

United City of Yorkville

800 Game Farm Road Yorkville, Illinois 60560 Telephone: 630-553-4350

www.yorkville.il.us

AGENDA

PUBLIC WORKS COMMITTEE MEETING

Tuesday, April 17, 2018 6:00 p.m.

City Hall Conference Room 800 Game Farm Road, Yorkville, IL

Citizen Comments:

Minutes for Correction/Approval: March 20, 2018

New Business:

- 1. PW 2018-34 Snow Operations Year End Report
- 2. PW 2018-35 Water Department Reports for January, February and March 2018
- 3. PW 2018-36 Bond/Letter of Credit Reductions Quarterly Report
- 4. PW 2018-37 Capital Improvement Status Quarterly Report
- 5. PW 2018-38 Whispering Meadows Completion of Improvements Change Order No. 1
- 6. PW 2018-39 Whispering Meadows Completion of Improvements Construction Engineering Agreement
- 7. PW 2018-40 Fox Highland Raintree Village Water Main Interconnect Contract Award
- 8. PW 2018-41 MFT Supplemental Resolution for FY 2019 General Maintenance Appropriation
- 9. PW 2018-42 Traffic Control Request Alan Dale Lane and Faxon Road
- 10. PW 2018-43 Pavement Management System Update
- 11. PW 2018-44 Metronet Cannonball Trail Easement Agreement
- 12. PW 2018-45 AECom Lake Michigan
 - a. Study Results
 - b. Supplemental Engineering Agreement

Old Business:

Additional Business:

2017/2018 City Council Goals – Public Works Committee			
Goal	Priority	Staff	
"Municipal Building Needs and Planning"	5	Bart Olson & Eric Dhuse	
"Vehicle Replacement"	6	Bart Olson & Eric Dhuse	
"Water Planning"	8	Eric Dhuse & Brad Sanderson	
"Capital Improvement Plan"	11	Bart Olson & Eric Dhuse	
"Water Conservation Plan"	15	Eric Dhuse & Brad Sanderson	

UNITED CITY OF YORKVILLE

WORKSHEET

PUBLIC WORKS COMMITTEE Tuesday, April 17, 2018 6:00 PM

CITY HALL CONFERENCE ROOM

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2. PW 2018-35 Water Department Report Moved forward to CC Approved by Committee Bring back to Committee Informational Item Notes	
3. PW 2018-36 Bond/Letter of Credit R ☐ Moved forward to CC	
 □ Approved by Committee □ Bring back to Committee □ Informational Item □ Notes 	
4. PW 2018-37 Capital Improvement St Moved forward to CC Approved by Committee Bring back to Committee Informational Item Notes	atus – Quarterly Report consent agenda? Y N

7. PW 2018-40 Fox Highlands Water Mai Moved forward to CC Approved by Committee Bring back to Committee Informational Item Notes	consent agenda? Y N

Moved forward to CC Approved by Committee Bring back to Committee Informational Item Notes	
9. PW 2018-42 Traffic Control Request – Moved forward to CC Approved by Committee Bring back to Committee Informational Item Notes	consent agenda? Y N
10. PW 2018-43 Pavement Management S Moved forward to CC Approved by Committee Bring back to Committee Informational Item Notes	consent agenda? Y N ——

☐ Moved forward to CC	consent agenda? Y N
Approved by Committee	
☐ Bring back to Committee	
☐ Informational Item	
Notes	
PW 2018-45 AECom Lake Michigan	
a. Study Results	
1.00	
Moved forward to CC	consent agenda? Y N
☐ Moved forward to CC Approved by Committee	consent agenda? Y N
<u> </u>	
Approved by Committee Bring back to Committee	
Approved by Committee Bring back to Committee b. Supplemental Engineering Agreement	
Approved by Committee Bring back to Committee b. Supplemental Engineering Agreement Moved forward to CC	
Approved by Committee Bring back to Committee b. Supplemental Engineering Agreement Moved forward to CC Approved by Committee	consent agenda? Y N
Approved by Committee Bring back to Committee Supplemental Engineering Agreement Moved forward to CC	consent agenda? Y N
Approved by Committee Bring back to Committee b. Supplemental Engineering Agreement Moved forward to CC Approved by Committee	consent agenda? Y N

ADDITIONAL BUSINESS:



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PANIA	1700	2 T 7
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Legal	
Finance	
Engineer	
City Administrator	
Human Resources	
Community Development	
Police	
Public Works	
Parks and Recreation	

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Agenda	Item	Num	ber

Minutes

Tracking Number

	Agend	a tem Summary Memo
Title: Minutes of the	e Public Works Cor	mmittee – March 20, 2018
Meeting and Date:	Public Works Con	mmittee – April 17, 2018
Synopsis:		
Council Action Prev	viously Taken:	
Date of Action:	Ac	tion Taken:
Item Number:		
Type of Vote Requi		
Council Action Req	uested: Committee	e Approval
Submitted by:	Minute Take	er
	Name	Department
	A	genda Item Notes:

DRAFT

UNITED CITY OF YORKVILLE PUBLIC WORKS COMMITTEE Tuesday, March 20, 2018, 6:00pm Yorkville City Hall, Conference Room 800 Game Farm Road

IN ATTENDANCE:

Committee Members

Chairman Joel Frieders Alderman Seaver Tarulis Alderman Jackie Milschewski Alderman Ken Koch

Other City Officials

City Administrator Bart Olson Interim Assistant City Administrator Erin Willrett

Public Works Director Eric Dhuse Engineer Brad Sanderson, EEI

Other Guests: None

The meeting was called to order at 6:00pm by Chairman Joel Frieders.

<u>Citizen Comments:</u> None

Previous Meeting Minutes: February 20, 2018

The minutes were approved as presented.

New Business:

1. PW 2018-21 Snow Operations Report

Mr. Dhuse reported the trucks plowed twice and he hopes the year end report can be given in April. No further action.

2. PW 2018-22 Request to Dispose of Vehicles

There are 3 vehicles in various states of disrepair which will be sold at auction. This moves to the consent agenda.

3. PW 2018-23 IDOT Resolution for Casey's Highway Permit

IDOT requires a resolution for the permit to connect Casey's to the state highway and there will be a right in/right out at this location. This moves to the consent agenda.

4. PW 2018-24 Fox Highlands Water Main Improvements – Engineering Agreement

This is the engineering agreement with EEI for design and construction for the start of the watermain project off Rt. 71 into Fox Highlands. The cost is estimated to be about \$32,000 for construction engineering and \$29,600 for design engineering. The project has not gone out for bid yet, but will very soon. This moves to consent.

5. PW 2018-25 Grande Reserve Unit 2 – Acceptance of Improvements

The developer has now completed the punchlist items and Mr. Sanderson recommended acceptance. The committee agreed and this moves to the consent agenda.

6. PW2018-26 Grande Reserve Unit 5 – Acceptance of Improvements

All punchlist items have now been completed and acceptance is recommended. The committee agreed and this also moves to the consent agenda.

7. PW 2018-27 Anthony Place - Acceptance of Improvements

Mr. Sanderson said there are some public improvements to be accepted with all related punchlist items for the public improvements being done. There will also be a letter of credit reduction. A grand opening will be held next month. This moves to the consent agenda.

8. PW 2018-28 2018 Sanitary Sewer Lining Program – Contract Awards

Bids went out on March 8th with the lowest bid below the engineering estimate. It was recommended to award the contract to Innovative Underground from Yorkville. The committee approved and this moves to the consent agenda.

9. PW 2018-29 2018 Road to Better Roads Program – Contract Award

Mr. Sanderson said bids went out March 12 and 3 bids were received. "D" Construction was the low bidder and well below the estimated cost. It is recommended the contract be awarded to them in the amount of \$385,182.36. Mr. Olson noted the difference between the bid and the EOPC was \$75,000. This moves to the consent agenda.

10. PW 2018-30 Whispering Meadows - Completion of Improvements - RFP

Geneva Construction was the low bidder and Mr. Sanderson said the asphalt prices are very good at this time. All paving and underground punchlist items were included in the bid as well as the off-site storm sewer. The base bid was \$1.49 million. EEI evaluated the results and came up with 4 options.

Chairman Frieders said he would prefer doing all the streets except Faxon rather than the other options. Mr. Olson recommended option #3 to redo all streets and intersection up to Faxon, evaluate how much has been spent and do a change order if more work can be done. If there are no funds for additional work this year, the work can be bid out as part of next year's projects, however, Mr. Sanderson said the asphalt prices would likely increase. Taking this option would result in a shortfall of about \$120,000 to \$125,000. After discussion, Chairman Frieders said he would like to do the following improvements: unit 2, unit 4, no work on Faxon, no off-site storm sewer and Unit 1 if possible. Mr. Olson said the city attorney will be consulted about authorizing the Unit #1 work if there are enough funds. Public Works will paint the fire hydrants. This moves forward to the regular agenda and Mr. Olson will provide a verbal outline of the funding at the Council meeting.

11. PW 2018-31 Traffic Control Requests - Sutton Street and Windett Ridge Road

Mr. Sanderson said staff identified sight distance concerns and it was recommended to install stop signs at the Sutton St. approach. Alderman Koch shared some instances of cars not stopping and landing in yards and near a porch in one case. He added this location is one of the 2 bus stops in the subdivision and this action will improve safety. This moves to the consent agenda.

12. PW 2018-32 CMAP Local Technical Assistance Program Grant for Planning and Technical Assistance Services for the Study of Shared Water Supply Service Governance Options

Mr. Dhuse said this is the next step in the ongoing water project for Oswego, Montgomery and Yorkville. This is a grant from IEPA through CMAP and the program will be finished by May or June this year. The grant requires Council approval and will move to the consent agenda.

13. PW 2018-33 Baseline Road Status

Due to the poor condition of Baseline Road, there was a discussion regarding closure or some other remedy. Mr. Olson said it would only be closed if the inspector recommended this action. Alderman Frieders also received some emails regarding the road with one resident suggesting to make the road off limits to trucks or to repaint the white strip near the sensor to improve traffic flow. Mr. Frieders asked if these 2 suggestions could be examined. Mr. Dhuse said the strip could be repainted when the weather improves.

Mr. Koch asked how much of the road belongs to the city. The City owns 2/3 of the way west to Ashe Road.

Old Business: None

Additional Business: None

There was no further business and the meeting was adjourned at 6:44pm.

Minutes respectfully transcribed by Marlys Young, Minute Taker



Reviewed By:		
Legal Finance Engineer City Administrator Human Resources Community Development Police Public Works		
Parks and Recreation		

Agenda Item Number
New Business #1
Tracking Number
PW 2018-34

Title: Snow Operation	ons – Year End Report		
Meeting and Date:	Public Works Committee – April	17, 2018	
Synopsis: Year End	Snow Report		
Council Action Prev	iously Taken:		
Date of Action:	Action Taken:		
Item Number:			
Type of Vote Requir	red: None, informational only		
Council Action Requ	uested:		
Submitted by:		Public Works	
	Name	Department	
	Agenda Item No	tes:	



Memorandum

To: Public Works Committee

From: Eric Dhuse, Director of Public Works

CC: Bart Olson, Administrator

Date: March 14, 2018

Subject: Year-end snow report

Summary

Year-end report for Snow Operations 17-18.

Background

Our last snow removal operation was on February 21st. Since that time, we have had snow, but not enough to warrant any type of removal operation.

The following facts, figures and statistics are yearly totals for key components in our snow removal operation. We use these to see if we hit our targets, find our problem areas to correct, and plan for future years. I have attached my worksheet for reference and review.

Highlights (yearly totals)

- 1190 Tons of salt used
- 35,028 gallons of brine used
- 3636 lane miles of road salted
- ~1450 tons of salt in storage for future use

Notable statistics for salt/brine trucks (yearly totals)

- ~9600 miles of road driven during snow removal operations
- 4475 miles of road salted
- 10.82 mph average for eight trucks over the entire season

Mailbox Damage (yearly totals)

- 6 mailboxes struck by city trucks
- 40 mailboxes reported damaged through phone and request tracker. Breakdown of reported mailbox damage by route is below
 - 1. **Route 1N** 7 reported, none struck. Bristol Bay, Caledonia, Whispering Meadows, Blackberry North
 - 2. **Route 2N** 7 reported, 2 struck. Kylyn's, Fox Hill, Cimmeron, Blackberry Woods
 - 3. **Route** 3N 0 reported. Countryside, old town north of river west of 47.
 - 4. **Route 4N** 1 reported, 1 struck. Grande Reserve
 - 5. Route 5N 2 reported, 1 struck. Autumn Creek, Prairie Meadows
 - 6. **Route 6N** 13 reported, 1 struck. Old town north of river and east of 47, Heartland, Heartland Circle, Woodworth, Longford Lakes

- 7. **Route 7S** 2 reported, none struck. Old town south of the river to Rt. 126, White Oak, River's Edge
- 8. **Route 8S** 5 reported, 1 struck. Colonial Prky, Ind. Park, Greenbriar, Sunflower, Wildwood I & II, country route
- 9. **Route 9S** 3 reported, none struck Raintree, Windett

Other Notables

We tested two way radios in the trucks this year with good success. We had two way radios in the past, but when Nextel came out in the 90's, the push to talk feature was almost as convenient as the two way radios at a fraction of the cost. It was decided at that time that we would not maintain our 2 way radios due to cost constraints.

Although we have smart phones with voice activated calls, you can only speak to one person at a time which then has to be repeated over and over between drivers and the supervisor. The communication between all drivers is very important during snow removal operations as well as other instances such as brush pick up, hot patching, water shut offs, and many other projects and tasks. In addition to the day to day projects and tasks, two way radios would be incredibly useful in emergency or disaster situations to be able to communicate city wide including YPD if we get radios that are compatible with theirs. We would not be on the police channel, but on a separate channel that we can communicate on when needed. We will continue to look at the budget to try and find the ~\$20,000 needed to outfit the public works department.

We also implemented new forms this year to assist with truck maintenance and the planning and execution of our snow removal operations. The forms consisted of:

- Pre-trip inspection for the street department detailed list of items that need to be checked before the truck is ready for the next snow event. These include, tire pressure, fluid levels, no leaks, plow and spreader in good working order.
- Pre-trip inspection for the drivers important details for the driver before leaving the shop for a snow removal event. These include all lights working, mirrors adjusted and in working order, snow plow hooked, snow plow and spreader working correctly, back up alarm working, turn signals, brakes and horn working.
- Post snow event worksheet for the drivers This sheet lets the supervisors know how the operation went. It simply informs us of what we did right, where we can improve and any additional comments the driver's may have.

I would ask that this be placed on the April 17, 2018 Public Works Committee agenda for discussion. If you have questions or need further information, please let me know.

			snow O	peratio	ns Sait a	ind Bri	ne Data			
Snow Ev	ent Date	12/29/2017	2/21/2018							
Date of I	Recording	4/4/2018								
Recorder	ED									
Recorder	ED	Total Miles	Average	Lbs of	Tons of	Lbs of	Gallons of	Gal Brine/	Salt	Brine
Route	Truck ID	Driven	MPH	Salt Used	10110 01	Salt/Mi.	Brine Used	-	Miles	Miles
1	9	1233.20	11.42	245444.00	122.72	504.20	3870.00	31.53	486.80	487.30
2	27	1044.80	11.85	193624.00	96.81	428.18	3945.00	40.75	452.20	424.10
3		vailable. Rout						40.73	432.20	424.10
4	13	1021.00	11.11	205164.00	102.58	436.98	2435.00	23.74	469.50	443.20
5	23	1144.90	12.56	249527.00	124.76	462.43	3431.00	27.50	539.60	539.60
6	10	762.80	9.17	224949.00	112.47	471.49	2416.00	21.48	477.10	473.60
7	28	836.53	11.26	199527.00	99.76	453.16	1771.00	17.75	440.30	370.40
	22	869.50	10.07	98571.00	49.29	386.10	0.00	0.00	255.30	0.00
9	11	1120.70	9.11	239850.00	119.93	465.28	3160.00	26.35	515.50	515.50
<u> </u>	11	1120.70	9.11	233630.00	119.93	403.20	3100.00	20.55	313.30	313.30
FVFNT	TOTALS	8033	10.82	1656656	828	460.25	21028	27.01	3636	3254
LVLIVI	IOIALS	0033	Avg.	1030030	020	Avg.	21020	Avg.	3030	3234
			Avg.			Avg.		Avg.		
		Even	ts that occur	red before da	ta download	s were utiliz	ed.			
Date			its that occur	ica scioic ac	Tons of Salt	o were demiz	Gal. Brine			
7-Dec-17							5000			
9-Dec-17					100					
24-Dec-17					60		1500			
25-Dec-17					50		1500			
Brine still in	tanks						6000			
			Add	ditional Salt U	sage Estimate	es	1			
	salt estimate		011.7		84				840	
	-	e = 8000 lb/200	0 lb/ton = 4 to	ons						
t tons time .	21 events = 84	4 tons								
Salt usage to	o produce bri	ine								
35028 gallor	ns x 2.2 lb/gal	salt = 77,076 lb	s/2000 = 38 to	ons	38					
Darkina la±	calt actimata									
	salt estimate	∣ a/63,360sf/lane	mile at 12' w	ide = 3 6	30					
		ane mile = 2880			30					
		x 21 application								
used for par		appcation	2 30 10301							
p.u.	J				1190		35028		4476	



Reviewed By:	
Legal Finance Engineer City Administrator Human Resources Community Development	
Police Public Works Parks and Recreation	

Agenda Item Number
New Business #2
Tracking Number
PW 2018-35

	0	·	
Title: Water Depart	ment Reports for January, Febru	uary, and March 2018	
Meeting and Date:	Public Works Committee – Ap	oril 17, 2018	
Synopsis: Monthly	water reports.		
Council Action Pre	viously Taken:		
Date of Action:	Action Taken:		
Item Number:			
Type of Vote Requi	i red: Majority		
Council Action Rec			
Submitted by:	Tom Konen	Public Works	
	Name	Department	
	Agenda Item	Notes:	



United City of Yorkville WATER DEPARTMENT REPORT

JANUARY 2018 MONTH / YEAR

WATER ABOVE PUMP

PUMP DEPTH

THIS MONTH'S PUMPAGE

WELLS

NO

COMMENTS:

WELL DEPTH

	NO	(FEET)	(FEET)	(FEET)	(GALLONS)
	4	1386	664	384	23,771,000
	7	1527	1125	430	8,157,000
	8	1384	840	456	8,186,000
	9	1368	861	509	8,867,000
ı				TOTAL TREATED	45,267,000
C	URRE	ENT MONTH'S PUMP,			nore THAN LAST MONTH
D	AILY	AVERAGE PUMPED:	1,46	0,225 GALLONS	
D	AILY	MAXIMUM PUMPED	2,9	<u>15,000</u> GALLONS	
D	AILY	AVERAGE PER CAPI	TA USE: <u>8</u>	1.12 GALLONS	
<u>v</u>	VATE	R TREATMENT:			
F	LUOR	IDE: _	<u>181 </u> LBS. FED <u>122 </u> LBS. FED	CALCULATED CON	NCENTRATION: 3.0 MG/L NCENTRATION: .74 MG/L
POLYPHOSPHATE: <u>1,061</u> LBS. FED			.061_LBS. FED	CALCULATED CON	NCENTRATION:97 MG/L
		R QUALITY:			
В	BACTERIOLOGICAL SAMPLES ANALYZED BY ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:				
F	LOUR	IDE: 3 SAMPL	E(S) TAKEN	CONCENT	TRATION: <u>0.75</u> MG/L
1	1AIN	TENANCE:		and the state of t	
		ER OF METERS REPI	_ACED:6_ MXU'S:1_	NUMBER OF LEAKS OR BE BATT	REAKS REPAIRED:2 ERIES REPLACED:14
=		ENTIAL:12	COMMERCIAL:	0 INDUSTRIA	L/GOVERNMENTAL:0

Main breaks: 806 Adrian: Lost 36,000 gallons. Badger and Wolf Street: Lost 90,000 gallons.



