issuer to give the City notice

at least thirty (30) days prior to the date of renewal.

13.2.2. Release/Reduction of Letter of Credit for Landscape Improvements. The Developer may apply to City for release of all or a portion of the Letter of Credit for Landscape Improvements as follows:

13.2.2.1. When another irrevocable letter of credit acceptable to the City is furnished to the City to replace the Letter of Credit for Landscape Improvements; or

13.2.2.2. Upon such time as the Landscape Improvements have been installed for a period of one (1) year or a warranty bond ensuring the proper growth of all plant material for a period of one (1) year following installation has been provided to the City.

13.3. Expiration. In the event any letter of credit required by this Section 13 will expire pursuant to its terms prior to the time that all money or obligations of the Developer are paid or completed pursuant to this Agreement, the Developer shall provide the City with a new letter of credit, acceptable to City, at least thirty (30) days prior to the expiration of such expiring letter of credit. If the City does not receive a new letter of credit as required above, the City may declare the Developer in default of this Agreement and draw, in whole or in part at the City's discretion, upon the expiring letter of credit to avoid the loss of surety.

13.4. Failure to Perform. If the Developer is in default of this Agreement or otherwise fails to perform any of the duties, conditions or terms of this Agreement in the time permitted herein or if no time period is specified, failure to perform within ten (10) days after written notice from the City, or in such extended time as may be granted in writing by the City Council, the City shall be entitled to draw on any letter of credit provided by the Developer pursuant to this Section 13, to enter the TCO Property, and to cure the default. In the event the default consists of the Developer's failure to install any of the Improvements in accordance with the provisions of this Agreement after the expiration of the notice and cure periods set forth in the prior sections, the City shall cure the default by performing the work in accordance with this Agreement and the Plans. The City may reimburse itself for all costs and expenses, including, but not limited to legal and consulting fees, arising out of or related to curing the Developer's default from letter of credit funds. The Developer shall indemnify, hold harmless, and defend the City, its officers and employees against any and all liability, loss, costs, damages, expenses, claims, actions, or judgments, including attorneys' fees which the City, its officers or employees may hereafter sustain, incur, or be required to pay, arising out of or by reason of the City exercising its power under this Section 13.4, excluding however any liability, loss, costs, damages, expenses, claims, actions, or judgments, including attorneys' fees related to the negligence of the City, its officers and employees.

13.5. Costs. The City's costs for processing any letter of credit reduction or release request shall be billed to the Developer at \$125.00 per hour with a minimum of one (1) hour per reduction or release, and shall be paid by the Developer to the City within thirty

(30) days of billing. Any request for reduction or release of a letter of credit shall be either approved or denied within thirty (30) days of being made in writing to the City.

- 13.6. **Deficiency.** In the event any of the sureties described in this Section 13 are used by the City and found to be deficient in amount to pay or reimburse the City in total as required herein, the Developer agree that upon being billed by the City, the Developer will pay the deficiency amount to City within ten (10) days of receipt of such billings to the Developer. If the Developer fails to pay, the City may assess all costs, including, but not limited to, staff time, engineering fees and legal fees against the TCO Property. The Developer acknowledges that the City has the authority, pursuant to Minnesota Statutes Chapters 412 and 429, to specially assess property benefited by improvements. If there should be an overage in the amount of utilized security the City shall, upon making such determination, refund to the Developer any monies in the City's possession that are more than the surety needed by City. In addition to the above, the City may seek a civil judgment against the Developer.
14. [Intentionally left blank.]
15. **REPRESENTATIONS AND WARRANTIES OF THE DEVELOPER.** The Developer, as an inducement to the City to enter into this Agreement, hereby represents, warrants and covenants to the City as follows:
- 15.1. **Authorization.** The Developer is an organized company under the laws of the State of Minnesota, as applicable, in good standing and authorized to do business in the State of Minnesota. The Developer has full authority to enter into this Agreement and make it binding on itself and its successors and assigns, and to make this Agreement, and the covenants herein, binding upon and running with the TCO Property. This Agreement shall not become effective until it is executed and delivered by the City and the Developer.
- 15.2. **Ownership.** The Developer has a legal or equitable interest in the TCO Property as set forth in the recitals.
- 15.3. **Execution No Violation.** The execution, delivery and performance of this Agreement does not and will not result in any breach of, or constitute a default under, any indenture, mortgage, contract, agreement or instrument to which the Developer is a party or by which it, or the TCO Property, is bound.
- 15.4. **Litigation.** There are no pending actions or proceedings or, to the knowledge of the Developer, threatened actions or proceedings before any court or administrative agency that will adversely affect the financial condition, business or operation of the Developer or the ability of the Developer to perform its obligations under this Agreement.
- 15.5. **Compliance.** The Developer will comply with and promptly perform all of the Developer's obligations under this Agreement and all related documents and instruments.
- 15.6. **Wetlands.** As of the date of this Agreement, there are no wetlands located on the TCO

Property.

- 15.7. **Environmental Laws.** To the best of the Developer's knowledge, as of the date of this Agreement, the Developer is not in violation of any local, state or federal environmental law, regulation or review procedure relating to the TCO Property, which would give any person a valid claim under the Minnesota Environmental Rights Act with respect to the TCO Property.
16. **DEFAULT.** If the Developer, its successors or assigns breach any of the covenants or agreements herein contained and any such breach remains uncured for more than thirty (30) days after the City gives the Developer notice of the breach (unless another provision of this Agreement calls for a shorter cure period, in which case the shorter period shall apply), the City may draw and/or utilize the deposited escrow funds, letters of credit, or other surety funds to complete the Developer's obligations as set forth herein, and to the extent not satisfied from such funds, to bring legal action against the Developer to collect any sums due pursuant to this Agreement. In the event of an uncured breach, the Developer hereby grants the City and the City's employees, representatives, or agents the right to enter the TCO Property to perform any act deemed necessary by City to complete the Developer's breach. In addition to the above, the City may initiate any legal action allowed by law, including, but not limited to, injunctive relief for compliance with this Agreement.
17. **NOTIFICATION INFORMATION.** Any notice to the parties herein shall be deemed to have been given or delivered if sent by certified mail addressed as follows or by email with a return receipt requested:
- If to the City:
- City of Waconia
201 South Vine Street
Waconia, MN 55387
Attn: City Administrator
Email: sfineran@waconia.org
- If to Developer:
- TCO Real Estate-Fund 2, LLC
4200 Dahlberg Drive, #300
Golden Valley, MN 55422
Attn: Aaron Johnson
Email: aaronjohnson@tcomn.com
18. **MISCELLANEOUS.**
- 18.1. **Runs with Property.** The terms and conditions of this Agreement shall be binding on the parties hereto, its respective successors and assigns. The benefits and burdens of this Agreement run with the TCO Property. Notwithstanding the foregoing, no conveyance of the TCO Property or any part thereof shall relieve the Developer of its personal liability for full performance of this Agreement unless the City expressly releases the Developer, or any individual Developer, in writing.

- 18.2. **Recording.** This Agreement shall be recorded against the TCO Property by the Developer. No building permits shall be issued until the City is provided with recording information for this Agreement. Further, the Developer shall record the final plat for INTERLAKEN VILLAGE 3RD ADDITION, or cause it to be recorded, prior to the recording of this Agreement, but no later than two (2) months after such final plat was approved by the City Council.
- 18.3. **Compliance.** Use of the TCO Property shall be consistent and comply with, at all times, federal, state and local regulation.
- 18.4. **Interest On Past Due Amounts.** In addition to all other remedies available to City under this Agreement, amounts owed the City and not paid when due shall accrue interest at the rate of eight percent (8%) per annum from the date due until the date actually paid.
- 18.5. **Construction of Agreement.** This Agreement, any attached exhibits, the incorporated instruments pursuant to Section 1 of this Agreement and any addenda or amendments signed by the parties shall constitute the entire agreement between the parties, and they supersede any other written or oral agreements between the parties as it relates to the terms and obligations contained herein. The word “including” shall mean including without limitation. The parties intend that each representation, warranty, and covenant contained in this Agreement have independent significance. The captions used in this Agreement are for convenience only and do not constitute terms of the Agreement.
- 18.6. **Warranty of Authority.** The Developer warrants and guarantees it has the authority to enter into this Agreement and to make it a covenant on the TCO Property binding all current and future owners. The Developer further warrants and guarantees there are no mortgages or other instruments containing a right of foreclosure recorded against the TCO Property.
- 18.7. **Attorneys’ Fees.** The City and the Developer agree that, in the event a suit or action is brought to enforce the terms of this Agreement, or in the event an action is brought upon a letter of credit furnished by the Developer as provided herein, the non-prevailing party shall pay the prevailing party’s reasonable attorneys’ fees and legal costs.
- 18.8. **Severability.** If any one or more of the provisions contained in this Agreement are invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein and any other application thereof shall not in any way be affected or impaired thereby.
- 18.9. **Data Practices Compliance.** The Developer shall have access to data collected or maintained by the City to the extent necessary to perform the Developer’s obligations under this Agreement. The Developer agrees to maintain all data obtained from the City as it relates to the Municipal Improvements, in the same manner as the City is required under the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13 or other applicable law (the “**Act**”). The Developer shall not release or

disclose the contents of data classified as not public to any person except at the written direction of the City. Upon receipt of a request to obtain and/or review data as defined in the Act, the Developer shall immediately notify the City. The City shall provide written direction to the Developer regarding the request within a reasonable time, not to exceed ten (10) days. The City agrees to indemnify, hold harmless and defend the Developer for any liability, expense, cost, damage, claim, and action, including attorneys' fees, arising out of or related to the Developer complying with the City's direction. Subject to the above provisions, the Developer agree to defend and indemnify the City from any claim, liability, damage or loss asserted against the City because of the Developer's failure to comply with the requirements of the Act. Upon termination and/or completion of this Agreement, the Developer agrees to return all data to the City, as requested by the City.

- 18.10. **Governing Law.** This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of Minnesota.
- 18.11. **Time is of the Essence.** Time is of the essence in the performance of the terms and obligations of this Agreement.
- 18.12. **Survival.** Any obligations in this Agreement to indemnify or hold another party harmless shall survive the expiration or earlier termination of this Agreement.
- 18.13. **Modification.** Any modification of this Agreement or additional obligation assumed by either party in connection with this Agreement shall be binding only if evidenced in writing signed by each party or an authorized representative of each party. It is understood that subsequent agreements may be necessary to complete the understandings of the parties relating to necessary improvements and uses of the TCO Property.
- 18.14. **Non-Waiver.** The action or inaction of the City or any Developer shall not constitute a waiver or amendment of the provisions of this Agreement. The waiver by or the failure of the City or any Developer to enforce any section, portion or requirement of this Agreement at any time shall not in any way constitute a waiver of any other section, provision, requirement, time element, or the right to enforce such provision at a subsequent time. To be binding, any amendments or waivers shall be in writing, signed by the parties and approved by written resolution of the City Council. The failure of the City or any Developer to promptly take legal action to enforce this Agreement shall not be a waiver or release.
- 18.15. **Cumulative Rights.** Each right, power, or remedy herein conferred upon the City or the Developer is cumulative and in addition to every other right, power, or remedy, express or implied, now or hereinafter arising, available to the City or the Developer, at law or in equity, or under any other agreement, and each and every right, power, and remedy herein set forth or otherwise so existing may be exercised from time to time as often and in such order as may be deemed expedient by the City or the Developer and will not be a waiver of the right to exercise at any time thereafter any other right, power, or remedy.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

[Signature pages follow.]

Signature Page - Development Agreement for INTERLAKEN VILLAGE 3RD ADDITION

CITY OF WACONIA, a Minnesota municipal corporation

By: _____
Nicole Waldron
Its: Mayor

By: _____
Jacqueline Schulze
Its: Clerk

STATE OF MINNESOTA)
)
COUNTY OF CARVER)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023, by Nicole Waldron and Jacqueline Schulze, the Mayor and Clerk, respectively, of the City of Waconia, a Minnesota municipal corporation under the laws of the State of Minnesota, on behalf of the municipal corporation.

Notary Public

Signature Page - Development Agreement for INTERLAKEN VILLAGE 3RD ADDITION

TCO Real Estate-Fund 2, LLC, a Minnesota
limited liability company

By: _____
Its: Chief Manager

STATE OF MINNESOTA)
)
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this ____ day of _____,
2023, by _____, the Chief Manager of TCO Real Estate-Fund 2, LLC, a
Minnesota limited liability company, on behalf of the limited liability company.

Notary Public

THIS INSTRUMENT WAS DRAFTED BY:

Lane L. Braaten – Community Development Director
City of Waconia
201 South Vine Street
Waconia, Minnesota 55387
(952) 442-3106

65070492.2

Final Plat for INTERLAKEN VILLAGE 3RD ADDITION

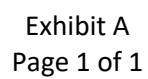
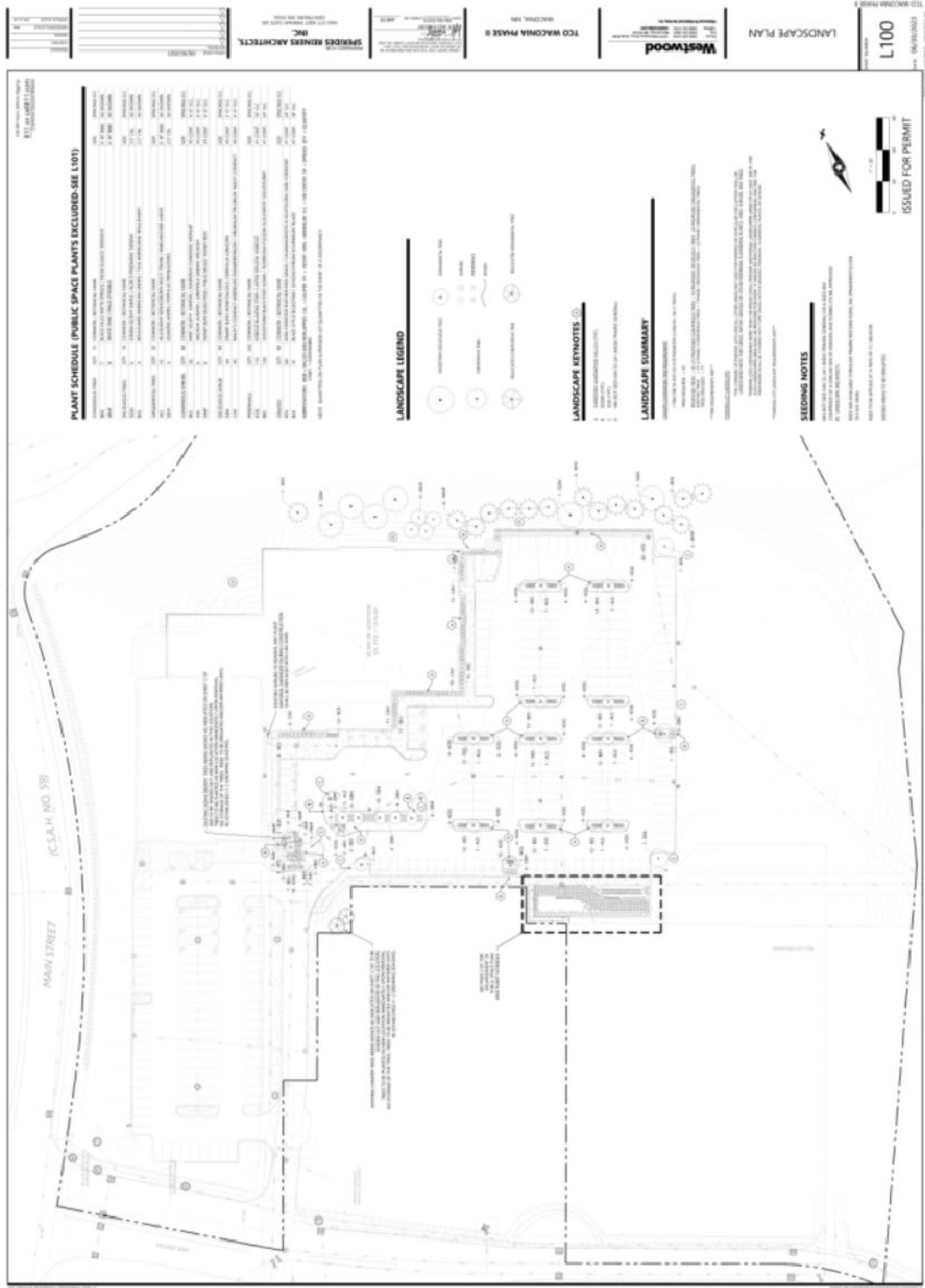


EXHIBIT B Landscape Plans



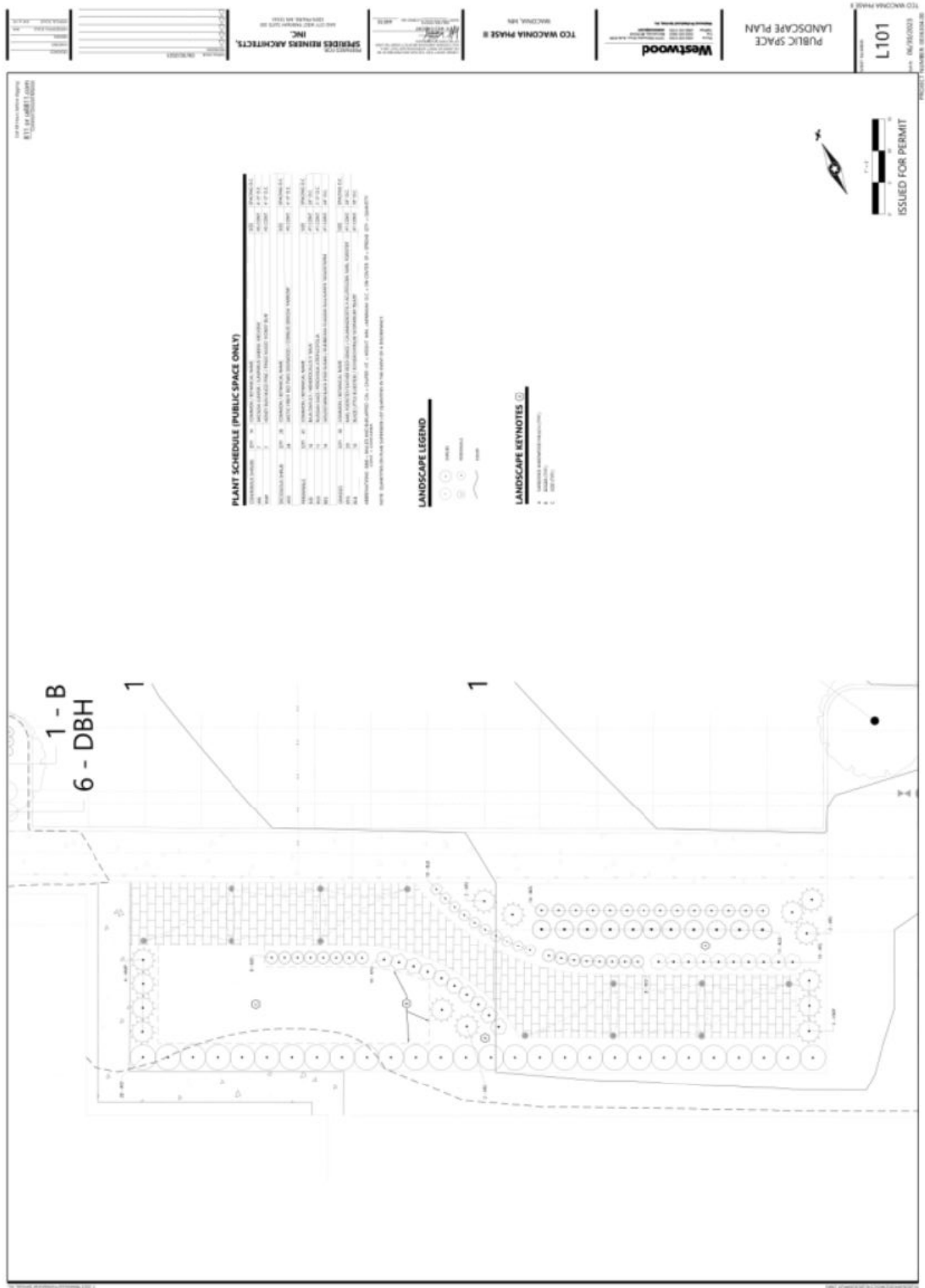


Exhibit B
Page 2 of 3



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		200 & 10250 10th Street East - Quit Claim Deed					
Originating Department:		Community Development					
Presented by:		Ethan Nelson					
Previous Council Action (if any):							
Item Type (X only one):	Consent	X	Regular Session		Discussion Session		
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Adopt Resolution #2023-222, approving the Quit Claim Deed for 200 and 10250 10th Street East							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
BACKGROUND: The City purchased 10250 10th Street East on August 16, 2021 and annexed the property into City limits on December 16, 2021. The property is also adjacent to the City water treatment facility located at 200 10th Street East. Staff is currently working through the process to combine 200 10th Street East and 10250 10th Street East into a single, contiguous parcel through an application to combine real estate parcels with Carver County. In order to complete this process, a resolution approving Quit Claim Deed will need to be adopted by the Council for both existing parcels and submitted to Carver County along with the new parcel legal description. CONCLUSION/RECOMMENDATION: Staff recommends adopting the attached resolution, approving the Quit Claim Deed. Attachments: 1. Resolution 2023-222 (1 Page) 2. Location Map (1 Page) 3. Quit Claim Deed (2 Pages)							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: _____ Budgeted _____ Non Budgeted _____ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			

**CITY OF WACONIA
RESOLUTION 2023-222**

**A RESOLUTION APPROVING A QUIT CLAIM DEED
FOR THE PROPERTIES LOCATED AT 200 & 10250 10TH STREET EAST**

WHEREAS, The City of Waconia owns 200 10th Street East and 10250 10th Street East, properties within the corporate limits of the City of Waconia and desires to combine the parcels into one contiguous property; and

WHEREAS, the subject properties are identified as PID# 750247700 and 750240610 respectively; and

WHEREAS, the City is required to record a Quit Claim Deed with Carver County, Minnesota in order to complete an Application to Combine Real Estate Parcels; and

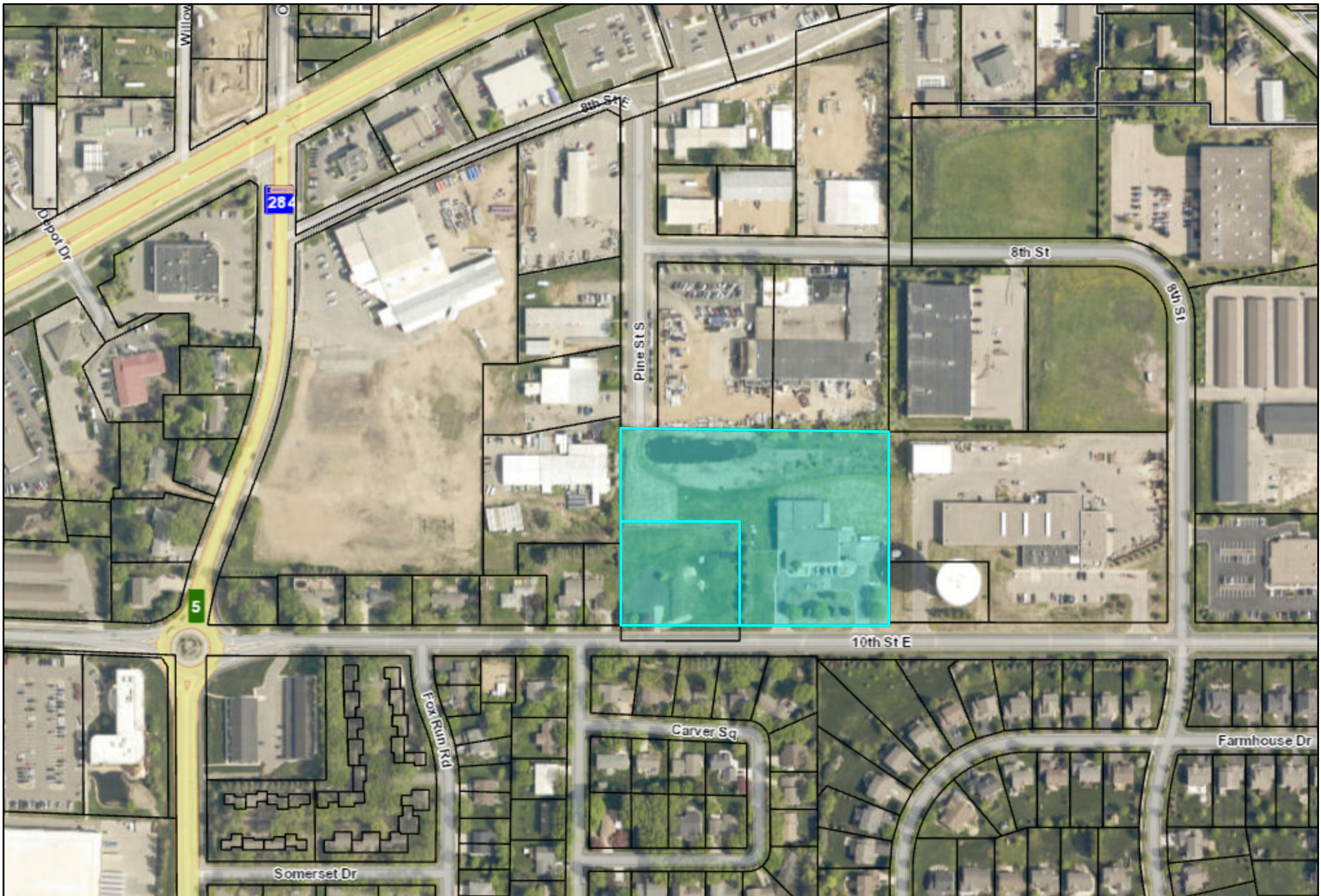
WHEREAS, staff recommend approval of the resolution based upon these findings.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Waconia hereby approves the resolution to complete the Quit Claim Deed with Carver County, Minnesota subject to the conditions, findings and recommendations of staff stated above.

Adopted by the City Council of the City of Waconia this 16th day of October, 2023.

Nicole Waldron, Mayor

ATTEST: _____
Jacqueline Schulze, City Clerk



(Top 3 inches reserved for recording data)

QUIT CLAIM DEED

Business Entity to Business Entity

eCRV number: _____

DEED TAX DUE: \$1.65

DATE: _____

FOR VALUABLE CONSIDERATION, the City of Waconia, a Minnesota municipal corporation ("Grantor"), hereby conveys and quitclaims to the City of Waconia, a Minnesota municipal corporation ("Grantee"), real property in Carver County, Minnesota, legally described as follows:

Part of the Northwest Quarter of Section 24, Township 116, Range 25, Carver County, Minnesota, described as follows:

Beginning at the intersection of the South line of said Northwest Quarter and the southerly extension of the West line of VOLKENANT'S SECOND ADDITION TO THE VILLAGE OF WACONIA, according to the recorded plat thereof; thence North 89 degrees 52 minutes 26 seconds West, assumed bearing, along the South line of said Northwest Quarter a distance of 577.5 feet to the point of intersection of the West line of the East 1772.00 feet of said Northwest Quarter with the South line of said Northwest Quarter; thence on an assumed bearing of North along said West line of the East 1772.00 feet of the Northwest Quarter a distance of 455.90 feet to the South line of REGISTERED LAND SURVEY NUMBER 26; thence South 89 degrees 12 minutes 41 seconds East along the South line of said REGISTERED LAND SURVEY NUMBER 26 a distance of 577.50 feet to the West line of VOLKENANT'S SECOND ADDITION TO THE VILLAGE OF WACONIA; thence South along the West line of VOLKENANT'S SECOND ADDITION TO THE VILLAGE OF WACONIA to the point of beginning.

Check here if all or part of the described real property is Registered (Torrens) ☐

together with all hereditaments and appurtenances belonging thereto.

The total consideration for this transaction is less than \$3,000.00.

This deed is intended to combine, for tax purposes, Carver County Parcel Identification Numbers 750247700 and 750240610.

Check applicable box:

- ☐ The Seller certifies that the Seller does not know of any wells on the described real property.
- ☐ A well disclosure certificate accompanies this document or has been electronically filed. (If electronically filed, insert WDC number: [...].)
- ☐ I am familiar with the property described in this instrument and I certify that the status and number of wells on the described real property have not changed since the last previously filed well disclosure certificate.

Grantor

CITY OF WACONIA, a Minnesota municipal corporation

By: _____

Nicole Waldron

Its: Mayor

By: _____

Jacqueline Schulze

Its: City Clerk

State of Minnesota, County of Carver

This instrument was acknowledged before me on _____, by Nicole Waldron, as Mayor, and by Jacqueline Schulze, as City Clerk, of the City of Waconia, on behalf of the City.

(Stamp)

(signature of notarial officer)

Title (and Rank): _____

My commission expires: _____
(month/day/year)

THIS INSTRUMENT WAS DRAFTED BY:
Melchert Hubert Sjodin, PLLP
121 West Main Street, Suite 200
Waconia, MN 55387
(952) 442-7700
(JMM/clw)

TAX STATEMENTS FOR THE REAL PROPERTY DESCRIBED IN THIS INSTRUMENT SHOULD BE SENT TO:
City Administrator
City of Waconia
201 South Vine Street
Waconia, MN 55387



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Ordering Improvements for the 2024 Downtown Reconstruction Project					
Originating Department:		Administration					
Presented by:		Shane Fineran					
Previous Council Action (if any):							
Item Type (X only one):	Consent		Regular Session	X	Discussion Session		
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Adopt Resolution #2023-223, Ordering Improvements & Preparation of Plans							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
The next step in the process of completion of the 2024 Downtown Reconstruction project is the ordering of improvements and plans. The City Council to date has received the feasibility study and conducted the public hearing regarding the project. The project scope includes reconstruction of streets, sidewalks, utilities including water, sewer, and storm water and street lighting. The project area includes Main Street from Olive to Spruce, and the 100 blocks of Elm Street, Pine Street, and Spruce Street. Some final items of discussion and direction as it relates to preparation of final plans include direction on the options presented for the middle block of Main Street. Staff will walk through these elements at the meeting. At this time staff is not recommending proceeding with ordering of the storm water reuse component, other than mains, and the off street public/private parking concept.							
Attachments: 1. 2023-223 Order Improvements 2. 2023-08-15 Downtown Recon Ph 2 Feasibility Report - reduced.pdf							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: ☐ Budgeted ☐ Non Budgeted ☐ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			

**CITY OF WACONIA
RESOLUTION NO. 2023-223**

**RESOLUTION ORDERING IMPROVEMENTS
& PREPARATION OF PLANS**

WHEREAS, a resolution of the City Council adopted August 21, 2023, fixed a date for a Public Hearing on the proposed Downtown Reconstruction, Phase 2 Project, a project consisting of street, drainage and utility improvements to the following:

- Main Street West from Olive Street to Elm Street
- Main Street East from Elm Street to approximately 100 feet east of Spruce Street
- Elm Street South from Main Street East to First Street
- Pine Street South from Main Street East to First Street
- Spruce Street South from Main Street East to First Street

WHEREAS, ten days' mailed notice and two weeks' published notice of the Public Hearing was given, and the hearing was held thereon on the 18th day of September, 2023, at which all persons desiring to be heard were given an opportunity to be heard thereon,

WHEREAS, the City Council finds that such improvement has no relationship to the City's comprehensive municipal plan.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Waconia, Minnesota,

1. Such improvement is necessary, cost-effective, and feasible as detailed in the Feasibility Study.
2. Such improvement is hereby ordered as proposed in the City Council Resolution adopted on the 18th day of September, 2023.
3. Pursuant to MN Stat. § 462.356 subd. 2, the requirements of that subdivision for planning agency review are waived.
4. The City Engineer shall prepare plans and specifications for the making of such improvements.
5. The City Council declares its official intent to reimburse itself for the costs of the improvement from the proceeds of tax-exempt bonds.

Adopted by the City Council of the City of Waconia this 16th day of October, 2023.

