STANDARD AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT made between the City of Aurora, a home rule Illinois municipal corporation, whose address is 44 E. Downer Place, Aurora, Illinois 60507 hereinafter called the **CLIENT** and Crawford, Murphy & Tilly, Inc., Consulting Engineers, 2750 West Washington Street, Springfield, Illinois 62702, hereinafter called the **ENGINEER**.

WITNESSETH, that whereas the **CLIENT** desires the following described professional engineering, land surveying or architectural services:

Task 1 - Continuation of a planned and organized system-wide watermain flushing program through the implementation of watermain flushing operations for a portion of the City of Aurora - six sub areas of Area 3 (Zone 3A thru 3F, and two sub areas of Area 4 (Zone 4A and 4B) based on flushing sequences developed previously. The engineering services for the implementation of watermain flushing operations for Zones 3A, 3B, 3C, 3D, 3E and 3F of Area 3, and Zones 4A and 4B of Area 4 is described in the attached Exhibit A – Scope of Services. The limits of the above-mentioned flushing areas are shown in the attached Exhibit B. The six sub areas of Area 3 and two sub areas of Area 4 are shown in the attached Exhibit B-1.

Task 2 – Annual update of hydraulic model based on watermain changes, update of flushing sequences based on field changes and hydraulic modeling evaluations as directed by the City.

NOW THEREFORE, the **ENGINEER** agrees to provide the above described services and the **CLIENT** agrees to compensate the **ENGINEER** for these services in the manner checked below:

☒ On a time and expense basis in accordance with the attached Exhibit C - Schedule of Hourly Charges which is subject to change at the beginning of each calendar year. Reimbursable direct expenses will be invoiced at cost. Professional or Subconsultant services performed by another firm will be invoiced at cost plus ten percent. Note that no Professional or Subconsultant services are anticipated to be furnished to the ENGINEER by another firm on this project.

☐ At the lump sum amount of $_____.

IT IS MUTUALLY AGREED THAT, payment for services rendered shall be made monthly in accordance with invoices rendered by the **ENGINEER**.

IT IS FURTHER MUTUALLY AGREED:

That the compensation for engineering services for the implementation of watermain flushing operations for Zones 3A thru 3F of Area 3, and Zones 4A and 4B of Area 4 shall not exceed $185,500, per the attached Exhibit D, D-1 and D-2 without further authorization from the CLIENT.

That the compensation for engineering services for the annual update of the watermain changes, additions and replacements, update of flushing maps based on field changes in the hydraulic model and performing hydraulic modeling evaluations as directed shall not exceed $14,500, per the attached Exhibit D without further authorization from the CLIENT.

The **CLIENT** and the **ENGINEER** each binds himself, his partners, successors, executors, administrators and assignees to each other party hereto in respect to all the covenants and agreements herein and, except as above, neither the **CLIENT** nor the **ENGINEER** shall assign, sublet or transfer any part of his interest in this **AGREEMENT** without the written consent of the other party hereto. This **AGREEMENT**, and its construction, validity and performance, shall be governed and construed in accordance with the laws of the State of Illinois. This **AGREEMENT** is subject to the General Conditions attached hereto.

IN WITNESS WHEREOF, the parties hereto have affixed their hands and seals this _____ day of _____, 2025.

CLIENT:	**ENGINEER:**
CITY OF AURORA	**CRAWFORD, MURPHY & TILLY, INC.**
(Client Name)	
	Chris Dagiantis
(Signature)	(Signature)
	Chris Dagiantis, Water Resources – Group Manager
(Name and Title)	(Name and Title)

CMT Job No. _____

STANDARD GENERAL CONDITIONS
Crawford, Murphy & Tilly, Inc.

1. Standard of Care

In performing its professional services hereunder, the **ENGINEER** will use that degree of care and skill ordinarily exercised, under similar circumstances, by members of its profession practicing in the same or similar locality. No other warranty, express or implied, is made or intended by the **ENGINEER'S** undertaking herein or its performance of services hereunder.