United City of Yorkville WATER DEPARTMENT REPORT

FEBRUAR	RY 2018
MONTH	/ YEAR

WELLS

NO	WELL DEPTH (FEET)	PUMP DEPTH (FEET)	WATER ABOVE PUMP (FEET)	THIS MONTH'S PUMPAGE (GALLONS)
4	1386	664	384	17,931,000
7	1527	1125	430	6,702,000
8	1384	840	456	15,752,000
9	1368	861	509	1,574,000
<u> </u>			TOTAL TREATED	38,849,000
CURRE	NT MONTH'S PUMP,			ess Than Last Month
DAILY	AVERAGE PUMPED:	1,38	7,464 GALLONS	
DAILY	MAXIMUM PUMPED	2,16	66,000 GALLONS	
DAILY	AVERAGE PER CAPI	TA USE:7	7.08 GALLONS	
WATE	R TREATMENT:			
CHLOR	INE:	835_LBS. FED	CALCULATED CON	
FLUOR	IDE:	53 LBS. FED	CALCULATED CON	
POLYPI	HOSPHATE:	922_LBS. FED	CALCULATED CON	ICENTRATION:97 MG/L
	R QUALITY:			
BACTE	RIOLOGICAL SAMPL <u>26</u> SATISFA	-	NOIS ENVIRONMENTAL PR 0 UNSATIS	ROTECTION AGENCY: SFACTORY (EXPLAIN)
FLOURIDE:3 SAMPLE(S) TAKEN			CONCENT	RATION: <u>0.75</u> MG/L
MAIN	TENANCE:			
	ER OF METERS REPI	_ACED:6 MXU'S:20	NUMBER OF LEAKS OR BR BATTE	ERIES REPLACED: 1
	ENTIAL: 3	COMMERCIAL:	0 INDUSTRIAL	/GOVERNMENTAL:0

Main breaks: 206 Pleasure Drive Lost 45,000

COMMENTS:



United City of Yorkville WATER DEPARTMENT REPORT

MARCH 2018	
MONTH / YEAR	

WELLS

	NO	WELL DEPTH (FEET)	PUMP DEPTH (FEET)	WATER ABOVE PUMP (FEET)	THIS MONTH'S PUMPAGE (GALLONS)			
	4	1386	664	384	19,908,000			
	7	1527	1125	430	7,338,000			
	8	1384	840	456	16,049,000			
	9	1368	861	509	2,159,000			
				TOTAL TREATED	37,045,000			
	CURRENT MONTH'S PUMPAGE IS 1,804,000 GALLONS less than last month 2,983,000 GALLONS more than last year DAILY AVERAGE PUMPED: 1,195,000 GALLONS							
C	AILY	MAXIMUM PUMPED	2,07	7 <u>5,000</u> GALLONS				
C	AILY	AVERAGE PER CAPI	TA USE:7	4.90 GALLONS				
V	VATE	R TREATMENT:						
F	HLOR LUOR OLYP	IDE:	039 LBS. FED 59 LBS. FED 086 LBS. FED		ICENTRATION: 3.0 MG/L CENTRATION: .74 MG/L CENTRATION: .97 MG/L			
٧	VATE	R QUALITY:						
E	ACTE	RIOLOGICAL SAMPL 26 SATISFA		NOIS ENVIRONMENTAL PR 0 UNSATIS	ROTECTION AGENCY: FACTORY (EXPLAIN)			
F	FLOURIDE: 3 SAMPLE(S) TAKEN CONCENTRATION: 0.75 MG/L							
1	1AIN	TENANCE:						
		ER OF METERS REPL I CUSTOMERS:	ACED:4 MXU'S:42	NUMBER OF LEAKS OR BR BATTE	EAKS REPAIRED: 1 FRIES REPLACED: 2			

Service breaks: 700 Game Farm Road

COMMENTS:



Reviewed By:
Legal
Finance

Engineer City Administrator Human Resources Community Development Police Public Works Parks and Recreation

Agenda	Item	Numb	er

New Business #3

Tracking Number

PW 2018-36

Title: Bond/LOC F	Reduction Summary – M	arch 31, 2018
Meeting and Date:	Public Works Commit	tee – April 17, 2018
Synopsis: Informat	ional	
Council Action Pre	viously Taken:	
Date of Action:	Action	Taken:
Item Number:		
Type of Vote Requi	ired:	
	quested: Informational	
Submitted by:	Brad Sanderson	Engineering
	Name	Department
	Agend	a Item Notes:



Memorandum

To: Bart Olson, City Administrator

From: Brad Sanderson, EEI

CC: Eric Dhuse, Director of Public Works

Krysti Barksdale-Noble, Community Dev. Dir.

Lisa Pickering, Deputy City Clerk

Date: April 4, 2018

Subject: 2018 Bond/LOC Reduction Summary – To Date

Please see the attached reduction summary through March 31, 2018. If you have any questions, please let me know.

2018 Bond and Letter of Credit Reduction Report

		Engineer	City Administrator	Mayor				
Date	Development/Project	Concurrence	Concurrence	Concurrence	Reduction	Final Release	Reduction Value	Remaining Balance
2/27/2018	Bristol Bay Unit 3	X	X			X	\$284,638.81	\$0.00
2/27/2018	Caledonia	X	Х		Х		\$497,615.58	\$60,000.00
3/27/2018	GC Housing	Х	Х		Х		\$200,022.65	\$8,845.35



Reviewed By:	
Legal	

Legal
Finance
Engineer
City Administrator
Human Resources
Community Development
Police
Public Works

Agenda	Item	Numl	oei

New Business #4

Tracking Number

PW 2018-37

Title: Capital Project U	pdate	
Meeting and Date: Pu	blic Works Committee – April 17	7, 2018
Synopsis: Status Updat	e	
Council Action Previou	ısly Taken:	
Date of Action:	Action Taken:	
Item Number:		
Type of Vote Required	:	
Council Action Reques	ted: None	
Submitted by:		Engineering
	Name	Department
	Agenda Item Notes	5:



Memorandum

To: Bart Olson, City Administrator

From: Brad Sanderson, EEI

CC: Eric Dhuse, Director of Public Works

Krysti Barksdale-Noble, Community Dev. Dir.

Lisa Pickering, Deputy City Clerk

Date: April 4, 2018

Subject: Capital Improvement Projects Update

The purpose of this memo is to update the Public Works Committee as to the status of the several projects. A brief summary on the status of the projects is provided below:

Construction Projects

Kennedy Shared Use Path – ITEP

• The project is substantially complete. Punchlist items will be addressed in the spring.

Planning/Design Projects

Rt 71 Water main and Sanitary Sewer Relocation

- Relocation along Rt 71 is included in IDOT's bid package.
- Bids to be received on Fox Highlands Improvements on April 6th.

Pavillion Road Streambank Stabilization

• Design engineering is underway. We are tentatively targeting a June 2018 letting and a late summer/early fall construction.

2018 RTBR Program

Contract has been awarded to D Construction.

Fountain Village – Completion of Improvements

Contract has been awarded to Wilkinson Excavating. A preconstruction meeting is scheduled for April 11^{th} .

2018 Sanitary Sewer Lining Program

Contract has been awarded to Innovative Underground.

Whispering Meadows – Completion of Improvements

Contract has been awarded to Geneva Construction.

East Orange Street Water Main Improvements

Final design has been initiated.



Reviewed By:	
Legal Finance Engineer City Administrator Human Resources Community Development	
Police	H

Agenda Item Number
New Business #5
Tracking Number
PW 2018-38

Agenda Item Summary Memo

Public Works Parks and Recreation

	rigonau rom gamma		
Title: Whispering	Meadows - Completion of Improvem	nents – Change Order No. 1	_
Meeting and Date:	Public Works Committee – April	17, 2018	_
Synopsis: Conside	ration of Change Order No. 1		
			_
Council Action Pro	eviously Taken:		
Date of Action:	Action Taken:		_
Item Number:			
Type of Vote Requ	nired: Majority		
Council Action Re		No. 1	_
	-		_
			_
Submitted by:		Engineering	
	Name	Department	
	Agenda Item Not	es:	



Memorandum

To: Bart Olson, City Administrator

From: Brad Sanderson, EEI

CC: Eric Dhuse, Director of Public Works

Krysti Barksdale-Noble, Community Dev. Dir.

Lisa Pickering, Deputy City Clerk

Date: April 6, 2018

Subject: Whispering Meadows Units 1, 2 &4 – Completion of Improvements

The purpose of this memo is to present Change Order No. 1 for the above referenced project.

A Change Order, as defined by in the General Conditions of the Contract Documents, is a written order to the Contractor authorizing an addition, deletion or revision in the work within the general scope of the Contract Documents, or authorizing in the Contract Price or Contract Time.

Background:

The United City of Yorkville and Geneva Construction Co. recently entered into agreement for a contract value of \$1,489,553.11 for the above referenced project. The intent of the project is to resurface the roads and any necessary storm, water and sanitary repairs within the Whispering Meadows Subdivision.

Questions Presented:

Should the City approve Change Order No. 1 which would <u>decrease</u> the contract amount by \$374,784.75.

Discussion:

The changes made to the contract are associated with removing the binder and surface course replacement along Faxon Road, removing the offsite storm sewer installation and to minimize the storm sewer repairs to within the roadway limits of Unit 1, 2, and 4 only.

We are recommending approval of the change order.

Action Required:

Consideration of approval of Change Order No. 1 in the amount of \$374,784.75.

CHANGE ORDER

Order No. <u>1</u>		
Date: April 6, 2018		
Agreement Date: <u>TBD</u>		
NAME OF PROJECT: Whispering Meadows – Completion of In	nprovements	
OWNER: United City of Yorkville		
CONTRACTOR: Geneva Construction Co.		
The following changes are hereby made to the CONTRACT DOO 1. See Attached	CUMENTS:	
Change of CONTRACT PRICE:		
Original CONTRACT PRICE:		<u>\$1,489,553.11</u>
Current CONTRACT PRICE adjusted by previous CHANGE OR	DER(S):	<u>\$0.00</u>
The CONTRACT PRICE due to this CHANGE ORDER will be (ir by:	icreased) (decreas	sed) <u>\$ 374,784.75</u>
The new CONTRACT PRICE including this CHANGE ORDER w	ill be:	<u>\$1,114,768.36</u>
Change to CONTRACT TIME:		
The CONTRACT TIME will be (increased) (decreased) by	0	calendar days.
The date for completion of all work will be August 31	, 2018	
<u>Justification</u>		
Removed from scope of work.		
Approvals Required		
Requested by:	Unite	ed City of Yorkville
Recommended by:	Engineerin	g Enterprises, Inc.
Accepted by:	Geneva	a Construction Co

CHANGE ORDER NO. 1 WHISPERING MEADOWS - COMPLETION OF IMPROVEMENTS UNITED CITY OF YORKVILLE

ITEMA NO	ITEMAS		CONTRACT		UT DDICE	AD	DITI	ONS	DEDUC	TIO	VS
ITEM NO.	ITEMS	UNIT	QUANTITY	UN	IIT PRICE	QUANTITY		COST	QUANTITY		COST
1	BIT MATERIALS (PRIME COAT)	LB	35,556	\$	0.01	0.0	\$	-	8,131.0	\$	81.31
2	HMA SURFACE REMOVAL, 1.5"	SY	10,532	\$	1.50	0.0	\$	-	0.0	\$	-
3	HMA SURFACE REMOVAL, 2.5"	SY	59,731	\$	1.60	0.0	\$	-	15,638.0	\$	25,020.80
4	HMA SURF REM - BUTT JOINT	SY	80	\$	12.00	0.0	\$	1,104.00	0.0	\$	-
5	HMA SURF CSE, MIX "D", N50	TON	6,084	\$	57.00	0.0	\$	-	1,348.7	\$	76,875.90
6	HMA BINDER COURSE, IL-19.0, N50	TON	9,033	\$	55.00	0.0	\$	-	2,248.0	\$	123,640.00
7	REM AND DISP OF UNSUITABLE MATL	CY	1,000	\$	29.00	0.0	\$	-	0.0	\$	-
8	AGG SUBGRADE IMPROVEMENT	CY	1,000	\$	38.00	0.0	\$	-	0.0	\$	-
9	GEOTECH FAB F/ GR STAB	SY	3,000	\$	0.95	0.0	\$	-	0.0	\$	-
10	PCC SIDEWALK REM & REPL	SF	7,135	\$	7.00	0.0	\$	-	0.0	\$	-
11	PCC SIDEWALK 5 INCH, SPEC	SF	360	\$	6.50	0.0	\$	-	0.0	\$	-
12	DETECTABLE WARNINGS	SF	420	\$	21.00	0.0	\$	-	0.0	\$	-
13	COMB CC&G REM & REPL	LF	2,225	\$	30.00	0.0	\$	-	0.0	\$	-
14	SAWCUT AND CAULKING CRACKED CC&G	EA	144	\$	35.00	0.0	\$	-	0.0	\$	-
15	EPOXY PATCH CURB HEAD	EA	152	\$	45.00	0.0	\$	-	0.0	\$	-
16	CRACK SEALING (CURBS)	LF	41,273	\$	0.41	0.0	\$	-	8,239.0	\$	3,377.99
17	THERMOPLASTIC PAVMNT MARKING - 6"	LF	1,120	\$	2.20	0.0	\$	-	0.0	\$	-
18	THERMOPLASTIC PAVMNT MARKING - 24"	LF	95	\$	5.26	0.0	\$	-	0.0	\$	-
19	YIELD SIGN INSTALLATION	EA	1	\$	300.00	0.0	\$	-	0.0	\$	-
20	DIVIDED ROAD SIGN INSTALLATION	EA	2	\$	300.00	0.0	\$	-	0.0	\$	-
21	REALIGN STREET LIGHTS	EA	2	\$	683.03	0.0	\$	-	0.0	\$	-
22	BACKFILL AROUND STREET LIGHTS	EA	2	\$	724.18	0.0	\$	-	0.0	\$	-
23	48-HOUR BURN TEST	LS	1	\$	1,734.90	0.0	\$	-	0.0	\$	-
24	MH LID REPLACEMENT - SANITARY	EA	2	\$	150.00	0.0	\$	-	0.0	\$	-
25	LOCATE & ADJ STRUCTURE- SANITARY	EA	4	\$	675.00	0.0	\$	-	0.0	\$	-
26	RESET FR & ADJ RINGS - SANITARY	EA	2	\$	500.00	0.0	\$	-	0.0	\$	-
27	RESET FRAME - SANITARY	EA	9	\$	450.00	0.0	\$	-	0.0	\$	-
28	STRUCTURE ADJ - SANITARY	EA	1	\$	500.00	0.0	\$	-	0.0	\$	-
29	REPLACE CHIMNEY SEAL	EA	3	\$	275.00	0.0	\$	-	0.0	\$	-
30	MH FR & LID REPLACEMENT- SANITARY	EA	2	\$	685.00	0.0	\$	-	0.0	\$	-
31	PIPE GROUTING - SANITARY	EA	1	\$	100.00	0.0	\$	-	0.0	\$	-
32	CLEAN STRUCTURE - SANITARY	EA	2	\$	195.00	0.0	\$	-	0.0	\$	-
33	MANDREL TESTING - SANITARY	LS	1	\$	600.00	0.0	\$	-	0.0	\$	-
34	TELEVISING - SANITARY	LF	20,075	\$	1.65	0.0	\$	-	0.0	\$	-

CHANGE ORDER NO. 1 WHISPERING MEADOWS - COMPLETION OF IMPROVEMENTS UNITED CITY OF YORKVILLE

ITENA NO	ITEMS		CONTRACT	LINUT DE	DICE	ADDITIONS		NS	DEDUC	CTION	IS
ITEM NO.	ITEMS	UNIT	QUANTITY	UNIT PI	RICE	QUANTITY		COST	QUANTITY	COST	
35	LOCATE & ADJ STRUCTURE - STORM	EA	16	\$ 37	5.00	0.0	\$	-	16.0	\$	6,000.00
36	STRUCTURE ADJ - STORM	EA	2	\$ 27	' 5.00	0.0	\$	-	2.0	\$	550.00
37	RESET FR & ADJ RINGS - STORM	EA	10	\$ 27	' 5.00	0.0	\$	-	10.0	\$	2,750.00
38	RESET FRAME - STORM	EA	23	\$ 27	' 5.00	0.0	\$	-	23.0	\$	6,325.00
39	MH FR & LID REPLACEMENT- STORM	EA	8	\$ 85	0.00	0.0	\$	-	0.0	\$	-
40	REPLACE ADJ RINGS - STORM	EA	10	\$ 32	25.00	0.0	\$	-	7.0	\$	2,275.00
41	REPL MH OPEN LID - STORM	EA	2	\$ 19	3.00	0.0	\$	-	2.0	\$	386.00
42	REPOUR BENCH - STORM	EA	7	\$ 30	00.00	0.0	\$	-	4.0	\$	1,200.00
43	STEP INSTALLATION - STORM	EA	14	\$ 18	35.00	0.0	\$	-	14.0	\$	2,590.00
44	FLARED END SECTION GRATE, 24"	EA	1	\$ 46	0.00	0.0	\$	-	1.0	\$	460.00
45	FLARED END SECTION RIP RAP	SY	210	\$ 7	5.00	0.0	\$	-	210.0	\$	15,750.00
46	BACKFILL SINKHOLE - STORM	EA	11	\$ 12	25.00	0.0	\$	-	11.0	\$	1,375.00
47	PATCH LIFT HOLE IN STRUCT - STORM	EA	50	\$ 6	55.00	0.0	\$	-	50.0	\$	3,250.00
48	RESET BARREL SECT - STORM	EA	1	\$ 31	0.00	0.0	\$	-	1.0	\$	310.00
49	PIPE GROUTING - STORM	EA	1	\$ 10	00.00	0.0	\$	-	0.0	\$	-
50	CLEAN STRUCTURE - STORM	EA	60	\$ 19	5.00	0.0	\$	-	60.0	\$	11,700.00
51	CLEAN OULTET STRUCTURE - STORM	EA	1	\$ 1,35	0.00	0.0	\$	-	1.0	\$	1,350.00
52	MORTAR FILLETS	EA	128	\$ 5	5.00	0.0	\$	-	0.0	\$	-
53	REMOVE FILTER BASKET/FABRIC	EA	59	\$ 2	0.00	0.0	\$	-	59.0	\$	1,180.00
54	ADJ. STORM RESTRICTOR STRUCTURE	EA	1	\$ 40	00.00	0.0	\$	-	1.0	\$	400.00
55	REMOVE & REPLACE STORM SEWER, 12"	LF	8	\$ 41	1.00	0.0	\$	-	0.0	\$	-
56	CLEAN STORM SEWER	LF	347	\$	7.75	0.0	\$	-	347.0	\$	2,689.25
57	DET. BASIN OVERFLOW WEIR INSTALL	LS	1	\$ 6,50	00.00	0.0	\$	-	1.0	\$	6,500.00
58	STORM SEWER CL A 1 18"	LF	1,400	\$ 3	9.00	0.0	\$	-	1,400.0	\$	54,600.00
59	MANHOLE TA 4' DIA T1F CL	EA	3	\$ 1,65	0.00	0.0	\$	-	3.0	\$	4,950.00
60	18" FES W/ GRATE	EA	1	\$ 1,40	00.00	0.0	\$	-	1.0	\$	1,400.00
61	CONNECT TO EX STORM SEWER (CORE DRILL)	EA	1	\$ 1,70	00.00	0.0	\$	-	1.0	\$	1,700.00
	REMOVE EXISTING 18" FES	EA	1	\$ 10	00.00	0.0	\$	-	1.0	\$	100.00
63	STORM SEWER REMOVAL 18"	LF	55	\$ 1	3.00	0.0	\$	-	55.0	\$	715.00
64	TELEVISING - STORM	LF	1,750	\$	3.65	0.0	\$	-	1,750.0	\$	6,387.50
65	REPLACE ADJ RINGS - VALVE VAULT	EA	2	\$ 27	' 5.00	0.0	\$	-	0.0	\$	-
66	LOCATE & ADJ STRUCT - VALVE VAULT	EA	7	\$ 40	00.00	0.0	\$	-	0.0	\$	-
67	STRUCTURE ADJUST - VALVE VAULT	EA	2	\$ 27	' 5.00	0.0	\$	-	0.0	\$	-
68	RESET FR & ADJ RINGS - VALVE VAULT	EA	9	\$ 27	' 5.00	0.0	\$	-	0.0	\$	-

CHANGE ORDER NO. 1 WHISPERING MEADOWS - COMPLETION OF IMPROVEMENTS UNITED CITY OF YORKVILLE

ITEM NO.	ITEMS	UNIT	CONTRACT QUANTITY	UNIT PRICE	ADDITIONS		DEDUCTIONS	
				UNIT PRICE	QUANTITY	COST	QUANTITY	COST
69	RESET FRAME - VALVE VAULT	EA	1	\$ 275.00	0.0	\$ -	0.0	\$ -
70	CLEAN STRUCTURE - VALVE VAULT	EA	3	\$ 195.00	0.0	\$ -	0.0	\$ -
71	REPLACE BROKEN AUX VB - WATER	EA	2	\$ 725.00	0.0	\$ -	0.0	\$ -
72	ADJ AUX VB TO GRADE - WATER	EA	17	\$ 230.00	0.0	\$ -	0.0	\$ -
73	REALIGN AUX VB - WATER	EA	9	\$ 410.00	0.0	\$ -	0.0	\$ -
74	CLEAN AUX VB OF DEBRIS - WATER	EA	5	\$ 195.00	0.0	\$ -	0.0	\$ -
75	REM & REPL BROKEN B-BOX	EA	20	\$ 420.00	0.0	\$ -	0.0	\$ -
76	RAISE FIRE HYDRANT TO GRADE	EA	4	\$ 950.00	0.0	\$ -	0.0	\$ -
77	LOWER FIRE HYDRANT TO GRADE	EA	2	\$ 1,000.00	0.0	\$ -	0.0	\$ -
78	ROTATE FIRE HYDRANT	EA	3	\$ 130.00	0.0	\$ -	0.0	\$ -
79	RESET FIRE HYDRANT - LEANING	EA	2	\$ 1,360.00	0.0	\$ -	0.0	\$ -
80	BACKFILL AROUND FIRE HYDRANT	EA	1	\$ 100.00	0.0	\$ -	0.0	\$ -
81	REPAINT FIRE HYDRANT	EA	62	\$ 180.00	0.0	\$ -	0.0	\$ -
82	TOPSOIL STRIP, STOCKPILE, & REPLACEMENT	LS	1	\$ 10,000.00	0.0	\$ -	1.0	\$ 10,000.00
83	PARKWAY GRADING & RESTORATION	SY	125	\$ 12.50	0.0	\$ -	0.0	\$ -
84	ALLOWANCE - ITEMS ORDERED BY ENGINEER	UNIT	40,000	\$ 1.00	0.0	\$ -	0.0	\$ -

TOTAL ADDITIONS = \$ 1,104.00

TOTAL DEDUCTIONS =

\$ (375,888.75)

ORIGINAL CONTRACT PRICE: \$ 1,489,553.11
AMOUNT OF CURRENT CHANGE ORDER: \$ (374,784.75)

NEW CONTRACT PRICE: \$1,114,768.36



Reviewed By:					
Legal					
Finance					
Engineer					
City Administrator					
Human Resources					
Community Development					
Police					
Public Works					
Parks and Recreation					

Agenda Item Number				
New Business #6				
Tracking Number				
PW 2018-39				

Title: Whispering Meadows Completion of Improvements – Construction Engineering Agreement								
Meeting and Date:	Public Works Committee – Ap	oril 17, 2018						
Synopsis: See attached memo.								
Council Action Previous	iously Taken:							
Date of Action: N/ A Action Taken:								
Item Number:	Item Number:							
Type of Vote Required: Supermajority (6 out of 9)								
Council Action Requested: Approval								
Submitted by:		Administration						
	Name	Department						
Agenda Item Notes:								



Memorandum

To: City Council

From: Bart Olson, City Administrator

CC:

Date: April 12, 2018

Subject: Whispering Meadows completion – construction engineering

Summary

Approval of an engineering agreement with EEI for construction engineering related to the Whispering Meadows infrastructure project.