Nicole Waldron, Mayor

Jackie Schulze, City Clerk

FEASIBILITY STUDY

FOR

DOWNTOWN RECONSTRUCTION, PHASE 2

PROJECT

CITY OF WACONIA, MN



AUGUST 2023

PREPARED BY:
BOLTON & MENK, INC.
2638 SHADOW LANE SUITE 200
CHASKA, MN 55318



Real People. Real Solutions.

2638 Shadow Lane
Suite 200
Chaska, MN 55318-1172

Ph: [952] 448-8838
Fax: [952] 448-8805
Bolton-Menk.com

August 15, 2023

City of Waconia
Attn: Shane Fineran
201 South Vine Street
Waconia, MN 55387

RE: Downtown Reconstruction, Phase 2 Project

Honorable Mayor and City Council Members:

Pursuant to your request we have prepared a Feasibility Study for project components to be included in the Downtown Reconstruction, Phase 2 Project. These components include the following:

- Street reconstruction, sidewalk reconstruction, sanitary sewer, watermain, and storm sewer replacements of Main Street from Olive Street to Spruce Street and of Elm Street, Pine Street and Spruce Street from Main Street to First Street.
- Constructing a new stormwater reuse system consisting of an underground storage chamber on Vine Street north of Main Street and associated drainage and distribution systems.

This report includes maps and drawings indicating the proposed improvements and a proposed method of financing and funding. I am available to discuss this report and this proposed project at your convenience.

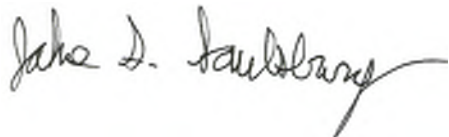
Respectfully Submitted,
Bolton & Menk, Inc.

Jake S. Saulsbury, P.E.

Enclosure

FEASIBILITY STUDY
FOR
DOWNTOWN RECONSTRUCTION, PHASE 2 PROJECT
CITY OF WACONIA, MINNESOTA

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.



Jake S. Saulsbury, P.E.

Date: August 15, 2023

Registration No. 42713

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FIGURES

DESCRIPTION

Figure 1.1	Project Location Map
Figure 2.1	Street & Sidewalk Reconstruction
Figure 2.2	Typical Street Sections
Figure 2.3	Parking Lot Improvements
Figure 2.4	Storm Sewer Reconstruction
Figure 2.5	Sanitary Sewer Reconstruction
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Figure 2.7	Storm Water Reuse System
Figure 2.8	Storm Water Reuse Treatment
Figure 3.1	Proposed Assessment Map

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DESCRIPTION

Table 4.1	Preliminary Assessment Roll
Table 4.2	Bond Debt Service & Proposed Funding Sources
Appendix A	Itemized Cost Estimates

SUMMARY & CONCLUSIONS

A. STUDY SCOPE

It is proposed that improvements to the infrastructure be constructed or reconstructed to provide the public with a sustainable system of roads, utilities, and pedestrian facilities to augment the City with good water quality, greater connectivity among residents, safer traveling for vehicles and pedestrians, and a healthier quality of life. This study investigates the feasibility of the proposed improvements, provides related project cost estimates, and recommends a proposed method for financing and funding the project. The location of these improvements is shown on Figure No. 1.1 and consists of the following project components:

1. Reconstruction of Main Street (from South Olive Street to South Spruce Street), South Elm Street, South Pine Street, South Spruce Street (from Main Street to First Street), and the parking lot in the southwest corner of Elm Street and First Street:
 - Removal and reconstruction of the entire 80-foot road right-of-way of Main Street and the entire 66-foot road right-of-way of Elm Street, Pine Street, and Spruce Street.
 - Reconstruction of Main Street and Elm Street to the City's truck route section.
 - Reconstruction of Pine Street and Spruce Street to City's residential section.
 - Replacement of the sanitary sewer system, including service laterals.
 - Replacement, upsizing, and expansion of the water system, including replacement of hydrants, gate valves, and services.
 - Replacement and expansion of the existing storm sewer system, including the addition of stormwater treatment.
 - Reconstruction of the existing sidewalks along Main Street, Elm Street, and Pine Street.
 - Construction of a stormwater reuse system on Vine Street with distribution mains located along Main Street, Elm Street, Pine Street, and Spruce Street.

The City Council requested two alternatives to be reviewed for Main Street between Elm Street and Pine Street. The contents of this Feasibility Study and the widths of the roadway, parking areas, and sidewalks contained herein reflect the City Council's direction.

B. ESTIMATED COSTS, FUNDING, AND FINANCING

Estimated project costs for each of the project components are provided in Appendix A. The project costs are summarized as follows:

1.) Option A Street Reconstruction	\$4,242,600
2.) Option B Street Reconstruction	\$4,225,800
3.) Parking Lot Reconstruction	\$299,800
4.) Utility Reconstruction	\$1,325,000
5.) Storm Water Reuse System	\$2,703,700

Option A Total Project Cost - **\$8,571,100**

Option B Total Project Cost - **\$8,554,300**

The proposed method of financing for the Downtown Reconstruction, Phase 2 Project is through the sale of a combined bond consisting of a Chapter 429 General Obligation Bond, a Chapter 115 Sanitary Sewer Revenue Bond, and a Chapter 444 Water and Storm Water Revenue Bond. The Chapter 429 Bond would be used for the street/storm sewer reconstruction. The Chapter 115 Bond would be used for the sanitary sewer reconstruction. The Chapter 444 Bond would be used for the watermain reconstruction and miscellaneous drainage improvements. PIR Capital Improvement cash would be used for the sidewalk improvements. This proposed method will be discussed further with the Finance Director and the City's Financial Consultant.

C. OVERALL FEASIBILITY AND COST EFFECTIVENESS

All improvements addressed within this report are feasible from a technical standpoint. This study addresses issues with failing or non-existent infrastructure including street pavement, storm sewer, watermain, sanitary sewer, storm water reuse, and sidewalk facilities. The improvements are necessary to provide safe and adequate infrastructure and represent cost effective solutions for doing so. Detailed cost estimates for all project components have been completed and are located in Appendix A.

SECTION 1 - INTRODUCTION

A. IMPETUS

The impetus for this report is a request from the City of Waconia to evaluate the feasibility of planned improvements for the upcoming year. Figure No. 1.1 shows the proposed project location for the Downtown Reconstruction, Phase 2 Project.

B. REPORT ORGANIZATION

To address the various projects in an orderly manner, this report is organized into four (4) sections, shown below:

- Section 1 - Introduction
- Section 2 - Street and Utility Reconstruction
- Section 3 - Stormwater Reuse Improvements
- Section 4 - Financing / Funding



SECTION 2 - STREET AND UTILITY RECONSTRUCTION

A. STREET IMPROVEMENTS

Figure No. 2.1 indicates the two proposed options for Main Street between Elm Street and Pine Street and the proposed improvements on Pine Street and Spruce Street. The street improvements include removal of the existing road sections on each of the highlighted roads and rebuilding them to current city standards, including replacement of existing curb and gutter sections. Options the City Council requested to be reviewed are outlined below:

1. Main Street (Olive Street to Elm Street)

The proposed street section for Main Street from Olive Street to Elm Street consists of a 62-foot-wide street with curb and gutter, matching the adjacent street section to the west that was reconstructed as part of the Phase 1 project. The proposed sidewalk on Main Street between Olive Street and Elm Street would be 9-feet wide on both sides of the roadway. The 9-foot sidewalk would increase the sidewalk width by approximately 1-foot on each side. Parking on Main Street between Olive Street and Elm Street would remain 60-degree parking on the north side of the road and parallel parking on the south side. The parking stall count would remain approximately the same as existing on this block of Main Street.

2. Main Street (Elm Street to Pine Street) - Option A

The proposed street section for Option A consists of a 62-foot-wide street with curb and gutter increasing the street width by approximately 8 feet. The 8 feet of increased street width would come from widening both the north and south sides of the roadway by 4 feet. Increasing the street width allows for 60-degree angled parking on the north side of Main Street which gains 8 parking stalls over the existing condition. Parking on the south side of Main Street would remain parallel parking. Option A would also increase the sidewalk width from 5 feet to 9 feet on both sides of Main Street.

3. Main Street (Elm Street to Pine Street) - Option B

The proposed street section for Option B consists of a 62-foot-wide street with curb and gutter through the commercial section of the block and 52-foot-wide street with curb and gutter through the residential section of the block. This option would increase the street width by approximately 8 feet through the commercial section of the block. The increase in street width would be approximately 4 feet on both the north and south sides of the road. Parking on the commercial section of the block would be 60-degree angled parking on the north side of the road and parallel on the south side. The parking on the north side of the road would switch to parallel parking through the residential section of the block. The south side of the road would remain parallel parking throughout the entire block. Option B's parking arrangement would result in an increase of 4 parking stalls over the existing condition. Option B would increase the sidewalk width to 9 feet in the commercial section of the block and taper into a 6-foot sidewalk with an 8-foot grass boulevard in the residential section of the block.

4. Main Street (Pine Street to Spruce Street)

The proposed street section for Main Street from Pine Street to Spruce Street consists of a 52-foot-wide street with curb and gutter. This results in no width change. Parking on the north and south sides of the road would remain parallel parking. The sidewalk on the north side of the road is proposed to be widened to 6 feet and to have a 4-foot grass boulevard.

5. Elm Street

The proposed street section for Elm Street consists of a 52-foot-wide street with curb and gutter, which matches the existing street width. Elm Street is proposed to have 7-foot sidewalks on both the east and west sides of the roadway. The parking arrangement on Elm Street would consist of 19-foot, 60-degree angled parking on the west side of the street and 9-foot parallel parking on the east side. With this parking layout there would be 12-foot drive lanes and approximately the same number of parking stalls as the existing condition.

6. Pine Street

The proposed street section for Pine Street consists of a 45-foot-wide street with curb and gutter, which matches the existing street width. Pine Street is proposed to have a 6-foot-wide sidewalk with a 3-foot grass boulevard on the west side of the roadway. The existing sidewalk on the east side of the roadway in City Square Park will be left as is, except for the reconstruction of the pedestrian ramps at the intersections. Parking on Pine Street will remain parallel parking, and the parking stall count shall remain similar to the existing condition.

7. Spruce Street

The proposed street section for Spruce Street also consists of a 45-foot-wide street with curb and gutter, decreasing the street width by less than 1-foot. Spruce Street is not proposed to have any sidewalk on the east side of the roadway. The existing sidewalk on the west side of the roadway in City Square Park will be left as is, except for the reconstruction of the pedestrian ramps at the intersections. Parking on Spruce Street will remain parallel parking, and the parking stall count shall remain similar to the existing condition.

8. Off Site Park Lot Improvements

With this project the City reviewed and evaluated the possibility of additional parking areas close to the downtown area. Figure No. 2.3 illustrates one of the potential locations near the intersection of Elm Street and First Street. This site would require coordination with the property owner and reserving some parking stalls for tenants. With the preliminary layout shown in Figure No 2.3 it would create a paved and striped lot with 30 to 35 parking stalls in the downtown area. The parking lot would be constructed with a typical section of 2 lifts of bituminous pavement (4.5”) and an aggregate base depth of 9.0”.

Construction of a standard truck route section includes three lifts of bituminous pavement (6.5”), aggregate base (12.0”), and select granular borrow (12.0”) underlain by geotextile fabric. The typical residential street section includes 2 lifts of bituminous pavement (4.5”), aggregate base (8.0”), and select granular borrow (12.0”). Both street sections are constructed on top of a compacted subgrade and both also contain daintile behind the curb. The typical section for the City standard truck route and residential section are

shown on Figure No. 2.2. The results of the soils investigation indicate poor soils could be encountered near the middle of the block on Pine Street. To provide a suitable subgrade, a layer of stabilizing aggregate will likely be needed in these areas. The 12" of select granular borrow and these additional materials are considered extra section items and are therefore not considered to be assessable.

The staging for construction will generally fall into three or four construction stages. These stages will be determined determine the final design phase of the project to help keep adequate parking, pedestrian access, and business access available at all times. The stages will be continually changing as the work progresses from utilities to street construction and will be adjusted as necessary.

B. STORM SEWER IMPROVEMENTS

The existing storm sewer systems on Main Street and Elm Street will be removed and reconstructed as shown on Figure No. 2.4. New storm sewer is proposed to be constructed on Spruce Street for future connection with storm sewer on First Street. The existing drainage patterns will primarily be maintained.

Additional stormwater treatment will be required in order to meet the Carver County Watershed Management Organization's rules. Due to the limited amount of green space in the right-of-way, underground treatment options will be evaluated during the final design phase of the project.

The total estimated cost for the proposed street and storm sewer reconstruction improvements is \$3,744,600. Of this amount, \$564,000 is considered assessable. Itemized cost estimates are provided in Appendix A of this report. Financing and funding for the entire project is discussed in Section 4.

C. SIDEWALK IMPROVEMENTS

The proposed sidewalk reconstruction locations and alternates are also shown on Figure No. 2.1. The two proposed options for the Main Street sidewalk are for the block between Elm Street and Pine Street. The current sidewalk on Main Street from Elm Street to Pine Street will be reconstructed and the width of sidewalk/boulevard will vary depending on which street width is selected. The current sidewalk along both sides of Main Street from Olive Street to Elm Street are proposed to be reconstructed to a width of 9-feet. Elm Street sidewalk is proposed to be reconstructed in the same location to a width of 7-feet

depending on building locations. The current 5-foot sidewalk on Pine Street is proposed to be reconstructed to a width of 6 feet with a 3-foot boulevard. The current sidewalk on the north side of Main Street from Pine Street to Spruce Street is proposed to be reconstructed to a width of 6 feet with a 4-foot boulevard. All existing and proposed pedestrian ramps will be constructed to Americans with Disabilities Act (ADA) standards to provide adequate access to all users.

The total estimated cost of the sidewalk improvements is \$498,000 which is not considered an assessable cost. An itemized cost is provided in Appendix A of this report. Financing and funding for the entire project is discussed in Section 4.

D. SANITARY SEWER IMPROVEMENTS

The sanitary sewer improvements consist of reconstruction of sewer main, manholes, and sewer services on Main Street and Elm Street as shown on Figure No. 2.5. The sewer reconstruction consists of replacing the old and deteriorated, clay sewer system with an 8-inch PVC sewer main and with sewer services from the main to the property line. Sanitary manholes will be reconstructed, and new sewer will be stubbed out of the intersections and connected to the existing pipes north and east of the Main Street and Spruce Street intersection.

The total estimated cost for all of the sanitary sewer improvements is \$411,500. Of this amount, \$181,100 is considered assessable. Itemized cost estimates are provided in Appendix A. Financing and funding is discussed in Section 4.

E. WATERMAIN IMPROVEMENTS

Figure No. 2.6 indicates the proposed watermain improvements. The existing watermain consists of 4-inch main on Elm Street and 6-in main on Main Street. The existing system is aging and is susceptible to breakages and leaks. Breakages and leaks result in high maintenance and repair costs, service disruptions, and saturation of the street subgrade. Therefore, the proposed improvements include removing and replacing the entire watermain system within the street right-of-way and upsizing to an 8-inch main. Replacement includes the mainline, gate valves, hydrants, and services. The watermain reconstruction will stop short of the intersection of Elm Street and First Street in order to not impact that intersection. The proposed work includes adding watermain on Spruce Street between Main Street and First Street to create a loop. This loop will improve water quality and will assist with operations by allowing for smaller isolation zones in the

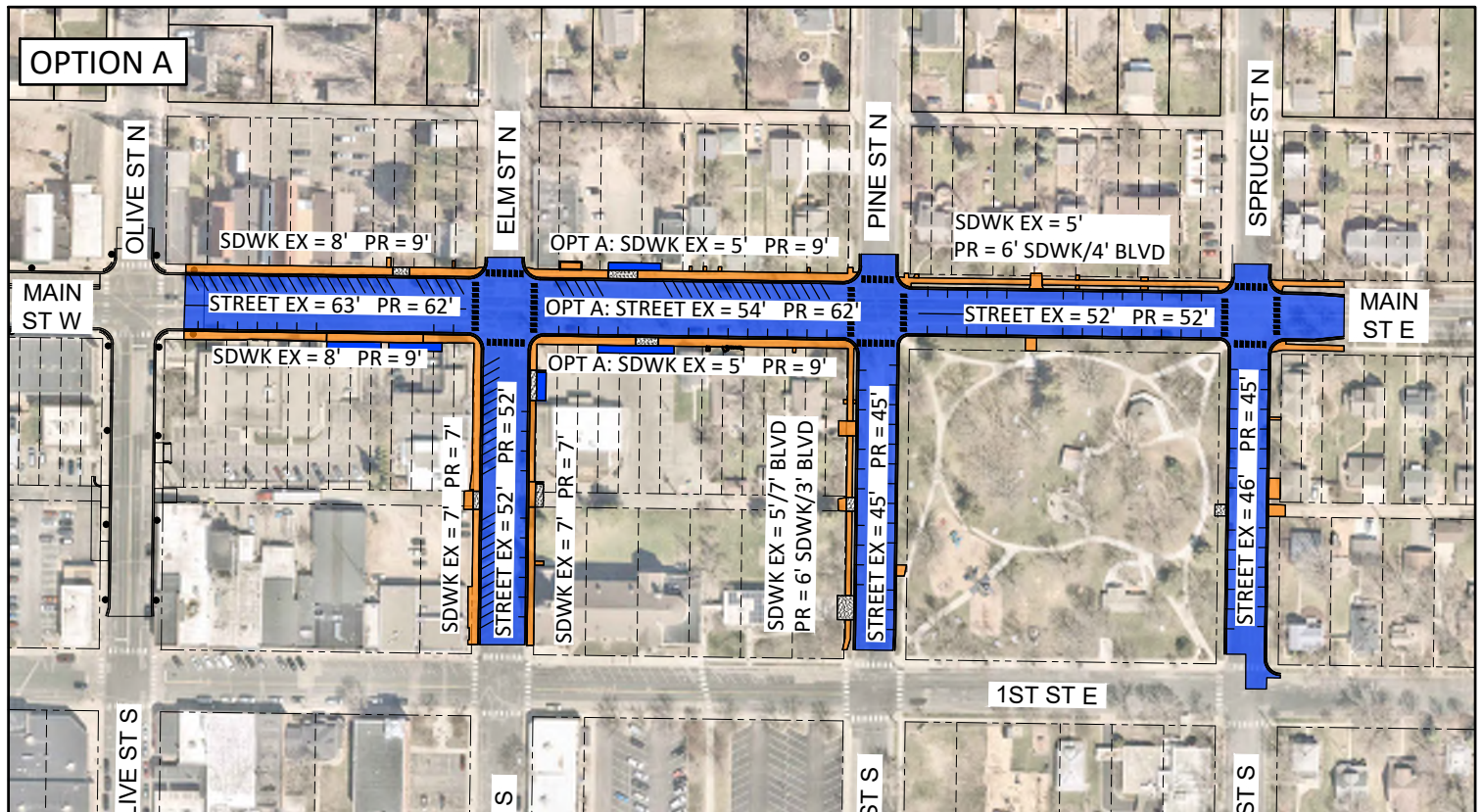
downtown area. The watermain looping is considered an extra item and is therefore not considered assessable. The new watermain will be stubbed out to the north and the east of the Main Street and Spruce Street intersection and connected to the existing pipes so the intersection will not need to be reconstructed again with future adjacent projects.

Water services along Main Street and Elm Street will be constructed into the buildings that are adjacent to the road. This will involve connecting inside the buildings and extra work to bore through the foundation walls and make any necessary adjustments to interior connections. Curb stops will be constructed within the city right-of-way for future operation and maintenance needs as standard practice.

The proposed pipe material is polyvinyl chloride pipe (PVC). This pipe is more resistant to corrosion from the in-place clay soils. Previous geotechnical evaluations on adjacent projects included soil resistivity testing to determine how corrosive the in-place soils are. These tests resulted in resistivity values showing the in-place soil to be moderately corrosive. To protect the watermain against corrosion, the following steps will be taken during construction:

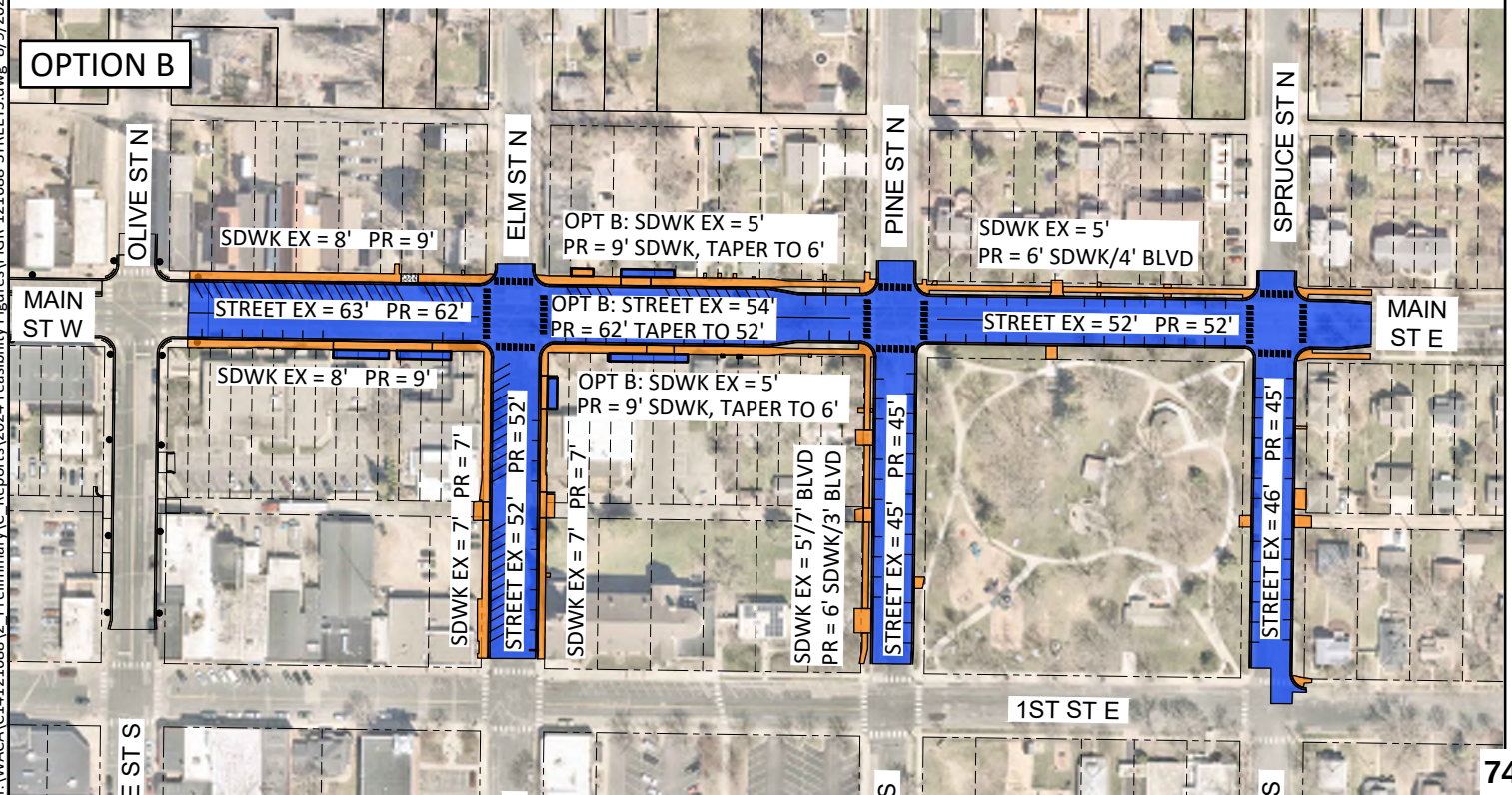
- All hydrants and gate valves will be manufactured and secured utilizing stainless steel bolts.
- All fittings will be coated with fusion bonded epoxy.
- All ductile iron pipe, fittings, valves, valve boxes, and hydrant risers will be wrapped in polyethylene encasement material and provided with cathodic protection.

The total estimated cost for all of the watermain improvements is \$913,400. Of this amount, \$351,900 is considered assessable. Itemized cost estimates are provided in Appendix A. Financing and funding is discussed in Section 4.

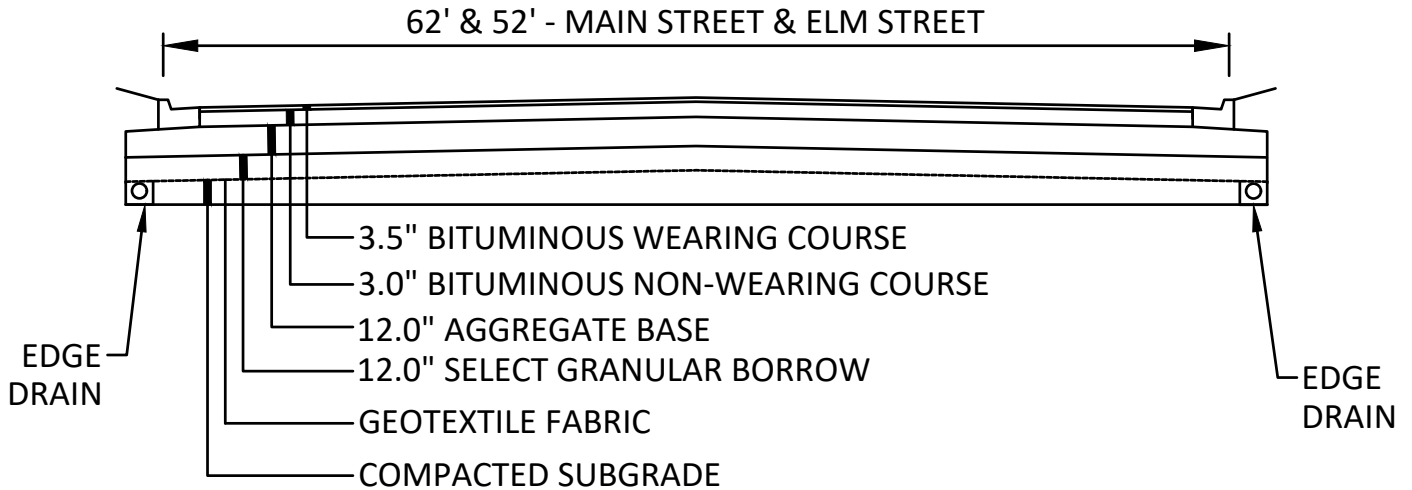


LEGEND

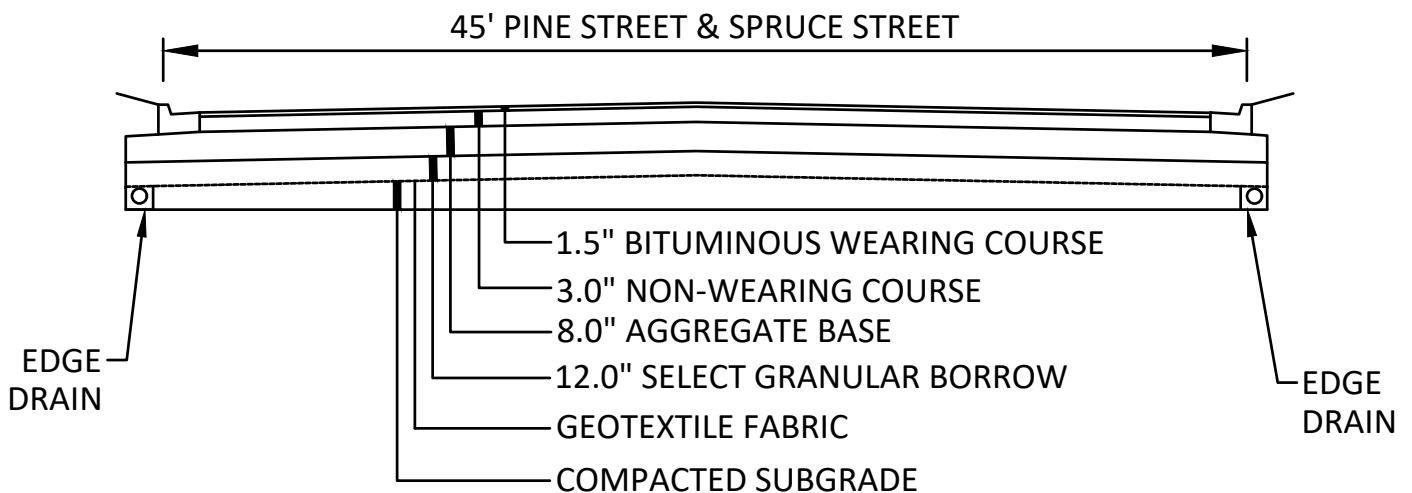
-  PROPOSED STREET RECONSTRUCTION
-  PROPOSED SIDEWALK RECONSTRUCTION

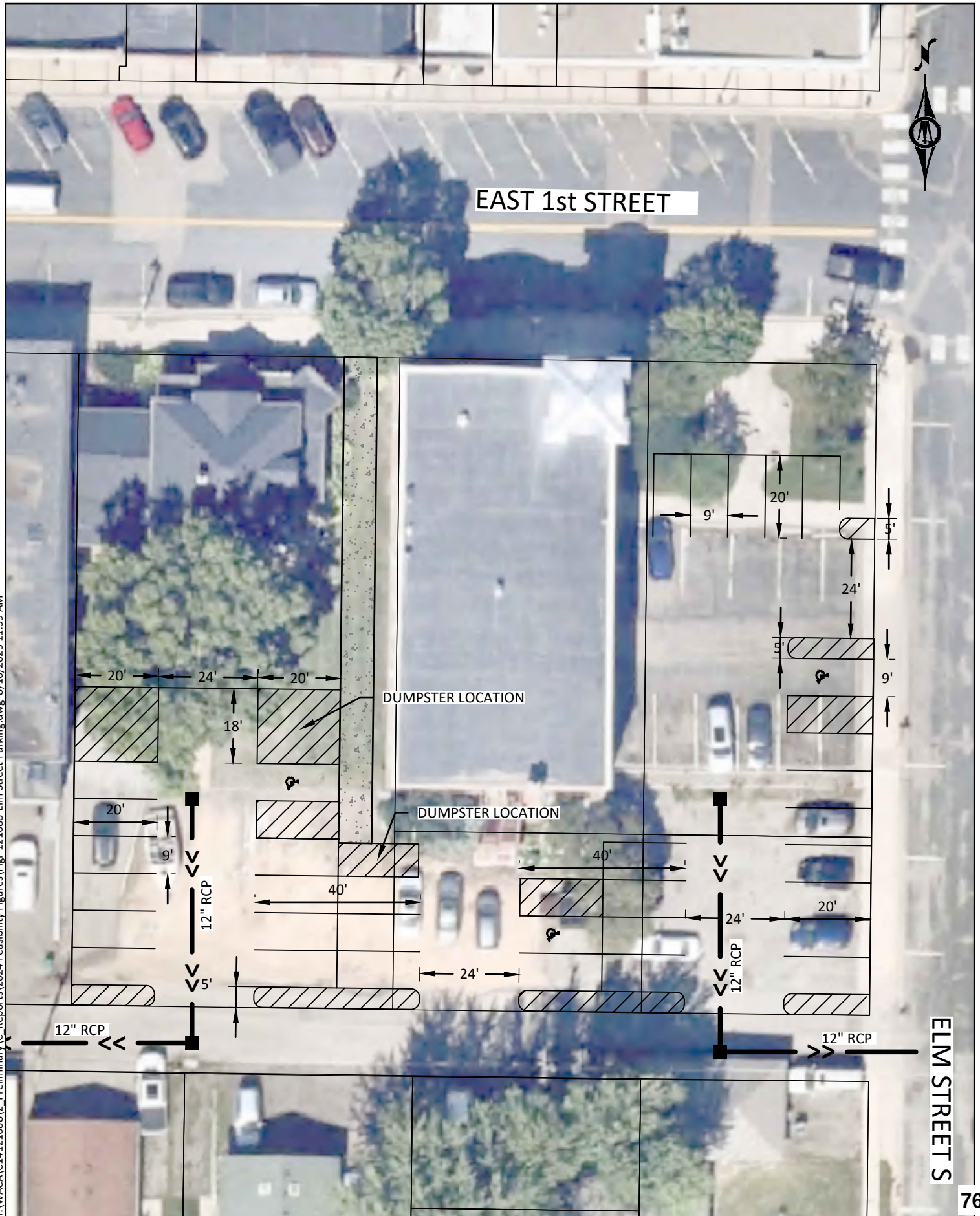
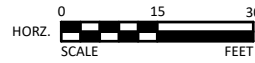