2. Reuse of Document

All Reports, Drawings, Specifications, other documents, and electronic media prepared or furnished by **ENGINEER** pursuant to this Agreement are instruments of service in respect to the Project and shall be the property of the **CLIENT**. **ENGINEER** shall retain the right of reuse of said documents and electronic media by and at the discretion of the **ENGINEER** whether or not the Project is completed. Reproducible copies of **ENGINEER'S** documents and electronic media of the Project and **ENGINEER's** documents shall be delivered to the **CLIENT**; however, Project and **ENGINEER's** documents and electronic media are not intended or represented to be suitable for reuse by the **CLIENT** or others on additions or extensions of the Project, or on any other project.

3. Termination

This Agreement may be terminated by either party upon seven days prior written notice. In the event of termination, the **ENGINEER** shall be compensated by the client for all services performed up to and including the termination date, including reimbursable expenses.

4. Parties to the Agreement

The services to be performed by the **ENGINEER** under this Agreement are intended solely for the benefit of the **CLIENT**. Nothing contained herein shall confer any rights upon or create any duties on the part of the **ENGINEER** toward any person or persons not a party to this Agreement including, but not limited to any contractor, subcontractor, supplier, or the agents, officers, employees, insurers, or sureties of any of them.

5. Construction and Safety

This project will be completed with CLIENT staff working alongside ENGINEER staff. The ENGINEER shall be responsible for the safety of their own personnel working on the job site. The CLIENT shall be responsible for the safety of their own personnel working on the job site.

6. Payment

CLIENT shall be invoiced once each month for work performed during the preceding period. **CLIENT** agrees to approve and pay such invoices in the manner provided by the Local Government Prompt Payment Act, 50 ILCS 505/1 et. seq. **CLIENT** further agrees to pay interest on all amounts approved and not paid at the interest rate permitted under the Local Government Prompt Payment Act. Every invoice must be accompanied with time comments for each and every entry, invoices without time comments will be returned to **ENGINEER**.

7. Insurance

ENGINEER shall indemnify and save harmless CITY, its officers and employees, from suits, actions or claims of any character brought because of any injuries or damages received or sustained by any person, persons, or property resulting from any negligent act, error or omission on the part of ENGINEER.

During the term of this AGREEMENT, ENGINEER shall provide the following types of insurance with no less than the following specified amounts.

a. Comprehensive general liability – combined single limit amount of $1,000,000 per incident, $2,000,000 general aggregate limit.
b. Auto Liability – combined single limit amount of $1,000,000 per incident on any vehicle driven by an R.I. while engaged in any activity within the scope of this AGREEMENT.
c. Professional Liability - $5,000,000;
d. Worker's Compensation – Statutory Limit; the policy shall include a "Waiver of Subrogation" clause;
e. "Umbrella Coverage" - $5,000,000.

ENGINEER shall furnish to CITY satisfactory proof of coverage of the above insurance requirements by a reliable company or companies, before commencing any work. Such proof shall consist of a current certificate executed by the insurance company(s) and shall be filed with CITY. Said certificate shall name the city of Aurora as additional, non-contributory insured and contain a clause which requires that no change shall be made to the coverage and there shall be no cancellation or lapse of such coverage unless CITY receives written notification from the insurance company providing coverage at least thirty (30)-days in advance of said cancellation or change in coverage.

CITY OF AURORA
2025 FLUSHING PROGRAM – ZONES 3A THROUGH 3F OF AREA 3, AND ZONES 4A AND 4B OF AREA 4 FLUSHING

EXHIBIT A - SCOPE OF SERVICES
March 3, 2025

Background

In 2012, the city of Aurora embarked upon the development of a planned and organized system-wide multi-year watermain flushing program as part of routine water distribution system maintenance. Flushing distribution system watermains is considered a standard and recommended practice by the American Water Works Association (AWWA).

Watermain flushing can be performed either by means of conventional flushing or unidirectional flushing. In order to effectively flush the watermain, a target velocity of 5 feet per second is desired. Conventional flushing which consists of sequentially opening fire hydrants can sometimes achieve the target velocities. In locations where the target velocity cannot be achieved, unidirectional flushing is required. Unidirectional flushing is a systematic method of closing watermain valves and opening hydrants to direct water one-way at high velocities through targeted segments of pipe. Unidirectional flushing induces high water velocities which effectively removes deposits and cleans the pipe. The benefits of flushing include removal of rust and sediment, improved chlorine residual, and reduction in taste and odor; all of which can help provide high quality water to city of Aurora residents.