Background

This item was discussed at the March 27th City Council meeting. At that meeting, the City Council awarded a bid for Whispering Meadows paving and infrastructure. Accordingly, EEI has submitted an engineering agreement for our consideration for construction engineering.

The attached contract contains a \$70,892 estimate for construction engineering and \$5,000 for subcontracting to Rubino Engineering for material testing of concrete and asphalt. Construction engineering will be paid on an hourly basis. These amounts are included in the FY 19 budget. Construction is expected to occur in Summer 2018.

Recommendation

Staff recommends approval of the engineering agreement with EEI for construction engineering related to the Whispering Meadows infrastructure project.

Whispering Meadows – Completion of Improvements United City of Yorkville, Kendall County, IL Professional Services Agreement - Construction Engineering

THIS AGREEMENT, by and between the United City of Yorkville, hereinafter referred to as the "City" or "OWNER" and Engineering Enterprises, Inc. hereinafter referred to as the "Contractor" or "ENGINEER" agrees as follows:

A. Services:

ENGINEER agrees to furnish to the City the following services: The ENGINEER shall provide any and all necessary engineering services to the City as indicated on the included Attachment A. All Engineering will be in accordance with all City and Illinois Department of Transportation requirements.

B. Term:

Services will be provided beginning on the date of execution of this agreement and continuing, until terminated by either party upon 7 days written notice to the non-terminating party or upon completion of the Services. Upon termination the ENGINEER shall be compensated for all work performed for the City prior to termination.

C. Compensation and maximum amounts due to ENGINEER:

ENGINEER shall receive as compensation for all work and services to be performed herein, an amount based on the Estimate of Level of Effort and Associated Cost included in Attachment B. Construction Engineering will be paid for hourly at the actual rates for services to be performed, currently estimated at \$70,892.00. The hourly rates for this project are shown in the attached 2018 Standard Schedule of Charges. All payments will be made according to the Illinois State Prompt Payment Act and not less than once every thirty days.

For outside services provided by other firms or subconsultants, the City shall pay the ENGINEER the invoiced fee to the ENGINEER, plus 10%. Such outside services include, but are not limited to services to be provided by Rubino Engineering, Inc. and are estimated at \$5,000.00

D. Changes in Rates of Compensation:

In the event that this contract is designated in Section B hereof as an Ongoing Contract, ENGINEER, on or before February 1st of any given year, shall provide written notice of any change in the rates specified in Section C hereof (or on any attachments hereto) and said changes shall only be effective on and after May 1st of that same year.

E. Ownership of Records and Documents:

Whispering Meadows – Completion of Improvements United City of Yorkville Professional Services Agreement Design and Construction Engineering

ENGINEER agrees that all books and records and other recorded information developed specifically in connection with this agreement shall remain the property of the City. ENGINEER agrees to keep such information confidential and not to disclose or disseminate the information to third parties without the consent of the City. This confidentiality shall not apply to material or information, which would otherwise be subject to public disclosure through the freedom of information act or if already previously disclosed by a third party. Upon termination of this agreement, ENGINEER agrees to return all such materials to the City. The City agrees not to modify any original documents produced by ENGINEER without contractors consent. Modifications of any signed duplicate original document not authorized by ENGINEER will be at OWNER's sole risk and without legal liability to the ENGINEER. Use of any incomplete, unsigned document will, likewise, be at the OWNER's sole risk and without legal liability to the ENGINEER.

F. Governing Law:

This contract shall be governed and construed in accordance with the laws of the State of Illinois. Venue shall be in Kendall County, Illinois.

G. Independent Contractor:

ENGINEER shall have sole control over the manner and means of providing the work and services performed under this agreement. The City's relationship to the ENGINEER under this agreement shall be that of an independent contractor. ENGINEER will not be considered an employee to the City for any purpose.

H. Certifications:

Employment Status: The Contractor certifies that if any of its personnel are an employee of the State of Illinois, they have permission from their employer to perform the service.

Anti-Bribery: The Contractor certifies it is not barred under 30 Illinois Compiled Statutes 500/50-5(a) - (d) from contracting as a result of a conviction for or admission of bribery or attempted bribery of an officer or employee of the State of Illinois or any other state.

Loan Default: If the Contractor is an individual, the Contractor certifies that he/she is not in default for a period of six months or more in an amount of \$600 or more on the repayment of any educational loan guaranteed by the Illinois State Scholarship Commission made by an Illinois institution of higher education or any other loan made from public funds for the purpose of financing higher education (5 ILCS 385/3).

Whispering Meadows – Completion of Improvements United City of Yorkville Professional Services Agreement Design and Construction Engineering

Felony Certification: The Contractor certifies that it is not barred pursuant to 30 Illinois Compiled Statutes 500/50-10 from conducting business with the State of Illinois or any agency as a result of being convicted of a felony.

Barred from Contracting: The Contractor certifies that it has not been barred from contracting as a result of a conviction for bid-rigging or bid rotating under 720 Illinois Compiled Statutes 5/33E or similar law of another state.

Drug Free Workplace: The Contractor certifies that it is in compliance with the Drug Free Workplace Act (30 Illinois Compiled Statutes 580) as of the effective date of this contract. The Drug Free Workplace Act requires, in part, that Contractors, with 25 or more employees certify and agree to take steps to ensure a drug free workplace by informing employees of the dangers of drug abuse, of the availability of any treatment or assistance program, of prohibited activities and of sanctions that will be imposed for violations; and that individuals with contracts certify that they will not engage in the manufacture, distribution, dispensation, possession, or use of a controlled substance in the performance of the contract.

Non-Discrimination, Certification, and Equal Employment Opportunity: The Contractor agrees to comply with applicable provisions of the Illinois Human Rights Act (775 Illinois Compiled Statutes 5), the U.S. Civil Rights Act, the Americans with Disabilities Act, Section 504 of the U.S. Rehabilitation Act and the rules applicable to each. The equal opportunity clause of Section 750.10 of the Illinois Department of Human Rights Rules is specifically incorporated herein. The Contractor shall comply with Executive Order 11246, entitled Equal Employment Opportunity, as amended by Executive Order 11375, and as supplemented by U.S. Department of Labor regulations (41 C.F.R. Chapter 60). The Contractor agrees to incorporate this clause into all subcontracts under this Contract.

International Boycott: The Contractor certifies that neither it nor any substantially owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the U.S. Export Administration Act of 1979 or the regulations of the U.S. Department of Commerce promulgated under that Act (30 ILCS 582).

Record Retention and Audits: If 30 Illinois Compiled Statutes 500/20-65 requires the Contractor (and any subcontractors) to maintain, for a period of 3 years after the later of the date of completion of this Contract or the date of final payment under the Contract, all books and records relating to the performance of the Contract and necessary to support amounts charged to the City under the Contract. The Contract and all books and records related to the Contract shall be available for review and audit by the City and the Illinois Auditor General. If this Contract is funded from contract/grant funds provided by the U.S. Government, the Contract, books, and records shall be available for review and audit by the Comptroller General of the U.S. and/or the Inspector General of the federal

Whispering Meadows – Completion of Improvements United City of Yorkville Professional Services Agreement Design and Construction Engineering

sponsoring agency. The Contractor agrees to cooperate fully with any audit and to provide full access to all relevant materials.

United States Resident Certification: (This certification must be included in all contracts
involving personal services by non-resident aliens and foreign entities in accordance with
requirements imposed by the Internal Revenue Services for withholding and reporting
federal income taxes.) The Contractor certifies that he/she is a: <u>x</u> United States Citizen
Resident Alien Non-Resident Alien The Internal Revenue Service requires that
taxes be withheld on payments made to non resident aliens for the performance of
personal services at the rate of 30%.
Tow Down Contification . Under namelties of nations the Contractor contifica that its
Tax Payer Certification: Under penalties of perjury, the Contractor certifies that its
Federal Tax Payer Identification Number or Social Security Number is (provided
separately) and is doing business as a (check one): Individual Real Estate
Agent Sole Proprietorship Government Entity Partnership Tax
Exempt Organization (IRC 501(a) only) <u>x</u> Corporation Not for Profit Corporation
Trust on Estate Medical and Health Core Convices Draviden Core
Trust or Estate Medical and Health Care Services Provider Corp.

I. Indemnification:

ENGINEER shall indemnify and hold harmless the City and City's agents, servants, and employees against all loss, damage, and expense which it may sustain or for which it will become liable on account of injury to or death of persons, or on account of damage to or destruction of property resulting from the performance of work under this agreement by ENGINEER or its Subcontractors, or due to or arising in any manner from the wrongful act or negligence of ENGINEER or its Subcontractors of any employee of any of them. In the event that the either party shall bring any suit, cause of action or counterclaim against the other party, the non-prevailing party shall pay to the prevailing party the cost and expenses incurred to answer and/or defend such action, including reasonable attorney fees and court costs. In no event shall the either party indemnify any other party for the consequences of that party's negligence, including failure to follow the ENGINEER's recommendations.

J. Insurance:

The ENGINEER agrees that it has either attached a copy of all required insurance certificates or that said insurance is not required due to the nature and extent of the types of services rendered hereunder. (Not applicable as having been previously supplied)

K. Additional Terms or Modification:

The terms of this agreement shall be further modified as provided on the attachments. Except for those terms included on the attachments, no additional terms are included as a part of this agreement. All prior understandings and agreements between the parties are merged into this agreement, and this agreement may not be modified orally or in any

Whispering Meadows – Completion of Improvements United City of Yorkville Professional Services Agreement Design and Construction Engineering

manner other than by an agreement in writing signed by both parties. In the event that any provisions of this agreement shall be held to be invalid or unenforceable, the remaining provisions shall be valid and binding on the parties. The list of attachments are as follows:

Attachment A: Scope of Services

Attachment B: Estimated Level of Effort and Associated Cost

Attachment C: Anticipated Project Schedule

Attachment D: Location Map

Attachment E: 2018 Standard Schedule of Charges

L. Notices:

All notices required to be given under the terms of this agreement shall be given mail, addressed to the parties as follows:

For the City:

City Administrator and City Clerk
United City of Yorkville
800 Game Farm Road
Yorkville, IL 60560

For the ENGINEER:

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove Illinois 60554

United City of Yorkville:

Gary Golinski
Mayor

Brad Sanderson, P.E.
Vice President

Beth Warren
City Clerk

Angie Smith
Executive Assistant

Whispering Meadows – Completion of Improvements United City of Yorkville Kendall County, IL Professional Services Agreement - Construction Engineering

Attachment A – Scope of Services

Construction Engineering:

- Attend the Pre-Construction Conference with the Contractor
- Provide resident engineering for on-site observation
- Daily documentation of work tasks and calculation of installed pay items
- Monitor adherence to specifications
- Gather material inspection and coordinate any required testing on behalf of the City
- Provide guidance to the contractor when questions arise during construction
- Prepare/verify payment estimates
- Prepare change orders
- Gather certified payrolls and waivers of lien
- Provide information to residents as required
- Perform punch list inspections, provide follow up inspections and recommend acceptance when appropriate
- Communicate activities with City weekly, or as required based on onsite activities
- Prepare necessary closeout paperwork



ATTACHMENT B - ESTIMATE OF LEVEL OF EFFORT AND ASSOCIATED COST PROFESSIONAL ENGINEERING SERVICES

WHISPERING MEADOWS - COMPLETION OF IMPROVEMENTS
United City of Yorkville, IL

		ENTITY:		ENGINEERING				SURVEYING		DRA	AFTING	ADMIN.	WORK	
			PRINCIPAL		SENIOR			SENIOR			SENIOR		ITEM	COST
WORK		PROJECT ROLE:	IN	PROJECT	PROJECT	PROJECT	PROJECT	PROJECT	PROJECT	CAD	PROJECT		HOUR	PER
ITEM			CHARGE	MANAGER	ENGINEER II	ENGINEER	MANAGER	SURVEYOR I	TECHNICIAN	MANAGER	TECHNICIAN	ADMIN.	SUMM.	ITEM
NO.	WORK ITEM	HOURLY RATE:	\$197	\$173	\$160	\$137	\$173	\$149	\$125	\$173	\$137	\$70		
CONSTR	UCTION ENGINEERING													
3.1	Contract Administration		16		24	24						4	68	\$ 10,560
3.2	Construction Layout				2	30							32	\$ 4,430
3.3	Observation and Documentation		16		30	350							396	\$ 55,902
	Construc	ction Engineering Subtotal:	32	-	56	404	-	-	-	-	-	4	496	\$ 70,892
		PROJECT TOTAL:	32	-	56	404	-					4	496	70,892

DIRECT EXPENS	ES	
Printing =	\$	-
Supplies & Misc. =	\$	-
Material Testing (Rubino) =	\$	5,000
DIRECT EXPENSES =	\$	5,000

LABOR SUMMARY	
Engineering Expenses =	\$ 70,612
Surveying Expenses =	\$
Drafting Expenses =	\$ -
Administrative Expenses =	\$ 280
TOTAL LABOR EXPENSES =	\$ 70,892

	TOTAL EXPENSES =	\$	75,892
--	------------------	----	--------

\Milkyway\EEL_Storage\Docs\Public\Yorkville\2017\YO1725-C Whispering Meadows, Units 1, 2 & 4-Completion of Improvements\PSAI\[Attachment B - Fee Estimate.xisx\]Fee Summittee (See Section 2) and the second of Improvements (See Section 2) and the second of Impro



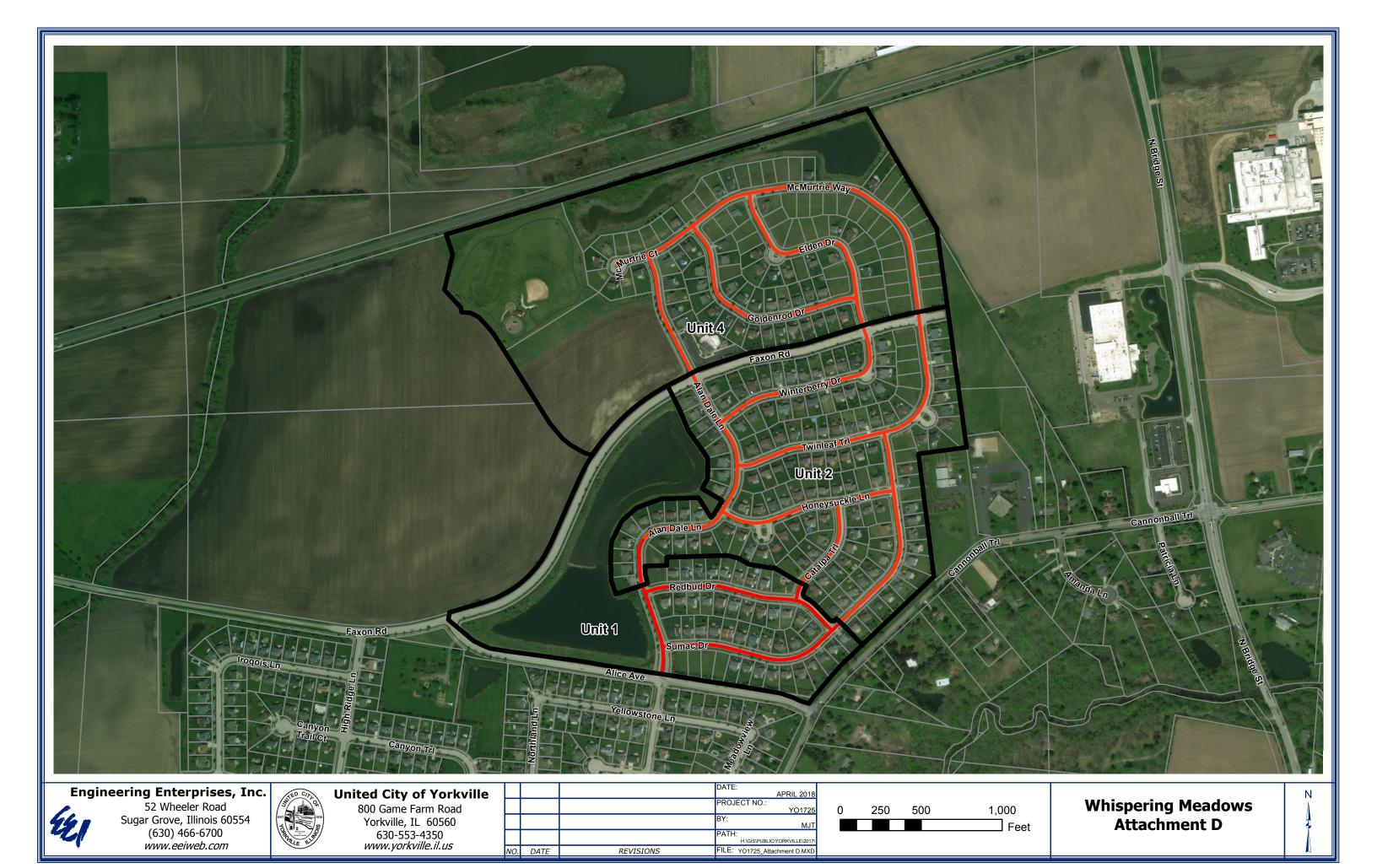
ATTACHMENT C: ANTICIPATED PROJECT SCHEDULE

WHISPERING MEADOWS - COMPLETION OF IMPROVEMENTS UNITED CITY OF YORKVILLE

WORK		Year:																201	8														
ITEM		Month:		Janı	uary		Fel	brua	ry		Ma	rch			April			Ма	y		J	June			Ju	ly		Αι	igust		Sep	ptemb	er
NO.	WORK ITEM	Week Starting:	1	2	3	4	1 2	2 3	4	1	2	3	4	1	2 3	4	1	2	3 4	4 1	2	3	4	1	2	3	4	1 2	3	4	1 :	2 3	4
CONSTR	UCTION ENGINEERING																																
3.1	Contract Administration																																
3.2	Constructing Layout																																
3.3	Observation and Documentation	•											Ī																				

Legend	
Project Management & QC/QA Meeting(s)	Preliminary Design Work Item
Bidding and Contracting	Construction

\\Milkyway\EEI_Storage\Docs\Public\Yorkville\2017\YO1725-C \Whispering Meadows, Units 1, 2 & 4-Completion of Improvements\PSA\[Attachment C - Schedule.xls]Schedule



Standard Schedule of Charges



January 1, 2018

EMPLOYEE DESIGNATION	CLASSIFICATION	HOURLY RATE
Senior Principal	E-4	\$202.00
Principal	E-3	\$197.00
Senior Project Manager	E-2	\$191.00
Project Manager	E-1	\$173.00
Senior Project Engineer/Planner/Surveyor II	P-6	\$160.00
Senior Project Engineer/Planner/Surveyor I	P-5	\$149.00
Project Engineer/Planner/Surveyor	P-4	\$137.00
Senior Engineer/Planner/Surveyor	P-3	\$125.00
Engineer/Planner/Surveyor	P-2	\$114.00
Associate Engineer/Planner/Surveyor	P-1	\$103.00
Senior Project Technician II	T-6	\$149.00
Senior Project Technician I	T-5	\$137.00
Project Technician	T-4	\$125.00
Senior Technician	T-3	\$114.00
Technician	T-2	\$103.00
Associate Technician	T-1	\$ 90.00
Engineering/Land Surveying Intern	I-1	\$ 84.00
GIS Technician	G-1	\$ 72.00
Administrative Assistant	A-3	\$ 70.00
CREW RATES, VEHICLES AND REPROGRAPHICS		
1 Man Field Crew with Standard Survey Equipment 2 Man Field Crew with Standard Survey Equipment 1 Man Field Crew with RTS or GPS * 2 Man Field Crew with RTS or GPS * Vehicle for Construction Observation In-House Scanning and Reproduction Reimbursable Direct Costs & Services by Others	\$0.25/Sq. Ft. (Black & White) \$1.00/Sq. Ft. (Color) Cost + 10%	\$163.00 \$254.00 \$202.00 \$293.00 \$15.00
Heimbursable Direct Costs & Services by Others	COS(+ 1070	

^{*}RTS = Robotic Total Station / GPS = Global Positioning System



Legal	
Finance	
Engineer	
City Administrator	
Human Resources	
Community Development	
Police	
Public Works	

	_		_
Agenda	Item	Num	hei

New Business #7

Tracking Number

PW 2018-40

Agenda Item Summary Memo

Fitle: Fox Highland	l-Raintree Village Water Main Int	erconnect
Meeting and Date:	Public Works Committee – Apri	il 17, 2018
Synopsis: Consider	ration of Bid Award	
Council Action Pre	viously Taken:	
Date of Action:	Action Taken:	
Type of Vote Requ	irad. Majority	
Council Action Rec	quested: Consideration of Contra	ct Award
Submitted by:	Brad Sanderson	Engineering
	Name	Department
	Agenda Item N	otes:



Memorandum

To: Bart Olson, City Administrator

From: Brad Sanderson, EEI

CC: Eric Dhuse, Director of Public Works

Krysti Barksdale-Noble, Community Dev. Dir.