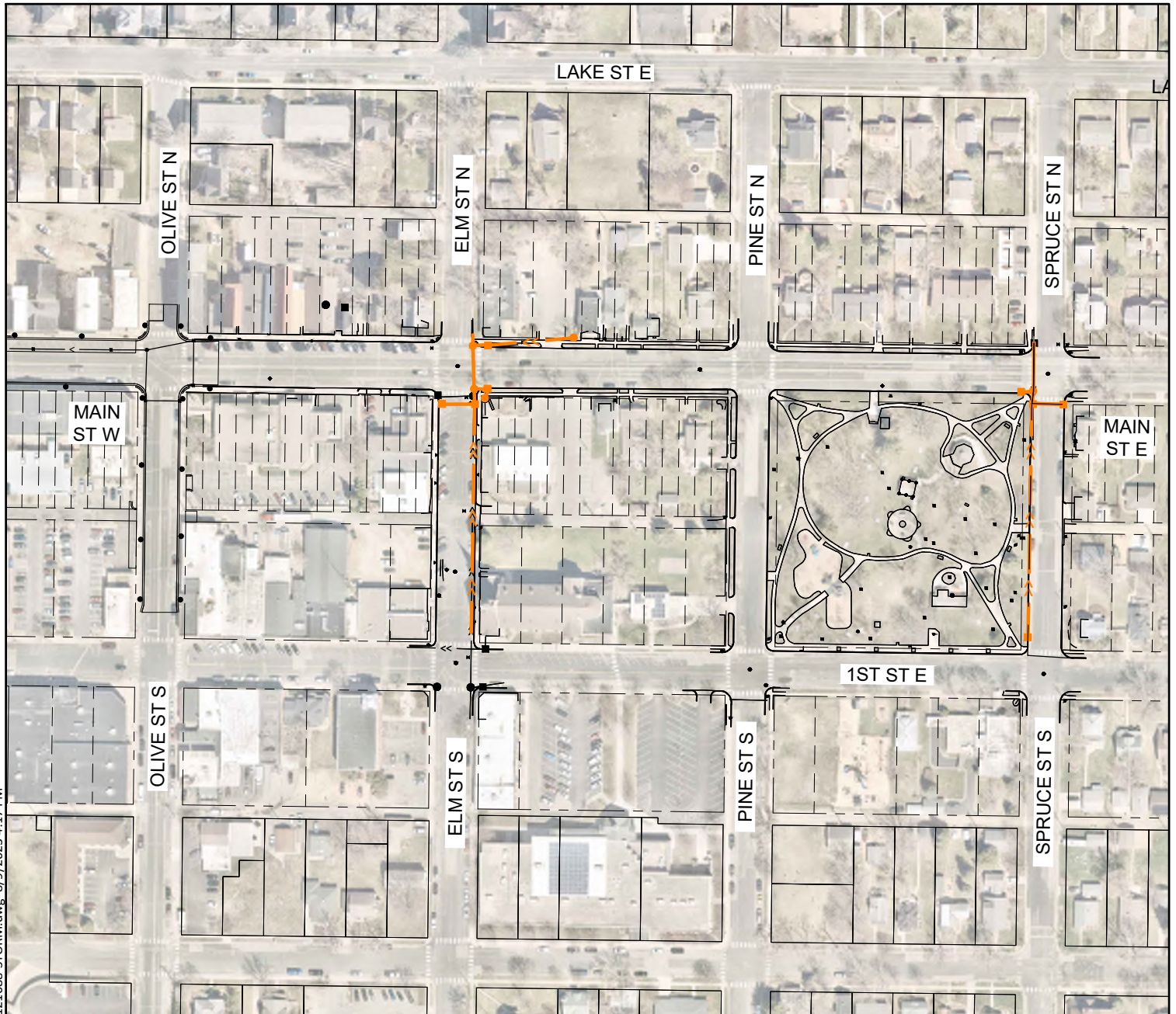
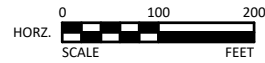
STREET SECTION (TRUCK SECTION)
NOT TO SCALE



STREET SECTION (RESIDENTIAL SECTION)
NOT TO SCALE



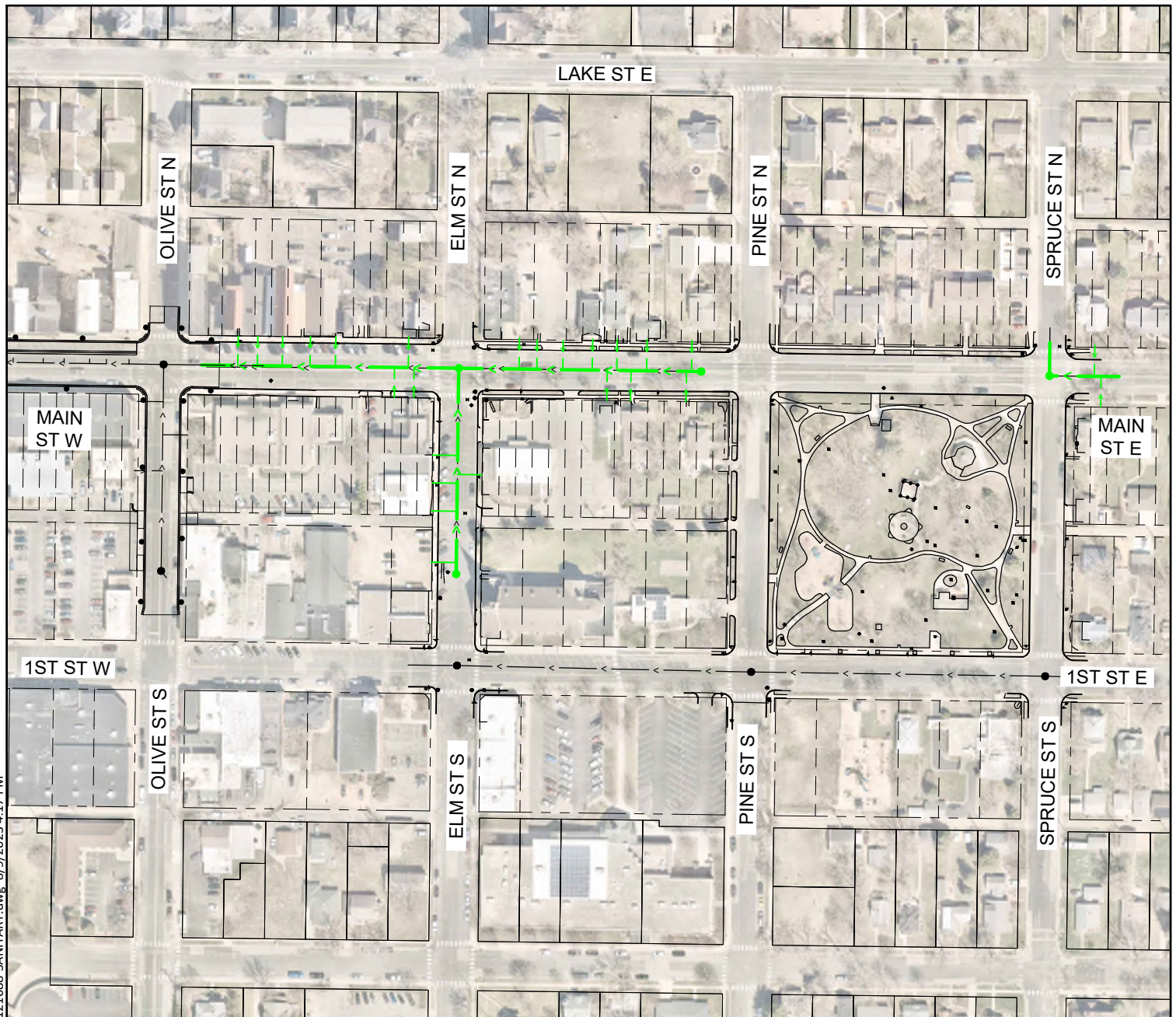




LEGEND

- << — << — EXISTING STORM SEWER
- << — << — CONSTRUCT STORM SEWER
- CONSTRUCT MANHOLE
- CONSTRUCT CATCH BASIN

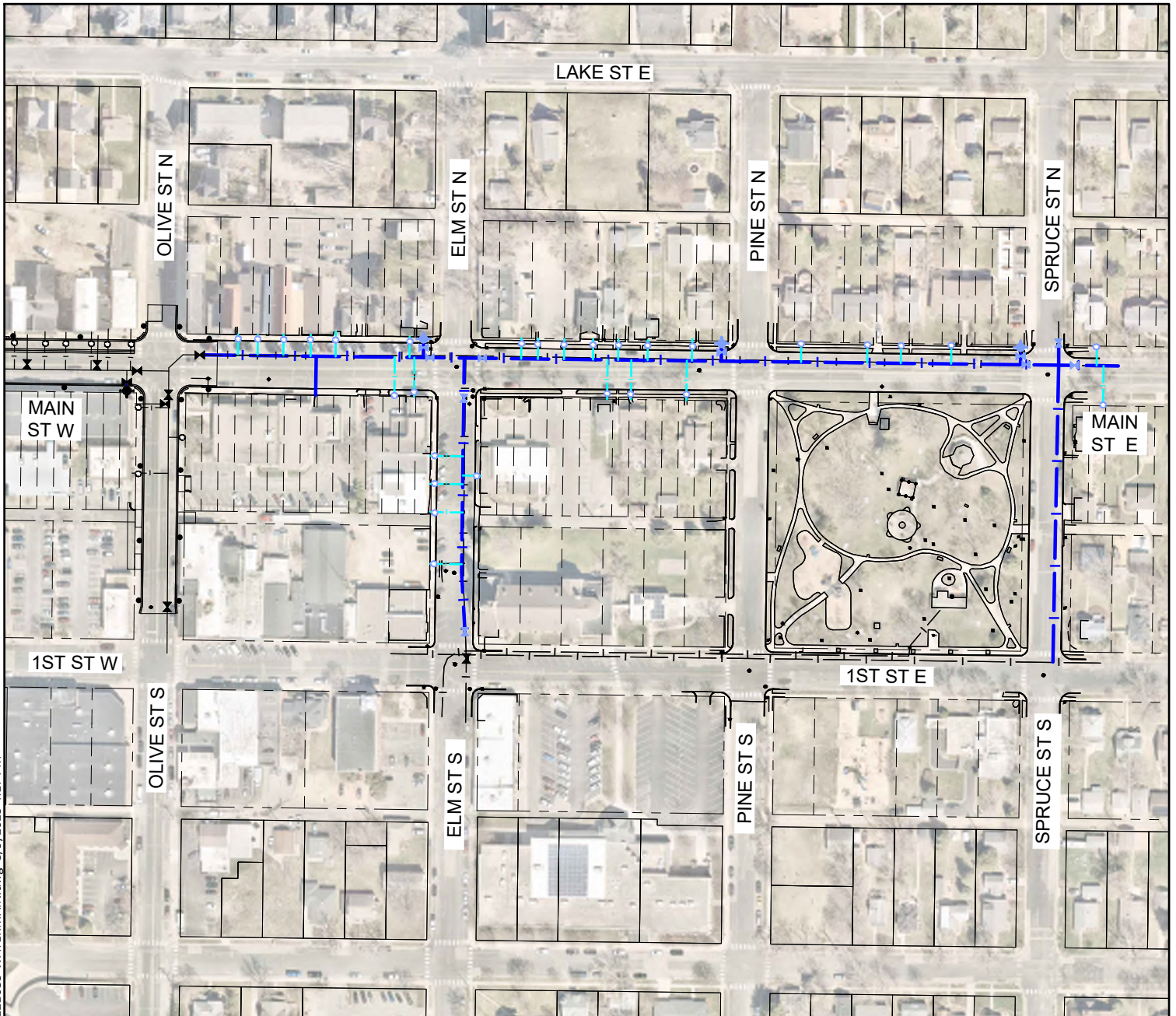
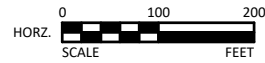




LEGEND

- 
 EXISTING SANITARY SEWER
 REPLACE SANITARY SEWER
 REPLACE SANITARY SEWER SERVICE
 REPLACE SANITARY SERVICE
 REPLACE MANHOLE





LEGEND

- | — | — EXISTING WATERMAIN
- | — | — REPLACE WATERMAIN
- - - | - - - REPLACE WATER SERVICE
- ★ ✕ HYDRANTS AND VALVES



SECTION 3 - STORMWATER REUSE IMPROVEMENTS

A. STORMWATER REUSE SYSTEM

Figure No. 2.7 and 2.8 indicate the proposed improvements to the stormwater reuse system.

The purpose of this proposed reuse system is to reduce the volume of stormwater runoff allowed to discharge untreated to Lake Waconia while also reducing the volume of potable water currently being utilized for irrigation. This will be done by capturing runoff from a 13.5-acre drainage area, that consists of 12.8 acres of impervious surface, and storing it in an underground chamber system to be utilized for irrigation in green spaces such as the Downtown Area, the City Park, and the townhomes on the old county road corridor. The stored water will receive UV (ultraviolet) treatment prior to being utilized for irrigation. UV treatment will be used over chlorination as there is no detention time required which allows for a smaller storage tank and a more cost-effective system. The main areas to be irrigated with the reuse water will have a large amount of human contact so the storm water will need to be treated to a level of 2.2 Most Probable Number(MPN)/100ml.

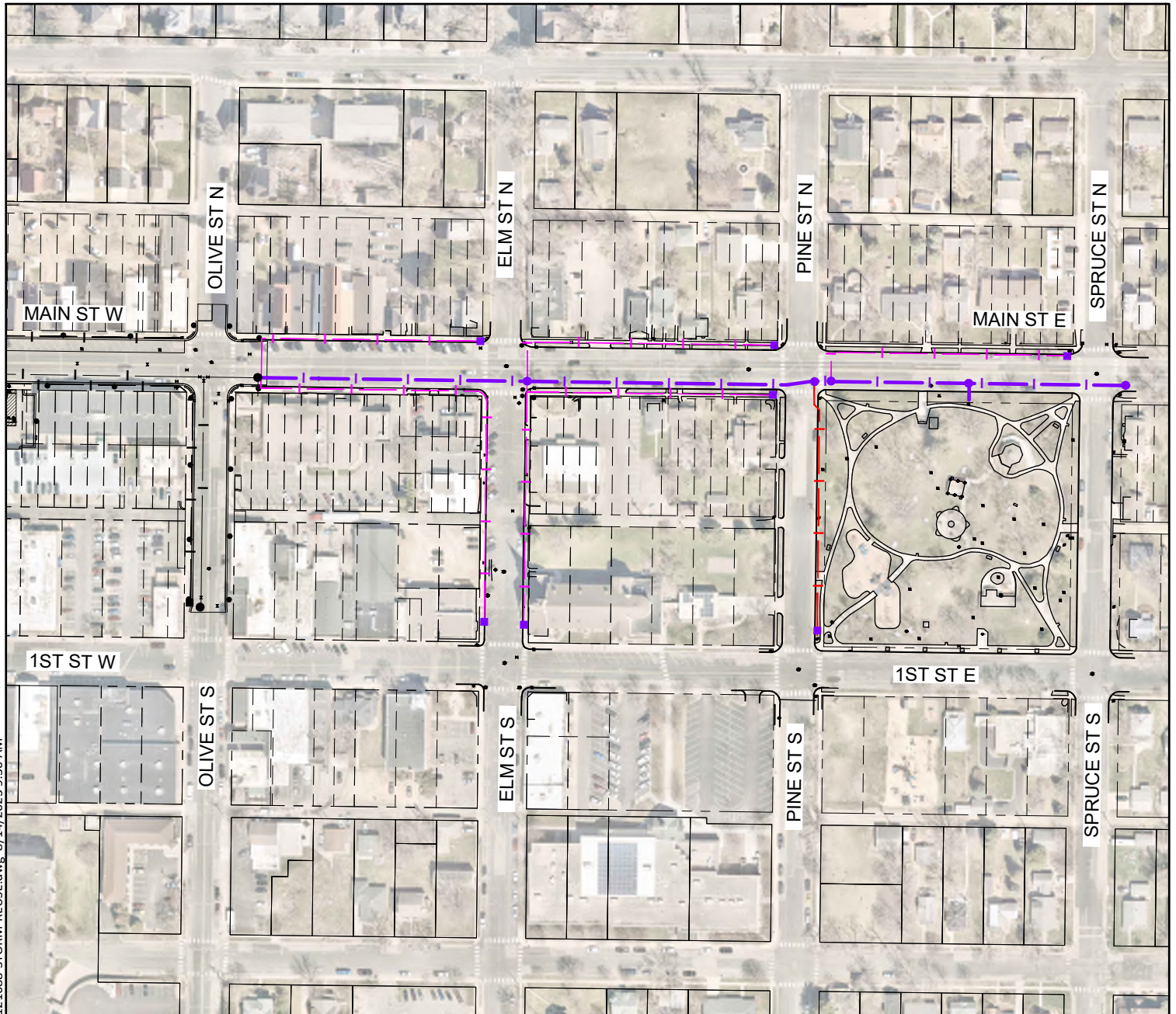
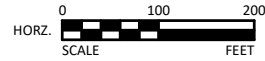
The storage tank is proposed to be located on Vine Street just south of the alley between Main Street and Lake Street. The holding tank is proposed to be half under Vine Street and half on the property in the northeast corner of Main Street and Vine Street (Parcel ID: 750503740). The City is still in communication with the owner of the property to acquire the easement for the proposed location. The pumping and treatment building is proposed to be located in the northeast corner of the HEI parking lot (Parcel ID: 750503740) and have exterior dimensions of 36'x15'. The proposed storage tank would have a sump at the upstream end to catch sediment. This system will use a single pump system to pump the stored water from the underground system to the areas to be irrigated.

To connect the storage tank to the storm sewer system a 36" storm pipe will be placed from the Downtown Reconstruction, Phase 1 stub to the tank. The storage tank will have an overflow outlet on the north side that connects into the existing storm system for when the tank is at capacity and there is still flow coming into the tank.

Lake Waconia is currently listed on the MPCA impaired waters list for mercury in fish tissue and fish bioassessment. This project will improve water quality for Lake Waconia.

The project will also provide a benefit to the aquifers utilized for the city's drinking water by reducing the usage of potable water for irrigation.

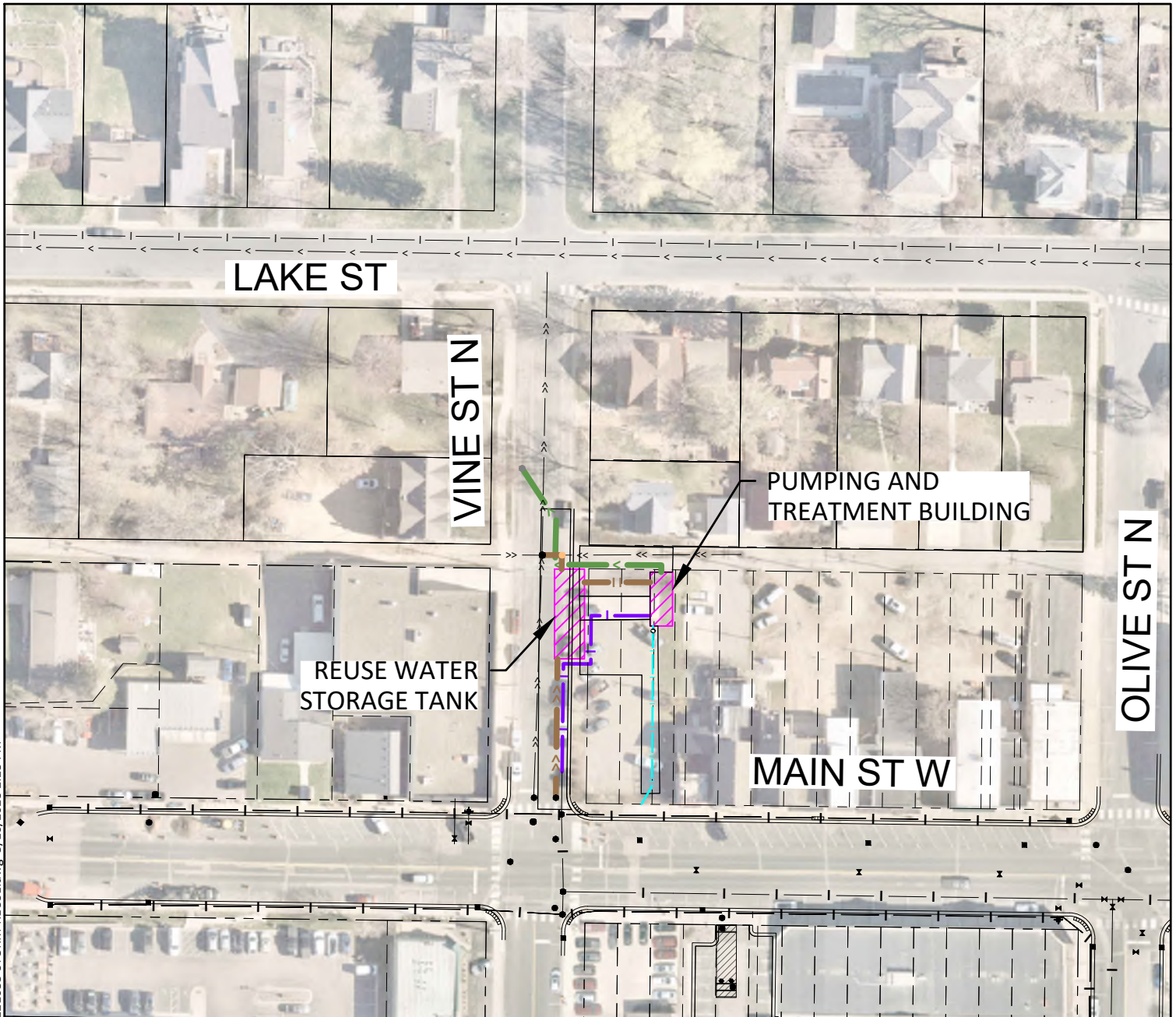
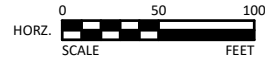
The total estimated cost for all of the reuse system is \$2,703,700 which is not considered an assessable cost and does not include a potential cost for easement. An itemized cost estimate is provided in Appendix A. Financing and funding is discussed in Section 4.



LEGEND

- 4" WATER REUSE PIPE
- 2" WATER REUSE PIPE
- 1" WATER REUSE PIPE
- ACCESS MANHOLE
- BLOWOFF IN CONCRETE MANHOLE
- EX 4" WATER REUSE PIPE (2023)
- EX 1" WATER REUSE PIPE (2023)





LEGEND

-  4" WATER REUSE PIPE
-  1" WATER SERVICE PIPE
-  SANITARY SEWER PIPE
-  STORM SEWER PIPE
-  STORM STRUCTURE



SECTION 4 - FINANCING / FUNDING

A. FINANCING

The proposed method of financing for the Downtown Reconstruction, Phase 2 Project is through the sale of a combined bond consisting of a Chapter 429 General Obligation Bond, a Chapter 115 Sanitary Sewer Revenue Bond, and a Chapter 444 Water and Storm Water Revenue Bond. The Chapter 429 Bond would be used for the street/storm sewer reconstruction. The Chapter 115 Bond would be used for the sanitary sewer reconstruction. The Chapter 444 Bond would be used for the watermain reconstruction and miscellaneous drainage improvements. PIR Capital Improvement cash would be used for the sidewalk improvements.

It is recommended that the City discuss financing options in more detail with their Financial Consultant. Combining the financing of this project with other possible planned improvements or planned equipment purchases should also be evaluated and discussed.

The total estimated project cost for Option A is \$8,571,100, and if Option B is selected overall project costs would be reduced. The detailed cost estimates for individual project components are located in Appendix A. The estimates consist of the estimated construction cost based on recent construction bid prices, a 10% allowance for contingencies, and a 30% allowance for bidding, surveying, engineering, construction staking, construction administration, and inspection costs.

B. FUNDING

There are different funding sources proposed to be used to service the bond debt including: special assessments, new special debt levy, stormwater funds, sewer funds, water funds, and PIR funds. The City has funds available in the various fund accounts to service the debt. And if necessary, the City also has funds available in the general fund to service the debt.

The following sections provide a cost apportionment and funding source summary for the various project components.

Also, to date the following grant funds have been received or are being pursued:

- \$10,000 2022 CCWMO Cost Share Grant (Approved)
- \$50,000 2023 CCWMO Cost Share Grant (Approved)
- \$75,000 2024 CCWMO Cost Share Grant (Pending)
- \$200,000 2023 Watershed-Based Implementation Funding (Approved)
- \$250,000 2024 Clean Water Fund Grant (Pending, Amount TBD)
- \$300,000 MN Department of Health / Public Facilities Authority Lead Water Service Line Replacements (Pending, \$10,000 per Found Lead Water Service)

C. STREET / STORM / SIDEWALK RECONSTRUCTION

The total project costs are apportioned as follows:

Item	Cost / FF	City Cost or Assessment	Recommended Funding Source
Sidewalk Construction Cost			
Sidewalk Construction Cost	\$498,000	City	PIR Funds
Total Project Cost:	\$498,000		
Street / Storm Reconstruction Costs			
Extra Section Depth / Width Cost	\$2,169,100	City	New Special Debt Levy
Street / Storm Reconstruction Cost	\$1,575,500		
Total Street / Storm Reconstruction Cost:	\$3,744,600		
Assessment Calculations			
Standard Street Section Cost	\$1,575,500		
City Contribution (50%)	\$787,800	City	New Special Debt Levy
Assessable Eligible Portion (50%)	\$787,800		
Total Front Footage	3,984.0		
Corner Lot Front Footage (Feet)	583.5		
Assessment Basis Front Footage (Feet)	3,400.50		
Assessable Cost Per Front Foot	\$231.66		
Non-Assessable Front Footage (Feet)	965.7		
Non-Assessable Cost	\$223,700	City	New Special Debt Levy
City Front Footage (Feet)	495.00		
City Front Footage Cost	\$114,700		
Assessment Front Footage (Feet)	2,434.8		
Total Assessed Amount	\$564,000	Assessment	Special Assessments
Total City Cost:	\$3,678,600		
Total Assessed Amount:	\$564,000		
Total Project Cost:	\$4,242,600		

D. SANITARY SEWER

The sanitary sewer proposed for reconstruction services commercial and residential properties. Commercial and multi-family properties are converted to equivalent residential units (ERUs) based on water usage. Four properties exceed the normal water usage for a typical single-family home. These properties and their ERU calculations are as follows:

Property Owner	Property Address	Annual Water Usage (gal)	Daily Water Usage (gal)	Daily Usage / ERU (gal)	*ERUs
4Main LLC	4 Main Street E	63,385	484	275	1.5
First Natl Bank of Waconia	53 Main Street W	317,000	868	275	3.0
CQ Rental LLC	1 Main Street W	155,000	425	275	1.5
16 South Elm Street LLC	16 Elm Street S	301,000	825	275	3.0

* ERUs are rounded down to the nearest 0.5 units

On previous projects the portion of the sanitary sewer cost that was assessed consisted of 50 percent of the typical project sanitary sewer cost. Costs related to soil corrections, bypass pumping, and vibration monitoring are isolated as City costs and not included in the assessment calculations.

Based on the information and recommendations above, the total project costs for the sanitary sewer component of the proposed project are apportioned as follows:

Item	Cost / Units	City Cost or Assessment	Recommended Funding Source
Total Sanitary Sewer Project Costs			
Typical Sanitary Sewer Project Cost	\$362,200		
City Contribution Cost	\$49,300	City	Sewer Fund
Total Project Cost:	\$411,500		
Assessment Calculations			
Assessment Eligible Portion	\$362,200		
City Contribution (50%)	\$181,100	City	Sewer Fund
Assessable Eligible Portion (50%)	\$181,100		
Sanitary Sewer Units	27.0		
Assessment Per Unit	\$6,708.87		
Assessable Units	27.0		
Non-Assessable Units	0		
Non-Assessable Cost	\$0	City	Sewer Fund
Total Assessed Amount	\$181,100	Assessment	Special Assessments
Total City Cost:	\$230,400		
Total Assessed Amount:	\$181,100		
Total Project Cost:	\$411,500		

E. WATERMAIN

The watermain proposed for reconstruction services commercial and residential properties. Same as with the sanitary sewer, commercial and multi-family properties are converted to equivalent residential units (ERUs) based on water usage. Five properties exceed the normal water usage for a typical single-family home. These properties and their ERU calculations are as follows:

Property Owner	Property Address	Annual Water Usage (gal)	Daily Water Usage (gal)	Daily Usage / ERU (gal)	*ERUs
4Main LLC	4 Main Street E	63,385	484	275	1.5
The Mitchell Ranch LLP	140 Main Street E	404,000	1,107	275	4.0
First Natl Bank of Waconia	53 Main Street W	317,000	868	275	3.0
CQ Rental LLC	1 Main Street W	155,000	425	275	1.5
16 South Elm Street LLC	16 Elm Street S	301,000	825	275	3.0

* ERUs are rounded down to the nearest 0.5 units

On previous projects, the portion of the watermain cost that was assessed consisted of 50 percent of the standard water system cost. Costs related to soil corrections, looping, vibration monitoring, boring, and cathodic protection are isolated as City costs and not included in the assessment calculations.

The total project costs for this component of the proposed project are apportioned as follows:

Item	Cost / Units	City Cost or Assessment	Recommended Funding Source
Total Watermain Project Costs			
City Contribution Cost	\$209,600	City	Water Fund
Standard Water System Costs	\$703,800		
Total Project Cost:	\$913,400		
Assessment Calculations			
Assessment Eligible Portion	\$703,800		
City Contribution (50%)	\$351,900	City	Water Fund
Assessable Eligible Portion (50%)	\$351,900		
Watermain Units	34.0		
Assessment Per Unit	\$10,349.25		
Assessable Units	34.0		
Non-Assessable Units	0		
Non-Assessable Cost	\$0	City	Water Fund
Total Assessed Amount	\$351,900	Assessment	Special Assessments
Total City Cost:	\$561,500		
Total Assessed Amount:	\$351,900		
Total Project Cost:	\$913,400		

F. STORMWATER REUSE IMPROVEMENTS

The costs associated with the Stormwater Reuse improvements are non-assessable costs and are proposed to be funded with various City funds. The total estimated project cost is \$2,703,700.

Itemized cost estimates are provided in Appendix A of this report.

G. OVERALL COST SUMMARY

In summary, a portion of the street and utility reconstruction work will be assessed to benefitting property owners and the remaining work is recommended to be paid by the City. The overall costs for all project components are summed as follows:

Item	Cost	Recommended Funding Source
Assessed Amount (Per Policy)	\$1,097,000	Special Assessments
Street & Utility Reconstruction (City Cost)	\$4,770,400	Combined Bond Funds & PIR Capital Improvement Funds
Stormwater Reuse Improvements	\$2,703,700	Stormwater Funds & Grant Funds
Total Overall Project Cost:	\$8,571,100	

Note – If street layout Option B is selected overall project costs would be reduced

H. ASSESSMENTS

The assessable portion of the street and utility reconstruction work is proposed to be assessed to the benefitting properties in accordance with current City policy as follows:

- Street Reconstruction - 50% Assessed on a Front Footage Basis of Standard City Residential Street
- Storm Sewer Reconstruction - 50% Assessed on a Front Footage Basis
- Sanitary Sewer Reconstruction - 50% Assessed on a Unit Basis
- Watermain Reconstruction - 50% Assessed on a Unit Basis

Some of the project components would not be assessed. These project components include the following:

- Extra Depth and Width of Street Reconstruction
- Sidewalk Reconstruction

- Stormwater Treatment
- Sanitary Sewer & Watermain Non-Standard Construction Items

The current estimated assessable percentage of the street and utility reconstruction project is 18.7%. The current estimated assessable percentage of the total project, including the reuse system is 12.8%. The minimum required assessable percentage for a Chapter 429 bond is 20.0%. Consistent with City policy and previous assessment projects, appraisals will be conducted to determine the special benefit amounts. The assessments will be capped at these amounts as determined by the appraisal process. This process is anticipated to considerably lower the assessments and reduce the assessable percentage of the project. Therefore, as discussed in the previous section, a combined bond approach is recommended in order meet all statutory requirements.