The city's water distribution system consists of over 740 miles of pipe. The extents of the flushing areas for the entire water distribution system have been determined as shown in Exhibit B. Flushing areas have been determined based on: dividing the city into 6 areas with similar total lengths of watermain; the location of water transmission main endpoints (locations that potable water from the Water Treatment Plant enters the distribution system) and a summary of water quality issue locations for ten years previous to 2012.

The watermain flushing program began in 2012 with the design of Area 1 flushing sequences. In 2013, Area 1 was flushed and the design of the flushing sequences for Area 2 was completed. In 2014, Area 2 was flushed and the design of flushing sequences for Areas 3 and 4 were completed. In 2015, remainder of Area 3 and Area 4 were flushed and the design of flushing sequences for Areas 5 and 6 was completed. In 2016, Areas 5 & 6 were flushed. In addition, the hydraulic analysis and design of flushing sequences were updated for Areas 1 through 6 to incorporate field changes, modifications to the flushing program parameters learned through the previous 4 years of field work, and new watermains constructed or replaced since the program began. With the completion of flushing in Areas 5 & 6, flushing of the entire water distribution system was completed.

In the summer of 2017, the City embarked upon its second round of watermain flushing, beginning with Area 1. In the summer of 2018, the City embarked upon the second round of watermain flushing for Area 2 and three subareas of Area 3 namely, Zones 3C, 3D and 3F. In the summer of 2019, the City embarked upon the second round of watermain flushing for Area 3 and three subareas of Area 4 namely, Zones 4A, 4B and 4C. No watermain flushing was performed in 2020. In the summer of 2021, the City embarked upon the second round of watermain flushing for the remaining three subareas of Area 4 (namely Zones 4C, 4D and

4F), and three subareas of Area 5 (namely Zone 5A, 5B and 5C). In the summer of 2022, the City embarked on its second round of flushing for the remaining four subareas of Area 5 (namely Zones 5D, 5E, 5F and 5G) and three subareas of Area 6 (namely Zones 6A, 6B and 6C). In the summer of 2023, the City embarked on its second round of flushing for the remaining four subareas of Area 6 (namely Zones 6D, 6E, 6F and 6G) and third round of flushing for the six subareas of Area 1 (namely Zones 1A, 1B, 1C, 1D, 1E and 1F). In 2024, the City embarked on its third round of flushing for the remaining four subareas of Area 1 (namely Zones 1G, 1H, 1I and 1J) and eleven subareas of Area 2 (namely Zones 2A through 2K). In the spring of 2025, the City will embark on its third round of flushing for Area 3 (namely Zone 3A through 3F) and two subareas of Area 4 (namely Zones 4A and 4B).

Project Tasks

TASK 1

Project tasks for the flushing of Area 3, (namely 3A through 3F), and two subareas of Area 4 (namely 4A and 4B) will include the following:

1. *Project Start-up*

   At the start of the flushing portion of the project, a kick-off meeting will be held with City staff to coordinate the field effort. The kick-off meeting will be attended by CMT team members so that flushing protocol/procedures can be reviewed by everyone at the same time. Project start-up activities will include update of the hydraulic model and development of flushing sequences for new and/or replaced watermain in the areas proposed to be flushed, the compilation of contact information for critical facilities, development of a flushing schedule, and the generation of checklists for field use.

   It is anticipated that the City will provide equipment required for the flushing including diffusers, hydrant wrenches, valve keys, hydrant flow meter, pressure gauges, hoses, signs, lab kits and traffic control. The equipment to be used will be coordinated at the kick-off meeting.

   It is anticipated that the City will prepare public notification information through social media and customer service. The content for the public notification information will be provided by CMT for publishing by the City.

   Prior to unidirectional flushing in each area, it is anticipated the City will locate each valve to be operated as part of the unidirectional flushing sequence using a GPS locator. The valve locations and numbers will be provided by the City as GIS data for use on CMT's mobile devices.

2. *Unidirectional Flushing*

   Within each subarea, there are sections of watermain noted for conventional flushing and sections noted for unidirectional flushing. The unidirectional flushing will be performed first in each subarea.

The unidirectional flushing will be performed with a crew of 6 people (2 valve operating crews each with 2 people, 1 person on the flushing hydrant, and 1 covering the residual pressure monitoring hydrant. Of the 6 unidirectional flushing crew members, it has been assumed that the flushing operations will be headed by one (1) CMT engineer with at least 2 years of flushing experience. The remaining 5 positions, including 3 summer help and 2 full time staff would be provided by the City's Water & Sewer maintenance division.