Lisa Pickering, Deputy City Clerk

Date: April 10, 2018

Subject: Fox Highland – Raintree Village Water Main Interconnect

Bids were received, opened and tabulated for work to be done on the project at 10:15 a.m., April 6, 2018. Representatives of contractors bidding the project and our firm were in attendance. A tabulation of the bids and the engineer's estimate is attached for your information and record. The low bid was below our engineer's estimate and within budget.

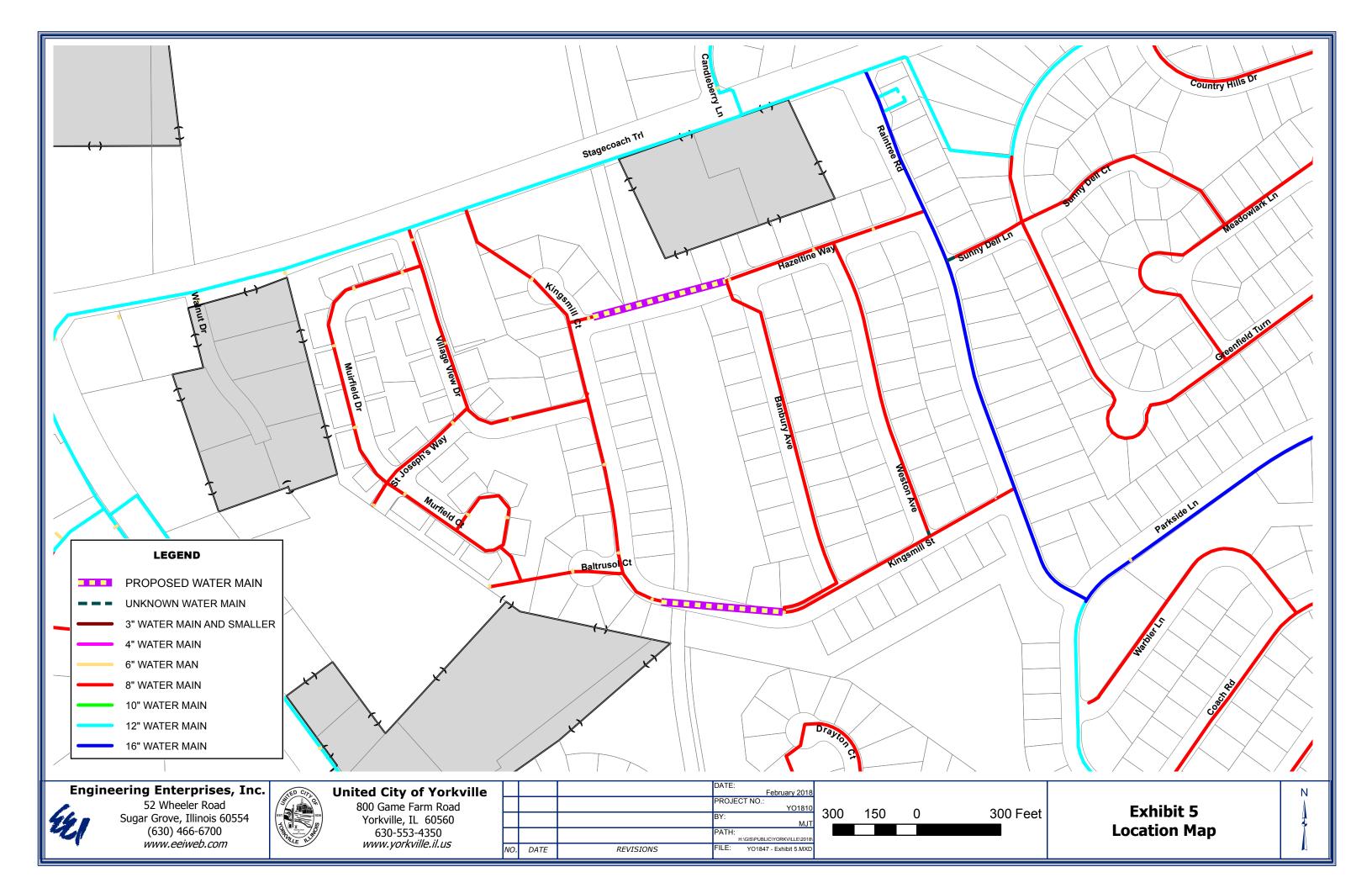
Therefore, we recommend the acceptance of the bid and approval of award be made to the low bidder, Vian Construction Co., Inc., 1041 Martha Street, Elk Grove Village, Illinois 60007 in the amount of \$292,304.00.

If you have any questions or require additional information, please let us know.



BID TABULATION FOX HIGHLAND-RAINTREE VILLAGE WATER MAIN INTERCONNECT UNITED CITY OF YORKVILLE

	ONITED CITY OF YORKVILLE															
		BID TABU BIDS RECD	LATION 4/6/2018	VIAN CONS 1041 Mar Elk Grove Villa	tha Street	H. LINDEN & S 722 E. South Plano, II	Street-Unit D	1305 S. Ri Batavia, I	ver Street	75 Ko	CONSTRUCTION ppie Drive s, IL 60136	1555 Gram	CAVATING nercy Place L 60450	ACQUA CONTRACTORS CORP 1415 S. Ardmore Ave. Villa Park, IL 60181	52 Whe	S ESTIMATE eler Road ve, IL 60554
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE AMOUNT	UNIT PRICE	AMOUNT
1	WATER MAIN, 8-INCH D.I.P, CLASS 52, WITH POLYETHYLENE WRAP	FOOT	1,010	\$ 108.00	\$ 109,080.00	\$ 110.00	\$ 111,100.00 \$	95.00	\$ 95,950.00	\$ 83.00	\$ 83,830.00	\$ 115.00	\$ 116,150.00	\$ 140.00 \$ 141,400.00	\$ 80.00	\$ 80,800.00
2	WATER MAIN PROTECTION, PVC, C-900, 12-INCH	FOOT	188	\$ 40.00	\$ 7,520.00	\$ 110.00	\$ 20,680.00 \$	50.00	\$ 9,400.00	\$ 80.00	\$ 15,040.00	\$ 50.00	\$ 9,400.00	\$ 110.00 \$ 20,680.00	\$ 80.00	\$ 15,040.00
3	CONNECTION TO EXISTING WATER MAIN, 8-INCH	EACH	2	\$ 2,800.00	\$ 5,600.00	\$ 3,000.00	\$ 6,000.00 \$	3,000.00	\$ 6,000.00	\$ 3,000.00	\$ 6,000.00	\$ 2,350.00	\$ 4,700.00	\$ 4,000.00 \$ 8,000.00	\$ 3,800.00	\$ 7,600.00
4	GATE VALVE & VALVE BOX, 8-INCH (RESILIENT SEAT)	EACH	1	\$ 1,600.00	\$ 1,600.00	\$ 3,800.00	\$ 3,800.00 \$	3,500.00	\$ 3,500.00	\$ 1,900.00	\$ 1,900.00	\$ 2,500.00	\$ 2,500.00	\$ 1,800.00 \$ 1,800.00	\$ 2,100.00	\$ 2,100.00
5	PRESSURE CONNECTION WITH 8-INCH GATE VALVE IN 60-INCH VAULT	EACH	2	\$ 5,200.00	\$ 10,400.00	\$ 7,000.00	\$ 14,000.00 \$	7,000.00	\$ 14,000.00	\$ 7,500.00	\$ 15,000.00	\$ 7,800.00	\$ 15,600.00	\$ 9,750.00 \$ 19,500.00	\$ 7,000.00	\$ 14,000.00
6	8-INCH PRESSURE REDUCING VALVE IN 60" VAULT W/TYPE 1 FR & CL	EACH	2	\$ 14,100.00	\$ 28,200.00	\$ 20,000.00	\$ 40,000.00 \$	17,000.00	\$ 34,000.00	\$ 22,000.00	\$ 44,000.00	\$ 19,900.00	\$ 39,800.00	\$ 18,000.00 \$ 36,000.00	\$ 25,000.00	\$ 50,000.00
7	FIRE HYDRANT ASSEMBLY WITH AUX. VALVE, 6-INCH MJ	EACH	2	\$ 5,400.00	\$ 10,800.00	\$ 5,000.00	\$ 10,000.00 \$	5,200.00	\$ 10,400.00	\$ 6,200.00	\$ 12,400.00	\$ 5,000.00	\$ 10,000.00	\$ 5,000.00 \$ 10,000.00	\$ 5,000.00	\$ 10,000.00
8	DUCTILE IRON FITTINGS	LB	740	\$ 5.00	\$ 3,700.00	\$ 5.00	\$ 3,700.00 \$	8.00	\$ 5,920.00	\$ 0.10	\$ 74.00	\$ 10.00	\$ 7,400.00	\$ 0.01 \$ 7.40	\$ 9.00	\$ 6,660.00
9	WATER SERVICE CONNECTION, 1-INCH	EACH	1	\$ 1,200.00	\$ 1,200.00	\$ 3,000.00	\$ 3,000.00 \$	1,000.00	\$ 1,000.00	\$ 900.00	\$ 900.00	\$ 1,200.00	\$ 1,200.00	\$ 1,000.00 \$ 1,000.00	\$ 1,200.00	\$ 1,200.00
10	WATER SERVICE PIPE, 1-INCH TYPE K COPPER	FOOT	25	\$ 56.00	\$ 1,400.00	\$ 51.00	\$ 1,275.00 \$	30.00	\$ 750.00	\$ 55.00	\$ 1,375.00	\$ 43.25	\$ 1,081.25	\$ 15.00 \$ 375.00	\$ 40.00	\$ 1,000.00
11	WATE MAIN TESTING-PRESSURE AND DISINFECTION	LSUM	1	\$ 2,200.00	\$ 2,200.00	\$ 1,000.00	\$ 1,000.00 \$	5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,500.00 \$ 2,500.00	\$ 4,000.00	\$ 4,000.00
12	FOUNDATION MATERIAL	CUYD	250	\$ 22.00	\$ 5,500.00	\$ 1.00	\$ 250.00 \$	40.00	\$ 10,000.00	\$ 20.00	\$ 5,000.00	\$ 30.00	\$ 7,500.00	\$ 1.00 \$ 250.00	\$ 30.00	\$ 7,500.00
13	EXPLORATORY EXCAVATION	EACH	4	\$ 300.00	\$ 1,200.00	\$ 10.00	\$ 40.00 \$	500.00	\$ 2,000.00	\$ 220.00	\$ 880.00	\$ 500.00	\$ 2,000.00	\$ 250.00 \$ 1,000.00	\$ 1,000.00	\$ 4,000.00
14	BITUMINOUS MATERIALS (TACK COAT)	LB	3,812	\$ 2.00	\$ 7,624.00	\$ 1.00	\$ 3,812.00 \$	0.50	\$ 1,906.00	\$ 1.00	\$ 3,812.00	\$ 0.50	\$ 1,906.00	\$ 1.00 \$ 3,812.00	\$ 0.20	\$ 762.40
15	HOT-MIX ASPHALT PAVEMENT REMOVAL	SQYD	1,540	\$ 4.00	\$ 6,160.00	\$ 5.00	\$ 7,700.00 \$	11.00	\$ 16,940.00	\$ 4.00	\$ 6,160.00	\$ 10.00	\$ 15,400.00	\$ 4.00 \$ 6,160.00	\$ 63.00	\$ 97,020.00
16	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	230	\$ 126.00	\$ 28,980.00	\$ 95.00	\$ 21,850.00 \$	90.00	\$ 20,700.00	\$ 129.00	\$ 29,670.00	\$ 90.00	\$ 20,700.00	\$ 120.00 \$ 27,600.00	\$ 64.00	\$ 14,720.00
17	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	140	\$ 88.00	\$ 12,320.00	\$ 105.00	\$ 14,700.00 \$	100.00	\$ 14,000.00	\$ 90.00	\$ 12,600.00	\$ 93.00	\$ 13,020.00	\$ 83.00 \$ 11,620.00	\$ 67.00	\$ 9,380.00
18	ROADWAY EDGE CRACK SEALING	FOOT	2,000	\$ 2.00	\$ 4,000.00	\$ 2.00	\$ 4,000.00 \$	3.50	\$ 7,000.00	\$ 2.00	\$ 4,000.00	\$ 2.50	\$ 5,000.00	\$ 2.00 \$ 4,000.00	\$ 2.70	\$ 5,400.00
19	SIDEWALK REMOVAL AND REPLACEMENT COMBINATION CURB AND GUTTER REMOVAL AND	SQFT	225	\$ 10.00	\$ 2,250.00	\$ 10.00	\$ 2,250.00 \$	12.00	\$ 2,700.00	\$ 9.00	\$ 2,025.00	\$ 15.00	\$ 3,375.00	\$ 9.00 \$ 2,025.00	\$ 25.00	\$ 5,625.00
20	REPLACEMENT	FOOT	55	\$ 48.00	\$ 2,640.00	\$ 50.00	\$ 2,750.00 \$	45.00	\$ 2,475.00	\$ 32.00	\$ 1,760.00	\$ 88.00	\$ 4,840.00	\$ 34.00 \$ 1,870.00	\$ 40.00	\$ 2,200.00
21	PCC DRIVEWAY REMOVAL AND REPLACEMENT	SQYD	30	\$ 88.00	\$ 2,640.00	\$ 10.00	\$ 300.00 \$	90.00	\$ 2,700.00	\$ 75.00	\$ 2,250.00	\$ 65.00	\$ 1,950.00	\$ 87.00 \$ 2,610.00	\$ 75.00	\$ 2,250.00
22	FIRE HYDRANT REMOVAL	EACH	1	\$ 350.00	\$ 350.00	\$ 750.00	\$ 750.00 \$	700.00	\$ 700.00	\$ 1,100.00	\$ 1,100.00	\$ 700.00	\$ 700.00	\$ 150.00 \$ 150.00	\$ 750.00	\$ 750.00
23	SANITARY SERVICE REPAIR, PVC SDR-26, D-2241, 6- INCH	EACH	2	\$ 400.00	\$ 800.00	\$ 100.00	\$ 200.00 \$	2,000.00	\$ 4,000.00	\$ 800.00	\$ 1,600.00	\$ 1,000.00	\$ 2,000.00	\$ 500.00 \$ 1,000.00	\$ 600.00	\$ 1,200.00
24	STORM SEWER REPAIR, PVC SCHEDULE 40, 4-INCH	FOOT	20	\$ 57.00	\$ 1,140.00	\$ 64.00	\$ 1,280.00 \$	50.00	\$ 1,000.00	\$ 25.00	\$ 500.00	\$ 45.00	\$ 900.00	\$ 40.00 \$ 800.00	\$ 30.00	\$ 600.00
25	STORM SEWER REPAIR, RCP, 12-INCH	FOOT	60	\$ 65.00	\$ 3,900.00	\$ 75.00	\$ 4,500.00 \$	70.00	\$ 4,200.00	\$ 59.00	\$ 3,540.00	\$ 92.51	\$ 5,550.60	\$ 130.00 \$ 7,800.00	\$ 80.00	\$ 4,800.00
26	STORM SEWER REPAIR, RCP, 15-INCH	FOOT	10	\$ 70.00	\$ 700.00	\$ 85.00	\$ 850.00 \$	150.00	\$ 1,500.00	\$ 85.00	\$ 850.00	\$ 220.00	\$ 2,200.00	\$ 290.00 \$ 2,900.00	\$ 90.00	\$ 900.00
27	STORM SEWER REPAIR, RCP, 30-INCH	FOOT	10	\$ 375.00	\$ 3,750.00	\$ 110.00	\$ 1,100.00 \$	250.00	\$ 2,500.00	\$ 120.00	\$ 1,200.00	\$ 350.00	\$ 3,500.00	\$ 315.00 \$ 3,150.00	\$ 120.00	\$ 1,200.00
28	RESTORATION	SQYD	90	\$ 45.00	\$ 4,050.00	\$ 10.00	\$ 900.00 \$	40.00	\$ 3,600.00	\$ 10.00	\$ 900.00	\$ 20.00	\$ 1,800.00	\$ 25.00 \$ 2,250.00	\$ 10.00	\$ 900.00
29	NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL, TYPE 1	TON	50	\$ 50.00	\$ 2,500.00	\$ 40.00	\$ 2,000.00 \$	30.00	\$ 1,500.00	\$ 10.00	\$ 500.00	\$ 15.00	\$ 750.00	\$ 50.00 \$ 2,500.00	\$ 70.00	\$ 3,500.00
30	NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL, TYPE 2	TON	50	\$ 50.00	\$ 2,500.00	\$ 40.00	\$ 2,000.00 \$	40.00	\$ 2,000.00	\$ 15.00	\$ 750.00	\$ 12.00	\$ 600.00	\$ 25.00 \$ 1,250.00	\$ 70.00	\$ 3,500.00
31	PERIMETER EROSION BARRIER	FOOT	200	\$ 4.00	\$ 800.00	\$ 3.00	\$ 600.00 \$	4.00	\$ 800.00	\$ 2.00	\$ 400.00	\$ 5.00	\$ 1,000.00	\$ 5.00 \$ 1,000.00	\$ 3.00	\$ 600.00
32	TRAFFIC CONTROL AND PROTECTION	LSUM	1	\$ 6,800.00	\$ 6,800.00	\$ 5,000.00	\$ 5,000.00 \$	5,000.00	\$ 5,000.00	\$ 42,200.00	\$ 42,200.00	\$ 17,500.00	\$ 17,500.00	\$ 4,990.60 \$ 4,990.60	\$ 6,250.00	\$ 6,250.00
33	ALLOWANCE-ITEMS ORDERED BY THE ENGINEER	UNIT	10,000	\$ 1.00	\$ 10,000.00	\$ 1.00	\$ 10,000.00 \$	1.00	\$ 10,000.00	\$ 1.00	\$ 10,000.00	\$ 1.00	\$ 10,000.00	\$ 1.00 \$ 10,000.00	\$ 1.00	\$ 10,000.00
	TOTAL				292,304.00		301,387.00		303,141.00)	317,216.00		332,022.85	340,000.00		375,457.40





	Reviewed By:
	Legal
	Finance
	Engineer
	City Administrator
	Human Resources
	Community Development
	Police
	Public Works
1 1	Parks and Recreation

Agenda Item Number
New Business #8
Tracking Number
PW 2018-41

Agenda Item Summary Memo

Title: MFT Supplemental Appropriation for General Maintenance Meeting and Date: Public Works Committee – April 17, 2018 Synopsis: Seeking approval for additional appropriation for bulk rock salt. Council Action Previously Taken: Date of Action: Action Taken: Item Number: Type of Vote Required: Majority Council Action Requested: Approval Submitted by: Eric Dhuse Public Works Name Department Agenda Item Notes:	Agenda Item Summary Wemo						
Synopsis: Seeking approval for additional appropriation for bulk rock salt. Council Action Previously Taken: Date of Action: Action Taken: Item Number: Type of Vote Required: Majority Council Action Requested: Approval Submitted by: Eric Dhuse Public Works Name Department	Title: MFT Supplen	Title: MFT Supplemental Appropriation for General Maintenance					
Council Action Previously Taken: Date of Action: Action Taken: Item Number: Type of Vote Required: Majority Council Action Requested: Approval Submitted by: Eric Dhuse	Meeting and Date:	Meeting and Date: Public Works Committee – April 17, 2018					
Date of Action: Action Taken:	Synopsis: Seeking a	Synopsis: Seeking approval for additional appropriation for bulk rock salt.					
Date of Action: Action Taken:							
Type of Vote Required: Majority Council Action Requested: Approval Submitted by: Eric Dhuse Public Works Name Department	Council Action Pres	viously Taken:					
Type of Vote Required: Majority Council Action Requested: Approval Submitted by: Eric Dhuse Public Works Name Department	Date of Action:	Action Tal	xen:				
Council Action Requested: Approval Submitted by: Eric Dhuse Public Works Name Department	Item Number:						
Submitted by: Eric Dhuse Public Works Name Department	Type of Vote Requi	red: Majority					
Name Department	Council Action Req	uested: Approval					
Name Department							
1	Submitted by:	Eric Dhuse	Public Works				
Agenda Item Notes:		Name	Department				
	Agenda Item Notes:						



Memorandum

To: Public Works Committee

From: Eric Dhuse, Director of Public Works

CC: Bart Olson, Administrator

Date: April 4, 2018

Subject: FY19 MFT Appropriation

Summary

Attached is the MFT general maintenance proposal for FY19. This year, the proposed appropriation is \$177,000. If approved, this money will be used to purchase bulk rock salt and electricity for our street lights.