A copy of the current City assessment policy is included in Appendix B of this report for reference. To follow is an assessment area map (Figure 3.1), a preliminary assessment roll (Table 4.1) for the street reconstruction project area, and debt service and proposed funding sources (Tables 4.2).



Prop. No.	Property Address	Owner	PID
1	48 MAIN ST W	DAVIS R III & PEGGY C PHILIP	750503860
2	44 MAINST W	SHAPE IT UP FITNESS LLC	750503850
3	36 MAINST W	SS JENSEN PROPERTIES LLC	750503830
4	20 MAIN ST W	DANIEL R NEUBAUER TRUST	750503820
5	16 MAIN ST W	BETH ANN & JOSEPH SCHRUPP	750503813
6	4 MAIN ST W	ALLEN LUETH	750503812
7	4 MAIN ST E	4MAIN LLC	750503990
8	MAIN ST W	4MAIN LLC	750503980
9	MAIN ST W	4MAIN LLC	750503970
10	24 MAIN ST E	BRIDEN PROPERTIES LLC	750503960
11	32 MAIN ST E	SOLTIS PROPERTIES LLC	750503950
12	40 MAIN ST E	JUSTIN YOUNG & MARIAH KETCHER	750503940
13	52 MAIN ST E	JEFFREY & JILL SCHMITT	750503930
14	104 MAIN ST E	JOHN S & KRISTINE DVORAK	750504070
15	116 MAIN ST E	JAMES K & JANALEE KITE	750504060
16	128 MAIN ST E	TIMOTHY L & RHONDA K TESCH	750504050
17	140 MAIN ST E	THE MITCHELL RANCH LLP	750504040
18	200 MAIN ST E	THERESA L HAMER & PAMELA L LEACH	750504170
19	53 MAIN ST W	FIRST NATL BANK OF WACONIA	750502720
20	MAIN ST W	CQ RENTAL LLC	750502741
21	1 MAIN ST W	CQ RENTAL LLC	750502730
22	8 ELM ST S	APG REAL PROPERTIES LLC	750502740
23	16 ELM ST S	16 SOUTH ELM STREET LLC	750502750
24	26 ELM ST S	16 SOUTH ELM STREET LLC	750502630
25	40 ELM ST S	EMBARQ CORP	750502640
26	32 MAIN ST E	CHURCH OF ST JOSEPH	750503550
27	9 MAIN ST E	CHURCH OF ST JOSEPH	750502560
28	29 MAIN ST E	THE CHURCH OF SAINT JOSEPH OF WACONIA	750502570
29	37 MAIN ST E	STEVEN J YETZER	750502580
30	4 PINE ST S	ROSEMARY PETERSON	750502600
31	MAIN ST E	WACONIA CITY (PARK)	750502540
32	201 MAIN ST E	THOMAS J MATHWIG & ANDREA SICHENEDER	750502480
33	200 1ST ST E	MARTHA LAYBOURN	750502470

TABLE 4.1 - PRELIMINARY ASSESSMENT ROLL
DOWNTOWN RECONSTRUCTION, PHASE 2 PROJECT
8/15/2023

PROP. NO.	P.I.D.	OWNER	PROPERTY ADDRESS	OWNER ADDRESS		F/F	*STREET ASSESSMENT	WATERMAIN UNITS	WATERMAIN ASSESSMENT	SANITARY SEWER UNITS	SANITARY SEWER ASSESSMENT	TOTAL ASSESSMENT	**ANNUAL ASSESSMENT PAYMENT
1	750503860	DAVID R III & PEGGY C PHILP	48 MAIN STREET W	10720 NORTH SHORE RD	WACONIA, MN 55387	44.00	\$10,193.15	1.0	\$10,349.25	1.0	\$6,708.87	\$27,251.27	\$3,615.37
2	750503850	SHAPE IT UP FITNESS LLC	44 MAIN STREET W	408 FIRST STREET W	WACONIA, MN 55387	33.40	\$7,737.53	1.0	\$10,349.25	1.0	\$6,708.87	\$24,795.65	\$3,289.58
3	750503830	SS JENSEN PROPERTIES LLC	36 MAIN STREET W	36 MAIN STREET W	WACONIA, MN 55387	54.60	\$12,648.77	1.0	\$10,349.25	1.0	\$6,708.87	\$29,706.89	\$3,941.15
4	750503820	DANIEL R NEUBAUER TRUST	20 MAIN STREET W	252 SUNSET BLVD	WACONIA, MN 55387-1227	44.00	\$10,193.15	1.0	\$10,349.25	1.0	\$6,708.87	\$27,251.27	\$3,615.37
5	750503813	BETH ANN & JOSEPH R SCHRUPP	16 MAIN STREET W	16 MAIN STREET W	WACONIA, MN 55387-1020	62.00	\$14,363.08	1.0	\$10,349.25	1.0	\$6,708.87	\$31,421.19	\$4,168.58
6	750503812	ALLEN LUETH	4 MAIN STREET W	10820 COUNTY ROAD 33	NORWOOD YOUNG AMERICA, MN 55397	35.00	\$8,108.19	1.0	\$10,349.25	1.0	\$6,708.87	\$25,166.31	\$3,338.76
7	750503990	4MAIN LLC	4 MAIN STREET E	13911 RIDGEDALE DR STE 243	MINNETONKA, MN 55305	22.00	\$5,096.58	1.5	\$15,523.87	1.5	\$10,063.31	\$30,683.75	\$4,070.74
8	750503980	4MAIN LLC	NA	13911 RIDGEDALE DR STE 243	MINNETONKA, MN 55305	44.00	\$10,193.15	0.0	\$0.00	0.0	\$0.00	\$10,193.15	\$1,352.30
9	750503970	4MAIN LLC	NA	13911 RIDGEDALE DR STE 243	MINNETONKA, MN 55305	43.50	\$10,077.32	0.0	\$0.00	0.0	\$0.00	\$10,077.32	\$1,336.94
10	750503960	BRIDEN PROPERTIES LLC	24 MAIN STREET E	35 WILLOW WOOD DR	EXCELSIOR, MN 55331	32.50	\$7,529.03	1.0	\$10,349.25	1.0	\$6,708.87	\$24,587.15	\$3,261.92
11	750503950	SOLTIS PROPERTIES LLC	32 MAIN STREET E	32 MAIN STREET E	WACONIA, MN 55387-1113	34.00	\$7,876.53	1.0	\$10,349.25	1.0	\$6,708.87	\$24,934.64	\$3,308.02
12	750503940	JUSTIN YOUNG & MARIAH KETCHER	40 MAIN STREET E	40 MAIN STREET E	WACONIA, MN 55387	44.00	\$10,193.15	1.0	\$10,349.25	1.0	\$6,708.87	\$27,251.27	\$3,615.37
13	750503930	JEFFREY & JILL SCHMITT	52 MAIN STREET E	52 MAIN STREET E	WACONIA, MN 55387	44.00	\$10,193.15	1.0	\$10,349.25	1.0	\$6,708.87	\$27,251.27	\$3,615.37
14	750504070	JOHN S & KRISTINE H DVORAK	104 MAIN STREET E	104 MAIN STREET E	WACONIA, MN 55387	33.00	\$7,644.86	1.0	\$10,349.25	0.0	\$0.00	\$17,994.11	\$2,387.24
15	750504060	JAMES K & JANALEE R KITE	116 MAIN STREET E	116 MAIN STREET E	WACONIA, MN 55387-1115	88.00	\$20,386.30	1.0	\$10,349.25	0.0	\$0.00	\$30,735.55	\$4,077.62
16	750504050	TIMOTHY L & RHONDA K TESCH	128 MAIN STREET E	128 MAIN STREET E	WACONIA, MN 55387-1115	44.00	\$10,193.15	1.0	\$10,349.25	0.0	\$0.00	\$20,542.40	\$2,725.31
17	750504040	THE MITCHELL RANCH LLP	140 MAIN STREET E	BOX 174	CORTEZ, CO 81321-0174	66.00	\$15,289.73	4.0	\$41,396.99	0.0	\$0.00	\$56,686.71	\$7,520.50
18	750504170	THERESA L HAMER & PAMELA J LEACH	200 MAIN STREET E	312 THIRD STREET W	JORDAN, MN 55352-1426	33.00	\$7,644.86	1.0	\$10,349.25	1.0	\$6,708.87	\$24,702.98	\$3,277.29
19	750502720	FIRST NATL BANK OF WACONIA	53 MAIN STREET W	PO BOX 80615	INDIANAPOLIS, IN 46280	110.00	\$25,482.88	3.0	\$31,047.74	3.0	\$20,126.61	\$76,657.23	\$10,169.94
20	750502741	CQ RENTAL LLC	NA	1570 OAKPOINTE DR	WACONIA, MN 55387-4522	54.00	\$12,509.78	0.0	\$0.00	0.0	\$0.00	\$12,509.78	\$1,659.64
21	750502730	CQ RENTAL LLC	NA	1570 OAKPOINTE DR	WACONIA, MN 55387-4522	44.70	\$10,355.31	1.5	\$15,523.87	1.5	\$10,063.31	\$35,942.49	\$4,768.41
22	750502740	APG REAL PROPERTIES LLC	8 ELM STREET S	39088 AIRPARK DR	EASTON, MD 21601-7000	49.60	\$11,490.46	1.0	\$10,349.25	1.0	\$6,708.87	\$28,548.58	\$3,787.48
23	750502750	16 SOUTH ELM STREET LLC	16 ELM STREET S	9990 ORCHARD RD	COLOGNE, MN 55322-9083	52.00	\$12,046.45	3.0	\$31,047.74	3.0	\$20,126.61	\$63,220.81	\$8,387.36
24	750502630	16 SOUTH ELM STREET LLC	26 ELM STREET S	9990 ORCHARD RD	COLOGNE, MN 55322	86.00	\$19,922.98	0.0	\$0.00	0.0	\$0.00	\$19,922.98	\$2,643.14
25	750502640	EMBARQ CORP	40 ELM STREET S	1025 ELDORADO BLVD	BROOMFIELD, CO 80021	35.50	\$8,224.02	0.0	\$0.00	0.0	\$0.00	\$8,224.02	\$1,091.06
26	750502550	CHURCH OF ST JOSEPH	32 FIRST STREET E	41 FIRST STREET E	WACONIA, MN 55387-1526	157.00	\$36,371.02	0.0	\$0.00	0.0	\$0.00	\$36,371.02	\$4,825.26
27	750502560	CHURCH OF ST JOSEPH	9 MAIN STREET E	41 FIRST STREET E	WACONIA, MN 55387-1526	155.50	\$36,023.52	1.0	\$10,349.25	1.0	\$6,708.87	\$53,081.64	\$7,042.22
28	750502570	THE CHURCH OF SAINT JOSEPH OF WAC	29 MAIN STREET E	41 FIRST STREET E	WACONIA, MN 55387	33.00	\$7,644.86	1.0	\$10,349.25	1.0	\$6,708.87	\$24,702.98	\$3,277.29
29	750502580	STEVEN J YETZER	37 MAIN STREET E	PO BOX 51	WACONIA, MN 55387	43.00	\$9,961.49	1.0	\$10,349.25	1.0	\$6,708.87	\$27,019.61	\$3,584.63
30	750502600	ROSEMARY PETERSON	4 PINE STREET S	4 PINE STREET S	WACONIA, MN 55387-1533	128.50	\$29,768.63	1.0	\$10,349.25	1.0	\$6,708.87	\$46,826.75	\$6,212.40
31	750502540	WACONIA CITY	NA	201 VINE STREET S	WACONIA, MN 55387-1337	495.00	\$114,672.95	0.0	\$0.00	0.0	\$0.00	\$114,672.95	\$15,213.40
32	750502480	THOMAS MATHWIG & A SICHENEDER	201 MAIN STREET E	201 MAIN STREET E	WACONIA, MN 55387-1119	111.50	\$25,830.37	1.0	\$10,349.25	1.0	\$6,708.87	\$42,888.49	\$5,689.92
33	750502470	MARTHA LAYBOURN	200 FIRST STREET E	200 FIRST STREET E	WACONIA, MN 55387-1528	78.50	\$18,185.51	1.0	\$10,349.25	1.0	\$6,708.87	\$35,243.63	\$4,675.69
						2,434.80							

*Cost per FF = \$231.66 (Original Calculation)

**Based on a 5.50% Interest Rate and a 10 Year Term.

TOTALS:	564,051.91
TOTAL FRONT FOOTAGE:	3,984.00
CORNER LOT CREDIT:	583.50
ASSESSMENT BASIS FRONT FOOTAGE:	3,400.50
NON-ASSESSABLE FRONT FOOTAGE:	965.70
ASSESSMENT FRONT FOOTAGE:	2,434.80

TABLE 4.2
DEBT SERVICE & PROPOSED FUNDING SOURCES
FOR
DOWNTOWN RECONSTRUCTION, PHASE 2 PROJECT
8/15/2023

PROPOSED PROJECTS	TOTALS				DEBT SERVICE / FUNDING SOURCE							RECOMMENDED FINANCING OPTION
	TOTAL PROJECT COST	TOTAL ASSESS. AMOUNT	TOTAL CITY COST	TOTAL ASSESS. %	TOTAL DEBT SERVICE	DEBT SVC ASSMT REVENUE	DEBT SVC GENERAL/ PIR FUND	DEBT SVC STM WTR FUND	DEBT SVC SEWER FUND	DEBT SVC WATER FUND	TOTAL REVENUE	
STREET & UTILITY RECONSTRUCTION	\$5,867,378	\$1,097,000	\$4,770,378	18.7%	\$741,512	\$138,638	\$452,244	\$50,552	\$29,118	\$70,962	\$741,512	\$8,600,000 Combined Bond
STORMWATER REUSE	\$2,703,717	\$0	\$2,703,717	0.0%	\$341,693	\$0	\$0	\$341,693	\$0	\$0	\$341,693	
TOTALS:	\$8,571,096	\$1,097,000	\$7,474,096	12.8%	\$1,083,205	\$138,638	\$452,244	\$392,244	\$29,118	\$70,962	\$1,083,205	

Notes:

- 1.) All Debt Service Projections are Based on a 10-Year Bond At 4.5%.
- 2.) Actual Assessment Revenue Debt Service Will Be Based On Interest Rate 1.0% Above Bonding Cost (=4.5% + 1.0% = 5.5%) With a 10-Year Term.
- 3.) Amounts Shown Do Not Include Any Grant Funds Which May Reduce the Required Payment Amounts.

APPENDIX A

ITEMIZED COST ESTIMATES

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

STREET RECONSTRUCTION (ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$56,000.00	\$56,000.00
2	CLEAR & GRUB TREE	EACH	30	\$650.00	\$19,500.00
3	REMOVE CONCRETE CURB & GUTTER	LIN FT	4,392	\$6.00	\$26,352.00
4	REMOVE BITUMINOUS PAVEMENT	SQ YD	12,515	\$4.00	\$50,060.00
5	REMOVE CONCRETE DRIVEWAY/WALK	SQ FT	20,183	\$3.00	\$60,549.00
6	REMOVE BITUMINOUS DRIVEWAY	SQ FT	5,015	\$1.75	\$8,776.25
7	REMOVE PAVER DRIVEWAY	SQ FT	257	\$5.00	\$1,285.00
8	REMOVE DRAINAGE STRUCTURE	EACH	8	\$750.00	\$6,000.00
9	REMOVE DRAINAGE PIPE	LIN FT	639	\$18.00	\$11,502.00
10	COMMON EXCAVATION (EV)	CU YD	5,598	\$27.00	\$151,146.00
11	GEOTEXTILE FABRIC	SQ YD	9,607	\$2.00	\$19,214.00
12	AGGREGATE BASE CLASS 5 (CV) - 8" DEPTH	TON	4,524	\$28.50	\$128,934.00
13	CONCRETE CURB & GUTTER (B618)	LIN FT	4,537	\$28.75	\$130,438.75
14	BITUMINOUS NON-WEAR COURSE - 3.0" DEPTH	TON	1,390	\$84.00	\$116,760.00
15	BITUMINOUS WEAR COURSE - 1.5" DEPTH	TON	694	\$107.00	\$74,258.00
16	3" BITUMINOUS DRIVEWAY	SQ FT	4,748	\$6.25	\$29,675.00
17	6" CONCRETE DRIVEWAY	SQ FT	5,273	\$16.00	\$84,368.00
18	PAVER DRIVEWAY	SQ FT	197	\$25.00	\$4,925.00
19	CONSTRUCT DRAINAGE STRUCTURE DES G	EACH	2	\$1,500.00	\$3,000.00
20	CONSTRUCT DRAINAGE STRUC. DES 2'X3'	EACH	4	\$2,000.00	\$8,000.00
21	CONSTRUCT DRAINAGE STRUC. DES 4020-48	EACH	5	\$2,750.00	\$13,750.00
22	CONSTRUCT DRAINAGE STRUC. DES 4022-48	EACH	9	\$2,750.00	\$24,750.00
23	15" RC PIPE SEWER DES 3006 CL V	LIN FT	757	\$88.00	\$66,616.00
24	18" RC PIPE SEWER DES 3006 CL V	LIN FT	405	\$95.00	\$38,475.00
25	CASTING ASSEMBLY (STORM)	EACH	14	\$1,100.00	\$15,400.00
26	ADJUST CASTING (STORM)	EACH	3	\$680.00	\$2,040.00
27	CONNECT TO EXISTING STORM PIPE	EACH	3	\$2,000.00	\$6,000.00

SUBTOTAL: \$1,101,774.00
 CONTINGENCIES (10%): \$110,177.40
 ESTIMATED CONSTRUCTION COST: \$1,211,951.40
 ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%): \$363,585.42
TOTAL ESTIMATED PROJECT COST: \$1,575,536.82

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

STREET RECONSTRUCTION (EXTRA WIDTH - NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	COMMON EXCAVATION (EV)	CU YD	112	\$27.00	\$3,024.00
2	SUBGRADE EXCAVATION (EV)	CU YD	5	\$29.00	\$145.00
3	GEOTEXTILE FABRIC	SQ YD	121	\$2.00	\$242.00
4	AGGREGATE BASE CLASS 5 (CV) - 12" DEPTH	TON	79	\$28.50	\$2,251.50
5	STABILIZING AGGREGATE (CV)	CU YD	5	\$35.00	\$175.00
6	SELECT GRANULAR BORROW (CV) - 12" DEPTH	CU YD	45	\$29.00	\$1,305.00
7	BITUMINOUS NON-WEAR COURSE - 3.0" DEPTH	TON	22	\$84.00	\$1,848.00
8	BITUMINOUS WEAR COURSE - 3.5" DEPTH	TON	26	\$107.00	\$2,782.00

	<i>SUBTOTAL:</i>	<i>\$11,772.50</i>
	<i>CONTINGENCIES (10%):</i>	<i>\$1,177.25</i>
	<i>ESTIMATED CONSTRUCTION COST:</i>	<i>\$12,949.75</i>
<i>ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):</i>		<i>\$3,884.93</i>
<i>TOTAL ESTIMATED PROJECT COST:</i>		<i>\$16,834.68</i>

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

STREET RECONSTRUCTION (EXTRA SECTION - NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$72,000.00	\$72,000.00
2	TRAFFIC CONTROL	LUMP SUM	1	\$50,000.00	\$50,000.00
3	REMOVE CONCRETE STAIRS	SQ FT	173	\$12.00	\$2,070.00
4	REMOVE SIGN	EACH	32	\$350.00	\$11,200.00
5	COMMON EXCAVATION (EV)	CU YD	5,595	\$27.00	\$151,065.00
6	SUBGRADE EXCAVATION (EV)	CU YD	931	\$29.00	\$26,999.00
7	GEOTEXTILE FABRIC	SQ YD	4,982	\$2.00	\$9,964.00
8	AGGREGATE BASE CLASS 5 (CV) - 12" DEPTH	TON	2,690	\$28.50	\$76,665.00
9	AGGREGATE BASE CLASS 5 (CV) - 4" DEPTH	CU YD	1,447	\$28.50	\$41,239.50
10	STABILIZING AGGREGATE (CV)	CU YD	931	\$35.00	\$32,585.00
11	SELECT GRANULAR BORROW (CV) - 12" DEPTH	CU YD	5,245	\$29.00	\$152,105.00
12	BITUMINOUS NON-WEAR COURSE - 3.0" DEPTH	TON	887	\$84.00	\$74,508.00
13	BITUMINOUS WEAR COURSE - 2.0" DEPTH	TON	645	\$84.00	\$54,180.00
14	BITUMINOUS WEAR COURSE - 3.5" DEPTH	TON	863	\$107.00	\$92,341.00
15	4" SOLID DOUBLE YELLOW LINE	LIN FT	949	\$1.50	\$1,422.95
16	4" SOLID LINE WHITE	LIN FT	2,542	\$1.25	\$3,177.50
17	PAVEMENT MARKINGS	EACH	4	\$275.00	\$1,100.00
18	CONCRETE STAIRS	SQ FT	173	\$175.00	\$30,187.50
19	SUMP PUMP SERVICE CONNECTION	EACH	10	\$315.00	\$3,150.00
20	STORMWATER TREATMENT / RAIN GARDENS	LUMP SUM	1	\$35,000.00	\$35,000.00
21	4" PERFORATED EDGE DRAIN	LIN FT	4,291	\$23.00	\$98,693.00
22	4" HDPE DRAIN TILE CLEANOUT	EACH	15	\$300.00	\$4,500.00
23	ROCK CONSTRUCTION ENTRANCE	EACH	1	\$1,000.00	\$1,000.00
24	SOD TYPE LAWN	SQ YD	3,515	\$14.00	\$49,210.00
25	FURNISH & INSTALL SIGN	EACH	32	\$350.00	\$11,200.00
26	2 1/2" CALIPER DECIDUOUS TREE	EACH	30	\$250.00	\$7,500.00
27	BUSINESS SIGNAGE	ALLOWANCE	1	\$10,000.00	\$10,000.00
28	STREET LIGHTING & WAYFINDING SIGNAGE	LUMP SUM	1	\$400,000.00	\$400,000.00
29	CONSTRUCTION TRAILER MOBILIZATION & SETUP	LUMP SUM	1	\$2,000.00	\$2,000.00

	SUBTOTAL:	\$1,505,062.45
	CONTINGENCIES (10%):	\$150,506.24
	ESTIMATED CONSTRUCTION COST:	\$1,655,568.69
ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):		\$496,670.61
TOTAL ESTIMATED PROJECT COST:		\$2,152,239.30

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

PARKING LOT RECONSTRUCTION (NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$7,000.00	\$7,000.00
2	TRAFFIC CONTROL	LUMP SUM	1	\$1,500.00	\$1,500.00
3	ROCK CONSTRUCTION ENTRANCE	EACH	1	\$1,000.00	\$1,000.00
4	REMOVE CONCRETE CURB & GUTTER	LIN FT	123	\$6.00	\$738.00
5	CLEAR & GRUB TREE	EACH	4	\$650.00	\$2,600.00
6	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,313	\$4.00	\$5,252.00
7	REMOVE CONCRETE DRIVEWAY/WALK	SQ FT	1,927	\$3.00	\$5,781.00
8	COMMON EXCAVATION (EV)	CU YD	867	\$27.00	\$23,409.00
9	SUBGRADE EXCAVATION (EV)	CU YD	73	\$29.00	\$2,117.00
10	GEOTEXTILE FABRIC	SQ YD	2,198	\$2.00	\$4,396.00
11	AGGREGATE BASE CLASS 5 (CV) - 9" DEPTH	TON	877	\$28.50	\$24,994.50
12	STABILIZING AGGREGATE (CV)	CU YD	73	\$35.00	\$2,555.00
13	BITUMINOUS NON-WEAR COURSE - 3.0" DEPTH	TON	391	\$84.00	\$32,844.00
14	BITUMINOUS WEAR COURSE - 1.5" DEPTH	TON	197	\$107.00	\$21,079.00
15	CONSTRUCT DRAINAGE STRUCTURE DES G	EACH	4	\$1,500.00	\$6,000.00
16	12" RC PIPE SEWER DES 3006 CL V	LIN FT	311	\$82.00	\$25,502.00
17	CASTING ASSEMBLY (STORM)	EACH	4	\$1,100.00	\$4,400.00
18	CONNECT TO EXISTING STORM STRUCTURE	EACH	2	\$2,000.00	\$4,000.00
19	STORM DRAIN INLET PROTECTION	EACH	8	\$150.00	\$1,200.00
20	BIOROLL	LIN FT	330	\$3.50	\$1,155.00
21	4" CONCRETE WALK (w/ AGG. CL 5 BASE)	SQ FT	2,336	\$9.25	\$21,608.00
22	6" CONCRETE DRIVEWAY	SQ FT	163	\$16.00	\$2,608.00
23	4" SOLID LINE WHITE	LIN FT	3,589	\$1.25	\$4,486.25
24	PAVEMENT MARKINGS	EACH	3	\$275.00	\$825.00
25	SOD TYPE LAWN	SQ YD	128	\$14.00	\$1,792.00
26	TOPSOIL BORROW (LV)	CU YD	17	\$45.00	\$765.00

	SUBTOTAL:	\$209,606.75
	CONTINGENCIES (10%):	\$20,960.68
	ESTIMATED CONSTRUCTION COST:	\$230,567.43
ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):		\$69,170.23
TOTAL ESTIMATED PROJECT COST:		\$299,737.65

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

SIDEWALK (NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	REMOVE CONCRETE WALK	SQ FT	20,183	\$2.80	\$56,512.40
2	REMOVE RAILING	LIN FT	53	\$15.00	\$787.50
3	4" CONCRETE WALK (w/ AGG. CL 5 BASE)	SQ FT	24,929	\$9.25	\$230,593.25
4	BUSINESS ENTRANCE MODIFICATIONS	ALLOWANCE	1	\$7,500.00	\$7,500.00
5	PEDESTRIAN RAMP	EACH	13	\$3,000.00	\$39,000.00
6	CONSTRUCT RETAINING WALL	SQ FT	263	\$30.00	\$7,890.00
7	METAL RAILING	LIN FT	53	\$20.00	\$1,050.00
8	CROSSWALK EXPOXY	SQ FT	1,644	\$3.00	\$4,932.00

SUBTOTAL:	\$348,265.15
CONTINGENCIES (10%):	\$34,826.52
ESTIMATED CONSTRUCTION COST:	\$383,091.67
ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):	\$114,927.50
TOTAL ESTIMATED PROJECT COST:	\$498,019.16

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

SANITARY SEWER RECONSTRUCTION (ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$13,000.00	\$13,000.00
2	REMOVE SANITARY MANHOLE	EACH	4	\$825.00	\$3,300.00
3	REMOVE SANITARY PIPE	LIN FT	1,134	\$7.00	\$7,938.00
4	REMOVE SANITARY SERVICE PIPE	LIN FT	1,037	\$5.00	\$5,185.00
5	EXTERNAL CHIMNEY SEAL	EACH	4	\$400.00	\$1,600.00
6	8" PVC PIPE SEWER SDR 35	LIN FT	1,102	\$72.00	\$79,344.00
7	6" PVC PIPE SEWER SERVICE SDR 26	LIN FT	1,037	\$50.00	\$51,850.00
8	8" X 6" SERVICE WYE	EACH	25	\$625.00	\$15,625.00
9	CONSTRUCT SANITARY MANHOLE	EACH	4	\$6,500.00	\$26,000.00
10	CASTING ASSEMBLY (SANITARY)	EACH	4	\$1,500.00	\$6,000.00
11	CONNECT TO EXISTING SANITARY SEWER PIPE	EACH	3	\$2,000.00	\$6,000.00
12	CONNECT TO EXISTING SANITARY SERVICE	EACH	25	\$1,500.00	\$37,500.00

SUBTOTAL:	\$253,342.00
CONTINGENCIES (10%):	\$25,334.20
ESTIMATED CONSTRUCTION COST:	\$278,676.20
ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):	\$83,602.86
TOTAL ESTIMATED PROJECT COST:	\$362,279.06

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

SANITARY SEWER RECONSTRUCTION (NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$2,000.00	\$2,000.00
2	BYPASS PUMPING	LUMP SUM	1	\$15,000.00	\$15,000.00
3	VIBRATION MONITORING	LUMP SUM	1	\$17,500.00	\$17,500.00

	<i>SUBTOTAL:</i>	<i>\$34,500.00</i>
	<i>CONTINGENCIES (10%):</i>	<i>\$3,450.00</i>
	<i>ESTIMATED CONSTRUCTION COST:</i>	<i>\$37,950.00</i>
	<i>ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):</i>	<i>\$11,385.00</i>
	<i>TOTAL ESTIMATED PROJECT COST:</i>	<i>\$49,335.00</i>

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

WATERMAIN RECONSTRUCTION (ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$24,000.00	\$24,000.00
2	REMOVE WATERMAIN	LIN FT	1,760	\$7.00	\$12,320.00
3	REMOVE WATERMAIN SERVICE	LIN FT	1,108	\$3.00	\$3,324.00
4	REMOVE GATE VALVE & BOX	EACH	5	\$325.00	\$1,625.00
5	REMOVE HYDRANT	EACH	3	\$500.00	\$1,500.00
6	6" DIP WATERMAIN	LIN FT	59	\$88.00	\$5,192.00
7	8" PVC WATERMAIN	LIN FT	1,702	\$78.00	\$132,756.00
8	3 LB ANODE	EACH	14	\$150.00	\$2,100.00
9	9 LB ANODE	EACH	4	\$250.00	\$1,000.00
10	WATERMAIN FITTINGS	POUND	1,650	\$16.00	\$26,400.00
11	6" GATE VALVE & BOX	EACH	3	\$2,500.00	\$7,500.00
12	8" GATE VALVE & BOX	EACH	9	\$3,450.00	\$31,050.00
13	1" CURB STOP & BOX	EACH	30	\$1,100.00	\$33,000.00
14	1" CORPORATION STOP	EACH	30	\$900.00	\$27,000.00
15	1" SERVICE PIPE (OPEN CUT)	LIN FT	1,190	\$46.00	\$54,740.00
16	1" SERVICE PIPE (DIRECTIONALLY DRILLED)	LIN FT	175	\$175.00	\$30,625.00
17	HYDRANT	EACH	3	\$7,700.00	\$23,100.00
18	WATER SERVICE CASTING ASSEMBLY	EACH	30	\$450.00	\$13,500.00
19	TRACER WIRE ACCESS BOX	EACH	3	\$300.00	\$900.00
20	TEMPORARY WATER SYSTEM	LUMP SUM	1	\$30,000.00	\$30,000.00
21	CONNECT TO EXISTING WATER SERVICE	EACH	30	\$750.00	\$22,500.00
22	CONNECT TO EXISTING WATERMAIN	EACH	4	\$2,000.00	\$8,000.00

	<i>SUBTOTAL:</i>	\$492,132.00
	<i>CONTINGENCIES (10%):</i>	\$49,213.20
	<i>ESTIMATED CONSTRUCTION COST:</i>	\$541,345.20
<i>ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):</i>		\$162,403.56
	<i>TOTAL ESTIMATED PROJECT COST:</i>	<i>\$703,748.76</i>

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

WATERMAIN RECONSTRUCTION (NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$7,000.00	\$7,000.00
2	8" PVC WATERMAIN	LIN FT	408	\$78.00	\$31,824.00
3	6" DIP WATERMAIN	LIN FT	55	\$88.00	\$4,804.80
4	3 LB ANODE	EACH	3	\$150.00	\$450.00
5	WATERMAIN FITTINGS	LB	408	\$16.00	\$6,528.00
6	8" GATE VALVE & BOX	EACH	2	\$3,450.00	\$6,900.00
7	6" GATE VALVE & BOX	EACH	1	\$2,500.00	\$2,500.00
8	CONNECT TO EXISTING WATERMAIN	EACH	1	\$2,000.00	\$2,000.00
9	BORE FOUNDATION WALL/REMOVE & REPLACE FLOOR	EACH	14	\$2,600.00	\$36,400.00
10	RESET WATER METER & ADJUST PIPING	EACH	14	\$800.00	\$11,200.00
11	MOVE ELECTRICAL GROUND FROM WATER SERVICE	EACH	14	\$500.00	\$7,000.00
12	HAND EXCAVATION TO CONNECT WATER SERVICE (IN CRAWL SPACE)	EACH	14	\$750.00	\$10,500.00
13	CATHODIC PROTECTION TEST STATION	EACH	1	\$2,000.00	\$2,000.00
14	VIBRATION MONITORING	LUMP SUM	1	\$17,500.00	\$17,500.00