Based on production rates achieved with unidirectional flushing completed in previous seven years, it has been assumed that 7,500 ft. of watermain can be unidirectionally flushed each day. The production rates for the unidirectional flushing will be evaluated periodically throughout the project.

3. *Conventional Flushing*

After the unidirectional flushing is completed in each subarea, conventional flushing will be performed with a reduced crew size of 4 members. Conventional flushing will be performed with crew members from the unidirectional flushing crew broken down into three crews – one with 1 CMT entry level engineer and one summer help and two other crews each with 1 W&S summer help.

It is anticipated that the two 1-person crews will be flushing in a separate area from the 2-person crew (1 CMT + 1 City member), so all three crews can be operating hydrants without adversely impacting the system.

It has been assumed that a 2-person crew will be able to conventionally flush 21 hydrants per day and a 1-person crew will be able to conventionally flush 15 hydrants per day resulting in 30 hydrants per day for the two 1-person crews. The production rates for the conventional flushing will be evaluated periodically throughout the project.

4. *Engineering Support*

As unidirectional and conventional flushing proceeds in the field, CMT will provide support as needed in the field to address field issues including closed valves, drainage problems, low pressure or inadequate flow. In addition, CMT will provide daily updates to the city for updating the flushing hotline. CMT will also provide updates to the City on a timely basis for updating the flushing schedule on the website. CMT will plan operations 1 - 3 days in advance to allow for time to contact critical facilities and to move signs for each zone (or subarea) and plan personnel/equipment for traffic control.

5. *ISO Fire Flow Testing*

As flushing proceeds in the field, CMT will provide support as needed in the field to perform flow testing as part of the ISO requirements. CMT will plan on performing 1-2 flow tests in each sub area identified to be flushed this summer.

6. *Coordination Meetings*

It has been assumed that coordination meetings (no more than once per month) will be required throughout the project.

7. *Miscellaneous Effort*

   Update Flushing Sequences:

   The City shall provide CMT with the engineering plans for the new water main replacements for Area 3; and Zones 4A and 4B of Area 4. CMT will update the Unidirectional flushing and Conventional flushing sequences accordingly and check the design criteria for planned flushing sequences.

   GIS Assistance:

   CMT will provide training and assistance as and when needed for the collection of field data.