Background

Each year the City Council must approve a proposed resolution to appropriate Motor Fuel Tax funds for use throughout the city under the umbrella of general maintenance. At the same time, IDOT also has to approve the type of maintenance, quantity of materials, and many other factors to make sure they all follow strict IDOT standards and regulations.

Recommendation

I recommend the approval of this resolution to appropriate \$177,000 for general maintenance use as approved by IDOT.

I would ask that this be placed on the April 17, 2018 public works committee for discussion. If you have any questions or need further information, please let me know.



Resolution for Maintenance Under the Illinois Highway Code



			Resolution Num	ber Reso	olution Type	Section No	umber
						18-0000	0-00-GM
BE IT RESOLVED, by the	Go	Council verning Body Type		of the	Local Public	City Agency Type	of
	orkville		s that there is he	reby approp			
	cal Public Agency	300					
One Hundred Seventy						\$177,000.00	
of Motor Fuel Tax funds for	the purpose of mainta	aining streets and	d highways unde	r the applica	ble provisions o	of Illinois High	way Code from
05/01/18 to	04/30/19 Ending Date						
BE IT FURTHER RESOLV including supplemental or r funds during the period as	evised estimates appro	erations as listed oved in connection	and described on with this resol	on the appro lution, are eli	ved Estimate of gible for mainte	Maintenance	Costs, otor Fuel Tax
BE IT FURTHER RESOLV	ED, that	City	of		Yorkvi	ille	
shall submit within three mo available from the Departm expenditure by the Departn BE IT FURTHER RESOLVI of the Department of Trans	onths after the end of the control o	he maintenance ent showing expe riation, and	period as stated enditures and the	above, to the balances re	e Department o maining in the f	of Transportation funds authoriz	ed for
			City	Clerk in a	and for said	Cit	у
Name o	Yorkville						
Name o	f Local Public Agency		n the State of Illi	nois, and ke	eper of the reco	rds and files t	hereof, as
provided by statute, do here	by certify the foregoing	g to be a true, pe	rfect and comple	ete copy of a	resolution adop	pted by the	
Council	of		Yorkville		at a montin	ag hald an	
Governing Body			of Local Public Age	ency	at a meetir	ig rieid on	Date
N TESTIMONY WHEREOF	, I have hereunto set r	my hand and sea	I this	_ day of	Month	n, Year	
(SEAL)			Clerk Signature				
					APPROVED		
			Regional Engine		n	Da	ate



Municipal Estimate of Maintenance Costs



Submittal Type Supplemental

Local Public Agency		_ (County		_ Se	ction Nu	ımber	Beginni	Maintena ng	nce Po	
United City of Yorkville							0-00-GN				/30/19
										0-77	00/10
	Marine		imated	Cost of M							
Maintanana Outsetiss	Maint.	1			- F	or Group	o I, IIA, IIE				
Maintenance Operation (No. and Description)	Eng. Group			14.0				Unit	Item		Est Total
Snow Removal	l	rteq.	Dulk D	Item			Quantity		Cost		Operation Cost
Chow Removal	-		DUIK P	Rock Salt		TON	1,400	\$55.00	\$77,000	.00	\$77,000.00
Operation of an existing	1		Electri	icity				<u> </u>			
Street lighting system	<u>'</u>		Liectii	City					-	\rightarrow	\$100,000.00
ou our nightung by stem	-								-	\dashv	
										+	
SACT BID THEOUGH											
CMS											
							3.00				
	-										
	-										
								0 1811			
Add Row					To	tal Esti	mated Ma	aintenance C	peration Co	ost \$	177,000.00
Estimated Cost of Maintenand	ce Engi	neer	ing	Maintena	nce P	rogran	n Estima	ated Costs			
Preliminary Engineering							ated Cost		Portion	0	ther Funds
Engineering Inspection				Maint	Oper	\$	177,000.		I		
Material Testing				Maint	Eng						
Advertising					otals	\$	177,000.	00			
Bridge Inspections								ated Mainten	ance Cost	\$1	77,000.00
Total Estimated Maintenance		-1200								Ψ1	77,000.00
Engineering Cost											
Submitted											
funicipal Official		_	Date		Anr	proved					
			11			ional Er	ngineer				
							of Trans	portation		D	ate
itle			J [J		*** ******		
	10 10 10										

State of Illinois DEPARTMENT OF TRANSPORTATION Bureau of Local Roads and Streets

SPECIAL PROVISION FOR **ROCK SALT**

Effective August 1, 1969 Revised January 1, 2002

All references to Sections or Articles in this specification shall be construed to mean a specific Section or Article of the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation.

<u>Description</u>. This item shall consist of furnishing rock salt (sodium chloride) in bins or stockpiles at location designated in the Proposal.

Materials. Material shall meet the requirements of Article 1013.02 except that the gradation shall be as follows:

Passing 12.5 mm (1/2 inch) sieve				0.0		100 %
Passing 9.5 mm (3/8 inch) sleve Passing 4.75 mm (No. 4) sleve	.	•	:		95 -	100 %
Passing 2.36 mm (No. 8) sieve		 , .	 ٠,	 -	20 -	90 % 60 %
Passing 600 μm (No. 30) sieve	•				0	10 %

The Department reserves the right to reject any shipments of rock salt which are delivered in a frozen or caked condition or which contain free water.

The Department reserves the right to accept delivery of Rock Salt which, according to analysis by the Department, has a sodium chloride (NaCi) content of less than 96.0 %, but is not less than 90.0 %. Material with less than 90.0 % sodium chloride will be rejected. When such exceptions are allowed, payment will be adjusted.

Method of Measurement. Rock salt will be measured by the metric ton (ton).

Basis of Payment. This work will be paid for at the contract unit price per metric ton (ton) for furnishing and transporting ROCK SALT based on the sodium chloride content. Payment will be in accordance with the following schedule:

NaCl Content 96.0% to 100.0% Net Bid price per ton.

NaCl Content 95.0% to 95.9% Bld price less \$0.50 per metric ton (ton).

NaCl Content 94.0% to 94.9% Bid price less \$2.00 per metric ton (ton).

NaCl Content 90.0% to 93.9% Bid price less \$4.00 per metric ton (ton).



ILLINOIS

JOINT PURCHASING REQUISITION CY'18-'19 New Purchase Commitment

PLEASE RETURN TO: Illinois Department of

Central Management Services 801 Wm. G. Stratton Building 401 S. Spring Street Springfield, IL 62706

Email Address for submission:

				CIVIS	S.BOSS.EC@illinois.gov		
No Thank You, But keep on mailing list.	Opt-Out-> O Notice:-> Pl	our unit does not want to participal ease complete and return the Conta	ite in the	CY' 2018	8-2019 Contract Procurement.		
Joint Purchasing #:	L-6249	7	_	Date:	3 / ZZ / 2018		
Government Unit:	UNITED	CITY of YORKUILLE	Г		Delivery Point		
Mailing Address:	800 GAME	FARM RD.			Delivery Details To Contract) At Time Of Order Placement)		
City / State / Zip:	YORKVIllE,	1L 60560	_		,		
County:	KENDALL		_				
Contact Person:	ERIC DA	AUSE .					
Telephone Number:	630-878	3-7102					
Fax Number:	<u>630-553-</u>	4377					
Contact Email:	EDHUSE	Cyperulle M. US		<- Please	provide Email Address		
* * * * * * * * * * * * * Pa	rticipant, Comi	olete Only One - Either "Table-A	" or "T	abla D" D			
Table A: Co	mplete this tabl	e to have the State "SOLICIT BI	DS" for	VOUE COL	commental antity		
ITEM DESCRIP	TION	BID QUANTITY	101				
AASHTO M143 Road Sal		(Total Tonnage)	UNIT MEASURE (22 – 25 Ton / Truck)				
Rock Salt, Bull	K			122	Tons		
OF 110N 1 80.%	o. minimum purc	ercentage for Total Tonnage Qua hase requirement/120% maximum hase requirement/120% maximum	purchase	e requiren	nent		
* * * * * * * * * * Partici	pant, Complete	Only One - Either "Table-A" Al	ove or '	"Table-B	"Below * * * * * * * * *		
Table B: Comple	te this table to l	nave the State "RENEW" Requir	ements	for your	governmental entity		
ITEM DESCRIPT	TION	QUANTITY			NIT MEASURE		
AASHTO M143 Road Salt	or Equivalent	(Total Tonnage)		(22 -	- 25 Ton / Truck)		
Rock Salt, Bulk		1400_			Tons		
Note: Renewal is available	ONLY under	Contracts PSD 4018455, 4018456	, and 40	18457 for	prior CV' 2017-2019		
Tour qualitity may not excee	ed more than a 2	0% increase of last season's quanti	tv and n	rice canno	of increase more than 100/ of		
last season's price. Other 16	erins & Conditio	ns of Contract will remain the same	e as last	year. Plea	ase Check Contract # Below:		
Note Your Current CMS (Contract: PSD 4	018455 (X) -or- PSD 4018456 (r- PSD 40)18457 ()		
I certify that funds are availa governmental unit, and not for	I certify that funds are available for the purchase of the items on this Requisition and that such items are for the sole use of this governmental unit, and not for personal use of any official or individual or re-sale.						
In addition, agree to abide t	by the Joint Purc	hasing Procedure established by th	e Depart	ment of C	entral Management Services.		
J-11/2			DI	z. of f	Public Works		
SIGNATURE OF A	UTHORIZED O	FFICIAL OR AGENT	V e - 33 - 25		TITLE		

Printed on Recycled Paper

11. 110 OS



Reviewed By:	
Legal Finance	

Finance
Engineer
City Administrator
Human Resources
Community Development
Police
Public Works

Agenda Item Number	
New Business #9	
Tracking Number	

PW 2018-42

Agenda Item Summary Memo

Title: Traffic Control I	Request – Alan Dale Lane and Fax	on Road	
Meeting and Date: \underline{P}	ublic Works Committee – April 17	7, 2018	
Synopsis: Signage Red	commendation		_
Council Action Previo	usly Taken:		
Date of Action:	Action Taken:		
Type of Vote Required			
Council Action Reque	sted: Consideration of Approval		_
Submitted by:	Brad Sanderson Name	Engineering Department	
	Agenda Item Notes	-	



Memorandum

To: Bart Olson, City Administrator

From: Brad Sanderson, EEI

CC: Eric Dhuse, Director of Public Works

Krysti Barksdale-Noble, Community Dev. Dir.

Lisa Pickering, Deputy City Clerk

Date: March 15, 2018

Subject: Alan Dale Lane and Faxon Road Multi-Way Stop Sign

As requested, we investigated the possible installation of multi-way stop signs at the intersection of Alan Dale Lane and Faxon Road. Our findings were as follows:

- Currently there are stop signs along Alan Dale Lane.
- The intersection at Alan Dale Lane and Faxon Road does not appear to have any sight distance constraints.
- The only recorded crash at that intersection in the last 5 years was a property damage accident in Septempter 2014.
- The governing entity on traffic control signage is the Manual on Uniform Traffic Control Devices (MUTCD). The manual states as follows in regards to multi-way stop sign installation:

Guidance:

The decision to install multi-way stop control should be based on an engineering study. The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

- A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
- B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 - 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
 - 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
 - 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Option:

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;

C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection

Due to the low traffic volumes, almost non-existent crash history, and no sight distance constraints with the current intersection control, this intersection does not make a good candidate for multi-way stop installation. The intersection control signage should be left as it currently stands.

UNITED CITY OF YORKVILLE **MULTI-WAY STOP**

PRELIMINARY ENGINEERING EVALUATION

Location:

Primary Criteria to Consider*

Yes	Criteria Met Additional Study Required	No	<u>Criteria**</u>
		X	A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
		X	B. Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation, Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
			C. Minimum Volumes:
		X	The vehicular volume entering the intersections from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
		×	The combined vehicular, pedestrian, and bicycle volume entering the intersections from the minor street 2. approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
		X	3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.
		×	Where no single criterion is satisfied, but where Criteria B, C.1 and C.2 are all satisfied to 80 percent of the minimum values, criterion C.3 is excluded from this condition.
		\boxtimes	E. The need to control left-turn conflicts;
		\bowtie	F. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
		X	G. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
		×	An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.
Based on a	ı preliminary revi	iew of the c	riteria for a multi-way stop sign the following action is recommended:
			Criteria are clearly met recommending installation of a multi-way stop
		X	Criteria are not clearly met at this time - no further action recommended
			Criteria may or may not be met - additional engineering study required
=	Senior	- Pro	Smollid Date: 3/15/18 Spect Engineer Date:
-		Title	and the second s

^{*} Based upon Professional Engineer's Review

^{**} Manual on Uniform Traffic Control Devices (MUTCD)



Westbound Approach, Looking West



Westbound Approach, Looking South



Westbound Approach, Looking North



Eastbound Approach, Looking East



Eastbound Approach, Looking North



Eastbound Approach, Looking South



Northbound Approach, Looking North



Northbound Approach, Looking West



Northbound Approach, Looking East



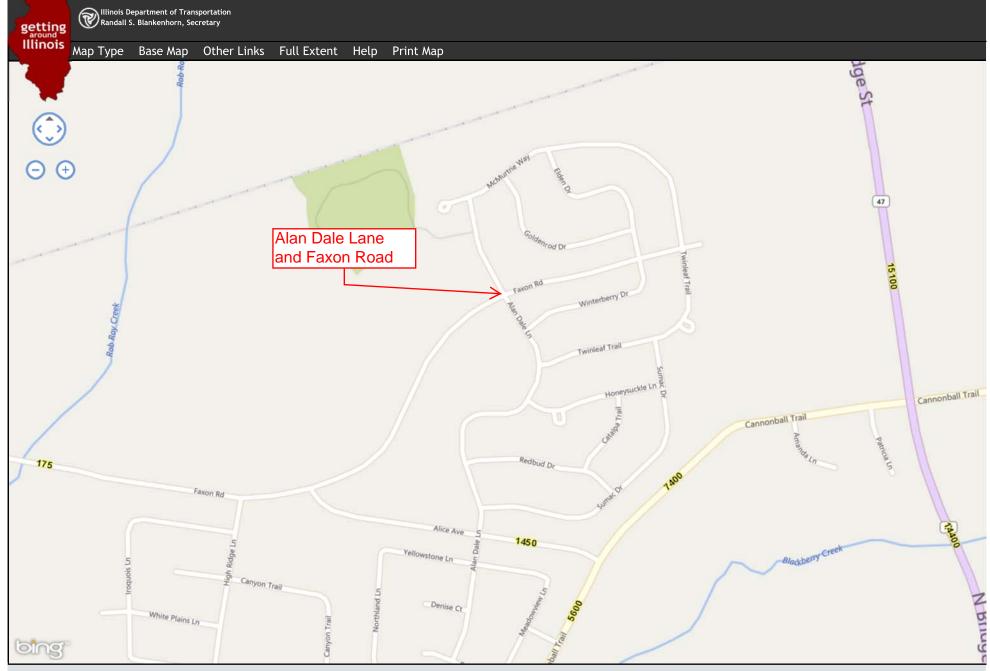
Southbound Approach, Looking South



Southbound Approach, Looking East



Southbound Approach, Looking West



Illinois Department of Transportation 2300 S. Dirksen Parkway Springfield, IL 62764 - Contact

Disclaimer

The Illinois Department of Transportation and the State of Illinois hereby give notice to all users that these maps and the data included hereon, lack the accuracy required for site-specific uses. Since all boundaries and all data are based on information derived from multiple sources within Transportation and the State of Illinois make no representation, guarantee, or warrant, either express or implied, regarding the accuracy of these maps or the data furnished thereon, including, but not limited to, the condition of this product, this product, this product, this product, the condition of this product is product.



Reviewed By:	
Legal	
Finance	
Engineer	
City Administrator	
Human Resources	
Community Development	

Agenda Item Number
New Business #10
Tracking Number
PW 2018-43

Agenda Item Summary Memo

Police Public Works Parks and Recreation

Title: Pavement M	anagement System Update	
Meeting and Date:	Public Works Committe	e – April 17, 2018
Synopsis: Conside	ration of Proposal	
Council Action Pre	eviously Taken:	
Date of Action:	Action T	aken:
Item Number:		
Type of Vote Requ	ired: Majority	
Council Action Re	quested: Proposal Approv	al
Submitted by:	Brad Sanderson	Engineering
	Name	Department
	Agenda	Item Notes:



Memorandum

To: Bart Olson, City Administrator

From: Brad Sanderson, EEI

CC: Eric Dhuse, Director of Public Works

Krysti Barksdale-Noble, Community Dev. Dir.

Lisa Pickering, Deputy City Clerk

Date: April 5, 2018

Subject: Pavement Management System Update

The purpose of this memo is to present a proposal from IMS to perform an update for the pavement management program.

Background:

The United City of Yorkville completed an analysis of its pavement infrastructure in 2013 utilizing data collected from IMS in 2012. The resulting report that was developed was instrumental in developing the five-year pavement management plan for the City.

Generally, it is recommended that the pavement analysis be revisited every 5 to 7 years in order to maintain accuracy. As noted above, it has been six years since the data has been collected.

Questions Presented:

Should the City approve the proposal from IMS to perform the pavement analysis in the amount not to exceed \$48,000?

Discussion:

IMS will provide the following as part of their proposal:

- Laser condition survey and deflection testing of all 112 miles of City streets
- Digital images every 25'
- Installation of latest PavePro software

EEI and Public Works will utilize the updated information to create a new five-year pavement management plan for the City.

This work is planned within the FY19 budget.

Action Required:

Consideration of approval of the IMS proposal.

105

IMS Infrastructure Management Services 1775 Winnetka Circle, Rolling Meadows, IL 60008 Phone: (847) 506-1500 Fax: (847) 255-2938 www.ims-rst.com

August 1, 2017

Engineering Enterprises, Inc. Christopher J. Ott, E.I., Project Engineer 52 Wheeler Road Sugar Grove, IL 60554

Reference: 2017 City of Yorkville Pavement Management Update Proposal

Dear Robert:

IMS Infrastructure Management Services is pleased to submit our proposal to update the City of Yorkville's pavement management program. The project will include testing the City's entire street system. Network level testing using block-to-block referencing will be performed on approximately 112 test miles of pavement designated by EEI. The field investigation will include a Laser RST surface condition survey, Dynaflect-based deflection testing, GPS referencing and a review of environmental and external factors. Digital images will be provided at 25' intervals. IMS will install the current version of the PavePRO Manager pavement management software with the updated field data. The pavement management software will be linked to the City's GIS. IMS can implement a variety of 3rd party software modules including Lucity, Cartegraph, Cityworks and others, should the City wish to change platforms or expand to an enterprise-wide management system in the future.

The proposed update will ensure that the City's pavement management program is complete and accurately reflects current conditions. It will also provide information on the benefits of the rehabilitation strategies used by the City. This street information can be used to meet many of the reporting requirements of the GASB 34 "modified approach".

A description of the elements of the proposed update program with corresponding cost summary is set forth on the following pages. Pricing is from the official schedule submitted by IMS to the Northeast Illinois Partnering Contract (a consortium of North and northwest Chicago municipalities). MFT funds can be used for IMS pavement management programs. We will assist the City and EEI in preparing the IDOT engineering agreement and expediting the approval from Local Roads.

We look forward to our continued work with Engineering Enterprises, Inc. and the City of Yorkville. If you have any questions regarding this proposal or new IMS services, please feel free to contact our office.

Very truly yours,

IMS Infrastructure Management Services, LLC

Donald L. Hardt

Manager of Client Services

Project Approach – Pavement Management Program Update

1. Surface Condition Survey

Surveys are completed using the Road Surface Tester (RST). The City will receive a continuous, objective, and accurate survey of the surface condition of the street network. Retests will be performed using previous sectioning wherever possible. These network-level surveys with intersection-to-intersection test sections will be linked to the City's GIS. The RST provides a great deal of flexibility and can easily adjust test section lengths to meet previously established test sections and/or any revised City goals. Single-direction testing will be performed on the two-lane streets. Two-direction testing is recommended for use on divided streets



and arterials and collectors with four or more lanes of traffic. The surface condition survey is conducted continuously over the entire length of the test section and is not based on sample sections. The information gathered in this survey includes inventory, roughness, rut depth, cracking, texture and distress. The effects of environmental conditions will be considered in conjunction with the surface condition survey.