	SUBTOTAL:	\$146,606.80
	CONTINGENCIES (10%):	\$14,660.68
	ESTIMATED CONSTRUCTION COST:	\$161,267.48
ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):		\$48,380.24
	TOTAL ESTIMATED PROJECT COST:	\$209,647.72

**ESTIMATED PROJECT COST
FOR
Downtown Reconstruction Phase 2
8/15/2023**

STORM WATER REUSE (NON-ASSESSABLE)

ITEM NO.	BID ITEM	UNIT	EST QTY	UNIT PRICE	TOTAL
1	MOBILIZATION	LUMP SUM	1	\$100,000.00	\$100,000.00
2	CLEAR & GRUB TREE	EACH	2	\$650.00	\$1,300.00
3	REMOVE CONCRETE CURB & GUTTER	LIN FT	190	\$6.00	\$1,140.00
4	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,005	\$4.00	\$4,020.00
5	REMOVE CONCRETE DRIVEWAY/WALK	SQ FT	175	\$3.00	\$525.00
6	REMOVE PAVERS	SQ FT	700	\$5.00	\$3,500.00
7	GEOTEXTILE FABRIC	SQ YD	1,040	\$2.00	\$2,080.00
8	SELECT GRANULAR BORROW (CV) - 12" DEPTH	CU YD	382	\$29.00	\$11,078.00
9	AGGREGATE BASE CLASS 5 (CV) - 8" DEPTH	TON	456	\$28.50	\$12,996.00
10	BITUMINOUS NON-WEAR COURSE - 3.0" DEPTH	TON	186	\$84.00	\$15,624.00
11	BITUMINOUS WEAR COURSE - 1.5" DEPTH	TON	96	\$107.00	\$10,272.00
12	CONCRETE CURB & GUTTER (B618)	LIN FT	190	\$28.75	\$5,462.50
13	4" CONCRETE WALK (w/ AGG. CL 5 BASE)	SQ FT	100	\$9.25	\$925.00
14	6" CONCRETE DRIVEWAY	SQ FT	75	\$16.00	\$1,200.00
15	SALVAGE & INSTALL PERVIOUS PAVERS WITH NEW ROCK SECTION	SQ FT	850	\$200.00	\$170,000.00
16	8" PVC PIPE SEWER (DRILLED)	LIN FT	50	\$150.00	\$7,500.00
17	8" PVC PIPE SEWER SDR 35	LIN FT	100	\$72.00	\$7,200.00
18	CONNECT TO EXISTING SANITARY SEWER STRUCTURE	EACH	1	\$2,000.00	\$2,000.00
20	1" CURB STOP & BOX	EACH	1	\$1,100.00	\$1,100.00
21	1" SERVICE PIPE (OPEN CUT)	LIN FT	130	\$46.00	\$5,980.00
22	CONNECT TO EXISTING WATER SERVICE	EACH	1	\$750.00	\$750.00
23	SCADA	LUMP SUM	1	\$60,000.00	\$60,000.00
24	PUMP & FILTER SKID	LUMP SUM	1	\$135,000.00	\$135,000.00
25	ELECTRICAL	LUMP SUM	1	\$55,000.00	\$55,000.00
26	REUSE WATER TREATMENT (UV)	LUMP SUM	1	\$135,000.00	\$135,000.00
27	UNDERGROUND STORAGE TANK	LUMP SUM	1	\$400,000.00	\$400,000.00
28	HUFFCUTT PRECAST WALLS	LUMP SUM	1	\$115,000.00	\$115,000.00
29	REUSE BUILDING	LUMP SUM	1	\$300,000.00	\$300,000.00
30	HVAC EQUIPMENT	LUMP SUM	1	\$10,000.00	\$10,000.00
31	CONTROL VALVES & SYSYEM CONTROLLER	LUMP SUM	1	\$10,000.00	\$10,000.00
32	12" PVC STORM PIPE	LIN FT	50	\$65.00	\$3,250.00
33	36" RC PIPE SEWER DES 3006 CL V	LIN FT	105	\$400.00	\$42,000.00
34	CONSTRUCT DRAINAGE STRUC. DES 4020-84	EACH	1	\$30,000.00	\$30,000.00
35	CASTING ASSEMBLY (STORM)	EACH	1	\$1,100.00	\$1,100.00
36	4" CONDUIT FOR REUSE MAIN	LIN FT	2,855	\$11.00	\$31,405.00
37	1" REUSE MAIN HDD	LIN FT	2,475	\$10.00	\$24,750.00
38	2" REUSE MAIN HDD	LIN FT	380	\$13.00	\$4,940.00
39	4" REUSE MAIN HDD	LIN FT	1,388	\$28.00	\$38,864.00
40	4" GATE VALVE & BOX (REUSE SYSTEM)	EACH	2	\$1,850.00	\$3,700.00
41	CONNECT TO EXISTING REUSE MAIN	EACH	1	\$750.00	\$750.00
42	REUSE WATER METER BOX	EACH	1	\$3,500.00	\$3,500.00
43	STORM WATER REUSE ACCESS MANHOLE CASTING	EACH	5	\$1,300.00	\$6,500.00
44	STORM WATER REUSE BLOWOFF STRUCTURE CASTING	EACH	7	\$1,250.00	\$8,750.00
45	DUCTILE IRON FITTINGS (REUSE)	LUMP SUM	1	\$8,000.00	\$8,000.00
46	BLOWOFF IN PRECAST CONCRETE HANDHOLE (60")	EACH	7	\$7,500.00	\$52,500.00
47	ACCES MANHOLE WITH BLOWOFF (60")	EACH	1	\$8,750.00	\$8,750.00
48	ACCESS MANHOLE (60")	EACH	4	\$8,200.00	\$32,800.00
49	LANDSCAPING ALLOWANCE	ALLOWANCE	1	\$4,500.00	\$4,500.00

	SUBTOTAL:	\$1,890,711.50
	CONTINGENCIES (10%):	\$189,071.15
	ESTIMATED CONSTRUCTION COST:	\$2,079,782.65
ADMINISTRATION, ENGINEERING, SURVEYING, INSPECTION (30%):		\$623,934.80
	TOTAL ESTIMATED PROJECT COST:	\$2,703,717.45

APPENDIX B

CITY ASSESSMENT POLICY

Section Extracted from City of Waconia Financial Policy & Guidelines
Last Amended June 19, 2017

Special Assessments

The financing for reconstruction projects is through the sale of General Obligation 429 Improvement Bonds. Minnesota State Statute requires a minimum assessed percentage of 20% for projects financed with 429 bonds.

With each reconstruction project, a feasibility study is completed and approved by the City Council. Once a draft of the feasibility study is complete, City staff will share the information with a qualified appraiser to determine the special benefit to each property in the reconstruction area. The City Council will use this appraisal information as a basis for finalizing the special assessments due by property owners for reconstruction projects.

Assessment Policy Summary:

- The portion of the project costs assessed to the abutting property owner shall be based on a linear front footage basis of the parcel or unit basis.
- The City pays 50% of the total project cost of a standard local street section and 100% of the cost of extra width and extra depth above the city standard local street section.
- Storm sewer costs are to be included in the total project cost of a city standard local street, assessed 50% (and City pays 50%), in accordance with the Street Assessment Policy.
- All or some of the following improvements may be incorporated in a reconstruction project. Costs for these improvements will be included in the overall project cost, with a contribution from the City: storm water ponding, street lights, relocation of overhead power lines, street signs, sidewalks and trails, and boulevard trees.
- Corner lots and parcels with multiple frontages shall be assessed 50% of the front footage on each side.
- A minimum assessment shall be levied to parcels identified within the project area having neither direct primary nor non-primary access to affected streets. The assessment shall be equal to 75% of the typical front footage identified within the project area. Parcels abutting county roads are exempt from this provision.
- Assessments will not be levied for seal coat and overlay operations.
- Assessments may be pre-paid to the City by benefiting properties
- Assessments will be billed to the benefiting property owner by the City; typically over a ten (10) year period, at an interest rate of one percent (1%) over the bond interest rate. Other terms of the assessment receivable may be available to the benefiting property owners.
 - For any project, where all the benefiting property owner(s) are governmental entities (school district, county, state, etc.), the City will assess the benefiting property owner(s) the actual bond interest rate, typically over a ten (10) year period.
- In the case where a benefiting property owner is delinquent in their assessment payment, assessments may be certified to real estate taxes over a ten (10) year period, at an interest rate one percent (1%) over the bond interest rate.
- Partial pre-payments for assessments exceeding \$100,000.00 may be accepted by the City.

Infrastructure Improvement Cost Breakdown & Methodology

Improvement	Type of Construction	Method
Curb & Gutter	New Development	100% of the cost assessed to abutting property owner on linear front footage OR unit basis.
	Reconstruction (Complete)	The portion of the project costs assessed to the abutting property owner shall be based on a linear front footage basis of the parcel.
	Reconstruction (Spot repair)	100% of cost to be included in overall cost of project prior to assessment apportionment in accordance with policy.
Local Street	New Development	100% of the cost assessed to abutting property owner on linear front footage OR per unit basis.
	Reconstruction	50% of the cost to be assessed to abutting property owner on linear front footage OR per unit basis. 50% of the cost to be paid by City.
	Maintenance (Seat coat & overlay)	100% Paid with City funds.
Collector Street as defined by the City's Transportation Plan	New Development	100% of the construction cost of a city standard local street assessed to abutting property owner based on linear front footage OR per unit basis.
	Reconstruction	The portion of the project costs assessed to the abutting property owner shall be based on a linear front footage OR per unit basis. City pays 50% of the cost of the construction of city standard local street and 100% of the cost of construction above a city standard local street.
	Maintenance (Seat coat & overlay)	100% Paid with City funds.
Intersection	New Development	100% of the cost to be included as part of street project and apportioned according to appropriate street construction category.
	Reconstruction	100% of cost to be included in overall cost of project prior to assessment apportionment in accordance with policy.
Multiple Fronted Parcels - Corner Lot - Double Fronted Lot - Large Parcels - Etc.	Reconstruction	Front footage to be used in assessment methods described herein shall be calculated as follows: - 50% of the front footage on all sides of the parcel. 50% of the cost to be paid with City funds.

Table continues on next page

Improvement	Type of Construction	Method
Parcels with no driveway access to primary and non-primary streets.	Reconstruction	A minimum assessment shall be levied to parcels identified within the project area having no direct driveway access to neither primary nor non-primary streets, i.e. alley access. The assessment shall be equal to 75% of the typical front footage identified within the project area. Parcels abutting county roads are exempt from this provision.
Alley	New Development	100% of the cost assessed to abutting property owner on linear front footage OR per unit basis.
	Reconstruction	50% of the cost to be assessed to abutting property owner on linear front footage OR per unit basis. 50% of the cost to be paid with City funds.
Sanitary Sewer Trunk/Lateral	New Development	100% of the cost assessed to benefited area on unit basis.
	Reconstruction	50% of the cost assessed to benefited area on unit basis. 50% of the cost to be paid with City funds.
	Maintenance	100% of the cost to be paid with City funds.
Sanitary Sewer Service	New Development	100% of cost assessed to property owner.
	Reconstruction (Including main)	50% of the cost assessed to benefited area on a unit basis. 50% of the cost to be paid with City funds.
	Reconstruction (Stand alone service replacement)	100% of cost assessed to property owner.
Sanitary Sewer Oversizing	New Development	100% paid with City funds. (Materials cost above 8-inch pipe plus 20% for handling and installation.)
	Reconstruction	100% paid with City funds. (Materials cost above 8-inch pipe plus 20% for handling and installation.)
Lift Station	New Development	100% of the cost assessed to benefited area on a per unit basis.
Water Trunk/Lateral	New Development	100% of the cost assessed to benefited area on unit basis.
	Reconstruction	50% of the cost assessed to benefited area on unit basis. 50% of cost to be paid with City funds.
	Maintenance	100% of the cost to be paid with City funds.
Water Service	New Development	100% of cost assessed to property owner.
	Reconstruction (Including main)	50% of the cost assessed to benefited area on a unit basis. 50% of the cost to be paid with City funds.
	Reconstruction (Stand alone service replacement)	100% of cost assessed to property owner.
Water Oversizing	New Development	100% paid with City funds. (Materials cost above 8-inch pipe plus 20% for handling and installation.)
	Reconstruction	100% paid with City funds. (Materials cost above 8-inch pipe plus 20% for handling and installation.)
Storm Sewer Trunk/Lateral	New Development	100% of the cost assessed to benefited area on unit basis.
	Reconstruction	50% of the cost to be assessed to abutting property owner on linear front footage OR per unit basis. 50% of the cost to be paid with City funds.
	Maintenance	100% of the cost to be paid with City funds.
Storm Water Ponding	New Development	100% assessed to development.
	Reconstruction	Cost to be included in overall cost of project prior to assessment apportionment in accordance with policy. City makes contribution to the project.
	Maintenance	100% of the cost to be paid with City funds.

Table continues on next page

Improvement	Type of Construction	Method
Overhead Power Lines	Relocation	Cost to be included in overall cost of project prior to assessment apportionment in accordance with policy. City makes contribution to the project.
Street Lights	New Development	100% of material and installation cost on a unit basis paid by developer.
	Reconstruction	Cost to be included in overall cost of project prior to assessment apportionment in accordance with policy. City makes contribution to the project.
	Maintenance	100% of the cost to be paid with City funds.
Street Signs	New Development	100% of material and installation cost on a unit basis paid by developer.
	Reconstruction	Cost to be included in overall cost of project prior to assessment apportionment in accordance with policy. City makes contribution to the project.
	Maintenance	100% of the cost to be paid with City funds.
Sidewalks & Trails	New Development	100% of cost assessed on a unit basis to development.
	Reconstruction	Cost to be included in overall cost of project prior to assessment apportionment in accordance with policy. City makes contribution to the project.
	Maintenance	100% of the cost to be paid with City funds.
Boulevard Trees	New Development	100% of cost paid by developer.
	Reconstruction	Cost to be included in overall cost of project prior to assessment apportionment in accordance with policy. City makes contribution to the project.
	Maintenance	100% of the cost to be paid with City funds.

Deferred Special Assessments

Hardship Assessment Deferral for Senior Citizens, People with Disabilities, or Members of the National Guard or other Reserves Ordered to Active Military Service.

Pursuant to the authority for deferring special assessments as provided in Minnesota State Statute Section 435.193 through 435.195, the City Council may, in its discretion, defer the payment of special assessments for any homestead property owned by a person 65 years of age or older, one retired by virtue of a permanent and total disability, or a member of the National Guard or other reserves ordered to active military service for whom it would be a hardship to make the payments.

Eligibility

Any person 65 years of age or older, permanently and totally disabled (as determined by the Social Security Administrator), or a member of the National Guard or other reserve ordered to active military service may request deferment of special assessments levied against real property for public improvements if the following conditions are met.

1. **Ownership.** The applicant must be the fee simple owner of the property or must be a contract vendee for fee simple ownership. An applicant must provide either a recorded deed or contract for deed with the application to establish a qualified ownership interest as required here.
2. **Homestead.** The property must be the applicant's principal place of domicile and classified on the City's and County's real estate tax rolls as the applicant's homestead.

3. Income. The income threshold for eligibility of those applicants 65 years of age and older or disabled be established by the most recent U.S. Census Bureau Poverty Threshold compilations. Income eligibility would be determined by the submittal of the most recent federal tax filing form.

Interest on Deferred Assessment

Interest on the deferred assessment shall be forgiven until December 31st of the year before the first installment is payable.

Deferment Period

The deferment shall be granted for as long a period of time as the hardship exists and the conditions aforementioned have been met. However, it shall be the duty of the applicant to notify the City Administrator of any change in status that would affect eligibility or deferment.

The entire amount of deferred special assessments shall be due within sixty (60) days after loss of eligibility by the applicant. If the special assessment is not paid within the sixty (60) days, the City Administrator shall add thereto interest at a per annum interest rate of one percent (1%) above the bond interest rate and the total amount of principal and interest shall be certified to the County Auditor for collection with taxes the following year. Should the applicant demonstrate to the satisfaction of the City Council that full repayment of the deferred special assessment would cause the applicant particular undue financial hardship, the Council may order that the applicant pay within sixty (60) days a sum equal to the number of installments of deferred special assessments outstanding and unpaid to date, including principal and interest, with the balance thereafter paid according to the terms and conditions of the original special assessments.

Termination of Deferral Status

The option to defer the payment of special assessment shall terminate and all amounts accumulated plus applicable interest shall become due upon the occurrence of any one of the following events:

1. Sale of Property. The subject is sold, transferred, or subdivided in whole or in part.
2. Death of Owner. The death of the fee owner qualified for deferral status unless a surviving joint tenant, tenant in common, or contract vendee is eligible for the deferral benefit provided hereunder.
3. Nonhomestead Property. The subject property loses its homestead status for any reason.
4. No Hardship. The City Council determines that there would be no hardship to require an immediate or partial payment of the deferred special assessment.

Filing for Federal Status/Fee

An eligible applicant must file an application not later than thirty (30) days after the assessment is adopted by the City Council.

All deferral applications must be made on forms approved by the City and submitted to the City Administrator. The applicant will be charged an administrative filing fee, based on the current fee schedule.

Nothing herein shall be construed to prohibit the determination of hardship on the basis of exceptional and unusual circumstances not covered by the above noted requirements where the determination is made in a nondiscriminatory manner and does not give the applicant an unreasonable preference or advantage over other applicants.

Deferred Assessment Procedures

- Deferred Assessment Application form is provided to applicant/property owner by the City Administrator's Office.
- Applicant fills out the application form and provides the relevant information to document qualification for deferred assessment. Applicant then returns form to City Administrator's Office.
- City Administrator forwards the application to the Finance Director for review of qualifications. Finance Director makes recommendation to City Council to approve or deny the application.
- An approved application may be forwarded to the Carver County Recorder's office for recording and to the Carver County Taxpayer Services Division.
- The deferral information is entered into the City's property records data base.
- At such time the property no longer qualifies for the deferred assessment (upon a transfer of the property, loss of homestead status, or death, no hardship as determined by the Council), the County Auditor/Recorder's office will notify the City of the termination of the deferral status, and direct the party to the City Administrator's office to pay balance on the outstanding deferred assessment amount.

7. That my social security number is _____ Spouse _____
8. That on January 2, 20____ or December 1, 20____ I owned and occupied the above property as my homestead and such occupancy began on _____.
9. That the payments for improvements on the special assessments duly adopted by the City of Waconia as of _____ which have been allocated against the subject property would create undue personal hardship on my behalf and I respectfully request that payment be delayed and that such payments be so deferred for the years 20____ to 20____.

Owner Signature

Owner Signature

=====

I, _____, City Clerk of the City of Waconia, Carver County, State of Minnesota, do hereby certify that the application of _____, above named, has been duly reviewed and that in accordance with the minutes of official record was duly
 _____ **APPROVED** _____ **DENIED** as of _____, 20____.

That in accordance with approval granted, that the payment for special assessments on the applicant's subject property in the amount of \$_____ for the year (s) _____ should be so deferred with interest at the annual rate of $\frac{\%}{2}$, until such time as it is deemed the applicant no longer qualifies or the property loses its eligibility.

Dated _____ 20____

City Clerk

10/2/2008

APPENDIX C

GEOTECHNICAL REPORT



CONSULTANTS

- ENVIRONMENTAL
- GEOTECHNICAL
- MATERIALS
- FORENSICS

REPORT OF GEOTECHNICAL EXPLORATION

2022 and 2023 Infrastructure Improvements Projects

Waconia, Minnesota

AET No. 20-23155

Date:

March 10, 2021

Prepared for:

City of Waconia
310 East 10th Street
Waconia, Minnesota 55387





CONSULTANTS
• ENVIRONMENTAL
• GEOTECHNICAL
• MATERIALS
• FORENSICS

March 10, 2021

City of Waconia
310 East 10th Street
Waconia, Minnesota 55387

Attn: Mr. Craig Eldred – Public Services Director

RE: Geotechnical Exploration
2022 and 2023 Infrastructure Improvements Projects
Waconia, Minnesota
AET No. 20-23155

Dear Mr. Eldred:

American Engineering Testing, Inc. (AET) is pleased to present the results of our subsurface exploration program and geotechnical engineering review for the City of Waconia's 2022 and 2023 Infrastructure Improvements projects. These services were performed according to our proposal to you dated September 15, 2020.

We are submitting an electronic (pdf) copy of the report to you. Additional copies are being sent on your behalf as noted below.

Please contact me if you have any questions about the report. I can also be contacted for arranging construction observation and testing services.

Sincerely,
American Engineering Testing, Inc.

A handwritten signature in black ink, appearing to read 'D.S. Van Heuveln', is written over the company name.

Derek S. Van Heuveln, PE

Senior Engineer

Phone: (651) 789-4656

dvanheuveln@amengtest.com

cc: Mr. Jake Saulsbury, PE – Bolton & Menk, Inc.

Report of Geotechnical Exploration

2022 and 2023 Infrastructure Improvements Projects; Waconia, Minnesota
March 10, 2021
Report No. 20-23155

AMERICAN
ENGINEERING
TESTING, INC.

SIGNATURE PAGE

Prepared for:

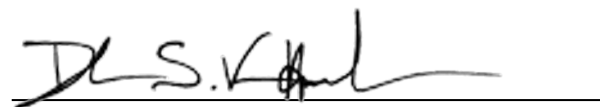
City of Waconia
310 East 10th Street
Waconia, Minnesota 55387

Attn: Mr. Craig Eldred – Public Services Director

Prepared by:

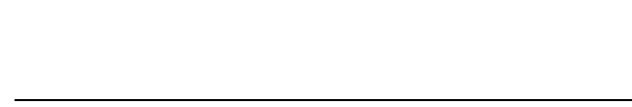
American Engineering Testing, Inc.
550 Cleveland Avenue North
St. Paul, Minnesota 55114
(651) 659-9001/www.amengtest.com

Authored by:



Derek S. Van Heuveln, PE
Senior Engineer

Reviewed by:



Gregory R. Reuter, PE, PG, D.GE
Principal Engineer/Vice President

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under Minnesota Statute Section 326.02 to 326.15

Name: Derek S. Van Heuveln

Date: March 10, 2021 License #: 45922

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Unauthorized use or copying of this document is strictly prohibited by anyone other than the client for the specific project.

Report of Geotechnical Exploration

2022 and 2023 Infrastructure Improvements Projects; Waconia, Minnesota

March 10, 2021

Report No. 20-23155

AMERICAN
ENGINEERING
TESTING, INC.**TABLE OF CONTENTS**

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Report of Geotechnical Exploration

2022 and 2023 Infrastructure Improvements Projects; Waconia, Minnesota

March 10, 2021

Report No. 20-23155

AMERICAN
ENGINEERING
TESTING, INC.

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Unified Soil Classification System

AASHTO Classification System

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APPENDIX B – Geotechnical Report Limitations and Guidelines for Use

Report of Geotechnical Exploration

2022 and 2023 Infrastructure Improvements Projects; Waconia, Minnesota

March 10, 2021

Report No. 20-23155

AMERICAN
ENGINEERING
TESTING, INC.**1.0 INTRODUCTION**

The City of Waconia (City) is planning future infrastructure improvements projects for 2022 and 2023. To assist planning and design, you have authorized American Engineering Testing, Inc. (AET) to conduct a subsurface exploration program at the site, conduct soil laboratory testing, and perform a geotechnical engineering review for the project. This report presents the results of the above services, and provides our engineering recommendations based on this data.

2.0 SCOPE OF SERVICES

AET's services were performed according to our proposal to you dated September 15, 2020, which you authorized on September 17, 2020. The authorized scope consists of the following.

- Drilling 13 standard penetration test borings to depths ranging from 10 to 25 feet below grade.
- Performing soil laboratory testing, including water content, sieve analysis, and electrical resistivity testing on select samples.
- Conducting a geotechnical engineering review based on the data and preparing this report.

These services are intended for geotechnical purposes only. The scope is not intended to explore for the presence or extent of environmental contamination in the soil or groundwater.

3.0 PROJECT INFORMATION

The following information was provided to us by the City and their designer, Bolton & Menk. The proposed 2022 Infrastructure Improvements project has two work areas. One project area consists of the replacement of retaining walls along the east and west sides of Oak Avenue at the lake channel outlet culvert. The west wall is one tier and the east wall consists of two tiers. These walls, which are located south of Pietz Avenue, are currently segmental block retaining walls, and have deteriorated due to road salt and erosion from the outlet channel; apart from this the walls have performed satisfactorily. Design for these walls has not begun; however, we understand that it is planned to replace these walls with new retaining walls constructed of large wet cast retaining wall blocks, that is, prefabricated modular block wall (PMBW) without soil reinforcement (e.g. a gravity PMBW), per MnDOT nomenclature. The bottom elevation of the

Report of Geotechnical Exploration

2022 and 2023 Infrastructure Improvements Projects; Waconia, Minnesota
March 10, 2021
Report No. 20-23155

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new walls will closely match the existing walls, and wall heights of 3 to 5 feet (similar to the existing walls) are anticipated. We have been provided with the Retaining Wall Details plan for the existing walls, dated October 14, 1996, as part of our review.

The second part of the 2022 project and the 2023 project includes utility replacement and street reconstruction in downtown Waconia. The project area generally includes Main Street West from Maple Street North to Spruce Street North, and portions of the cross streets within one block south of Main Street. The 2022 project will be from Maple Street to Olive Street, and the 2023 project will be from Olive Street to Spruce Street.

The sanitary sewer is planned to be replaced along Main Street between Maple Street and Pine Street, with smaller replacement areas along Olive Street and Elm Street south of Main Street. Following utility work, street reconstruction will be performed on Main Street and along portions of Olive Street, Elm Street, Pine Street, and Spruce Street.

The above stated information represents our understanding of the proposed construction. This information is an integral part of our engineering review. It is important that you contact us if there are changes from that described so that we can evaluate whether modifications to our recommendations are appropriate.

4.0 SUBSURFACE EXPLORATION AND TESTING

4.1 Field Exploration Program

The subsurface exploration program conducted for the project consisted of 13 standard penetration test borings. The number of borings, boring locations, and boring depths were determined by the City and Bolton & Menk. The logs of the borings and details of the methods used appear in Appendix A. The logs contain information concerning soil layering, soil classification, geologic origins, and moisture condition. A density description or consistency is also noted for the natural soils, which is based on the standard penetration resistance (N-value).

The boring locations are shown on Figure 1 in Appendix A. The borings were located in the field by Bolton & Menk. Final boring locations were offset based on underground utilities identified as part of the Gopher State One Call utility clearance. Surface elevations at the boring locations

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were recorded in the field by AET personnel using a GPS unit with $\pm\frac{1}{2}$ -foot (0.15 meter) accuracy.

4.2 Laboratory Testing

The laboratory test program included water content testing on fine grained (clayey) soils, sieve analysis (gradation only) testing on select samples, and electrical resistivity testing on samples taken from Borings B-12 and B-19. The test results appear in Appendix A on the individual boring logs adjacent to the samples upon which they were performed, on the data sheets following the logs, or presented in the report text below.

5.0 SITE CONDITIONS**5.1 Pavement and Aggregate Base Thickness**

The bituminous pavement at our boring locations varied from approximately 2¼ inches (Boring B-22) to 8¼ inches (Borings B-11) thick, with an average of about 5¾ inches as measured from the augered boreholes. The varying pavement thickness could be due to overlays.

Apparent aggregate base materials were encountered at each boring location in a thickness that generally varied from approximately 4 to 18 inches. The base soils generally consisted of crushed limestone and silty sands with varying amounts of gravel. At Boring B-20, the possible aggregate base material consisted of a mixture of clayey sands and silty sands. Pieces of geotextile fabric were observed beneath the aggregate base at Borings B-10 to B-12. Please refer to table A for summary information.

Table 5.1– Pavement and Base Thickness

Soil Boring No.	Bituminous Thickness (inches)	Aggregate Base Thickness (inches)	Aggregate Base Type and AASHTO Classification
B-10	7½	12	Silty sand with gravel (A-1-b)
B-11	8¼	12	Crushed limestone (A-1-b)
B-12	7½	15	Silty sand with gravel (A-1-b)

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Soil Boring No.	Bituminous Thickness (inches)	Aggregate Base Thickness (inches)	Aggregate Base Type and AASHTO Classification
B-13	6½	8½	Crushed limestone (A-1-b)
B-14	6¾	4	Silty sand with gravel (A-1-b)
B-15	6½	>12	Silty sand with gravel (A-1-b)
B-16	5¾	18	Silty sand (A-2-4)
B-17	4¾	4	Crushed limestone and silty sand (A-1-b)
B-18	5½	18	Gravelly silty sand (A-1-b)
B-19	7¼	17	Silty sand (A-2-4)
B-20	2½	9½	Clayey sand and silty sand (A-2-6)
B-21	5	12	Silty sand (A-2-4)
B-22	2¼	10	Silty sand with gravel (A-1-b)

5.2 Subsurface Soils/Geology**5.2.1 Oak Avenue Area (Borings B-10 and B-11)**

Below the pavement and aggregate base, the Oak Avenue borings encountered fill to depths of 7 to 9¼ feet below grade. The fill could be roadway embankment, retaining wall backfill, or utility trench backfill. The fill consisted mainly of organic clays, lean clays, sandy lean clays, clayey sands, and silty sands with varying amounts of gravel. The N-values in the fill ranged from 4 to 15. The water content ranged from 13% to 38%.

Below the fill, the borings generally encountered naturally-deposited soft to very stiff sandy lean clays and clayey sands (A-6). Boring B-11 encountered a swamp deposit layer below the fill from 7 to 9½ feet below grade consisting of firm organic clay. The water content in the naturally-deposited soils ranged from 17% to 30%.

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5.2.2 Main Street Area (Borings B-12 to B-22)

At the boring locations in the Main Street project areas, the borings encountered fill or possible fill to depths of 1 to 12 feet below grade. The fill could be roadway embankment or utility trench backfill. The fill consisted mainly of sandy lean clays, clayey sands, silty sands, and sands with silt with varying amounts of gravel. We observed pieces of bituminous in portions of the fill. Cinders were observed in the fill from 2 to 4½ feet at Boring B-19. The N-values in the fill ranged from 1 to 28. The water content in the clayey soils ranged from 11% to 28%.

Below the fill, the borings generally encountered naturally-deposited fine alluvium and till soils to the termination depths. A layer of firm organic clay (swamp deposit) was encountered at Boring B-12 from 12 to 14½ feet below grade. The water content of the organic clay was 26%.

The fine alluvial soils consist of lean clays and sandy lean clays. The N-values ranged from 6 to 17. The water content ranged from 24% to 33%. The till soils consist of sandy lean clays, clayey sands, and silty sands. The N-values in these soils ranged from 5 to 54. The water content in the clayey soils ranged from 14% to 23%. An apparent boulder was encountered in boring B-15 at a depth of approximately 5 feet.

5.3 Groundwater

We did not encounter groundwater in the majority of the boring locations at the time of our exploration. Groundwater was measured at a depth of 13.7 feet below grade at Boring B-14 and 21.4 feet below grade at Boring B-16. The majority of the site soils are relatively slow draining silty and clayey soils and an extended period of time would be required for groundwater to appear and stabilize in an open borehole; therefore, the absence of groundwater in our borings should not be taken to mean that groundwater would not be encountered in an excavation. Perched water levels can occur in sand and clay matrixes and groundwater may be encountered in some utility excavations. A discussion of the water level measurement methods is presented in Appendix A.