8. *Schedule*

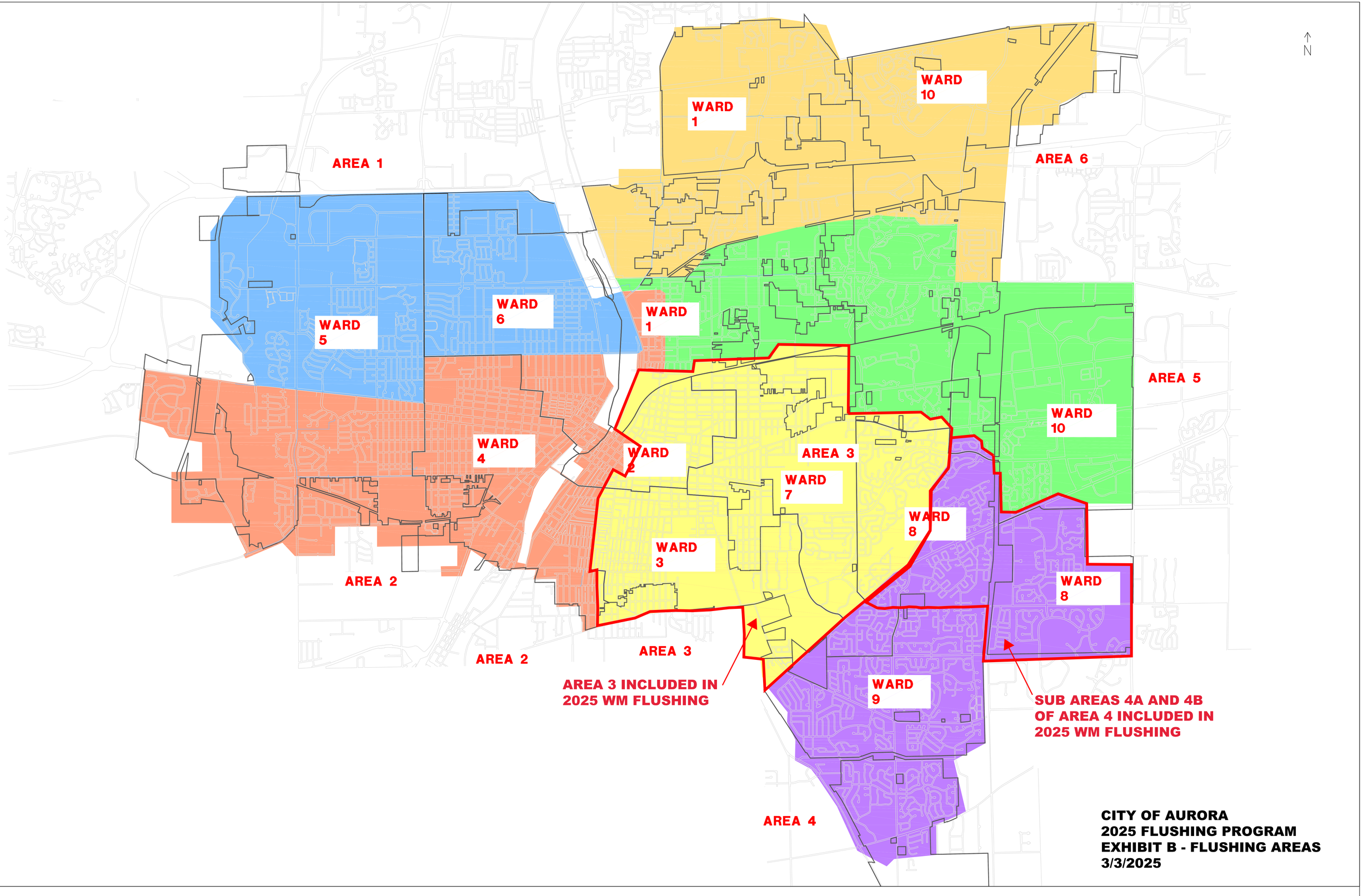
   Flushing will not occur during July and August so as to not impact the demands during the peak months. Flushing is planned to begin on May 5, 2025, and will continue through the end of June and will resume on September 2, 2025 and will continue through the end of October, resulting in approximately 80 working days taking into account holidays and a couple of rain/heat days.

TASK 2

Project tasks will include the following:

1. *Annual Model Update*

   The City shall provide CMT with the engineering plans and GIS updates for the new water main replacements in the City on an annual basis. CMT will update the Unidirectional flushing and Conventional flushing sequences accordingly and check the design criteria for planned flushing sequences. CMT will also update the Unidirectional flushing and Conventional flushing sequences based on changes occurred during field work. CMT shall perform miscellaneous hydraulic modeling evaluations as directed by the City.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AREA 2
AREA 3
WARD 9
AREA 3 INCLUDED IN 2025 WM FLUSHING
SUB AREAS 4A AND 4B OF AREA 4 INCLUDED IN 2025 WM FLUSHING
AREA 4
CITY OF AURORA
2025 FLUSHING PROGRAM
EXHIBIT B - FLUSHING AREAS
3/3/2025