To provide the City with a future ROW asset data collection option, IMS will collect continuous digital video during the surface condition survey. The RST combines an inertial navigation guidance system with GPS to geo-locate visible pavement and ROW features. The simultaneous pavement and ROW asset data collection capability of the RST is unique in the industry. It provides an efficient and cost-effective means to populate both pavement and future asset management systems.

The presence of any failed or broken concrete slabs within a test section will be recorded for further detailed identification during the deflection survey. IMS crews will use the City-identified definition of failed/broken slabs as the basis for our rating. The number of failed slabs will be recorded during the deflection survey and used by PavePRO Manager software to give the City an option to address individual slab removal and replacement as a maintenance/rehabilitation strategy for concrete pavements.

2. Deflection Testing

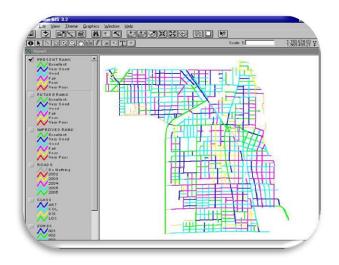
Each street test section surveyed by the Laser RST will receive a deflection test. This testing will be performed using the Dynaflect device and the results of this testing will permit an analysis of the structural capabilities of the existing street section. IMS utilizes all five sensors of the Dynaflect in its structural analysis. This provides valuable information on the capabilities of the pavement, base and subgrade sections, and the interaction between these sections. Deflection testing will be performed on all streets in the City and will provide a solid basis for comparison to previous results.



Although most Chicago area agencies include structural analysis as part of their program, the PavePRO software can be used with or without deflection data.

3. GIS and Pavement Management

IMS will provide a link between the City's GIS program and the pavement management data to enable the City to display and generate color-coded maps based upon existing pavement conditions, street rehabilitation plans or most any of the data in the pavement management program. The City can use the query function of its mapping program to display the pavement management data and images. It may also be possible to use its mapping program to make queries of other departments infrastructure plans in conjunction with their street rehabilitation plans to determine if conflicts exist between plans. To



most effectively maintain this link, IMS will require a copy of the City's current electronic centerline map prior to field data collection activities.

4. Digital Images

In conjunction with the surface condition survey, each test section is recorded with GPS referenced digital video with forward and rearward directed video cameras and used as part of IMS' Quality Control and Quality Assurance procedures. Additional cameras can be used to expand the viewing area or include features of special interest to the City. IMS will provide digital images at intervals of 25' for viewing in PavePRO Manager software and/or through the City's GIS. Many agencies find these images valuable as a "point-in-time" record of their roads and as a source of information for a variety of engineering, legal/investigative, and administrative uses. They can also be beneficial in assessing damage from a natural disaster or unforeseen event.

The PavePRO Manager software includes an image module. This enhancement allows for the attachment of digital images to each test section. The City can then access all the pavement management data from a selected block and view multiple digital images for the identified section on his/her computer monitor. The digital images will be captured directly from the continuous video performed as part of the RST survey, but can be expanded to include images generated from a City-owned digital camera, and/or result from scanned photos or drawings.



IMS uses an automated image capture process that is cost effective and provides for a user-defined frequency for the number of pictures per section.

5. Pavement Management Software Implementation & Training

IMS will provide the current version of PavePRO Manager software fully loaded with IMS collected field data. Any City condition data and maintenance histories can be added following staff training. The software will be installed on the City's computer network. Since the software is provided with a site license, it can be used on laptops, field computers or by other departments at no additional charge. The software provides information on existing conditions, future performance, viable maintenance and rehabilitation strategies, optimization, schedules, budgets multiyear programs. The program is kept

	Street	From		To		Class	Zn A	Zn B	Zn C L	ength.	Width	Surf	Are	a (sq.	yd.
0001	55TH PL	ADAMS	ST	CAS	SAV	RES	001		П	1066	22.0	AC	26	05.8	
0002	56TH PL	CASS A	V	ADA	MS ST	RES	001			1059	22.0	AC	26	88.7	
0003	56TH ST	ADAMS	ST	CAS	SAV	RES	001			1063	22.0	AC	25	98.4	
0003	56TH ST	CASS A	V	CITY	LIMIT	RES	001			2436	22.0	AC		54.7	
	56TH ST	WESTE		OAK			001			1112	24.0			65.3	
	57TH ST	CASS A			T END		001			578	18.0			56.0	
	57TH ST	ADAMS			TEND	RES	001			1211	21.2			52.6	
	57TH ST	OAK AV			METTE AV		001			620	24.0			53.3	
	58TH ST		CREEKLN		VIEW AV	1100	001			1627	25.0			19.4	
	58TH ST	JAMES			TEND		001	_	\vdash	1192	22.0			13.8	_
0010	59TH ST	CITY LI	MIT	HEA	THLN	COL	001			1564	34.3	AC	5960.6		
	Edit Street Name	100	rom		То					Area (s					C
	Luk Ottoot Hullo		DAMS ST		WASHINGTON	ST	+	251	18.0			N 1	\rightarrow	AC	Υ
														AC I	Υ
			VASHINGTON	IST	LINDLEY RD		_	343	22.0		_	N 1	\rightarrow		
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]		1 1	INDLEY RD	IST	PARK ST			327	22.0	799.3	3	N 1		110	Ŀ
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]		1	INDLEY RD	IST	PARK ST			327	22.0	799.3	3	N 1		110	Ŀ
]		1	INDLEY RD	IST	PARK ST			327	22.0	799.3	3	N 1		110	·
]	Edit Street Zones	1	INDLEY RD	IST	PARK ST			327	22.0	799.3	3	N 1		110	·
]	Edit Street Zones	1	INDLEY RD	IST	PARK ST			327	22.0	799.3	3	N 1		110	Ŀ

current by City staff through input of rehabilitation activities.

6. Project Timing

The data collection phase of the proposed update program including the RST survey and deflection testing will be completed within a four week period. Data processing, GIS linkage, and digital images will immediately follow the fieldwork. The current version of PavePRO Manager software with the updated test results will be delivered within 60 days of completion of the field testing.

Fee Schedule

The cost summary is based on the following fee schedule. It is derived from the official schedule submitted by IMS to the Northeast Illinois Partnering Contract (a consortium for North and Northwest Chicago area municipalities) and offers reduced pricing for our Chicago metro area clients. It is based on scheduling surveys in conjunction with other area projects to minimize mobilization charges.

•	Project Initiation	\$2,000.00
•	Network Referencing	\$1,500.00
•	RST Local Mobilization, Setup & Calibration	\$1,500.00
•	RST Surface Condition Survey	\$135.00/ test mile
•	Dynaflect Local Mobilization, setup & Calibration	\$1,000
•	Deflection Testing	\$125.00/ test mile
•	Data Processing	\$20.00/ test mile
•	Development of Structural Indices (3 rd Party Software)	\$15.00/ test mile
•	PCC Slab Survey (for streets with no deflection testing)	\$20.00/ test mile
•	Pavement Width Measurements (for streets with no deflection testing)	\$10.00/ test mile
•	PavePRO Manager Software	\$3,000.00
•	3 rd Party Software	Special Quote
•	Data Configuration & Data Load (3 rd Party Software)	Special Quote
•	Parking Lot Survey, Software/Report	\$0.25/sq.yd Special Review
•	Software Training (on site)	\$1,000.00/day - \$600/ half day
•	Engineering Interpretation, Analysis, Special Reports	\$125.00/hour
•	Transfer of Historical Data to a New Program	\$85.00/hour
•	PavePRO Software Maintenance and Support	\$1,000.00/year
•	GIS Linkage	\$20.00/ test mile
•	Digital Images @ 25' intervals (single view)	\$22.00/ test mile
•	Digital Images @ 25' intervals (additional views)	\$14.00/mile/view
•	Digital Video Storage for Future ROW Asset Extraction	\$10.00/ test mile
•	GPS/Camera Extraction Set-up & AVI Conversion	\$10.00/ test mile
•	ROWMan Software	\$2,000.00
•	Master Asset List Development	\$300.00 - \$1,500.00
•	Project Management	7.5% of Task Activities
•	Asset Extraction Services*	Special Quote

Cost Summary

IMS has developed the following cost summary based on a street network of 112 test miles. Mileages were developed using the information from the 2012 survey and adding 2 miles for new roads.

2017 Pavement Management Program Update

Task	Activity	Qty	Units	Unit Rate	Total
	Project Initiation				
1	Project Initiation	1	LS	\$2,000.00	\$2,000.00
2	Network Referencing	1	LS	\$1,500.00	\$1,500.00
	Field Surveys				
3	RST Local Mobilization, Setup & Calibration	1	T-MI	\$1,500.00	\$1,500.00
4	RST Surface Condition Survey	112	T-MI	\$135.00	\$15,120.00
5	Dynaflect Local Mobilization, Setup & Calibration	1	T-MI	\$1,000.00	\$1,000.00
6	Deflection Testing	112	T-MI	\$125.00	\$14,000.00
7	Pavement Width Measurements	112	T-Mi	\$10.00	\$1,120.00
	Data Management				
8	Data Processing	112	T-MI	\$20.00	\$2,240.00
9	GIS Linkage	112	T-MI	\$20.00	\$2,240.00
10	Digital Images (1 HD View @ 25' Intervals)	112	T-MI	\$20.00	\$2,240.00
11	Software Maintenance and Support	1	LS	\$1,000.00	\$1,000.00
12	Project Management	1	LS	\$3,297.00	\$3,297.00
		Pavement Management F	rogram U	pdate Total:	\$47,257.00
	Outland Brown and Complete				
13	Optional Pavement Services	1	Dov	¢1 000 00	¢1 000 00
	On-site Software Training	•	Day	\$1,000.00	\$1,000.00
14	Digital Video Storage for Future Asset Extraction	112	T-Mi	\$10.00	\$1,120.00

Services are provided on a unit-price basis. The fee schedule is submitted with the assumption that the City will provide or assist IMS with the following information and services:

- Street list and GIS centerline file of roads to be surveyed complete with functional classifications.
- Safety vehicle to trail deflection-testing equipment on major collectors, if requested.
- Notification and coordination with other departments or agencies, if necessary.

Project Approval - Engineering Enterprises, Inc. for the City of Yorkville, IL

This proposal is submitted in duplicate with each copy being considered as an original. Acceptance is constituted by signing and returning one copy to our office.

Approved Services (please check off selected services)

Pavement Management Program Update – \$47,257.00

Optional Pavement Services (please check off selected services)

1-Day On-site Software Training – \$1,000.00

Video Storage for Future Asset Extraction – \$1,120.00

ACCEPTED:

By:

Title:

Date:



Reviewed By:	
Legal	
Finance	
Engineer	
City Administrator	
Human Resources	
Community Development	
Police	
Public Works	
Parks and Recreation	

Agenda Item Number	
New Business #11	
Tracking Number	
PW 2018-44	

Agenda Item Summary Memo

Title: Metronet Easen	nent Agreement – Cannonball	Trail
Meeting and Date:	Public Works Committee – A	April 17, 2018
Synopsis: See attach	ed memo.	
Council Action Previous	iously Taken:	
Date of Action: N/A	Action Taker	ı:
Item Number:		
Type of Vote Requir	ed: Majority	
Council Action Requ	ested: Approval	
Submitted by:	Bart Olson	Administration
	Name	Department
	Agenda Iter	n Notes:



Memorandum

To: Public Works Committee From: Bart Olson, City Administrator

CC:

Date: April 12, 2018

Subject: Metronet Easement Agreement

Summary

Approval of an easement for Metronet equipment near the City's Cannonball Trail pump station site.

Background

The City Council approved the Metronet Cable Franchise Agreement at the March 13, 2018 meeting. Metronet is finalizing documents and is beginning to look at construction plans. One component of their construction rollout is installation of various utility cabinets throughout the City. These can be sited within the rights-of-way throughout town, pursuant to the City's right-of-way control ordinances. However, Metronet is looking for one cabinet in the area of Cannonball Trail and Route 34 and staff proposed to put the cabinet within the Cannonball Trail booster station near the northeast corner of Kendall Marketplace. Since there are already utilities in the area and it is set back from the roadway, we thought this was a good location.

An aerial with the general location of the cabinet and the booster station is attached. The easement document is attached. The easement is not required to be given by the City under the franchise agreement, but we are proposing a minimal fee for the easement.

Recommendation

Staff recommends approval of the easement.



Document Prepared by and After Recorded Return to:

Metro Fibernet, LLC Attn: Legal Department 8837 Bond Street Overland Park, KS 66214

(Space Above this Line for County Recorder's Use only)

Grant of Utility Easement

This Grant of Utility Easement ("Grant of Easement") is made as of this ____ day of April 2018, by the United City of Yorkville ("Grantor").

RECITALS:

- A. Grantor is the owner of record of a certain parcel(s) of real estate legally described on Exhibit A attached hereto and made a part hereof (the "Parcel").
- B. Subject to and in accordance with the terms and provisions of this Grant of Easement, Grantor desires to convey to Metro Fibernet, LLC d/b/a Metronet ("Grantee") a utility easement on, in, under and across a certain portion of land on the Parcel (the "Easement Parcel") that is legally described on Exhibit B-1 and depicted on Exhibit B-2 hereto.
- **NOW, THEREFORE,** for and in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby grants and agrees as follows:
- 1. Grant of Easement. Subject to the terms, covenants, conditions and restrictions contained in this Grant of Easement, Grantor hereby declares, grants, and establishes for the benefit of Grantee a nonexclusive easement ("Easement") on, in, under and across the Easement Parcel to construct, operate, maintain, expand, replace and remove facilities that Grantee may desire, consisting of but not limited to cabinets, concrete pads, aerial cables, underground cables, wires, conduits, manholes, drains, splicing boxes, utility meters, surface location markers, gas mains, electric lines, water lines, telecommunications systems and other facilities or structures for similar uses, upon, over, through, under and along the Easement Parcel together with the right of access over and across such limited portions of the Parcel that are reasonably necessary to undertake the foregoing in and under the Easement Parcel. This Easement also includes the right of ingress and egress over and across the property adjacent to the Easement Parcel for the purpose of exercising the rights granted herein, and the right to clear and keep cleared all trees, roots, brush and other obstructions from the surface and sub-surface of the Easement Parcel during construction and maintenance and to use adjacent areas as necessary. The rights granted to Grantee pursuant to this Grant of Easement shall be assignable for the placement of facilities for the purpose of providing services to Grantee, such as to third party utilities and service providers.

- 2. <u>Restoration of Easement Parcel.</u> If the exercise by Grantee of its rights under this Grant of Easement causes a disturbance, destruction or removal of any gardens, shrubs, landscaping, paving or other improvements permitted to be located on the Easement Parcel pursuant to the terms hereof or otherwise located on the Parcel, then Grantee will restore the affected portion of the Easement Parcel and/or the Parcel to substantially its prior condition; provided, however, Grantee may reasonably cut or trim any tree, shrub or other plant that interferes with the construction, operation, maintenance, renewal, relocation or removal of the cabinets, underground pipes, meters, wires, cables, conduits, manholes, transformers, pedestals and other facilities in the Easement Parcel as is permitted to Grantee pursuant to the terms of this Grant of Easement.
- 3. Additional Easements Limitation of Improvements. Grantor will have the right to use and enjoy the Easement Parcel so long as Grantor's use does not interfere with the rights conveyed to Grantee. The rights reserved by the Grantor include the right to cross sections of the Easement Parcel and right-of-way with roads, parking lots, sewers, utilities, drains and the like in such manner as not to disturb Grantee's facilities or the operation or maintenance thereof. In addition, Grantor reserves the right to grant additional easements in, on, over or under the Easement Parcel; provided, however, any such grant of additional easements shall not interfere with the rights granted hereunder to Grantee. Notwithstanding the foregoing, Grantor shall not permit any buildings or other permanent structures not set forth above to be constructed or placed on the Easement Parcel if such structure would disturb Grantee's facilities or the operation or maintenance thereof or otherwise interfere with Grantee's use of the Easement Parcel for the purposes stated herein.
- 4. <u>Access.</u> Grantee shall have a right of access seven (7) days a week, twenty-four (24) hours a day to the Easement Parcel, including the right of access to the Easement Parcel inside the fenced portion of the Parcel.
- 5. <u>Term.</u> This Grant of Easement shall be coterminous with the term of the franchise agreement by and between CMN-RUS, Inc. and Grantor, or any subsequent franchise or similar agreement entered into between CMN-RUS, Inc. and Grantor that replaces such franchise agreement. In the event there is a change in applicable law, and CMN-RUS, Inc. no longer is required to enter into a franchise or similar agreement with Grantor to provide video services, upon the delivery of written notice from either Grantor or Grantee to the other party, the parties shall negotiate in good faith on an appropriate amendment to this Section 5 that shall include a new term which shall not be less than ten (10) years. Any such amendment shall be recorded. Grantor may terminate this Grant of Easement in whole or in part upon thirty (30) days written notice to Grantee for Grantee's non-use of the Easement for the purpose for which it was granted for any consecutive twelve (12) month period.
- 6. Insurance and Indemnity. Throughout the term of this Grant of Easement, the Grantee shall, at its own cost and expense, maintain such insurance and provide the Grantor certificates of insurance in accordance with the amounts set forth in Section 7-8-8 of the Yorkville City Code. The Grantee shall indemnify, defend and hold harmless the Grantor, its officers, employees, and agents (the "Indemnitees") from and against any injuries, claims, demands, judgments, damages, losses and expenses, including reasonable attorney's fees and costs of suit or defense (the "Indemnification Events"), arising from the Grantee's construction and operation of its facilities within or on the Parcel. The Grantee's obligation with respect to the Indemnitees shall apply to Indemnification Events which may occur during the term of this Grant of Easement, provided that the claim or action is initiated within the applicable statute of limitations, notwithstanding that the claim may be made or action filed subsequent to the termination or expiration of this Grant of Easement. The Grantor shall give the Grantee timely written notice of its obligation to indemnify and defend the Grantor after the Grantor's receipt of a claim or action pursuant to this Section 6. For purposes of this Section 6, the word "timely" shall mean within a time period that does not cause prejudice to the respective positions of the Grantee and/or the Grantor. If the Grantor elects in its own discretion to employ additional counsel, the costs for such additional counsel for the Grantor shall be the responsibility of

the Grantor. The Grantee shall not indemnify the Grantor for any liabilities, damages, costs or expense resulting from any conduct for which the Grantor, its officers, employees and agents may be liable under the laws of the State of Illinois. Nothing herein shall be construed to limit the Grantee's duty to indemnify the Grantor by reference to the limits of insurance coverage described in this Grant of Easement.

7. <u>Miscellaneous.</u>

- (a) <u>Recitals.</u> The foregoing Recitals are deemed to form a part of this Grant of Easement as if restated herein.
- (b) <u>Governing Law.</u> This Grant of Easement will be interpreted and construed in accordance with the laws of the State of Illinois, without regard to conflict of law rules.
- (c) <u>Binding Effect and Priority of Grant.</u> All of the covenants and rights declared and established hereunder will be considered as covenants and rights running with the land and not conditions, and the same will be binding upon and inure to the benefit of the parties hereto.
- (d) <u>Partial Invalidity.</u> If any term, covenant or condition of this Grant of Easement or the application thereof to any person or circumstance will, to any extent, be invalid or unenforceable, the remainder of this Grant of Easement, or the application of such term, covenant or condition to persons or circumstances other than those as to which it is held invalid or unenforceable, will not be affected thereby, and each term, covenant and condition of this Grant of Easement will be valid and enforceable to the fullest extent permitted by law.

IN WITNESS V , 2018.	WHEREOF, the said Grantor h	as hereunto affixed its name, this day of UNITED CITY OF YORKVILLE
		By: Name: Title:
STATE OF ILLINOIS)	
COUNTY OF KENDALL) SS:)	
personally appeared _ satisfactory evidence) to me that he/she executed	personal be the person whose name is su d the same in his/her authorized o	ned, a Notary Public in and for said County and State, ly known to me (or proved to me on the basis of bscribed to the within instrument and acknowledged to apacity, and that by his/her signature on the instrument acted, executed the within instrument.
WITNESS my hand and o	official seal.	
Notary Public		

METRO FIBERNET, LLC hereby joins in this Grant of Easement to evidence its approval hereof, its agreement with the terms hereof, and its intent to be bound hereby.