Groundwater levels fluctuate due to varying seasonal and annual rainfall and snow melt amounts, as well as other factors.

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5.4 Review of Soil Properties

Bituminous pavements are “flexible” systems, and require a high level of strength/stability from the upper subgrade zone. Generally, the upper 4 feet of the subgrade is considered the critical subgrade zone. At the test locations, the fill soils in the critical subgrade zone encountered have moderate strength and stability, unless further disturbed.

The soils found in the upper 4 feet range from moderately fast draining sands with silt to slow draining lean clay, sandy lean clay, and clayey sand. These soils have a moderate to high susceptibility to frost heaving and freeze thaw weakening.

The soils in the upper 4 feet of the subgrade had water contents varying from near optimum for compaction, based on our experience with these soils and the standard Proctor test (ASTM D 698), to above optimum moisture, with some water contents as high as 38%. In general, the inorganic soils more than 4 feet below subgrade elevation had water contents that varied from 14% to as high as 33%. The water content in the organic clays encountered in Borings B-11 and B-12 ranged from 26% to 30%. A larger percentage of these soils would be considered above “optimum” water content, and it may be difficult to obtain proper compaction for utility trench backfill.

6.0 UTILITY RECOMMENDATIONS**6.1 Approach Discussion**

The natural soils encountered in our borings were primarily clayey till and fine alluvial soils. These soils would generally be judged suitable to support the new utility pipes at depth. However, these till and alluvial soils can include cobbles and boulders, such as at encountered in Boring B-15. This may make excavating procedures somewhat more difficult than normal if they are encountered.

It should be noted that layers of organic clay were encountered at some of the boring locations. Utility pipe support and bedding will be significantly different in those zones than would be required in the alluvial and till soils encountered at our boring locations.

Groundwater was encountered at 2 of the 13 boring locations at depths ranging from approximately 13½ to 21½ feet below grade at the time of our exploration. Excavations for new

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utilities are planned to extend to depths of 14 to 17 feet below grade. The soils at our borings were predominately cohesive (lean clays, sandy lean clays, and clayey sand till and fine alluvium, and organic clay swamp deposits); however sandier seams in the cohesive soil matrix can be waterbearing, as well as layers of silty sands such as encountered at Boring B-22. The project contractor should consider groundwater control, which will need to be carefully planned and executed, as part of their installation process. If dewatering is required, it is the responsibility of the contractor to design the dewatering system. We anticipate groundwater control may be possible by using sump pits and pumps due to the relatively low permeability sandy lean clays and clayey sands.

Please refer to the following sections for additional information.

6.2 Bedding and Backfilling

We judge the natural soils encountered at our boring locations should provide acceptable utility foundation support. Where clayey or silty soils are present at pipe grade in open excavations, a 4-inch thick granular bedding layer should be placed beneath pipes to improve support uniformity. In organic soils, this bedding layer should be increased to at least 12 inches. If the soils are soft and susceptible to disturbance, or if organic soils are present, we recommend placing a geotextile separator fabric between the subgrade and the pipe bedding to reduce mixing of the subgrade and the bedding. We also recommend that the contractors remove any cobbles/boulders in the utility line trenches prior to utility line installation. This will reduce the potential for the development of point loads on the pipe that would not be accounted for in the pipe design.

6.2.1 Pipe Bedding

For pipe bedding material, we recommend a sand or sand and gravel mix, such as MnDOT 3149.2B2, with less than 12% of the particles (by weight) passing the No. 200 sieve. Imported fill will be required for the pipe bedding.

Pipe bedding should be carefully placed and hand-compacted under the haunches of the pipe, around the pipe, and to a minimum of 6 inches above the crown. As backfill is placed in the trenches, special caution must be given to the densification of the soil around and over the pipe. The contractor may have to use special manual techniques to properly compact the backfill under the haunches of the pipe, in order to prevent voids and prevent lateral movement of the pipe.

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The bedding must be in direct contact with the pipe before the trench is backfilled. This will also help prevent having dissimilar materials contact the metallic pipes and setting up potential corrosion cells.

6.2.2 Trench Backfill

The excavated non-organic soils can be used as backfill for new utility line trenches. The existing soils should be evaluated at the time of excavation to determine if these soils are suitable for use as trench backfill. Soils containing construction debris are generally not recommended for use as backfill, as the debris can make it difficult to adequately compact the entire lift thickness.

Utility trench backfill beneath pavements should be placed per the requirements of MnDOT Specification 2105.3F1 (Specified Density Method). The backfill soils should be placed in a maximum lift thickness of 1 foot or less for the granular soils and 8 inches or less for the cohesive soils. This specification requires soils placed within an excavation trench be compacted to a minimum of 100% of the *standard maximum dry unit weight* defined in ASTM: D698 (Standard Proctor test), at a water content 65% to 102% of the *standard optimum water content*.

The silty and clayey soils found at our borings are sensitive to changes in moisture content and could be difficult to compact at their natural moisture content and/or if they become wet and/or dry of optimum water content after they are excavated. Soils will need to be placed within a certain range of water (moisture) contents to attain desired compaction levels. Moisture conditioning to within this range can be time consuming, labor intensive, and requires favorable weather. Failure to compact the trench backfill to the recommended densities could result in excessive settlement of pavements constructed over this material. If it is not feasible to dry the soils then the backfill should be compacted in thin lifts, with a lower density anticipated and possibly some additional trench settlement. This is the “Quality Compaction Method,” MnDOT Specification 2105.3F.2. However, the top 3 feet of trench backfill should be dried to meet the recommend compaction specifications, as this is in the “critical” subgrade zone. Please refer to the enclosed standard sheets titled “Utility Excavation Backfilling” for additional information.

One method to mitigate differential utility trench backfill is to delay paving of the final wearing course of the pavement until the next construction season to allow settlement to occur and corrective grading/paving to be performed on areas of excessive differential settlement. The

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base course of pavement can be sawcut and removed, the subgrade and aggregate base can be regraded/compacted, and the bituminous base course replaced prior to final paving.

In “green” areas, backfill soils should be placed in reasonable lift thicknesses (about 1 foot or less) and compacted to a minimum of 90% of the Standard Proctor density (ASTM: D698) and/or per the MnDOT “Quality Compaction Method.” If lower compaction levels are attained, more noticeable subsidence at the surface can occur.

6.2.3 Utility Pipe Corrosion Potential

The soils encountered in the soil borings were predominately lean clays, sandy lean clays, and clayey sands, with occasional zones of organic clays, silty sands, and sands with silt. We performed soil resistivity on soil samples at Boring B-12 and B-19. The resistivity values were as follows:

Table 6.2.3 – Resistivity Values

Soil Boring No.	Depth of Sample Tested (ft.)	Natural Moisture (ohm-cm)	Water Added (ohm-cm)	Soil Type
B-12	7-11½	1210	1200	Fill - Sandy Lean Clay (CL)
B-19	7-9	1080	1010	Sandy Lean Clay (CL)

The above resistivity values, when compared to American Water Work Association (AWWA) charts and other sources, indicate that the clayey soils are considered corrosive. Organic soils are also considered corrosive. Silty sands are considered to be moderately corrosive. Corrosion can occur to buried metallic pipes that are not coated or protected from soils that are considered corrosive, or where fluctuating groundwater levels occur, or where dissimilar backfill has been placed.

In our opinion, the new watermain should have coated (or wrapped) pipes backfilled with a uniform sand bedding placed completely around the pipes so that clayey or organic soils are not

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touching the pipes. The entire system should be designed to be electrically continuous. HDPE pipes installed for directional drilled utilities are not considered corrosive.

7.0 PAVEMENTS**7.1 Definitions**

The italicized words used in this section have specific definitions. These definitions are presented on the attached Standard Sheet entitled “Definitions Relating to Pavement Construction” or in ASTM Standards or MnDOT Specifications. Some of these definitions are also noted in section 6.2 of this report.

7.2 Subgrade Preparation**7.2.1 Standard City Pavement Sections**

The current City pavement sections incorporate the use of a drained *sand subbase* layer of *Select Granular Material* beneath the aggregate base layer for bituminous pavement systems. The purpose of the *sand subbase* is to provide improved drainage for the aggregate base and upper zone of the subgrade which better controls frost heaving and thaw weakening effects. The appropriate *sand subbase* thickness is usually a function of the underlying soil’s frost and strength properties, and the traffic loadings.

The pavement sections, which also include geotextile fabric below the aggregate base, are as follows:

- Residential Section - 4½ inches bituminous, 6 inches aggregate base, and 12 inches of Select Granular Material (MnDOT 3149.2B.2).
- Truck Route Section - 6½ inches bituminous, 10 inches aggregate base, and 12 to 18 inches of Select Granular Material (MnDOT 3149.2B.2).

It is our opinion that for these project areas, a 1-foot thick *sand subbase* layer would suffice. Where there is a need to vary the thickness of the *sand subbase*, we recommend the thickness have a taper of no steeper than 10H:1V. The subcut and sand layer placement should extend slightly beyond the back of the curb to maintain frost uniformity.

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Because the underlying subgrade soils are generally clayey, and will not allow infiltrating water to percolate quickly, the *sand subbase* layer should be provided with a proper means of subsurface drainage. At the bottom of the *sand subbase*, we recommend the installation of finger drains tied into catch basins. The subsurface drains should be properly engineered and installed per MnDOT Specification 2502 Subsurface Drains, (MnDOT Standard Specifications for Construction, 2018 Edition, pages 394 to 401).

7.2.2 Stability Improvement

The final subgrade should have proper stability within the critical subgrade zone. When clayey soils or higher silty content soils are present, stability should be evaluated using the *test roll* procedure. Where unstable soils are found using the *test roll* process, then these soils should be improved by means of scarification, drying, and recompaction; or by subcutting and replacement. We recommend the final soils remaining in place be capable of passing a *test roll* prior to placing the *sand subbase* and/or aggregate base. It is our judgement that a *test roll* should not be necessary on the *sand subbase* material, or where the roadway subgrade consists of sands and sands with silt; in this case, the *test roll* process should be performed at the top of the aggregate base material prior to pavement construction.

We caution that instability of soils present beneath the soils being reworked and compacted may limit the ability to compact the upper soils. In this case, greater depths of subcutting and stability improvement may be needed.

7.2.3 Geosynthetic Use

A Type V geotextile fabric can be used for separation purposes below the *sand subbase*. A geotextile fabric (or a geogrid) can be used as reinforcement to aid in off-setting subgrade instability. For stability improvement, the geotextile fabric should be placed on top of the subgrade, below a *sand subbase* layer, which better uses the tensile properties of the fabric. However, you should recognize that the use of a geotextile stabilization fabric over *unstable soils* may not necessarily provide an equivalent off-set (compared to proper soil stabilization). Geotextile fabric use and installation should meet the requirements of MnDOT Specification 3733. A Type V geotextile is judged appropriate for separation purposes. However, if you wish to provide subgrade reinforcement, then a stronger geotextile should be used (Type VI).

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Following the subcutting and stabilization of existing soils as needed, fill can be placed as needed to re-attain subgrade elevation. Fill should be placed per the requirements of MnDOT Specification 2105.3.F.1 (Specified Density Method). This specification generally requires soils placed within the *critical subgrade zone* be compacted to a minimum of 100% of the *standard maximum dry unit weight* defined in ASTM: D698 (Standard Proctor test), at a water content 65% to 102% of the *standard optimum water content*. A reduced minimum compaction level of 95% of the *standard maximum dry unit weight* can be used below the *critical subgrade zone*. The moisture content below the upper 3-foot zone shall be from 65% to 115% of the *standard optimum moisture content*. The *sand subbase* can be considered part of a composite subgrade; and the top of the subbase can be figured as the top of the 3-foot subgrade zone needing the 100% compaction level. However, the lower (dry) end of the water content range requirement does not need to apply to the sand subbase.

7.3 Subgrade R-value

The limiting on-site subgrade soils are the lean clay, sandy lean clay, and clayey sand soils. Based on the laboratory classification, we recommend using a design R-value of 12.

7.4 Aggregate Base

New aggregate base imported for pavement support should meet the gradation and quality requirements for Class 5, 5Q, or 6 per MnDOT Spec. 3138. Aggregate base placement and compaction should be performed according to MnDOT Spec. 2211. All aggregate base material (including existing, imported, or reclaimed) should be tested for compaction using the Penetration Index Method per MnDOT Spec. 2211.3.D.2.c.

7.5 Bituminous Pavement Comments

The bituminous materials should meet appropriate MnDOT 2360 specifications. The mix designs presented previously meet minimum requirements. We recommend limiting RAP within the upper wear course to a maximum of 10% and in lower courses to a maximum of 20% to reduce thermal cracking. Minimizing the number of mixes and binder oils (PG grades) used on a project is generally more economical. Other mix design alternatives include the following options:

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- Size-A aggregate ($\frac{1}{2}$ -inch minus) can be used instead of the Size-B aggregate ($\frac{3}{4}$ -inch minus). Size-A aggregate generally provides a “finer” pavement surface and therefore tighter longitudinal joints. Size-B aggregate will generally accommodate Recycled Asphalt Pavement (RAP) more readily than size-A aggregate.
- The use of an F-binder oil (PG 58V-34) in the wear layers will reduce rutting caused by turning movements, slow speeds, and starting/stopping traffic. It will also result in less thermal cracking of the pavement and subsequently less maintenance and better long-term pavement performance.

Regardless of the improvement approach selected, all bituminous pavements require on-going maintenance to reach their design life. Even if placed and compacted properly over stable subgrade conditions, bituminous pavements typically experience cracking in 1 to 3 years, primarily due to temperature-related expansion and shrinkage. We recommend that a regularly scheduled maintenance program consisting of patching of cracks and local distressed areas be implemented. Seal coating of the pavement surface after 3 to 5 years also helps prolong the pavement life.

8.0 RETAINING WALLS

8.1 Approach Discussion

We understand your desired wall type is a prefabricated modular block wall (PMBW) without soil reinforcement (e.g. a gravity PMBW). We recommend that the walls be designed and constructed per MnDOT Special Provision S-2411. As noted, no drawings or plans have been provided to us for the new retaining walls. The City has provided us with a topographic plan view of the area showing that the replacement walls will be placed on the east and west sides of Oak Avenue at the lake outlet culvert. The culvert consists of a 72-inch diameter corrugated metal pipe. You indicated that the walls will be constructed in approximately the same lengths as the existing walls (120 feet for the east wall and 190 feet for the west wall). Exposed wall heights are anticipated to be approximately 3 to 5 feet, similar to the existing walls. Based on the site survey provided, we assume the proposed ground surface elevation along the wall alignment will match the existing walls, which range from 958 to 963 feet on the east wall and 958 to 965 feet on the west wall. It is in our experience that an exposed height of 8 feet is the normal limit using the MnDOT Special Provision for PMBW's without soil reinforcement.

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Our recommended approach to prepare the retaining wall foundation is to excavate the fill and swamp deposited soils below the retaining wall to the underlying naturally-deposited sandy lean clay till at about elevation 951 feet, and placing engineered fill in lifts to re-attain bottom of leveling pad elevation. Excavations to elevation 951 feet will be near the invert elevation of the culvert, and would likely require damming of the outlet channel (e.g. coffer dams) and bypass pumping or other water control to allow earthwork to occur in dry conditions.

If the City is willing to accept an increased risk of greater than normal settlement and wall movement, the walls could be reconstructed in a similar configuration, supported on the in-place foundation soils. The existing walls have performed satisfactorily in regard to settlement and lateral movement, and future wall performance would be anticipated to be similar as long as a similar geometry (grades, exposed heights, alignments) was used for the replacement walls. Geometry changes, such as replacing the current two-tiered east wall with a single wall or increasing wall heights, would result in additional settlement and risk for the City with this approach.

To reduce the risk of greater than normal wall settlement with either the approach of reconstructing the walls in a similar configuration, or with geometry changes, consideration could be given to using compaction grouting to strengthen the existing fill and swamp deposited soils in place, and constructing the new walls on these compaction grouted soils. Compaction grouting is performed by a specialty contractor and consists of inserting a ported probe to the design treatment depth and injecting grout under pressure in lifts as the probe is retracted. The grout is injected in a series of overlapping bulbs, which work to increase the stiffness of the surrounding soils. This approach would be performed to increase the bearing capacity of the in-place soils, reduce foundation settlement, and reduce the required excavation depths, which should result in a lesser need for groundwater/outlet channel control measures. Design of compaction grouting is performed by a specialty contractor based on the conditions encountered at a project site. One local contractor that performs compaction grouting services is Veit & Company, Inc.

Our scope of services did not include global stability analysis, internal stability analysis, or external stability analysis items of sliding, overturning, and compound failure of the walls. We understand that these analyses will be performed by others.

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Based on our geotechnical review, we recommend the wall designer utilize the soil parameters in Table 8.2-1 to design the wall and evaluate stability. Please refer to the attached MnDOT Figure 2411-1 “Gravity PMBW Material Definitions/Typical Cross Sections” for additional information.

Table 8.2-1. Soil Parameters for PMBW External Stability Evaluation

Soil Description	Unit Weight (pcf)	Drained Friction Angle (degrees)	Undrained Cohesion (psf)
Backfill Soils	125	34	0
Retained Soil	120	28	0
Foundation Soils*	120	28	1,000

*Assuming soil correction is performed.

We recommend the retained soil parameters based on the existing mixed fill soils, including lean clays, sandy lean clays, clay sands, and silty sands. The foundation soils are assumed to consist of the underlying stiff sandy lean clay till. Additional borings or test pit excavations could be performed to provide additional information on the strength of the retained soil.

We recommend the bottom of the leveling pad be embedded at least 4 feet (i.e. minimum 4 feet of cover for the bottom of the wall) for frost protection, and that a minimum 6-inch thick unreinforced concrete leveling pad be utilized, which is consistent with the PMBW special provisions.

Gravity PMBW's are not allowed to support traffic within a 1V:1H horizontal distance measured from the front face bottom corner of the bottom block per MnDOT standards. For example, assuming the anticipated maximum exposed wall height of 5 feet and assuming the lowest block course is 3½ feet below grade (on top of the leveling pad) results in the roadway being no closer than 8½ feet behind the top of the wall to satisfy the design standard. A thicker leveling pad could be used to raise the lowest course of block and reduce the roadway set back distance.

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To prepare the retaining wall area for foundation support, we recommend the excavation of all fill and swamp deposited soils from within the retaining wall footprint to the underlying naturally-deposited stiff sandy lean clay till. Excavations should extend at least 6 inches below the proposed bottom of wall elevation for the placement of a leveling pad (typically unreinforced concrete per the MnDOT PMBW special provisions). This would result in excavation depths at the boring locations as shown in Table 8.3.1.

Table 8.3.1 – Recommended Excavation Depths

Boring Location	Surface Elevation (ft)	Excavation Depth (ft)	Approximate Excavation Elevation (ft)
B-10	962.8	12	951
B-11	962.9	12	951

The depth/elevation indicated in Table 8.3.1 is based on the soil condition at the specific boring location. Since conditions will vary away from the boring location, it is recommended that AET geotechnical personnel observe and confirm the competency of the soils in the entire excavation bottom prior to new fill or leveling pad placement.

Where the excavation extends below foundation grade, the excavation bottom and resultant engineered fill system must be oversized laterally beyond the planned outside edges of the foundations to properly support the lateral loads exerted by that foundation. This excavation/engineered fill lateral extension should at least be equal to the vertical depth of fill needed to attain foundation grade at that location (i.e., 1H:1V lateral oversize).

8.3.2 Excavations Adjacent to Existing Utilities, Roadways, and Culvert

Extreme care should be exercised when excavating adjacent to the existing culvert, pavements, and utilities, as these activities could possibly undermine foundations, or other grade supported improvements. Excavations should not extend below any existing slabs, pavements, or utilities. Excavation slopes adjacent to the existing structures or utilities should be cut in a benched pattern which should exhibit an overall slope of approximately 2H:1V or flatter and individual benches should not be taller than 2 feet. If this cannot be accomplished, underpinning or soil stabilization may be needed for proper support of the existing structure.

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Groundwater and outlet channel water control may be required to allow excavations and earthwork operations adjacent to the culvert to be performed under dry conditions. If groundwater is encountered, the level of drawdown should be achieved before the excavation reaches the planned elevation and maintained at least 2 feet below the lowest anticipated subgrade or subcut elevation. The water table should not be lowered more than necessary to provide a dry excavation, to reduce the risk of settlement of adjacent structures, pavements, and sewers. It is the responsibility of the designers of the dewatering system to assess the effects of lowering the groundwater on adjacent structures, pavements, or sewers.

8.3.3 Subgrade Fill Placement and Compaction

Fill placed to attain grade for foundation support (i.e. to backfill any excavations that may be needed below the leveling pad) should be compacted in thin lifts, such that the entire lift achieves a minimum compaction level of 98% of the standard maximum dry unit weight per ASTM:D698 (Standard Proctor test). Fill placed outside of the 1:1 oversize zone below the leveling pad should have a minimum compaction level of 95% of the standard maximum dry unit weight. All fill should be free of debris, rubble, organics, and other unsuitable materials. All fill soils should be compacted with equipment which will densify the entire lift of fill. Fill should not be placed over frozen soils, and frozen soils should not be used as fill.

8.4 Foundation Support Recommendations

The MnDOT PMBW standard plans require an allowable bearing pressure of 2,000 psf for walls up to 10 feet tall (8-foot exposed height, with minimum 2 feet embedment) with level fill at the top of the wall.

Based on the conditions encountered, it is our opinion the encountered soil conditions would be suitable for conventional foundation design for PMBW retaining walls based on an allowable soil bearing pressure of up to 2,000 psf. It is our judgment this design pressure will have a factor of safety of at least 3 with respect to the ultimate bearing capacity. We estimate that total settlements under these loadings should not exceed 1-inch and differential settlements are estimated to be less than 1"/200" over the length of each wall assuming the soils along the length of the wall are uniform as depicted in the borings.

The bottoms of all foundation excavations should be free of water and loose soil prior to placing structural fill or concrete. Structural fill should be placed soon after excavating to reduce bearing

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soil disturbance, and concrete should be placed soon after excavating or completion of the structural fill placement. If the materials at bearing level become excessively dry, disturbed, saturated, or frozen, the affected material should be removed and replaced prior to placing concrete.

8.5 Wall Backfill Recommendations

The new wall backfill should consist of *Select Granular Material Modified 10%* per the MnDOT PMBW special provisions. The new fill material should provide a minimum friction angle of 34 degrees, which should be confirmed via material testing in accordance with Standard Method of Direct Shear Test of Soils under Consolidated Drained Conditions (ASTM: D3080/AASHTO T236). The zone of sand backfill should extend behind the wall to a 2V:1H (i.e. 63 degree) backslope up from the back of the leveling pad for the blocks.

Wall backfill should be compacted in thin lifts, such that the entire lift achieves a minimum compaction level of at least 95% of the standard maximum dry unit weight per ASTM: D698 (Standard Proctor test). Note the MnDOT PMBW specifications or the wall designer may require a higher compaction level, particularly if the backfill supports pavements or other surface structures.

Compaction within 3 feet of the back of the retaining wall should be accomplished with hand-operated tampers or other lightweight compactors. Over-compaction may cause excessive lateral earth pressures which could result in unexpected wall movement or cracking.

8.6 Wall Drainage Recommendations

We recommend that a perforated drainpipe wrapped with Type I geotextile (meeting MnDOT Spec. 3733) be placed immediately behind the block at the same elevation as the lowest block course, on top of the concrete leveling pad. The drain pipe should extend through the wall at maximum intervals of 150 feet to gravity outlet or connect to the existing storm sewer system, if feasible.

9.0 CONSTRUCTION CONSIDERATIONS

9.1 Potential Difficulties

9.1.1 Water in Excavations

Groundwater was observed in 2 of the 13 borings drilled in the planned project areas. Groundwater should also be expected near the level of the lake outlet channel. Water also can be expected to collect in the excavation bottom during times of inclement weather or snow melt. To allow observation of the excavation bottom, to reduce the potential for soil disturbance, and to facilitate filling operations, we recommend water be removed from within the excavation during construction. Based on the soils encountered, we anticipate the groundwater can be handled with conventional sump pumping.

If groundwater is encountered, the level of drawdown should be achieved before the excavation reaches the planned elevation and maintained at least 2 feet below the lowest anticipated subgrade or subcut elevation. The water table should not be lowered more than necessary to provide a dry excavation, to reduce the risk of settlement of adjacent structures, pavements, and sewers. It is the responsibility of the designers of the dewatering system to assess the effects of lowering the groundwater on adjacent structures, pavements, or sewers.

9.1.2 Disturbance of Soils

The on-site soils can be disturbed under construction traffic, especially if the soils are wet. If soils become disturbed, they should be subcut to the underlying undisturbed soils. The subcut soils can then be dried and recompacted back into place, or they should be removed and replaced with drier imported fill.

9.1.3 Cobbles and Boulders

The soils at this site can include cobbles and boulders. This may make excavating procedures somewhat more difficult than normal if they are encountered.

9.2 Excavation Backsloping

If excavation faces are not retained, the excavations should maintain maximum allowable slopes in accordance with *OSHA Regulations (Standards 29 CFR), Part 1926, Subpart P, "Excavations"* (can be found on www.osha.gov). Even with the required OSHA sloping, water

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seepage or surface runoff can potentially induce sideslope erosion or sloughing which could require slope maintenance.

9.3 Observation and Testing

The recommendations in this report are based on the subsurface conditions found at our test boring locations. Since the soil conditions can be expected to vary away from the soil boring locations, we recommend on-site observation by a geotechnical engineer/technician during construction to evaluate these potential changes. Soil density testing should also be performed on new fill placed in order to document that project specifications for compaction have been satisfied.

10.0 ASTM STANDARDS

When we refer to an ASTM Standard in this report, we mean that our services were performed in general accordance with that standard. Compliance with any other standards referenced within the specified standard is neither inferred nor implied.

11.0 LIMITATIONS

Within the limitations of scope, budget, and schedule, we have endeavored to provide our services according to generally accepted geotechnical engineering practices at this time and location. Other than this, no warranty, express or implied, is intended.

Important information regarding risk management and proper use of this report is given in Appendix B entitled “Geotechnical Report Limitations and Guidelines for Use.”

UTILITY EXCAVATION BACKFILLING

GENERAL

Clayey and silty soils are often difficult to compact, as they may be naturally wet or dry, or may become wet due to ground water or runoff water during construction. Soils will need to be placed within a certain range of water (moisture) content to attain desired compaction levels. Moisture conditioning to within this range can be time consuming and labor intensive, and will require favorable weather.

The degree of compaction and the soil type used for backfill within open cut utility excavations depends on the eventual function of the overlying land surface. Details are as follows:

ROADWAYS

Where trenches are located below roadways, we recommend using inorganic fill and compacting these soils per MnDOT Specification 2105.3F1 (Specified Density Method). On MnDOT funded roads, the 2016 Specification requires 100% compaction over the entire trench depth. On non-MnDOT funded roads, we feel the specification can be relaxed to the previous version of achieving 100% of the Standard Proctor density in the upper 3-foot subgrade zone, and 95% below this depth. Note that this specification also includes moisture content range requirements which are important for proper subgrade stability.

Where available soils are wet or of poor quality, it may be possible to use the "Quality Compaction Method" (MnDOT Specification 2105.3F2) for soils below the upper 3-foot subgrade zone if you can tolerate some subsidence. However, a high level of stability is still important within the upper subgrade zone and recommend that the "Specified Density Method" be used in this upper subgrade area. We caution that if backfill soils in the lower trench area are significantly unstable, it may be difficult or even impossible to properly compact soils within the upper 3-foot subgrade zone. In this case, road subgrade stability can be improved by placing a geotextile reinforcement fabric directly over the unstable soils followed by properly drained granular fill placement.

STRUCTURAL AREAS

If fill is placed beneath or within the significant zone of influence of a structure (typically a 1:1 lateral oversize zone), the soil type and minimum compaction level will need to be evaluated on an individual basis. Because trenches result in variable fill depths over a short lateral distance, higher than normal compaction levels and/or more favorable (sandy) soil fill types may be needed. If this situation exists, it is important that special geotechnical engineering review be performed.

NON-STRUCTURAL AREAS

In grass/ditch areas, backfill soils should be placed in reasonable lift thicknesses and compacted to a minimum of 90% of the Standard Proctor density (ASTM: D698) and/or per the MnDOT "Quality Compaction Method." If lower compaction levels are accepted, more noticeable subsidence at the surface can occur. Steep or high slopes require special consideration, and if this situation exists, it is important that special geotechnical engineering review be performed.

SPECIAL CASES

Structural retention systems are often used to reduce impacts on adjacent streets/improvements. If localized excavations/pits or annular spaces are created which need to be backfilled, it may not be possible to place and compact soils by the conventional means of backfilling. Retraction of structural systems can also leave soils loosened. Significant settlement can occur in areas where backfill cannot be compacted. If these situations are located in non-structural or non-paved areas, it may be reasonable to accept the settlements and associated follow-up maintenance in order avoid the high cost of trying to compact the soil or placing flowable lean concrete fill. However, there may be areas where fill settlement needs to be avoided, especially as the settlement will be differential from the surrounding surface, or differential from a buried structure in the case of higher piping entering the structure. Where settlement needs to be avoided, the specification should require that the contractor submit a backfill compaction plan along with the retention plan. Improper sequencing of retention system removal and backfilling of the pits could result in excessive settlement and/or lateral movement of nearby improvements.

DEFINITIONS RELATING TO PAVEMENT CONSTRUCTION

Top of subgrade: Grade which contacts the bottom of the aggregate base layer.

Sand subbase: Uniform thickness sand layer placed as the top of subgrade which is intended to improve the frost and drainage characteristics of the pavement system by increasing drainage of excess water in the aggregate base and subbase, by reducing and “bridging” frost heaving, and by reducing spring thaw weakening effects.

Critical subgrade zone: The subgrade portion beneath and within three vertical feet of the top of subgrade. A sand subbase, if placed, would be considered the upper portion of the critical subgrade zone.

Suitable Grading Material: Mineral soil materials, typically from the project site, excluding the following: 1) soils which have an organic content exceeding 3%, 2) cohesive soils having a Liquid Limit exceeding 50%, 3) soils which include debris, cobbles, and/or boulders, and 4) soils which are considered acceptable from an environmental standpoint. The soil must also be capable of attaining the specified compaction level at its current water content or at a water content that can be reasonably scarified, blended, and moisture conditioned to a uniform water content in order to uniformly meet compaction requirements.

Granular Material: Soils meeting MnDOT Specification 3149.2B.1. This refers to granular soils which, of the portion passing the 1" sieve, contain less than 20% by weight passing the #200 sieve.

Select Granular Material: Soils meeting MnDOT Specification 3149.2B.2. This refers to granular soils which, of the portion passing the 1" sieve, contain less than 12% by weight passing the #200 sieve.

Select Granular Material (Super Sand): Soils meeting MnDOT Specification 3149.2B.3. This material is cleaner and coarser than Select Granular Material (see specification for specific requirements).

Compaction Subcut: Construction of a uniform thickness subcut below a designated grade to provide uniformity and compaction within the subcut zone. Replacement fill can be the materials subcut, although the reused soils should be blended to a uniform soil condition, moisture conditioned as needed to meet MnDOT Specification 2105.F; and re-compacted per the Specified Density Method defined in MnDOT Specification 2105.3F.1.

Test Roll: A means of evaluating the near-surface stability of subgrade soils (usually non-granular). Suitability is determined by the depth of rutting or deflection caused by passage of heavy rubber-tired construction equipment, such as a loaded dump truck, over the test area. Yielding of less than 1" is normally considered acceptable, although engineering judgment may be applied depending on the equipment used, soil conditions present, and/or depth below final grade.

Unstable Soils: Subgrade soils which do not pass a test roll. Unstable soils typically have water content exceeding the *standard optimum water content* defined in ASTM:D698 (Standard Proctor test).

Organic Soils: Soils which have sufficient organic content such that the soils engineering properties are negatively affected (typically more than 3% organic content). These soils are usually black to dark brown in color.