2025 WATERMAIN FLUSHING PROGRAM SUB AREA

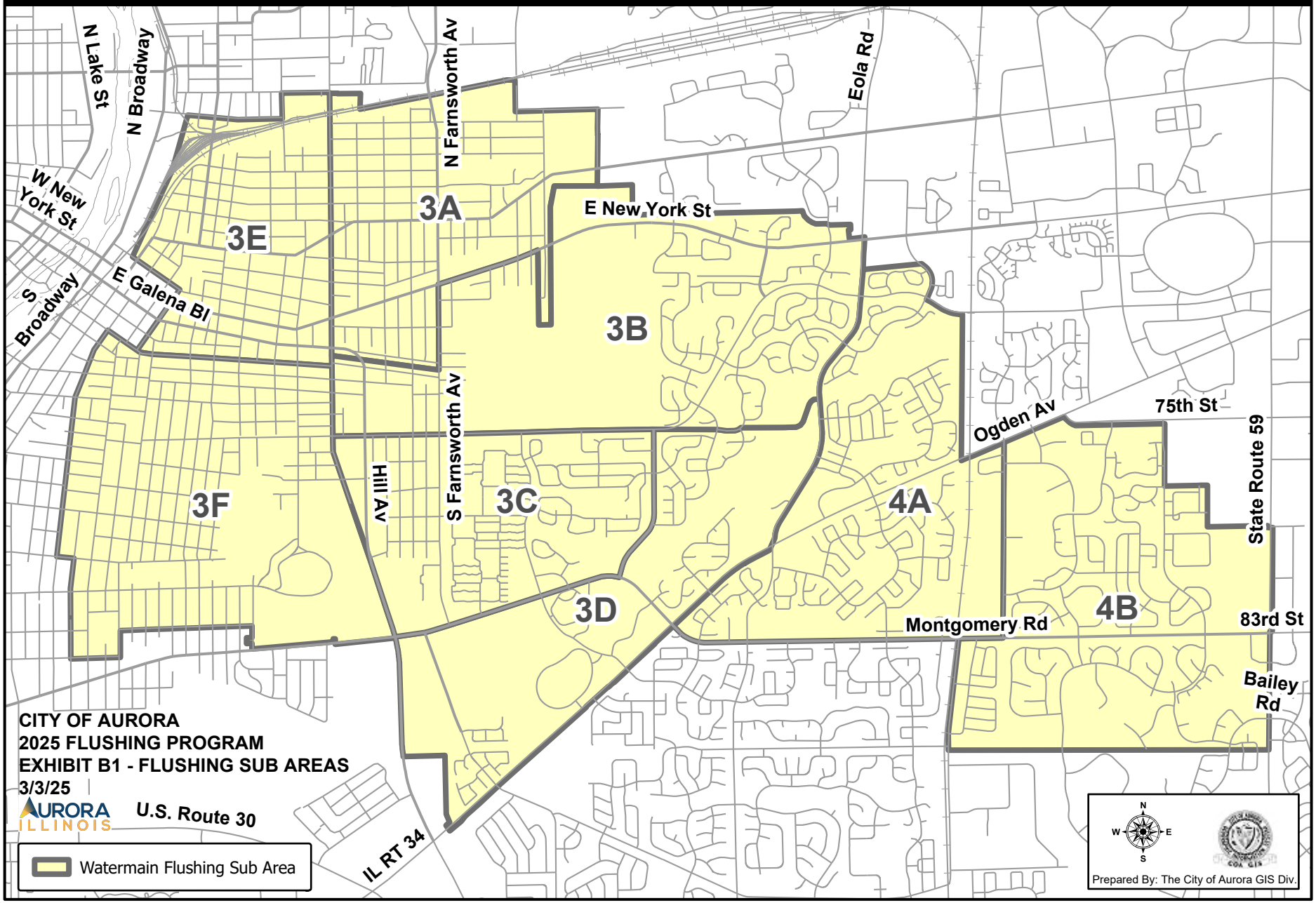

EXHIBIT C
CITY OF AURORA
RESIDENT INSPECTION AND ENGINEERING SERVICES

CLASS NO. Rev. 2025	CLASSIFICATION Rev 2025	2023 BILLING RATE Dir Labor x 2.99 Multiplier)	2024 BILLING RATE (2023 Rate x CCI Increase of 9.11%)	2025 BILLING RATE (2024 Rate x CCI Increase of 2.24%)
11	Senior Principal	233.22	254.47	260.17
10	Principal	233.26	254.51	260.21
340 240 540 440 140	Senior Specialty Engineer 2 Senior Structural Engineer 2 Senior Planner 2 Senior Specialty Professional 2 Senior Civil Engineer 2	206.07	224.84	229.88
740 60 640 230	Senior Environmental Scientist 2 Project Manager Senior Architect 2 Senior Structural Engineer	186.97	204.00	208.57
130 730 430	Senior Civil Engineer Senior Environmental Scientist Senior Specialty Professional	199.35	217.51	222.38
1330	Senior Administrative Assistant Senior Technician 2	166.49	181.66	185.73
1130	Senior Technician	136.29	148.71	152.04
720 120 320 220 530	Project Environmental Scientist Project Civil Engineer Project Specialty Engineer Project Structural Engineer Senior Planner	137.89	150.45	153.82
520 420 110 310 520	Project Planner Project Specialty Professional Civil Engineer Specialty Engineer Project Planner"	107.62	117.43	120.06
1320 410 510 1120	Administrative Specialist Specialty Professional Planner Project Technician	100.23	109.37	111.82
610	Architect	133.92	146.12	149.40
710 1110	Environmental Scientist Technician	88.59	96.66	98.82
900 1310	Admin/Admin Coordinator	83.98	91.63	93.68