	METRO FIBERNET, LLC
	Ву:
	Name:
	Title:
STATE OF)	
) SS:	
COUNTY OF)	
On, 2018, before me, the undersigned personally appeared, personally satisfactory evidence) to be the person whose name is subsime that he/she executed the same in his/her authorized cap the person, or the entity upon behalf of which the person according to the person of the entity upon behalf of which the person according to the person of the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of which the person according to the entity upon behalf of the entity u	y known to me (or proved to me on the basis of oscribed to the within instrument and acknowledged to apacity, and that by his/her signature on the instrument
WITNESS my hand and official seal.	
Notary Public	

EXHIBIT A

PARCEL

THAT PART OF THE SOUTH HALF OF SECTION 20, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHEAST QUARTER OF SECTION 19. TOWNSHIP AND RANGE AFORESAID: THENCE SOUTH ALONG THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP AND RANGE AFORESAID, 429.15 FEET TO THE CENTERLINE OF U.S. ROUTE NO. 34; THENCE EASTERLY ALONG SAID CENTERLINE, WHICH FORMS AN ANGLE OF 95 DEGREES 41 MINUTES 25 SECONDS WITH THE LAST DESCRIBED COURSE. MEASURED CLOCKWISE THEREFROM, 2059.30 FEET TO THE CENTERLINE EXTENDED SOUTHERLY OF CANNONBALL TRAIL; THENCE NORTHERLY ALONG THE CENTERLINE OF SAID CONNONBALL TRAIL, WHICH FORMS AN ANGEL OF 106 DEGREES 47 MINUTES 23 SECONDS WITH THE LAST DESCRIBED COURSE, MEASURED CLOCKWISE THEREFROM, 1816.44 FEET TO THE NORTHWEST CORNER OF OAK KNOLLS SUBDIVISION; THENCE CONTINUING NORTHERLY ALONG SAID CENTERLINE, WHICH FORMS AN ANGEL OF 180 DEGREES 25 MINUTES 14 SECONDS WITH THE LAST DESCRIBED COURSE, MEASURED CLOCKWISE THEREFROM, 746.59 FEET FOR THE POINT OF BEGINNING; THENCE NORTHWESTERLY ALONG A LINE WHICH FORMS AN ANGEL OF 94 DEGREES 29 MINUTES 17 SECONDS WITH SAID CENTERLINE, MEASURED CLOCKWISE THEREFROM, 140.00 FEET; THENCE SOUTHERLY ALONG A LINE WHICH FORMS AN ANGLE OF 85 DEGREES 30 MINUTES 43 SECONDS WITH THE LAST DESCRIBED COURSE, MEASURED CLOCKWISE THEREFROM AND PARALLEL WITH SAID CENTERLINE, 100.00 FEET; THENCE EASTERLY ALONG A LINE WHICH FORMS AN ANGLE OF 94 DEGREES 29 MINUTES 17 SECONDS WITH THE LAST DESCRIBED COURSE, MEASURED CLOCKWISE THEREFROM, 140.00 FEET TO SAID CENTERLINE: THENCE NORTHERLY ALONG SAID CENTERLINE. WHICH FORMS AN ANGLE OF 85 DEGREES 30 MINUTES 43 SECONDS WITH THE LAST DESCRIBED COURSE, 100.00 FEET TO THE POINT OF BEGINNING, IN BRISTOL TOWNSHIP, KENDALL COUNTY, ILLINOIS.

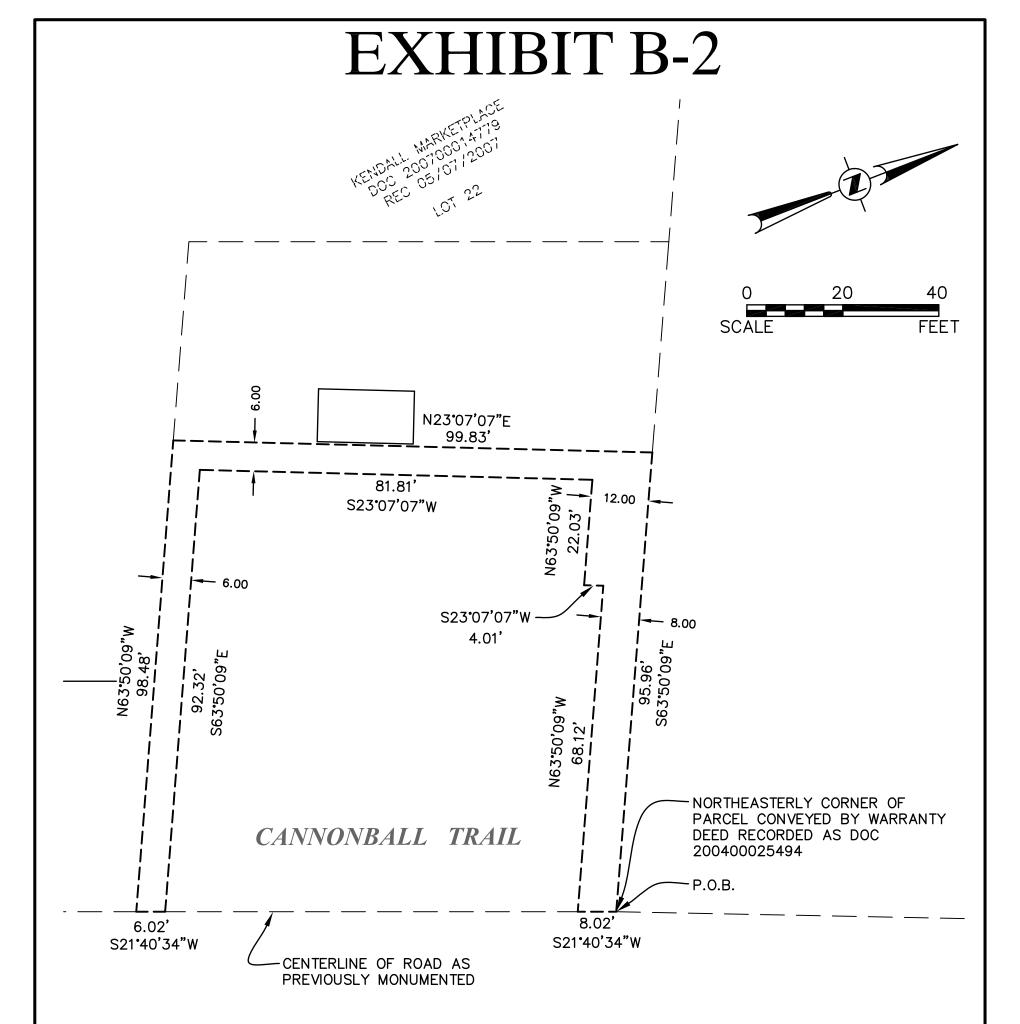
EXHIBIT B-1

EASEMENT PARCEL LEGAL DESCRIPTION

THAT PART OF THE SOUTH HALF OF SECTION 20, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEASTERLY CORNER OF A PARCEL OF LAND CONVEYED BY WARRANTY DEED RECORDED AS DOCUMENT 200400025494; THENCE SOUTH 21 DEGREES 0 MINUTES 34 SECONDS WEST, ALONG THE EASTERLY LINE OF SAID PARCEL, 8.02 FEET; THENCE NORTH 63 DEGREES 50 MINUTES 09 SECONDS WEST, 68.12 FEET; THENCE SOUTH 23 DEGREES 07 MINUTES 07 SECONDS WEST, 4.01 FEET: THENCE NORTH 63 DEGREES 50 MINUTES 09 SECONDS WEST. 22.03 FEET: THENCE SOUTH 23 DEGREES 07 MINUTES 07 SECONDS WEST, 81.81 FEET: THENCE SOUTH 63 DEGREES 50 MINUTES 09 SECONDS WEST, 92.32 FEET TO THE EASTERLY LINE OF SAID PARCEL: THENCE SOUTH 21 DEGREES 40 MINUTES 34 SECONDS WEST, ALONG SAID EASTERLY LINE, 6.02 FEET TO THE SOUTHERLY LINE OF SAID PARCEL: THENCE NORTH 63 DEGREES 50 MINUTES 09 SECONDS WEST, ALONG SAID SOUTHERLY LINE, 98.48 FEET; THENCE NORTH 23 DEGREES 07 MINUTES 07 SECONDS EAST, 99.83 FEET TO THE NORTHERLY LINE OF SAID PARCEL; THENCE SOUTH 63 DEGREES 50 MINUTES 09 SECONDS EAST, ALONG SAID NORTHERLY LINE, 95.96 FEET TO THE POINT OF BEGINNING.

EXHIBIT B-2

EASEMENT PARCEL SURVEY



LEGAL DESCRIPTION

THAT PART OF THE SOUTH HALF OF SECTION 20, TOWNSHIP 37 NORTH, RANGE 7 EAST OF THE THIRD PRINCIPAL MERIDIAN DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEASTERLY CORNER OF A PARCEL OF LAND CONVEYED BY WARRANTY DEED RECORDED AS DOCUMENT 200400025494; THENCE SOUTH 21 DEGREES 40 MINUTES 34 SECONDS WEST, ALONG THE EASTERLY LINE OF SAID PARCEL, 8.02 FEET; THENCE NORTH 63 DEGREES 50 MINUTES 09 SECONDS WEST, 68.12 FEET; THENCE SOUTH 23 DEGREES 07 MINUTES 07 SECONDS WEST, 4.01 FEET; THENCE NORTH 63 DEGREES 50 MINUTES 09 SECONDS WEST, 22.03 FEET; THENCE SOUTH 23 DEGREES 07 MINUTES 07 SECONDS WEST, 81.81 FEET; THENCE SOUTH 63 DEGREES 50 MINUTES 09 SECONDS EAST, 92.32 FEET TO THE EASTERLY LINE OF SAID PARCEL; THENCE SOUTH 21 DEGREES 40 MINUTES 34 SECONDS WEST, ALONG SAID EASTERLY LINE, 6.02 FEET TO THE SOUTHERLY LINE OF SAID PARCEL; THENCE NORTH 63 DEGREES 50 MINUTES 09 SECONDS WEST, ALONG SAID SOUTHERLY LINE, 98.48 FEET; THENCE NORTH 23 DEGREES 50 MINUTES 09 SECONDS EAST, 99.83 FEET TO THE NORTHERLY LINE OF SAID PARCEL; THENCE SOUTH 63 DEGREES 50 MINUTES 09 SECONDS EAST, ALONG SAID NORTHERLY LINE, 95.96 FEET TO THE POINT OF BEGINNING.



Engineering Enterprises, Inc.

CONSULTING ENGINEERS

52 Wheeler Road Sugar Grove, Illinois 60554 630.466.6700 / www.eeiweb.com

PROJECT NO: Y01521 FILE NO: Y01521-EASE



Reviewed By:	
Legal	
Finance	
Engineer	
City Administrator	
Human Resources	
Community Development	
Police	
Public Works	
Parks and Recreation	

Agenda Item Number	
New Business #12	
Tracking Number	
PW 2018-45	

Agenda Item Summary Memo

Title: AECom Lake	Michigan Water Supply Rep	ort and Supplemental Route Study
Meeting and Date:	Public Works Committee –	April 17, 2018
Synopsis: See attach	ned memo.	
Council Action Prev	iously Taken:	
Date of Action: N/A	Action Take	n:
Item Number:		
Type of Vote Requir	red: Majority	
Council Action Requ	uested: Approval	
Submitted by:	Bart Olson Name	Administration
		Department
	Agenda Ite	m Notes:



Memorandum

To: City Council

From: Bart Olson, City Administrator

CC:

Date: April 12, 2018

Subject: AECom Lake Michigan Water Supply Report

Summary

Review of a feasibility study for Lake Michigan water supply.

Background

In 2017, Yorkville and Oswego engaged AECom to conduct a feasibility study for Lake Michigan water supply via the DuPage Water Commission. This study was authorized a staff level after mutual discussions on the possibility that previous cost estimates for a Lake Michigan water supply were higher than the cost estimates Bartlett is estimating. Bartlett is currently transitioning from Elgin/Fox River water supply to Lake Michigan water supply through the DuPage Water Commission.

The AECom report is attached. Without getting into the details in advance of an expected full presentation from AECom at the April 24th City Council meeting and a follow up presentation from EEI at a meeting to be determined:

- 1. Lake Michigan is viable source of long-term water supply for Yorkville and Oswego, via the Dupage Water Commission (cost notwithstanding).
- 2. DuPage Water Commission is aware of our interest and is willing to entertain our inquiries.
- 3. System wide water pressure, especially in Oswego, would require some not-estimated improvements to each City's water system.
- 4. Internal water system storage reservoirs and water age may need to be addressed and are not estimated by AECom.
- 5. Cost estimates for receiving stations are not included, but have been estimated separately by EEI and AECom.
- 6. Very rough cost estimates provided by AECom for the system described in the report were in the \$85,000,000 range. This appears to be competitive from a capital basis with the Fox River intake system, notwithstanding the items discussed in #3 and #4.
- 7. The actual supply cost for water from DuPage Water Commission is \$4.88 per 1000 gallons. The City's all-in water cost to residents is around \$5.50 to \$6 per 1000 gallons currently. Some of that cost might go away if the City went to Lake Michigan water because the City may no longer have to maintain wells and treatment facilities.

a. DuPage receives water from the City of Chicago. They have a favorable water price (i.e. a most favored nations clause) through 2024, and then can re-up for a 40-year term after that. The DuPage water supply contract with Chicago does not prevent large water rate increases in full, however.

AECom will not be at the Public Works Committee because they will be attending an Oswego Village Board meeting the same evening.

Recommendation

The report and supporting documents are an informational item for the committee.

A supplemental route study document is attached between Oswego and AECom. Oswego is likely to move forward with this route study to have a tighter cost estimate for the long transmission mains needed between the DuPage Water Commission, Oswego, and Yorkville. The actual scope and connection points are expected to be refined in the next week or so (i.e. Yorkville's connection points need to be updated), but Yorkville's expected cost share is around \$4,600. We think there is value in having more analysis of the potential transmission main routes and a tighter cost estimate, and we would intend to move forward with contributing the ~\$4,600 to Oswego pending the discussion at the Public Works Committee.

VILLAGE OF OSWEGO UNITED CITY OF YORKVILLE

FEASIBILITY STUDY TO RECEIVE LAKE MICHIGAN WATER VIA THE DUPAGE WATER COMMISSION

FINAL REPORT OCTOBER 2017

AECOM TECHNICAL SERVICES, INC. 303 E. WACKER DRIVE CHICAGO, ILLINOIS 60601

Project Nos.: 60546713

60546705



AECOM 303 East Wacker Drive Suite 1400 Chicago, IL 60601 www.aecom.com 312 373 7700 tel 312 373 6800 fax

October 9, 2017

Mr. Daniel W. DiSanto Village Administrator Village of Oswego 100 Parkers Mill Oswego, IL 60543

Mr. Bart Olson City Administrator United City of Yorkville 800 Game Farm Road Yorkville, IL 60560

Reference:

Feasibility Study to Receive Lake Michigan Water Via the DuPage Water Commission

AECOM Project Nos: 60546713 and 60546705

Dear Mr. DiSanto and Mr. Olson:

In compliance with our Agreements for Engineering Services dated July 12, 2017, we are hereby submitting our Engineering Report to the Village of Oswego and the United City of Yorkville. The study is entitled "Feasibility Study to Receive Lake Michigan Water Via the DuPage Water Commission."

This study examines and lists the facilities and sizing required for the two communities to receive Lake Michigan water via the DuPage Water Commission. Also included are the probable opinion of construction costs as well as the buy-in costs from the Water Commission.

After you have reviewed this study, we will be pleased to meet with you and discuss the contents in detail.

Very truly yours,

AECOM Technical Services, Inc.

du algaz

Dana Al-Qadi

Engineer

Chad R. Laucamp, P.E.

Associate

Michael H. Winegard, P.E.

Vice President

VILLAGE OF OSWEGO AND UNITED CITY OF YORKVILLE

FEASIBILITY STUDY TO RECEIVE LAKE MICHIGAN WATER VIA THE DUPAGE WATER COMMISSION

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Executive Summary

The Village of Oswego and the United City of Yorkville retained AECOM to perform a feasibility study regarding the purchase of treated Lake Michigan Water via the DuPage Water Commission (DWC). This was in response to a Regional Approach Study in 2016 in which the two communities participated. Both communities currently obtain their water from the deep sandstone aquifer, which is being steadily drawn down as it is being pumped beyond its long term sustainable yield due to increasing water demands in this area. The Regional Approach Study recommended that the two communities pursue the Fox River as a source of supply. After discussions with the DWC, who had stated that they were interested in selling water to communities in Kendall County, the Village of Oswego and the United City of Yorkville decided to pursue a feasibility study in order to determine if bringing Lake Michigan water to their communities in Kendall County was feasible.

In Chapter 2 of this study, hydraulic modeling was evaluated where we utilized the projected water demands for the two communities from the previous Regional Approach Study. The projected demands for 2020 and 2050 were integrated into the recently updated DWC hydraulic model. The results were positive in that the Water Commission could effectively serve both Oswego and Yorkville in conjunction with maintaining service to their existing customers.

Staff from Oswego and Yorkville identified a potential route, which was utilized for determining the Probable Opinion of Construction Cost for this study. Any deviances from this proposed route can easily be incorporated with corresponding revisions to the Probable Opinion of Construction Cost, depending on what constitutes that change. The route is detailed in Chapter 4, and generally consists of the following:

The proposed Oswego addition is a 42-inch diameter transmission main that is approximately 7.64 miles long through Aurora and Naperville and runs along 95th Street near the intersection of 75th Street and Book Road to the intersection of Ogden Falls Blvd. and Waterbury Circle. The proposed Oswego to Yorkville segment is a 30-inch diameter transmission main that is approximately 9.71 miles long and begins at the intersection of Ogden Falls Blvd. and Waterbury Circle and runs along Douglas Road until reaching the intersection of Orchard Road and Illinois Rte. 71. The Yorkville addition is a 30-inch diameter transmission main that is approximately 2.34 miles long through Yorkville and begins at the intersection of Orchard Road and Illinois Rte. 71 and ends at Watertower near Berrywood Lane and Lehman Crossing.

In Chapter 5, we provide the requirements for purchasing water from DWC, including defining the storage facility needs and providing the meter/receiving station options. In Chapter 7, we evaluate the various risks of service interruptions that should be identified and considered, as well as measures to mitigate these risks. Finally, in Chapter 8 we present our recommendations and next steps in the event the decision is made to purchase treated water from DWC.

1. Introduction

In 2016, the Village of Oswego and the United City of Yorkville participated in a Regional Approach Study to determine future water demands and a future water supply. Both communities currently obtain their water from the deep sandstone aquifer. As the Illinois State Water Survey has been predicting that this aquifer will be depleted in the future based on the future demands and the replenishment rate, the 2016 study investigated the Fox River as a source of supply. Recently the DuPage Water Commission has stated that they are interested in selling water to communities in Kendall County. As a result, the Village of Oswego and the United City of Yorkville have entered into an engineering agreement with AECOM Technical Services, Inc. (AECOM) to prepare a feasibility study regarding the purchase of treated water from the DuPage Water Commission.

2. Water Requirements

For purposes of this study, the projections for population and water demands were taken from the 2016 Regional Study. They are presented below in Tables 1 and 2.

Table 1 Village of Oswego Projected Water Demands

		Current Trends (CT)				esource ve (LRI)
Year	Population	Ave Day (mgd)	Max Day (mgd)	Gallons Per Capita Per Day	Ave Day (mgd)	Max Day (mgd)
2014	33,877	2.50	4.75	74	2.50	4.38
2020	38,877	3.50	6.65	90	2.92	5.10
2050	90,996	8.19	15.56	90	6.82	11.94

Table 2
United City of Yorkville
Projected Water Demands

	Current Trends (CT) Less Resource Intensive (LF			Current Trends (CT)		
Year	Population	Ave Day (mgd)	Max Day (mgd)	Gallons Per Capita Per Day	Ave Day (mgd)	Max Day (mgd)
2014	17,878	1.38	2.17	77	1.38	2.17
2020	22,878	2.06	4.12	90	1.83	3.20
2050	59,565	5.36	10.72	90	4.77	8.34

For purposes of this study, the Current Trends (CT) demands will be utilized in order to be conservative. Conversely, the Less Resource Intensive (LRI) demands will be utilized in Chapter 7 (Risks of Service interruptions and Mitigation Measures) as during a service interruption, water conservation measures will undoubtedly be utilized.

3. Hydraulic Modeling

The DWC hydraulic model was recently updated and calibrated by AECOM. This updated model was the basis for analyzing the addition of Oswego and Yorkville to the DWC system. All of the analyses were performed under extended period simulation (EPS) conditions (i.e. the model is run over an extended period of time, typically 24 hours) using Bentley WaterGEMS Select Series 5. The following is a summary of the hydraulic modeling analysis performed by AECOM for this report.

Oswego and Yorkville are both expected to have a large population growth in the next 30 years. The future Oswego/Yorkville demands that will be supplied by DWC, as well as the demands of existing DWC customers, can be seen in Table 3 below. It should be noted that the maximum day demands utilized are from Chapter 5 of this study and not the demands in Chapter 2.