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Appendix A

Geotechnical Field Exploration and Testing

Boring Log Notes

Unified Soil Classification System

AASHTO Classification System

Figures 1 to 3 – Boring Locations

Subsurface Boring Logs

Sieve Analysis Tests

MnDOT Figure 2411-1 Gravity PMBW Material Definitions/Typical Cross
Sections

Appendix A

Geotechnical Field Exploration and Testing

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A.1 FIELD EXPLORATION

The subsurface conditions at the site were explored by drilling and sampling 13 standard penetration test borings. The locations of the borings appear on Figure 1, preceding the Subsurface Boring Logs in this appendix.

A.2 SAMPLING METHODS

A.2.1 Split-Spoon Samples (SS) - Calibrated to N_{60} Values

Standard penetration (split-spoon) samples were collected in general accordance with ASTM: D1586 with one primary modification. The ASTM test method consists of driving a 2-inch O.D. split-barrel sampler into the in-situ soil with a 140-pound hammer dropped from a height of 30 inches. The sampler is driven a total of 18 inches into the soil. After an initial set of 6 inches, the number of hammer blows to drive the sampler the final 12 inches is known as the standard penetration resistance or N-value. Our method uses a modified hammer weight, which is determined by measuring the system energy using a Pile Driving Analyzer (PDA) and an instrumented rod.

In the past, standard penetration N-value tests were performed using a rope and cathead for the lift and drop system. The energy transferred to the split-spoon sampler was typically limited to about 60% of its potential energy due to the friction inherent in this system. This converted energy then provides what is known as an N_{60} blow count.

The most recent drill rigs incorporate an automatic hammer lift and drop system, which has higher energy efficiency and subsequently results in lower N-values than the traditional N_{60} values. By using the PDA energy measurement equipment, we are able to determine actual energy generated by the drop hammer. With the various hammer systems available, we have found highly variable energies ranging from 55% to over 100%. Therefore, the intent of AET's hammer calibrations is to vary the hammer weight such that hammer energies lie within about 60% to 65% of the theoretical energy of a 140-pound weight falling 30 inches. The current ASTM procedure acknowledges the wide variation in N-values, stating that N-values of 100% or more have been observed. Although we have not yet determined the statistical measurement uncertainty of our calibrated method to date, we can state that the accuracy deviation of the N-values using this method is significantly better than the standard ASTM Method.

A.2.2 Disturbed Samples (DS)/Spin-up Samples (SU)

Sample types described as "DS" or "SU" on the boring logs are disturbed samples, which are taken from the flights of the auger. Because the auger disturbs the samples, possible soil layering and contact depths should be considered approximate.

A.2.3 Sampling Limitations

Unless actually observed in a sample, contacts between soil layers are estimated based on the spacing of samples and the action of drilling tools. Cobbles, boulders, and other large objects generally cannot be recovered from test borings, and they may be present in the ground even if they are not noted on the boring logs.

Determining the thickness of "topsoil" layers is usually limited, due to variations in topsoil definition, sample recovery, and other factors. Visual-manual description often relies on color for determination, and transitioning changes can account for significant variation in thickness judgment. Accordingly, the topsoil thickness presented on the logs should not be the sole basis for calculating topsoil stripping depths and volumes. If more accurate information is needed relating to thickness and topsoil quality definition, alternate methods of sample retrieval and testing should be employed.

A.3 CLASSIFICATION METHODS

Soil descriptions shown on the boring logs are based on the Unified Soil Classification (USC) system. The USC system is described in ASTM: D2487 and D2488. Where laboratory classification tests (sieve analysis or Atterberg Limits) have been performed, accurate classifications per ASTM: D2487 are possible. Otherwise, soil descriptions shown on the boring logs are visual-manual judgments. Charts are attached which provide information on the USC system, the descriptive terminology, and the symbols used on the boring logs.

Visual-manual judgment of the AASHTO Soil Group is also noted as a part of the soil description. A chart presenting details of the AASHTO Soil Classification System is also attached.

Appendix A
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The boring logs include descriptions of apparent geology. The geologic depositional origin of each soil layer is interpreted primarily by observation of the soil samples, which can be limited. Observations of the surrounding topography, vegetation, and development can sometimes aid this judgment.

A.4 WATER LEVEL MEASUREMENTS

The ground water level measurements are shown at the bottom of the boring logs. The following information appears under “Water Level Measurements” on the logs:

- ♦ Date and Time of measurement
- ♦ Sampled Depth: lowest depth of soil sampling at the time of measurement
- ♦ Casing Depth: depth to bottom of casing or hollow-stem auger at time of measurement
- ♦ Cave-in Depth: depth at which measuring tape stops in the borehole
- ♦ Water Level: depth in the borehole where free water is encountered
- ♦ Drilling Fluid Level: same as Water Level, except that the liquid in the borehole is drilling fluid

The true location of the water table at the boring locations may be different than the water levels measured in the boreholes. This is possible because there are several factors that can affect the water level measurements in the borehole. Some of these factors include: permeability of each soil layer in profile, presence of perched water, amount of time between water level readings, presence of drilling fluid, weather conditions, and use of borehole casing.

A.5 LABORATORY TEST METHODS

A.5.1 Water Content Tests

Conducted per AET Procedure 01-LAB-010, which is performed in general accordance with ASTM: D2216 and AASHTO: T265.

A.5.2 Sieve Analysis of Soils (thru #200 Sieve)

Conducted per AET Procedure 01-LAB-040, which is performed in general conformance with ASTM: D6913, Method A.

A.5.3 Laboratory Soil Resistivity using the Wenner Four-Electrode Method

Conducted per AET Procedure 01-LAB-090, which is performed using Soil Box apparatus in the laboratory in general accordance with ASTM: G57

A.6 TEST STANDARD LIMITATIONS

Field and laboratory testing is done in general conformance with the described procedures. Compliance with any other standards referenced within the specified standard is neither inferred nor implied.

A.7 SAMPLE STORAGE

Unless notified to do otherwise, we routinely retain representative samples of the soils recovered from the borings for a period of 30 days.

BORING LOG NOTES

DRILLING AND SAMPLING SYMBOLS

Symbol	Definition
AR:	Sample of material obtained from cuttings blown out the top of the borehole during air rotary procedure.
B, H, N:	Size of flush-joint casing
CAS:	Pipe casing, number indicates nominal diameter in inches
COT:	Clean-out tube
DC:	Drive casing; number indicates diameter in inches
DM:	Drilling mud or bentonite slurry
DR:	Driller (initials)
DS:	Disturbed sample from auger flights
DP:	Direct push drilling; a 2.125 inch OD outer casing with an inner 1½ inch ID plastic tube is driven continuously into the ground.
FA:	Flight auger; number indicates outside diameter in inches
HA:	Hand auger; number indicates outside diameter
HSA:	Hollow stem auger; number indicates inside diameter in inches
LG:	Field logger (initials)
MC:	Column used to describe moisture condition of samples and for the ground water level symbols
N (BPF):	Standard penetration resistance (N-value) in blows per foot (see notes)
NQ:	NQ wireline core barrel
PQ:	PQ wireline core barrel
RDA:	Rotary drilling with compressed air and roller or drag bit.
RDF:	Rotary drilling with drilling fluid and roller or drag bit
REC:	In split-spoon (see notes), direct push and thin-walled tube sampling, the recovered length (in inches) of sample. In rock coring, the length of core recovered (expressed as percent of the total core run). Zero indicates no sample recovered.
SS:	Standard split-spoon sampler (steel; 1.5" is inside diameter; 2" outside diameter); unless indicated otherwise
SU	Spin-up sample from hollow stem auger
TW:	Thin-walled tube; number indicates inside diameter in inches
WASH:	Sample of material obtained by screening returning rotary drilling fluid or by which has collected inside the borehole after "falling" through drilling fluid
WH:	Sampler advanced by static weight of drill rod and hammer
WR:	Sampler advanced by static weight of drill rod
94mm:	94 millimeter wireline core barrel
▼:	Water level directly measured in boring
▽:	Estimated water level based solely on sample appearance

TEST SYMBOLS

Symbol	Definition
CONS:	One-dimensional consolidation test
DEN:	Dry density, pcf
DST:	Direct shear test
E:	Pressuremeter Modulus, tsf
HYD:	Hydrometer analysis
LL:	Liquid Limit, %
LP:	Pressuremeter Limit Pressure, tsf
OC:	Organic Content, %
PERM:	Coefficient of permeability (K) test; F - Field; L - Laboratory
PL:	Plastic Limit, %
q _p :	Pocket Penetrometer strength, tsf (<u>approximate</u>)
q _c :	Static cone bearing pressure, tsf
q _u :	Unconfined compressive strength, psf
R:	Electrical Resistivity, ohm-cms
RQD:	Rock Quality Designation of Rock Core, in percent (aggregate length of core pieces 4" or more in length as a percent of total core run)
SA:	Sieve analysis
TRX:	Triaxial compression test
VS _R :	Vane shear strength, remolded (field), psf
VS _U :	Vane shear strength, undisturbed (field), psf
WC:	Water content, as percent of dry weight
%-200:	Percent of material finer than #200 sieve

STANDARD PENETRATION TEST NOTES

(Calibrated Hammer Weight)

The standard penetration test consists of driving a split-spoon sampler with a drop hammer (calibrated weight varies to provide N₆₀ values) and counting the number of blows applied in each of three 6" increments of penetration. If the sampler is driven less than 18" (usually in highly resistant material), permitted in ASTM: D1586, the blows for each complete 6" increment and for each partial increment is on the boring log. For partial increments, the number of blows is shown to the nearest 0.1' below the slash.

The length of sample recovered, as shown on the "REC" column, may be greater than the distance indicated in the N column. The disparity is because the N-value is recorded below the initial 6" set (unless partial penetration defined in ASTM: D1586 is encountered) whereas the length of sample recovered is for the entire sampler drive (which may even extend more than 18").

UNIFIED SOIL CLASSIFICATION SYSTEM

ASTM Designations: D 2487, D2488

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Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		Notes	
				Group Symbol	Group Name ^B		
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines ^C	Cu≥4 and 1≤Cc≤3 ^E	GW	Well graded gravel ^F	^A Based on the material passing the 3-in (75-mm) sieve. ^B If field sample contained cobbles or boulders, or both, add “with cobbles or boulders, or both” to group name. ^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt GW-GC well-graded gravel with clay GP-GM poorly graded gravel with silt GP-GC poorly graded gravel with clay	
			Cu<4 and/or 1>Cc>3 ^E	GP	Poorly graded gravel ^F		
	Sands 50% or more of coarse fraction passes No. 4 sieve	Gravels with Fines more than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}	^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt SW-SC well-graded sand with clay SP-SM poorly graded sand with silt SP-SC poorly graded sand with clay	
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}		
		Clean Sands Less than 5% fines ^D	Cu≥6 and 1≤Cc≤3 ^E	SW	Well-graded sand ^I		
			Cu<6 and/or 1>Cc>3 ^E	SP	Poorly-graded sand ^I		
	Fine-Grained Soils 50% or more passes the No. 200 sieve (see Plasticity Chart below)	Silts and Clays Liquid limit less than 50	inorganic	PI>7 and plots on or above “A” line ^J	CL	Lean clay ^{K,L,M}	^E Cu = D ₆₀ /D ₁₀ , Cc = $\frac{(D_{30})^2}{D_{10} \times D_{60}}$ ^F If soil contains ≥15% sand, add “with sand” to group name. ^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM. ^H If fines are organic, add “with organic fines” to group name. ^I If soil contains ≥15% gravel, add “with gravel” to group name. ^J If Atterberg limits plot is hatched area, soil is a CL-ML silty clay. ^K If soil contains 15 to 29% plus No. 200 add “with sand” or “with gravel”, whichever is predominant. ^L If soil contains ≥30% plus No. 200, predominantly sand, add “sandy” to group name. ^M If soil contains ≥30% plus No. 200, predominantly gravel, add “gravelly” to group name. ^N PI≥4 and plots on or above “A” line. ^O PI<4 or plots below “A” line. ^P PI plots on or above “A” line. ^Q PI plots below “A” line. ^R Fiber Content description shown below.
				PI<4 or plots below “A” line ^J	ML	Silt ^{K,L,M}	
organic			<u>Liquid limit—oven dried</u> <0.75 <u>Liquid limit – not dried</u>	OL	Organic clay ^{K,L,M,N} Organic silt ^{K,L,M,O}		
			Silts and Clays Liquid limit 50 or more	inorganic	PI plots on or above “A” line	CH		Fat clay^{K,L,M}
PI plots below “A” line		MH			Elastic silt ^{K,L,M}		
organic		<u>Liquid limit—oven dried</u> <0.75 <u>Liquid limit – not dried</u>		OH	Organic clay ^{K,L,M,P} Organic silt ^{K,L,M,Q}		
		Highly organic soil		Primarily organic matter, dark in color, and organic in odor		PT		Peat^{R}

SIEVE ANALYSIS

For classification of fine-grained soils and fine-grained fraction of coarse-grained soils:

Equation of “A”-line
Horizontal at PI = 4 to LL = 25.5,
then PI = 0.73 (LL-20)

Equation of “U”-line
Vertical at LL = 16 to PI = 7,
then PI = 0.9 (LL-8)

Calculation: $C_c = \frac{D_{60}}{D_{10}} = \frac{15}{0.075} = 200$, $C_u = \frac{(D_{60})^2}{D_{10} \times D_{30}} = \frac{2.9}{0.075 \times 15} = 5.6$

PLASTICITY CHART

For classification of fine-grained soils and fine-grained fraction of coarse-grained soils:

Equation of “A”-line
Horizontal at PI = 4 to LL = 25.5,
then PI = 0.73 (LL-20)

Equation of “U”-line
Vertical at LL = 16 to PI = 7,
then PI = 0.9 (LL-8)

Calculation: $C_c = \frac{D_{60}}{D_{10}} = \frac{15}{0.075} = 200$, $C_u = \frac{(D_{60})^2}{D_{10} \times D_{30}} = \frac{2.9}{0.075 \times 15} = 5.6$

Notes

^ABased on the material passing the 3-in (75-mm) sieve.

^BIf field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^CGravels with 5 to 12% fines require dual symbols:
GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay

^DSands with 5 to 12% fines require dual symbols:
SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay

^E $Cu = D_{60} / D_{10}$, $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

^FIf soil contains $\geq 15\%$ sand, add "with sand" to group name.

^GIf fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^HIf fines are organic, add "with organic fines" to group name.

^IIf soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^JIf Atterberg limits plot is hatched area, soil is a CL-ML silty clay.

^KIf soil contains 15 to 29% plus No. 200 add "with sand" or "with gravel", whichever is predominant.

^LIf soil contains $\geq 30\%$ plus No. 200, predominantly sand, add "sandy" to group name.

^MIf soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

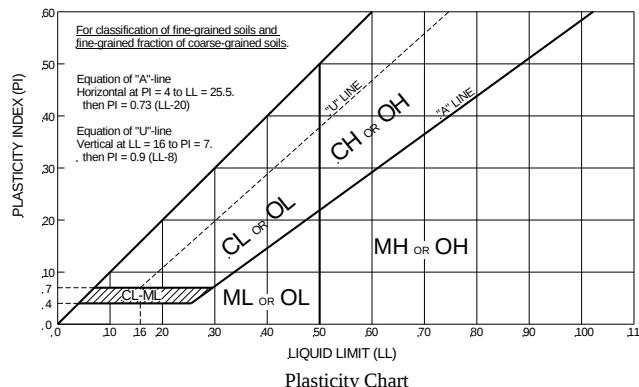
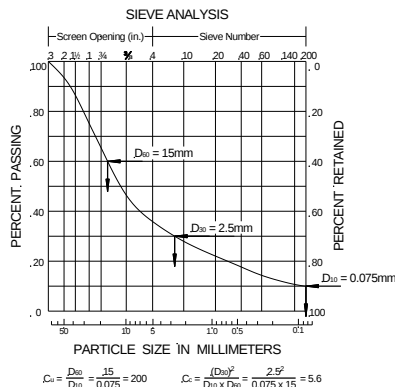
^NPI ≥ 4 and plots on or above "A" line.

^OPI < 4 or plots below "A" line.

^PPI plots on or above "A" line.

^QPI plots below "A" line.

^RFiber Content description shown below.



ADDITIONAL TERMINOLOGY NOTES USED BY AET FOR SOIL IDENTIFICATION AND DESCRIPTION

Grain Size		Gravel Percentages		Consistency of Plastic Soils		Relative Density of Non-Plastic Soils	
Term	Particle Size	Term	Percent	Term	N-Value, BPF	Term	N-Value, BPF
Boulders	Over 12"	A Little Gravel	3% - 14%	Very Soft	less than 2	Very Loose	0 - 4
Cobbles	3" to 12"	With Gravel	15% - 29%	Soft	2 - 4	Loose	5 - 10
Gravel	#4 sieve to 3"	Gravelly	30% - 50%	Firm	5 - 8	Medium Dense	11 - 30
Sand	#200 to #4 sieve			Stiff	9 - 15	Dense	31 - 50
Fines (silt & clay)	Pass #200 sieve			Very Stiff	16 - 30	Very Dense	Greater than 50
				Hard	Greater than 30		
Moisture/Frost Condition		Layering Notes		Peat Description		Organic Description (if no lab tests)	
(MC Column)						Soils are described as <i>organic</i> , if soil is not peat and is judged to have sufficient organic fines content to influence the Liquid Limit properties. <i>Slightly organic</i> used for borderline cases.	
D (Dry):	Absence of moisture, dusty, dry to touch.	Laminations:	Layers less than 1/2" thick of differing material or color.	Term	Fiber Content (Visual Estimate)	Root Inclusions	
M (Moist):	Damp, although free water not visible. Soil may still have a high water content (over "optimum").			Fibric Peat:	Greater than 67%	With roots: Judged to have sufficient quantity of roots to influence the soil properties.	
W (Wet/ Waterbearing):	Free water visible, intended to describe non-plastic soils. Waterbearing usually relates to sands and sand with silt.	Lenses:	Pockets or layers greater than 1/2" thick of differing material or color.	Hemic Peat:	33 - 67%	Trace roots: Small roots present, but not judged to be in sufficient quantity to significantly affect soil properties.	
F (Frozen):	Soil frozen			Sapric Peat:	Less than 33%		

AASHTO SOIL CLASSIFICATION SYSTEM

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

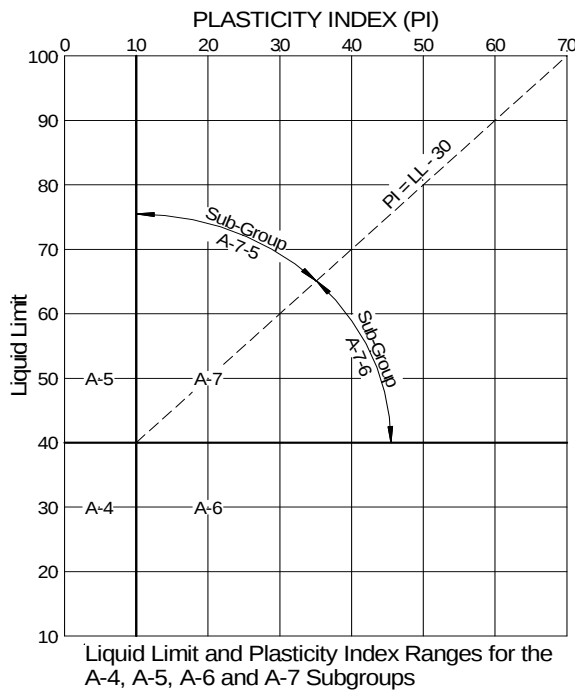
Classification of Soils and Soil-Aggregate Mixtures

General Classification	Granular Materials (35% or less passing No. 200 sieve)							Silt-Clay Materials (More than 35% passing No. 200 sieve)			
Group Classification	A-1		A-3	A-2				A-4	A-5	A-6	A-7
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5 A-7-6
Sieve Analysis, Percent passing:											
No. 10 (2.00 mm)	50 max.	....	....	....	....	....	....	....	....	....	....
No. 40 (0.425 mm)	30 max.	50 max.	51 min.	....	....	....	....	....	....	....	....
No. 200 (0.075 mm)	15 max.	25 max.	10 max.	35 max.	35 max.	35 max.	35 max.	36 min.	36 min.	36 min.	36 min.
Characteristics of Fraction Passing No. 40 (0.425 mm)											
Liquid limit . . . . .	....		....	40 max.	41 min.	40 max.	41 min.	40 max.	41 min.	40 max.	41 min.
Plasticity index	6 max.		N.P.	10 max.	10 max.	11 min.	11 min.	10 max.	10 max.	11 min.	11 min.
Usual Types of Significant Constituent Materials	Stone Fragments, Gravel and Sand		Fine Sand	Silty or Clayey Gravel and Sand				Silty Soils		Clayey Soils	
General Ratings as Subgrade	Excellent to Good							Fair to Poor			

The placing of A-3 before A-2 is necessary in the "left to right elimination process" and does not indicate superiority of A-3 over A-2.

Plasticity index of A-7-5 subgroup is equal to or less than LL minus 30. Plasticity index of A-7-6 subgroup is greater than LL minus 30.

Group A-8 soils are organic clays or peat with organic content >5%.



Definitions of Gravel, Sand and Silt-Clay

The terms "gravel", "coarse sand", "fine sand" and "silt-clay", as determinable from the minimum test data required in this classification arrangement and as used in subsequent word descriptions are defined as follows:

GRAVEL - Material passing sieve with 3-in. square openings and retained on the No. 10 sieve.

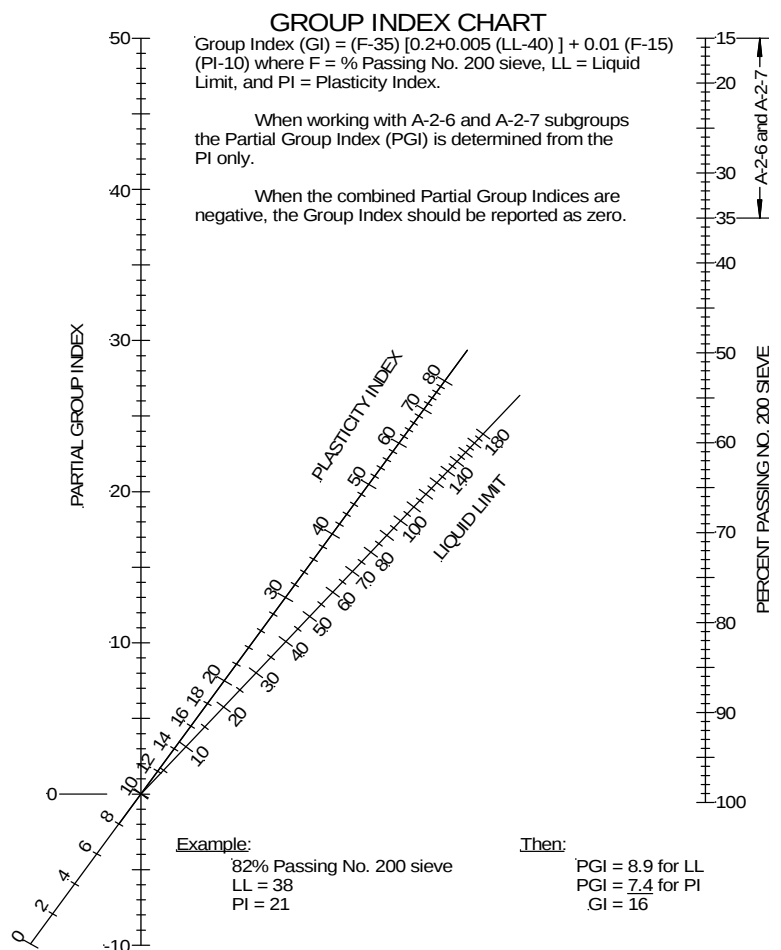
COARSE SAND - Material passing the No. 10 sieve and retained on the No. 40 sieve.

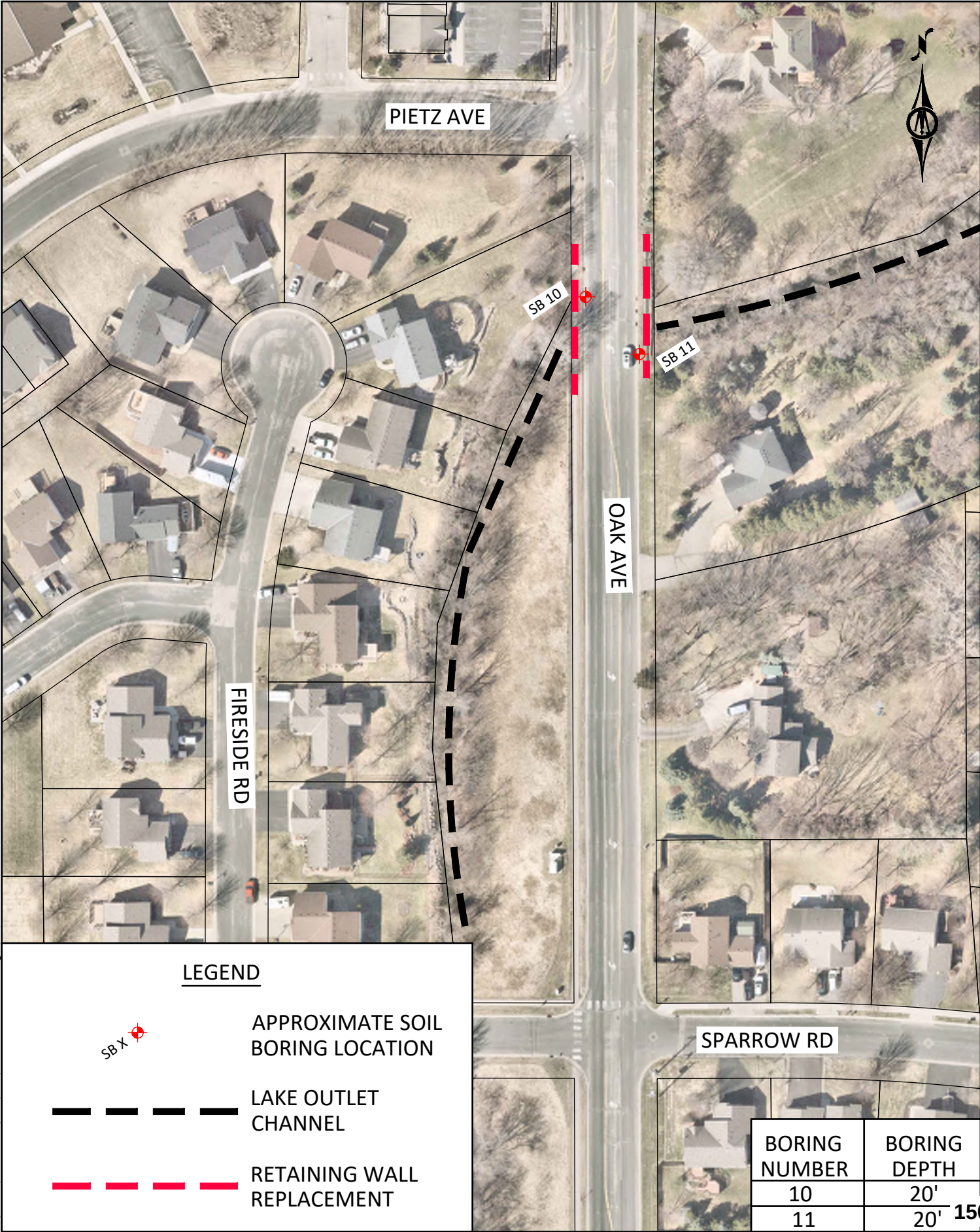
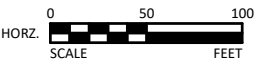
FINE SAND - Material passing the No. 40 sieve and retained on the No. 200 sieve.

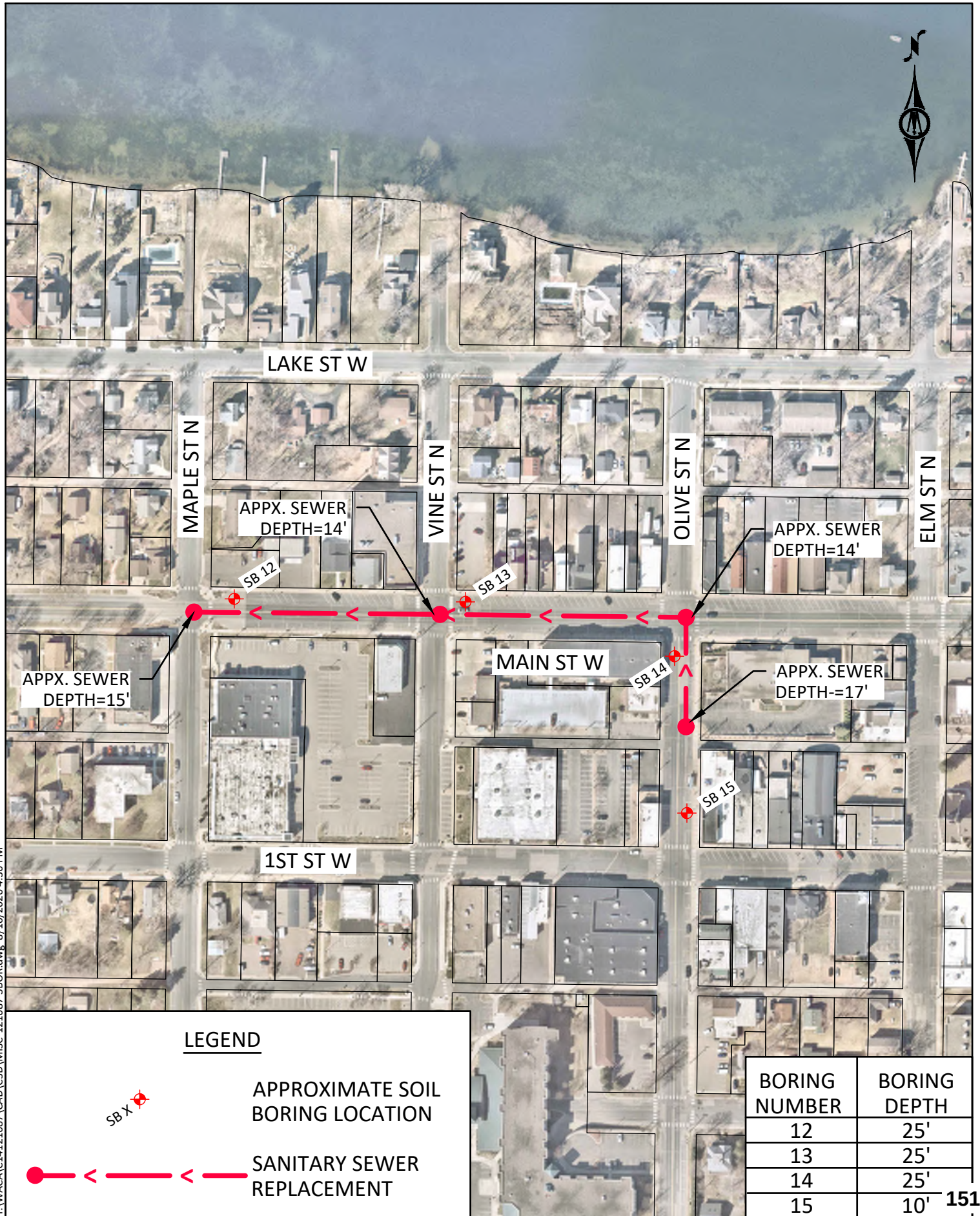
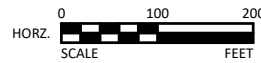
COMBINED SILT AND CLAY - Material passing the No. 200 sieve

BOULDERS (retained on 3-in. sieve) should be excluded from the portion of the sample to which the classification is applied, but the percentage of such material, if any, in the sample should be recorded.

The term "silty" is applied to fine material having plasticity index of 10 or less and the term "clayey" is applied to fine material having plasticity index of 11 or greater.