CITY OF AURORA
2025 WATERMAIN FLUSHING PROGRAM - Subareas 3A through 3F of Area 3, and Subareas 4A and 4B of Area 4 Flushing

Exhibit D - Professional Services Cost Estimate Summary
3-March-25

Exhibit	Description	Manhours	Amount
D-1; Task 1	Zone 3A through Zone 3F + Zone 4A + Zone 4B - Flushing Costs	1,127	$185,500
Task 2	Update hydraulic model distribution system annually, revise flushing sequences based on field changes and modeling evaluations as needed	-	$14,500

CITY OF AURORA
2025 Watermain Flushing Program - Area 3 and Subareas 4A, 4B of Area 4 Flushing
Exhibit D-1 - Professional Services Cost Estimate
3-March-25

Assumptions:

Unidirectional Flushing - Assume 6 total with 1 CMT crew leader and 5 City crew members
Conventional Flushing - Assume reduced crew with 1 CMT crew leader and 3 City crew members
Technical Assitance - Assume CMT to provide daily office technical asstance

Conventional Flushing Crew:

-->assume reduced crew, one 2-person crew (1 CMT leader and 1 City member) and two 1-person crew, for conventional flushing

Crew Size (1 CMT + 1 City)	1	
Engineer ($/hr.)	$153.82	
2025 Crew Cost ($/hour)	$153.82	
Number of Hydrants per day	21	Based on a 2 person crew flushing between 20 - 25 hydrants per day in 2015 Watermain Flushing Program
City Crew Size (2 City crews with 1 person each)	2	
Number of Hydrants per day	30	Based on a 1 person crew flushing 15 hydrants per day

Unidirectional Flushing:

CMT Crew Size	1	
Engineer ($/hr.)	$153.82	
2025 Crew Cost ($/hour)	$153.82	
Approximate feet per day	7,500	Based on average of 7,500 feet/day of UDF Flushing with a 6 member crew.

Assume operating a maximum of 30 valves per day (add crew days as necessary above footage calculation)

Flushing Technical Assistance

2025 Senior Engineer ($/hour)	$153.82
2025 GIS Specialist ($/hour)	$120.06
2025 Engineer	$120.06

Technical Assistance - assume 1 hours per day
Field Paperwork - assume 5 hours per week
Coordination Meetings - assume 2.5 hours per week
Project Management Time - 1.5 hours per week (2025 Hourly Rate = $260.21/hr)