LEGEND

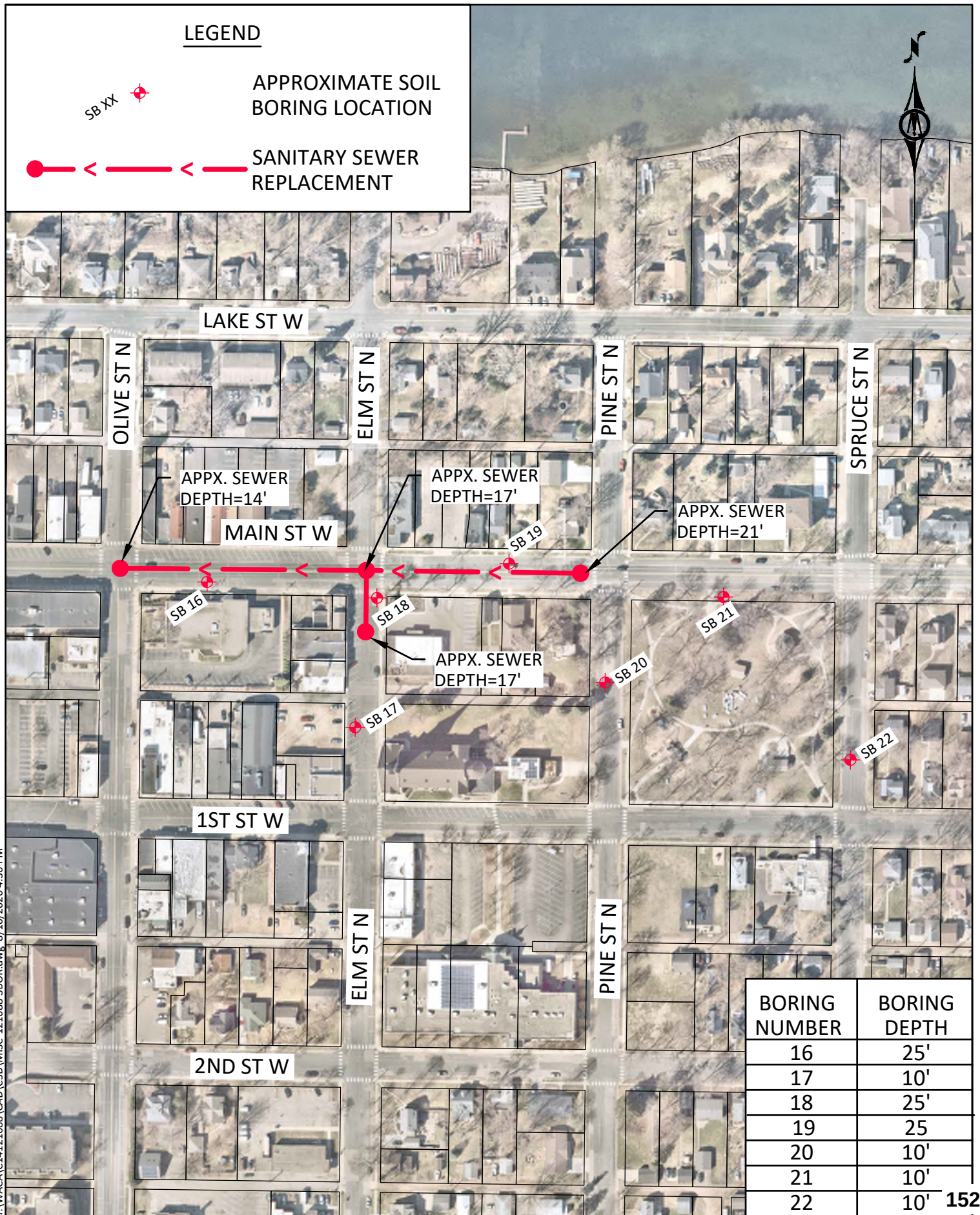
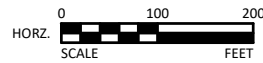


APPROXIMATE SOIL BORING LOCATION



SANITARY SEWER REPLACEMENT

BORING NUMBER	BORING DEPTH
12	25'
13	25'
14	25'
15	10'



BORING NUMBER	BORING DEPTH
16	25'
17	10'
18	25'
19	25
20	10'
21	10'
22	10'



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-10 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation <u>962.8</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS																																																													
							WC	DEN	LL	PL	%-#200																																																									
	7½" Bituminous pavement	FILL			 SU																																																															
1	FILL, mostly silty sand with gravel, brown, A-1-b		16	M	 SS	12	13																																																													
2	FILL, mostly clayey sand, a little gravel, geofabric, brown and black, A-6				 SS																																																															
3	FILL, mostly lean clay, brown, A-6		10	M	 SS	14	38																																																													
4					 SS																																																															
5	FILL, mixture of sandy lean clay and lean clay, brown and dark brown, A-6		7	M	 SS	14	17																																																													
6					 SS																																																															
7	FILL, mixture of organic clay and sandy lean clay, a little gravel, brown and black, A-6 and A-8		4	M	 SS	12	31																																																													
8					 SS																																																															
9		TILL			 SS																																																															
10	SANDY LEAN CLAY, a little gravel, trace roots, brown to gray, soft to stiff, A-6 (CL)		4	M	 SS	20	29																																																													
11					 SS																																																															
12					 SS																																																															
13			7	M	 SS	24	21																																																													
14					 SS																																																															
15	CLAYEY SAND, a little gravel, gray, stiff, A-6 (SC)		12	M	 SS	18	20																																																													
16					 SS																																																															
17					 SS																																																															
18					 SS																																																															
19			12	M	 SS	18	18																																																													
	END OF BORING																																																																			
<table> <tr> <td colspan="2">DEPTH: DRILLING METHOD</td><td colspan="7">WATER LEVEL MEASUREMENTS</td><td colspan="3" rowspan="6">NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG</td></tr> <tr> <td>0-17½'</td><td>3.25" HSA</td><td>DATE</td><td>TIME</td><td>SAMPLED DEPTH</td><td>CASING DEPTH</td><td>CAVE-IN DEPTH</td><td>DRILLING FLUID LEVEL</td><td>WATER LEVEL</td></tr> <tr> <td></td><td></td><td>10/8/20</td><td>12:20</td><td>19.5</td><td>17.5</td><td>19.1</td><td></td><td>None</td></tr> <tr> <td></td><td></td><td>10/8/20</td><td>12:30</td><td>19.5</td><td>17.5</td><td>19.1</td><td></td><td>None</td></tr> <tr> <td colspan="2">BORING COMPLETED: 10/8/20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2">DR: DS LG: SB Rig: 1C</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>												DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG			0-17½'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			10/8/20	12:20	19.5	17.5	19.1		None			10/8/20	12:30	19.5	17.5	19.1		None	BORING COMPLETED: 10/8/20									DR: DS LG: SB Rig: 1C								
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG																																																											
0-17½'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL																																																												
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		10/8/20	12:30	19.5	17.5	19.1		None																																																												
BORING COMPLETED: 10/8/20																																																																				
DR: DS LG: SB Rig: 1C																																																																				



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-11 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation <u>962.9</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
	8 1/4" Bituminous pavement	FILL			 SU						
1	12" FILL, mostly crushed limestone, brown, A-1-b		39	M	 SS	15	19				
2	FILL, mostly clayey sand, a little gravel, geofabric, black, A-6				 SS						
3	FILL, mixture of organic clay and gravelly silty sand, black, A-2-4 and A-8		15	M	 SS	17	26				
4					 SS						
5	FILL, mostly organic clay, a little silty sand and gravel, black, A-8		15	M	 SS	18	27				
6					 SS						
7	ORGANIC CLAY, black, firm, A-8 (OL/OH)	SWAMP DEPOSIT			 SS						
8			6	M	 SS	12	30				
9					 SS		25				
10	SANDY LEAN CLAY, a little gravel, gray to brown, firm to stiff, A-6 (CL)	TILL			 SS						
11			5	M	 SS	17	22				
12					 SS						
13			11	M	 SS	24	20				
14					 SS						
15	CLAYEY SAND, a little gravel, gray, stiff to very stiff, A-6 (SC)		14	M	 SS	18	17				
16					 SS						
17					 SS						
18			18	M	 SS	18	17				
19					 SS						
	END OF BORING										
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
0-17 1/2' 3.25" HSA		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
		10/8/20	1:30	19.5	17.5	19.0		None			
		10/8/20	1:40	19.5	17.5	19.0		None			
BORING COMPLETED: 10/8/20											
DR: DS LG: SB Rig: 1C											

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG.GDT 1/29/21



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-12 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation <u>1011.5</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	7½" Bituminous pavement	FILL									
2	FILL, mostly silty sand with gravel, pieces of concrete, geotextile, brown, A-1-b		75	M		3					
3	FILL, mostly silty sand with gravel, a little clayey sand and gravel, pieces of bituminous pavement, brown, A-1-b		28	M		22					
4											
5	FILL, mostly sandy lean clay, a little gravel, brown and dark brown, A-6		11	M		18	24				
6											
7											
8			2	M		4	23				
9											
10			5	M		10	21				
11											
12	ORGANIC CLAY, black, firm, A-8 (OL/OH)	SWAMP DEPOSIT									
13			8	M		12	26				
14		FINE ALLUVIUM									
15	SANDY LEAN CLAY, slightly organic, dark brown, grayish brown, firm, A-6 (CL)		7	M		22	24				
16		TILL									
17	SANDY LEAN CLAY, a little gravel, brown and gray mottled, a little light gray, stiff, laminations of silt, A-6 (CL)		14	M		15	14				
18											
19	CLAYEY SAND, a little gravel, brown and a little dark brown, very stiff, laminations of sandy silt, A-6 (SC)		22	M		13	18				
20											
21	CLAYEY SAND, a little gravel, brown, very stiff, laminations of silty sand, A-6 (SC)		24	M		17	20				
22											
23											
24	END OF BORING										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-22½'	3.25" HSA								
		10/6/20	11:40	24.0	22.5	23.9		None	
		10/6/20	11:50	24.0	22.5	23.9		None	
BORING COMPLETED: 10/6/20									
DR: DS LG: SB Rig: 1C									



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-13 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation <u>1012.3</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	6½" Bituminous pavement	FILL	18	M	 SU	17					
2	8½" FILL, crushed limestone, light brown A-1-b				 SS						
3	FILL, mostly silty sand, a little clayey sand and gravel, brown, A-2-4				 SS						
4					 SS						
5	FILL, mostly gravelly sand with silt, brown, A-1-b	FINE ALLUVIUM	6	M	 SS	18	29				
6					 SS						
7	SANDY LEAN CLAY, brown, a little gray, firm, laminations of sand and silt, A-6 (CL)				 SS						
8					 SS						
9		TILL	5	M	 SS	24	18				
10	SANDY LEAN CLAY, a little gravel, brown, firm, laminations of silty sand, A-6 (CL)				 SS						
11					 SS						
12					 SS						
13	SANDY LEAN CLAY, a little gravel, gray, very stiff to stiff, A-6 (CL)		19	M	 SS	24	17				
14					 SS						
15					 SS						
16					 SS						
17			14	M	 SS	18	18				56
18					 SS						
19					 SS						
20					 SS						
21	CLAYEY SAND, a little gravel, gray, a little brown, hard, laminations of silty sand, A-6 (SC)		47	M	 SS	18	15				
22					 SS						
23					 SS						
24					 SS						
25	CLAYEY SAND, a little gravel, gray, a little light gray, hard, laminations of sand (SC)		54	M	 SS	6	15				
26					 SS						
27					 SS						
28					 SS						
29	END OF BORING										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-22½'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		10/6/20	10:10	24.0	22.5	23.8		None	
		10/6/20	10:20	24.0	22.5	23.8		None	
BORING COMPLETED: 10/6/20									
DR: DS LG: SB Rig: 1C									

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG GDT 12/15/20



SUBSURFACE BORING LOG

AET No: 20-23155		Log of Boring No. B-14 (p. 1 of 1)									
Project: 2022 and 2023 Infrastructure Improvement Projects; Waconia, MN											
DEPTH IN FEET	Surface Elevation <u>1017.4</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	6¾" Bituminous pavement	FILL				SU					
2	FILL, mostly silty sand with gravel, brown, A-1-b		11	M		SS	15	11			
3	FILL, mostly clayey sand, a little silty sand and gravel, brown, A-6		7	M		SS	7	11			
4											
5											
6							4	14			
7											
8	FILL, mostly sandy lean clay, a little gravel, brown, A-6	TILL	1	M		SS	12	22			
9											
10	SANDY LEAN CLAY, a little gravel, brown to brown and dark brown mottled, firm to very stiff, A-6 (CL)		7	M		SS	18	19			
11											
12											
13			18			SS	22	18			
14											
15	SANDY LEAN CLAY, a little gravel, grayish brown, stiff to very stiff, A-6 (CL)		15	M		SS	18	19			
16											
17											
18											
19											
20			18	M		SS	18	21			
21											
22											
23			16	M		SS	18	22			
24	END OF BORING										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-22½'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		10/6/20	1:10	24.0	22.5	24.0		19.6	
		10/6/20	1:30	24.0	22.5	23.9		13.7	
BORING COMPLETED: 10/6/20									
DR: DS LG: SB Rig: 1C									

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG.GDT 12/15/20



SUBSURFACE BORING LOG

AET No: 20-23155		Log of Boring No. B-15 (p. 1 of 1)											
Project: 2022 and 2023 Infrastructure Improvement Projects; Waconia, MN													
DEPTH IN FEET	Surface Elevation <u>1025.6</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS						
							WC	DEN	LL	PL	%-#200		
1	6½" Bituminous pavement	FILL	16	M		SU	14						
2	FILL, mostly silty sand with gravel, pieces of bituminous pavement at 3', brown and black, A-1-b												
3													
4													
5	FILL, mostly sandy lean clay, a little silty sand and gravel (apparent boulder at 5'), brown, a little light tan, A-6	55/6	M		SS	6	17						
6													
7													
8	SANDY LEAN CLAY, a little gravel, grayish brown and brown mottled, a little light gray, stiff, laminations of silt and sandy silt, stiff, A-6 (CL)		TILL	12	M		SS	24	20				
9													
END OF BORING													

DEPTH: 0-7½'		DRILLING METHOD: 3.25" HSA		WATER LEVEL MEASUREMENTS					NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		10/6/20	1:50	9.5	7.5	9.4		None	
BORING COMPLETED: 10/6/20									
DR: DS LG: SB Rig: 1C									

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG.GDT 1/29/21



SUBSURFACE BORING LOG

AET No: 20-23155		Log of Boring No. B-16 (p. 1 of 1)									
Project: 2022 and 2023 Infrastructure Improvement Projects; Waconia, MN											
DEPTH IN FEET	Surface Elevation <u>1019.7</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	5¾" Bituminous pavement	FILL				SU					
2	FILL, mostly silty sand, a little gravel, brown, A-2-4		27	M		SS	17				
3	FILL, mostly clayey sand, a little silty sand, gravel and bituminous pavement, brown, A-6		17	M		SS	18	15			
4											
5	SANDY LEAN CLAY, a little gravel, brown, a little gray mottled to brown, stiff to very stiff, A-6 (CL)	TILL	11	M		SS	22	19			
6											
7											
8				13	M		SS	24	20		
9											
10				15	M		SS	24	20		
11											
12											
13				17	M		SS	24	18		
14											
15				15	M		SS	24	19		
16											
17											
18											
19											
20			16	M		SS	18	19			
21											
22	CLAYEY SAND, a little gravel, brown, hard, lens of silty sand, A-6 (SC)										
23			39	M/W		SS	18	16			
24	END OF BORING										
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
0-22½;' 3.25" HSA		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
		10/7/20	9:40	24.0	22.5	24.0		23.0			
		10/7/20	9:50	24.0	22.5	24.0		21.4			
BORING COMPLETED: 10/7/20											
DR: DS LG: SB Rig: 1C											

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG.GDT 1/29/21



AET No: **20-23155**

Log of Boring No. **B-17 (p. 1 of 1)**

Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

END OF BORING

NOTE: REFER TO
THE ATTACHED
SHEETS FOR AN
EXPLANATION OF
TERMINOLOGY ON
THIS LOG



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-18 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation 1032.1	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS					
	MATERIAL DESCRIPTION						WC	DEN	LL	PL	%-#200	
1	5½" Bituminous pavement	FILL	28	M		SU	15					
	FILL, mostly gravelly silty sand, brown, A-1-b					SS						
2	FILL, mostly gravelly clayey sand, brown, A-2-6					SS						
3			6	M		SS	19	12				
4												
5	FILL, mostly clayey sand, a little gravel, brown, A-6								6	M		SS
6												
7		SANDY LEAN CLAY, a little gravel, brown, firm to very stiff, A-6 (CL)	TILL	7	M		SS	20				
8												
9												
10	12			M		SS	24	20				
11												
12												
13	19			M		SS	24	19				
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16	20			M		SS	18	20				
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22	15			M		SS	18	20				
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25	15	M		SS	18	19						
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DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-23'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		10/7/20	11:30	24.5	23.0	24.3		None	
		10/7/20	11:40	24.5	23.0	24.3		None	
BORING COMPLETED: 10/7/20									
DR: DS LG: SB Rig: 1C									

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG.GDT 12/15/20



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-19 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation 1039.6	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS					
	MATERIAL DESCRIPTION						WC	DEN	LL	PL	%-#200	
1	7¼" Bituminous pavement	FILL	19	M		SU	15					
2	FILL, mostly silty sand, a little gravel, brown, A-2-4					SS						
3	FILL, mixture of clayey sand and silty sand with cinders, a little gravel, brown and dark brown. A-2-4 and A-6					SS						
4		TILL	11	M		SS	19	15				
5	SANDY LEAN CLAY, a little gravel, brown to brown with a little gray mottled, stiff, A-6 (CL)					SS						
6						SS						
7						SS						
8						SS						
9						SS						
10						SS						
11						SS						
12						SS						
13						SS						
14						SS						
15						SS						
16						SS						
17						SS						
18						SS						
19						SS						
20						SS						
21						SS						
22						SS						
23			SS									
24			SS									
END OF BORING												57

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-23'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		10/7/20	1:10	24.5	23.0	24.0		None	
		10/7/20	1:20	24.5	23.0	24.0		None	
BORING COMPLETED: 10/7/20									
DR: DS LG: SB Rig: 1C									

AET CORP 20-23155.GPJ AET-CPT+WELL 20181012 JG.GDT 12/15/20



SUBSURFACE BORING LOG

AET No: **20-23155** Log of Boring No. **B-20 (p. 1 of 1)**
Project: **2022 and 2023 Infrastructure Improvement Projects; Waconia, MN**

DEPTH IN FEET	Surface Elevation <u>1047.1</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	2½" Bituminous pavement	FILL				SU	7				
2	FILL, mixture of clayey sand and silty sand, a little gravel, dark brown, A-2-6	TOPSOIL OR FILL	2	M		SS	6	28			
3	LEAN CLAY with sand, slightly organic, dark grayish brown, A-6 (possible fill) (CL)	TILL	12	M		SS	10	22			
4	SANDY LEAN CLAY, a little gravel, brown, stiff, A-6 (CL)										
5	SANDY LEAN CLAY, a little gravel, brown, a little gray and light brown, stiff, laminations of sandy silt, A-6 (CL)		11	M		SS	20	22			
6											
7											
8	LEAN CLAY, brown, a little gray, stiff, laminations of silt, A-6 (CL)	FINE ALLUVIUM	11	M		SS	24	33			
9											
END OF BORING											

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-7½'	3.25" HSA	10/8/20	10:50	9.5	7.5	9.5		None	
BORING COMPLETED: 10/8/20									
DR: DS LG: SB Rig: 1C									



SUBSURFACE BORING LOG

AET No: 20-23155		Log of Boring No. B-21 (p. 1 of 1)									
Project: 2022 and 2023 Infrastructure Improvement Projects; Waconia, MN											
DEPTH IN FEET	Surface Elevation <u>1043.2</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	5" Bituminous pavement	FILL	25	M		SU	17				
	FILL, mostly silty sand, a little gravel, brown, A-2-4										
2	FILL, mostly silty sand with gravel, pieces of bituminous, dark brown, A-1-b										
3		TILL	11	M		SS	19	23			
4	SANDY LEAN CLAY, a little gravel, brown, stiff, A-6 (CL)										
5	SANDY LEAN CLAY, a little gravel, brown, a little light brown, stiff, laminations of sandy silt, A-6 (CL)										
6											
7											
8	SANDY LEAN CLAY, a little gravel, brown mottled, very stiff, A-6 (CL)		11	M		SS	22	22			
9											
	END OF BORING										

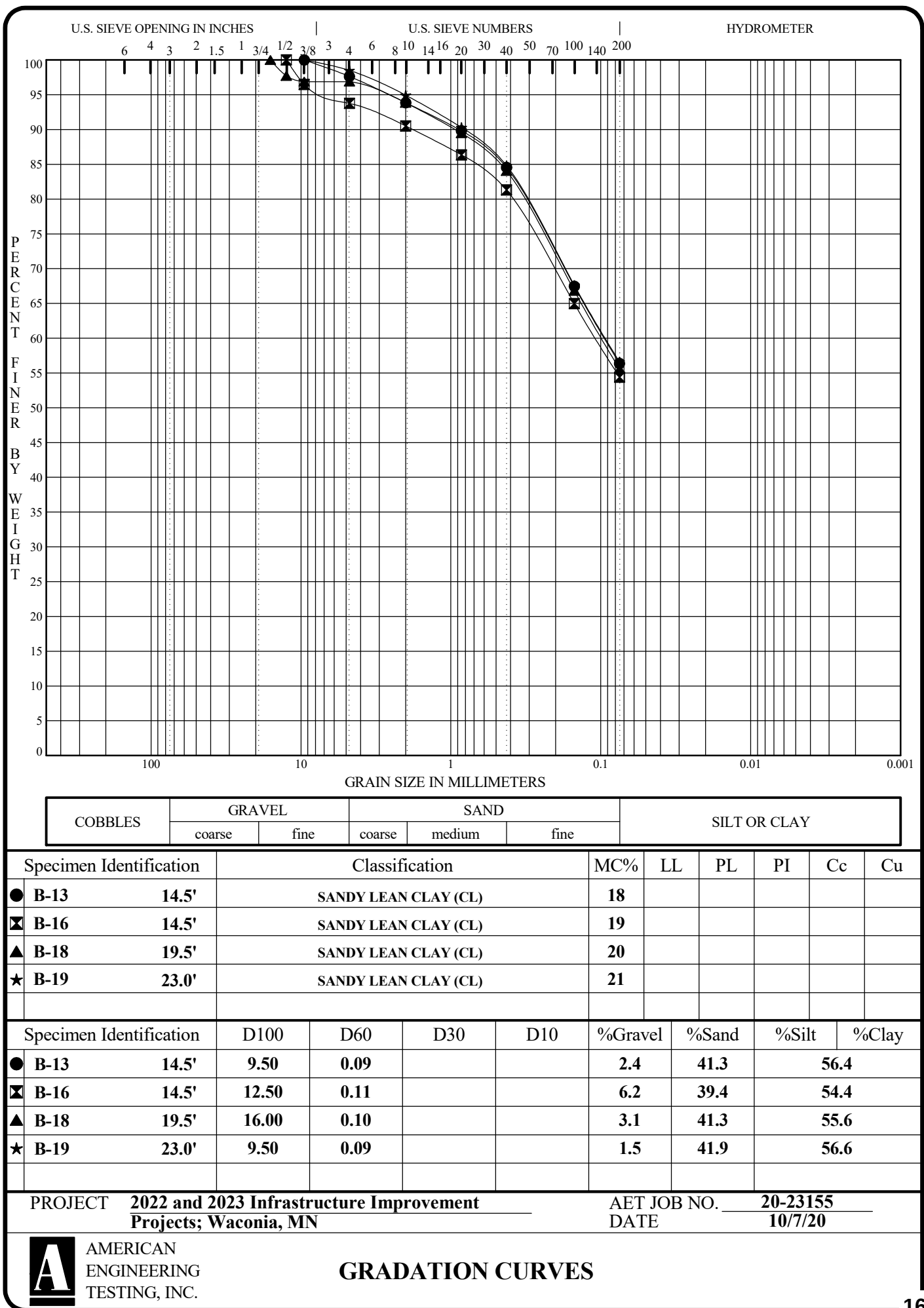
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-7½'	3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		10/8/20	9:35	9.5	7.5	9.5		None	
BORING COMPLETED: 10/8/20									
DR: DS LG: SB Rig: 1C									

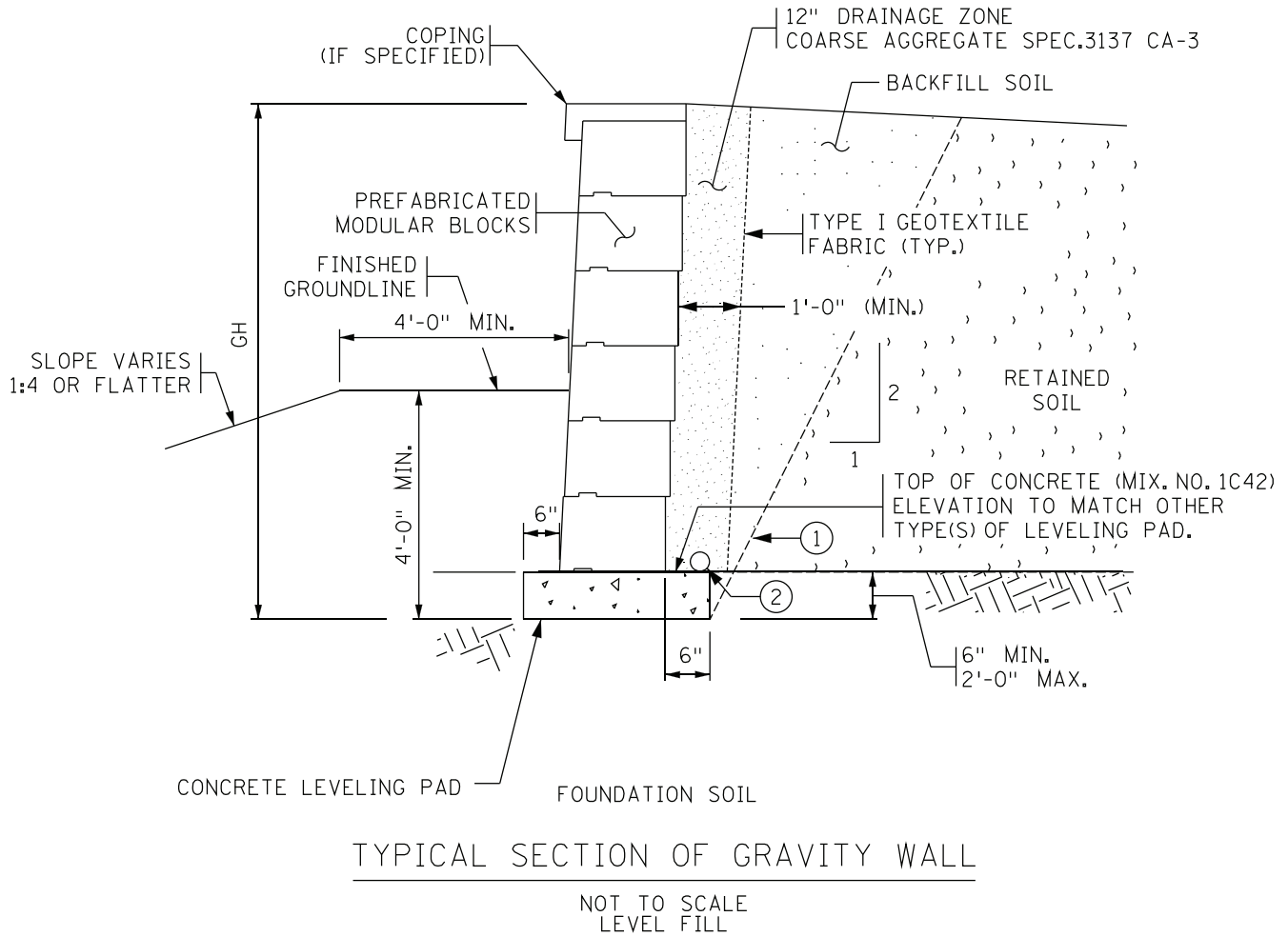


AET No: 20-23155 Log of Boring No. B-22 (p. 1 of 1)

Project: 2022 and 2023 Infrastructure Improvement Projects; Waconia, MN

AET_CORP 20-23155.GPJ AET+CPT+WELL 20181012 JG.GDT 12/15/20





- ① PAY LIMIT (2:V TO 1:H) ACTUAL EXCAVATION SLOPE IS DETERMINED BY DESIGNER PREFERENCE OR OSHA REGULATIONS OF IN-SITU SOILS: EXCAVATION BEYOND THESE LIMITS AT CONTRACTORS EXPENSE.
- ② 4" THERMOPLASTIC PERFORATED PIPE, SPEC. 3245. WRAP WITH TYPE 1 GEOTEXTILE, SPEC. 3733, INSTALLATION AS PER SPEC. 2502. CONNECT TO DRAINAGE SYSTEM OR OUTLET THROUGH WALL USING 6" T.P. NON-PERFORATED PIPE WITH RODENT SCREEN. ALL WORK INCIDENTAL.

Figure 2411-1 Gravity PMBW Material Definitions/ Typical Cross Sections

Report of Geotechnical Exploration

2022 and 2023 Infrastructure Improvements Projects; Waconia, Minnesota

March 10, 2021

Report No. 20-23155

AMERICAN
ENGINEERING
TESTING, INC.

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Report No. 20-23155

B.1 REFERENCE

This appendix provides information to help you manage your risks relating to subsurface problems which are caused by construction delays, cost overruns, claims, and disputes. This information was developed and provided by GBA¹, of which, we are a member firm.

B.2 RISK MANAGEMENT INFORMATION

B.2.1 Understand the Geotechnical Engineering Services Provided for this Report

Geotechnical engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical engineering services is typically a geotechnical engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

B.2.2 Geotechnical Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared solely for the client.

Likewise, geotechnical engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. If you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

¹ Geoprofessional Business Association, 1300 Piccard Drive, LL14, Rockville, MD 20850
Telephone: 301/565-2733; www.geoprofessional.org, 2019

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Report No. 20-23155

B.2.3 Read the Full Report

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. Read and refer to the report in full.

B.2.4 You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, always inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

B.2.5 Most of the “Findings” Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

B.2.6 This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations only after observing actual subsurface conditions exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.

B.2.7 This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

B.2.8 Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical engineering report, along with any attachments or appendices, with your contract documents, but be certain to note conspicuously that you've included the material for information purposes only. To avoid misunderstanding, you may also want to note that “informational purposes” means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Report No. 20-23155

specific project requirements, including options selected from the report, only from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and be sure to allow enough time to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

B.2.9 Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled “limitations,” many of these provisions indicate where geotechnical engineers’ responsibilities begin and end, to help others recognize their own responsibilities and risks. Read these provisions closely. Ask questions. Your geotechnical engineer should respond fully and frankly.

B.2.10 Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a “phase-one” or “phase-two” environmental site assessment – differ significantly from those used to perform a geotechnical engineering study. For that reason, a geotechnical engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Unanticipated subsurface environmental problems have led to project failures. If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

B.2.11 Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer’s services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, proper implementation of the geotechnical engineer’s recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. Geotechnical engineers are not building-envelope or mold specialists.



REQUEST FOR CITY COUNCIL ACTION

Meeting Date:		October 16, 2023					
Item Name:		Closed Session					
Originating Department:		Administration					
Presented by:		Shane Fineran					
Previous Council Action (if any):							
Item Type (X only one):		Consent		Regular Session	X	Discussion Session	
RECOMMENDATIONS/COUNCIL ACTION/MOTION REQUESTED <i>(Include motion in proper format.)</i>							
Motion to convene in closed session.							
EXPLANATION OF AGENDA ITEM <i>(Include a description of background, benefits, and recommendations.)</i>							
Pursuant to Minnesota Statute 13D.05, Subdivision 3(b) the City Council will meet in closed session to review attorney client privilege related to the lawsuit JMH Land v. Siegle Family Partnership.							
<u>Attachments:</u>							
FINANCIAL IMPLICATIONS:				ADVISORY BOARD RECOMMENDATIONS:			
Funding Sources & Uses:							
Budget Information: _____ Budgeted _____ Non Budgeted _____ Amendment Required				Planning Commission			
				Parks and Recreation Board			
				Safari Island Advisory Board			
				Other			