	3A	3B	3C	3D	3E	3F	4A	4B	TOTAL
Conventional Flushing									
Length of watermain (feet)	76,134	83,898	97,165	134,184	62,546	43,545	128,320	108,982	734,773
Length of watermain (miles)	14.42	15.89	18.40	25.41	11.85	8.25	24.30	20.64	139
--> Conventional Flushing (2 person crew with 1 CMT Engineer and 1 City crew member)									
# of Hydrants	40	85	75	60	70	80	140	120	670
Estimated flushing time (crew hours)	16	33	29	23	27	31	54	46	259
Estimated flushing time (crew days)*	**2.5**	**5.5**	**4.5**	**4.0**	**4.0**	**5.0**	**7.0**	**6.5**	**39.0**
Estimated CMT Crew Labor Cost	$3,076.40	$6,768.08	$5,537.52	$4,922.24	$4,922.24	$6,152.80	$8,613.92	$7,998.64	$47,991.84
-->Conventional Flushing (2 person City crew)									
# of Hydrants	60	127	116	93	99	113	201	176	985
Estimated flushing time (crew hours)	16	34	31	25	27	31	54	47	265
Estimated flushing time (crew days)*	**2.5**	**5.5**	**4.5**	**4.0**	**4.0**	**5.0**	**7.0**	**6.5**	**39.0**
Estimated CMT Crew Labor Cost	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Unidirectional Flushing (1 CMT person crew)									
Length of watermain (feet)	27,399	25,593	24,508	28,623	24,151	30,116	27,331	38,528	226,249
Length of watermain (miles)	5.19	4.85	4.64	5.42	4.57	5.70	5.18	7.30	43
Number of Sequences	17	12	7	11	14	13	13	18	105
Number of Valves to Operate	76	55	73	64	81	86	103	86	624
Average Length of Watermain per Sequence (feet)	1,612	2,133	3,501	2,602	1,725	2,317	2,102	2,140	2,155
Average # of Valves per Sequence	4	5	10	6	6	7	8	5	50
# of valves per mile of watermain	15	11	16	12	18	15	20	12	118
Estimated flushing time (crew hours)	30	28	27	31	26	33	30	42	247
Estimated flushing time (crew days)*	**4.5**	**5.0**	**4.0**	**4.5**	**4.0**	**5.0**	**5.0**	**6.0**	**38.0**
Estimated CMT Crew Labor Cost (Senior Engineer)	$5,537.52	$6,152.80	$4,922.24	$5,537.52	$4,922.24	$6,152.80	$6,152.80	$7,383.36	$46,761.28
Subtotal Estimated flushing time (crew days)*	**7.0**	**10.5**	**8.5**	**8.5**	**8.0**	**10.0**	**12.0**	**12.5**	**77.0**
Subtotal Estimated flushing time (crew hours)	56	84	68	68	64	80	96	100	616
ISO/Fire Flow Testing									
Estimated flow testing time (crew days)*	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**4.0**
Estimated CMT Crew Labor Cost	$615.28	$615.28	$615.28	$615.28	$615.28	$615.28	$615.28	$615.28	$4,922.24
Total Estimated flushing and flow testing time (crew days)*	**7.5**	**11.0**	**9.0**	**9.0**	**8.5**	**10.5**	**12.5**	**13.0**	**81.0**
Office/Engineering Support									
Technical Assistance time (hours)	7	11	9	9	8	10	12	13	77
Estimated Labor Cost	$1,076.74	$1,615.11	$1,307.47	$1,307.47	$1,230.56	$1,538.20	$1,845.84	$1,922.75	$11,844.14
Total									
Length of watermain (feet)									961,022
Length of watermain (miles)									182
Miscellaneous Effort									
Update flushing maps (hours)									80
Update flushing maps (cost)									$12,305.60
Facility Contact List (hours)									32
Facility Contact List (cost)									$4,922.24
Project Start-up/Close-Out (hours)									100
Project Start-up/Close-Out Costs									$20,716.50
GIS Assistance (hours)									20
GIS Assistance Costs									$2,401.20
Field Paperwork (hours)									100.0
Field Paperwork Cost									$15,382.00
Coordination Meetings (hours)									40.0
Coordination Meetings Cost									$10,408.40
Project Management (hours)									30.0
Project Management Cost									$7,806.30
Total Labor Hours for CMT	67	99	81	81	76	94	112	117	1,127
Total Cost	$10,305.94	$15,151.27	$12,382.51	$12,382.51	$11,690.32	$14,459.08	$17,227.84	$17,920.03	$185,461.74
									*rounded up to
									$185,500

*Rounded up to nearest half day (this accounts for time to move signs).

CITY OF AURORA

2025 Watermain Flushing Program - Area 3, and Zones 4A and 4B of Area 4

Exhibit D-2 - Summary of Unidirectional and Conventional Flushing Statistics

3-March-25

	3A	3B	3C	3D	3E	3F	4A	4B	TOTAL
Conventional Flushing									
# of Hydrants	100	212	191	153	169	193	341	296	1,655
Length of watermain (feet)	76,134	83,898	97,165	134,184	62,546	43,545	128,320	108,982	734,773
Length of watermain (miles)	15.31	15.89	18.40	25.41	11.85	10.26	24.30	20.64	142
Unidirectional Flushing									
Length of watermain (feet)	27,399	25,593	24,508	28,623	24,151	30,116	27,331	38,528	226,249
Length of watermain (miles)	5.19	4.85	4.64	5.42	4.57	5.70	5.18	7.30	43
Number of Sequences	17	12	7	11	14	13	13	18	105
Number of Valves to Operate	76	55	73	64	81	86	103	86	624
TOTAL									
Length of watermain (feet)	103,533	109,491	121,673	162,807	86,697	73,661	155,651	147,510	961,022
Length of watermain (miles)	19.61	20.74	23.04	30.83	16.42	13.95	29.48	27.94	182