Table 3 – Current and Projected Water Demands

	Oswego (mgd)	Yorkville (mgd)	Existing DWC Customers (mgd) ¹	Total (mgd)
2020 Average Day Demand (ADD)	3.5	2.1	79.4	85.0
2020 Maximum Day Demand (MDD)	6.0	3.6	144.5	154.1
2050 Average Day Demand (ADD)	8.2	5.4	95.4	109.0
2050 Maximum Day Demand (MDD)	13.9	9.2	161.9	185.0
For the purposes of the contract of the c	is study, existing o	ustomers will includ	e the Village of Bartlet	t.

The demands in this table are the basis of the hydraulic modeling analysis performed in this report. Also, the connection points were assumed to be located near Ogden Falls Boulevard and Blue Ridge Court (Oswego) and Minkler Road and IL 71 (Yorkville) based on the routes provided by Oswego and Yorkville (see Chapter 4 of this report).

The model was first run under 2020 average day and maximum day demand conditions. The results of this analysis are shown in the tables below:

Table 4 – Pressure During 2020 Average and Maximum Day Demands

Scenario	Location	Approximate USGS Ground Elevation	Minimum Pressure, psi	Maximum Pressure, psi	Average Pressure, psi
2020 Average Day Demand	Oswego Connection	742'	61.2	69.7	65.3
2020 Maximum Day Demand	Point	742	57.9	66.7	63.4
2020 Average Day Demand	Yorkville Connection	652'	95.2	103.9	99.5
2020 Maximum Day Demand	Point	032	89.4	99.1	95.5

Table 5 – Velocity During 2020 Average and Maximum Day Demands

Scenario	Pipeline Diameter, inches	Minimum velocity, feet per second (fps)	Maximum velocity, feet per second (fps)	Average velocity, feet per second (fps)
2020 Average Day Demand	40	1.0	1.2	1.1
2020 Maximum Day Demand	42	1.7	1.7	1.6
2020 Average Day Demand	20	0.6	0.7	0.7
2020 Maximum Day Demand	30	1.0	1.2	1.1

The tables above indicate that DWC can meet 2020 average day and maximum day demands for Oswego and Yorkville. Additionally, based on the hydraulic modeling analysis, DWC can continue to meet the demands of their existing customers, which is a critical part of this analysis. It should be noted that the pipelines in the table above have been sized for future 2050 demands. Therefore, the velocities are lower than are typically recommended. As a result of these low velocities, Oswego and Yorkville will have higher than average water age, as compared to the rest of the DWC system. In light of this, Oswego and Yorkville would likely need to rechlorinate at their connection points. Other alternatives may also need to be explored (i.e. additional flushing, rechlorinating at other points along the proposed transmission main, etc.).

The model was also run under 2050 average day and maximum day demand conditions. The results of this analysis are shown in the tables below:

Table 6 – Pressure During 2050 Average and Maximum Day Demands

Scenario	Location	Approximate USGS Ground Elevation	Minimum Pressure, psi	Maximum Pressure, psi	Average Pressure, psi
2050 Average Day Demand	Oswego Connection	742'	50.8	60.8	56.5
2050 Maximum Day Demand	Point	742	20.9	37.1	28.4
2050 Average Day Demand	Yorkville Connection	652'	88.0	92.3	83.9
2050 Maximum Day Demand	Point	652	35.4	58.0	45.5

Table 7 – Velocity During 2050 Average and Maximum Day Demands

Scenario	Pipeline Diameter, inches	Minimum Velocity, feet per second (fps)	Maximum Velocity, feet per second (fps)	Average Velocity, feet per second (fps)
2050 Average Day Demand	40	2.3	2.7	2.5
2050 Maximum Day Demand	42	3.4	4.0	3.7
2050 Average Day Demand		1.6	1.9	1.8
2050 Maximum Day Demand	30	2.6	3.1	2.9

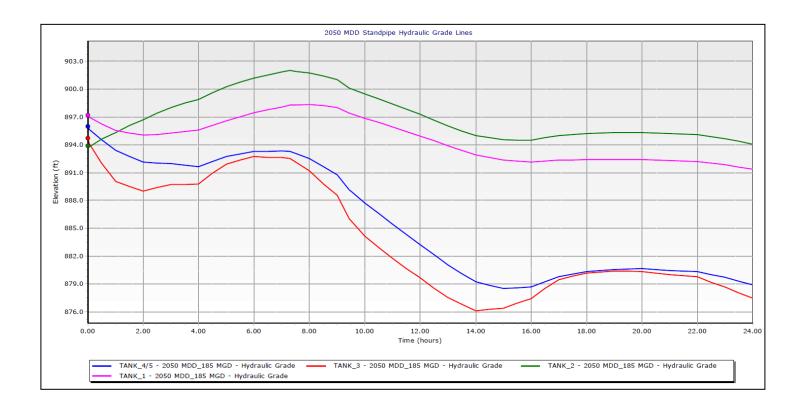
While the tables above indicate that DWC can meet 2050 average day and maximum day demands for Oswego and Yorkville, there are some items that should be noted, which are mentioned below.

The model indicated that all existing DWC pumps are required to be operated in order to meet the future Oswego and Yorkville demands. Therefore, DWC would need to install an additional pump in order to meet 10 State Standards (see section 6.3 of the 2012 edition, "Recommended Standards for Water Works"), which requires that a pump station be able to meet maximum day demand with the largest pump out of service. It is our understanding that this additional pump is already in DWC's capital plan to be installed in 2018.

Also, DWC typically operates their five (5) existing standpipe tanks between approximately 886' and 902'. In the simulation above, the HGLs of all Standpipe #3 drops as low as 876'. Additionally, over a 24-hour simulation period, none of the standpipes are able to fill back up to typical operations levels under these conditions (see Figure 1). This may be a challenge for DWC's existing system and customers, particularly if they had multiple, consecutive days of maximum day demand. Finally, the C-factors for the proposed transmission mains in all of the above scenarios were assumed to be 130.

There are improvements that may help operations at these existing tanks. For example, a 6th standpipe tank could be added at the connection point to the existing DWC transmission main near the vicinity of 75th Street and Book Road. Additionally, existing and proposed transmission mains could be upsized or parallel transmission mains could be constructed to reduce head loss in the system.

Figure 1- Standpipe Tank Levels



4. Proposed Routing

The proposed alignment for the routing of the transmission main from the current DWC transmission main system in Naperville is based on input for the routes provided by the Village of Oswego and the United City of Yorkville. Based on this information provided by the Village and the City, the routing is composed of the following three primary segments (see Figure 5 at the end of the report).

Segment 1 - Oswego

Segment 2 - Yorkville

Segment 3 - Oswego to Yorkville

The length of each individual segment of the proposed route can be seen below in Table 8.

Table 8 – Lengths of Water Main Segments Along Proposed Route

	Segment 1 Oswego	Segment 2 Yorkville	Segment 3 Oswego to Yorkville
Length	7.64 miles	2.34 miles	9.71 miles

The routes were analyzed to determine whether they were along unincorporated boundaries as well as whether the proposed routes would be impacted by key factors such as wetlands, floodplains, and existing railroad lines. A map of the routes along municipal boundaries can be seen in Figure 6 and a map of the routes with key features can be seen in Figure 7.

Segment 1 – Oswego (42-inch pipe diameter)

This segment of the route is approximately 7.64 miles long through Aurora and Naperville. The segment runs along 95th Street beginning near the intersection of 75th Street and Book Road to the intersection of Ogden Falls Blvd. and Waterbury Circle. The corridor along 95th Street was determined to be fairly open for implementation of a new transmission main. It is recommended to be strategic in the placement of the main so as not to interfere with the future planned construction of 95th Street as well as the additional utilities that would be constructed in the corridor.

The segment runs through the three counties of Kendall County, Will County, and DuPage County. The segment through DuPage County is approximately 1.4 miles long along Book Road and then approximately 4.8 miles through Will County and approximately 1.4 miles through Kendall County.

Routes along both IL59 and Book Road were also considered during this analysis. Placement of a main along IL59 was determined to not be feasible as the parkways already have significant utility congestion and it is unlikely that IDOT would allow the water main under the paved section. Book Road was identified to be fairly open with the City of Naperville having a water main and an electrical duct bank on the west side of the right of way from 87th Street to 75th Street. Utility congestion south of 87th Street in the right of way means there is a possibility that using this route would require the water main to be under the pavement. Therefore, a route along 95th Street was preferred by both the Village and the City.

Additionally, the beginning of the proposed route goes through Springbrook Prairie of the Forest Preserve District of DuPage County, which also contains some floodplain areas. There are also two railroads that pass through this proposed routing, the BNSF railroad line and an abandoned railroad line. These areas will need to be considered for the final routing and handled appropriately.

<u>Segment 2</u> – Yorkville (30-inch pipe diameter)

This segment of the route is located in Kendall County and is approximately 2.34 miles long through Yorkville and begins at the intersection of Orchard Road and Illinois Rte. 71 and ends at Watertower near Berrywood Lane and Lehman Crossing. The alignment of this route should be along the north side of the river, if possible, as routing along the south side of the river would require a booster pump. Additionally, the beginning of the route falls in a wetland area that will require additional consideration.

<u>Segment 3</u> – Oswego to Yorkville (30-inch pipe diameter)

This segment of the route is located in Kendall County and is approximately 9.71 miles long and connects the two aforementioned segments for Yorkville and Oswego. It begins at the intersection of Orchard Road and Illinois Rte. 71 and travels south along Minkler Road and then through undeveloped land and along Collins Road and then north along Douglas Road until ending near the intersection of Ogden Falls Blvd. and Waterbury Circle. This proposed route was selected as it runs through mostly undeveloped land and is more suitable for the anticipated expansion of Oswego. Another more direct route along Illinois Rte. 71 was not selected as it entails passing through a recently completed IDOT widening project. The proposed route does not pass through any identified forest preserves, wetlands, or floodplains.

5. DuPage Water Commission (DWC) Requirements

If the Village and City decide to pursue purchasing water from DWC, they will need to negotiate with the Commission to become a member and also, the State of Illinois, Department of National Resources in order to obtain an allocation to withdraw water from Lake Michigan.

Each takeoff point from DWC requires the following:

A metering station (owned and operated by DWC)

A receiving station (owned and operated by the member)

In other words, if Oswego has three takeoff points and Yorkville has two takeoff points, a total of five metering stations and five receiving stations will be required.

DWC also requires a certain amount of water storage in the distribution system, which we will cover later in this section of the study.

For the purposes of this study, it is assumed that the Lake Michigan water allocation will be the same as the average day demands for 2020 and 2050 utilized in Chapter 2 of this study. DWC contractually limits the maximum day demand to 1.7 times the average day demand. Thus, the maximum day demands assumed to be met by the Village's and City's water systems through the year 2050 are as follows:

Table 9 - Maximum Day Water Demands

Year	Oswego		Yorkville		
i eai	Ave Day (mgd) Max Day (mgd)		Ave Day (mgd)	Max Day (mgd)	
2020	3.5	6.0	2.1	3.6	
2050	8.2	13.9	5.4	9.2	

The above are the demands that the Village and City can expect to receive from DWC. The difference in maximum day demands from the demands in Table 9 versus the demands in Tables 1 and 2 (Chapter 2) will have to be made up from the storage facilities throughout the Village's and City's water distribution systems. That difference is determined below.

Table 10- Maximum Day Water Demand Deficit

	Oswego				Yorkville	
Year		Max Day (m	gd)	Max Day (mgd)		d)
	Table 1	Table 9	Diff (mgd)	Table 2	Table 9	Diff (mgd)
2020	6.7	6.0	0.7	4.1	3.6	0.5
2050	15.6	13.9	1.7	10.7	9.2	1.5

For the purposes of this report, it is assumed that the Village and City can make up this difference through their existing storage facilities (i.e. additional storage facilities will not need to be constructed).

The DuPage Water Commission allows customer delivery stations to withdraw up to the greater of three times the year 2020 average day Lake Michigan allocation amount or 1,500 gpm for emergencies. Three times the 2020 average day will be 10.5 mgd (15,120 gpm) for Oswego and 6.3 mgd (9,072 gpm) for Yorkville. Therefore the receiving stations will be designed for a maximum flow of 10.5 mgd for Oswego and 6.3 mgd for Yorkville.

Storage Facilities

The DuPage Water Commission (DWC) requires that its customers have a minimum storage capacity equal to two average demand days less a credit for storage provided by DWC. This credit is based on the percentage of water used by that customer compared to the total pumpage of the DWC.

The existing storage in the two distribution systems consist of the following:

Table 11 - Existing Storage Facilities

Community	Storage Volume, gallons
Oswego	5,300,000
Yorkville	4,550,000

Based on the information above, Table 12 below indicates the additional storage required by the Village and by the City utilizing the 2020 projected average day demands.

Table 12 – Additional Storage Requirements

	Oswego-gallons	Yorkville-gallons
Storage Required by DWC	$2 \times 3.5 = 7,000,000$	2 x 2.06 = 4,120,000
Credit for the Commission's Storage	2,050,000	1,210,000
Existing Storage	5,300,000	4,550,000
Total Storage Including Credit	7,350,000	5,760,000
Additional Storage Required	0	0

Therefore, as far as DWC is concerned, neither Oswego or Yorkville will be required to construct additional storage.

Receiving Stations

As previously discussed, DWC requires the construction of a receiving station downstream of each metering station. DWC utilizes four types of receiving stations. They are as follows:

Type A – Pressure Reducing Station Utilizing Ground Storage

Type B – Pressure Reducing Station

Type C – Rate Control Station

Type D – Pressure Increasing Station

The receiving station can also include a meter. This meter can be utilized to measure the flow of water to the Member's distribution system as opposed to the metering station that DWC will construct to measure flow from their transmission system. This meter can also be used so that

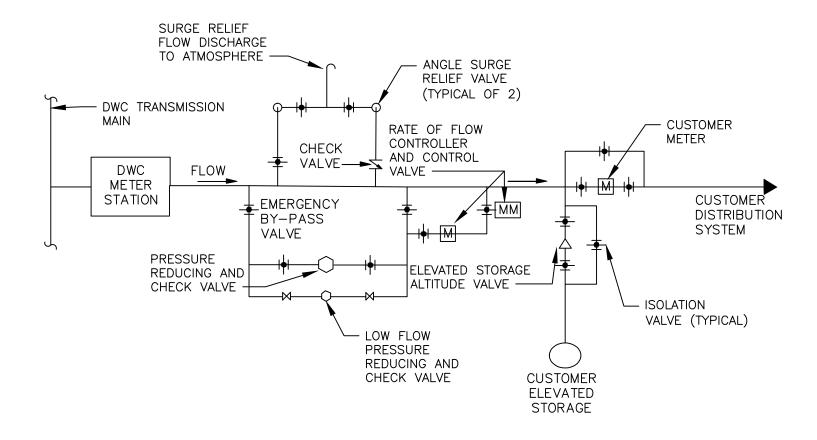
if additional chlorine needs to be added to the water being distributed in the system, it can be paced by the flow being used at the time.

As the delivery pressures from DWC range from approximately 58 psi to 103 psi in 2020, the pressure adjusting stations can be a Rate Control Station or a Pressure Reducing Station. The actual type will be decided once the two communities decide if the water from DWC will enter their distribution systems directly or if the water will enter a storage reservoir first. The delivery pressures in 2050 will range from 24 psi to 92 psi. Again, depending on how the two communities decide how they want to receive the lake water, it may be advantageous to construct the pressure adjusting stations larger than what will initially be required in order to allow space for possible booster pumps to be added later. Figure 2, presents a Schematic diagram of a pressure reducing station to give an idea of what type of facilities may be required

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6. Probable Opinion of Construction Costs

Introduction

The preliminary opinion of probable construction and project costs for the anticipated improvements required for DWC to deliver Lake Michigan water to the Village of Oswego and to the United City of Yorkville are presented in this section. These estimates are based on recent prices for equipment and fixed construction, advice from construction contractors and historical prices from comparable construction obtained from records.

Estimated costs developed for improvements under this report are in October 2017 dollars based on an Engineering News Record Construction Cost Index (1913 = 100) of 10,817, and include a 15 percent contractor's overhead and profit multiplier and a 10 percent general construction contingency multiplier. Since AECOM has no control over the cost of labor, material, equipment, or general inflation, the preliminary estimated construction costs provided herein have been prepared on the basis of experience and judgment of an engineering professional. AECOM cannot guarantee that the actual cost of the improvements will not vary from the estimated provided below.

Capital Costs

The costs for improvements for delivery of Lake Michigan water that have been discussed in this study are presented below in Table 13.

Table 13 – Estimated Capital Costs for Receiving DWC Lake Michigan Water

No.	Description	Quantity	Units	Unit Cost	Total Cost	
1.	42-Inch Diameter Transmission Main	39,750	LF	\$600	\$23,850,000	
2.	42-Inch Dia. Transmission Main	750	LF	\$1,500	\$1,125,000	
	Jacked/Bored and Installed In Casing					
	Pipe (Under Highway, Railroad or					
	Water Crossing)					
3.	30-Inch Diameter Transmission Main	63,000	느	\$500	\$31,500,000	
4.	30-Inch Dia. Transmission Main	750	LF	\$1,200	\$900,000	
	Jacked/Bored and Installed In Casing					
	Pipe (Under Highway, Railroad or					
	Water Crossing)					
5.	Oswego Connection Point	1	EA	\$750,000	\$750,000	
6.	Yorkville Connection Point	1	EA	\$750,000	\$750,000	
	Subtotal:					
	10% Engineering Costs:					
	10% Contingency:					
					\$70,650,000	

Notes

- 1. Improvements to the Oswego and Yorkville water distribution systems not included
- 2. Costs for pressure adjusting stations not included
- 3. Costs for land acquisition for the connection points are not included
- 4. Assumes one connection point per municipality
- 5. Costs are in 2017 dollars

For comparison, we reviewed the Sub-Regional Water Supply and Treatment Planning study, dated January 2017 prepared by others, and the capital costs indicated for construction of the Sub-Regional Fox River Intake with Claricone LSWTP system are as follows:

Table 14 - Estimated Capital Costs for Sub-Regional Fox River System

No.	Description	Total Cost
1.	Village of Oswego	\$56,414,000
2	United City of Yorkville	\$49,468,000
	Total:	\$105,882,000

Note: Costs are in 2016 dollars

It should be noted that the operation and maintenance costs are expected to be less under the Lake Michigan option since the Fox River system would need to include all Water Treatment Plant costs.

Cost Per Thousand Basis

In order to become a member of the DuPage Water Commission (DWC), there is a one-time Capital Cost Recovery Charge that must be paid by the member.

This buy-in cost from DWC is based on current usage projections. For Oswego the charge has been determined to be \$10,128,368 and for Yorkville it is \$5,672,382. The breakdown for these costs is indicated in Figures 3 and 4 on the following pages. If the two communities want to join the Commission, the buy-in costs would be calculated based on their usage at the time. For determination of the total annual costs for Lake Michigan water and the cost per 1,000 gallons of water, we have based the calculations on the following:

- The Capital Cost and Recovery Charge as well as the Capital Costs for the new facilities will be financed using a 30 year bond at 4% interest
- It is assumed that there would not be an upfront cash-on-hand paydown to reduce the debt amount; if there is paydown cash available, the debt service would be reduced accordingly
- Cost breakdown for capital improvements between Oswego and Yorkville is based on current ADD; 2.5 MGD, or 64.4% for Oswego; and 1.38 MGD, or 35.6% for Yorkville

Based on the above, the annual debt service on capital will be approximately \$3,368,700 for Oswego and \$1,866,700 for Yorkville. The wholesale cost is based on a purchase price of \$4.88 per 1,000 gallons from DWC. The following table presents a breakdown of the cost per 1,000 gallons for water for both Oswego and Yorkville based on current water demands.

Table 15 - Estimated Unit Cost per 1,000 Gallons with 4% Financing for all Project Costs

Community	Average Daily Consumption (gpd)	Total Project Cost	Annual Debt Service	Per 1,000 Gallons			
				Debt Service for Construction and Buy-In	Wholesale Cost	Net Wholesale Cost	
Oswego	2,500,000	\$55,626,968	\$3,368,700	\$3.69	\$4.88	\$8.57	
Yorkville	1,380,000	\$30,823,782	\$1,866,700	\$3.71	\$4.88	\$8.59	

Note:

- 1. Assumes financing using a 30 year bond at 4% interest for all project costs
- 2. Debt service incorporates typical issuance and reserve costs, as determined by Municapital.com municipal bond payment calculator

Oswego and Yorkville learned that recently another new member negotiated 0% financing costs for the recovery charge portion of the costs and wondered how that would affect their costs. If the same financing is made available to Oswego and Yorkville, the breakdown of the cost per 1,000 gallons is presented below in Table 16.

Table 16 - Estimated Unit Cost per 1,000 Gallons with 4% Financing for Capital Costs Only

Community	Average Daily Consumption (gpd)	Total Project Cost	Annual Debt Service	Per 1,000 Gallons			
				Debt Service for Construction and Buy-In	Wholesale Cost	Net Wholesale Cost	
Oswego	2,500,000	\$55,626,968	\$3,093,000	\$3.39	\$4.88	\$8.27	
Yorkville	1,380,000	\$30,823,782	\$1,712,400	\$3.40	\$4.88	\$8.28	

Note:

- 1. Assumes financing using a 30 year bond at 4% interest for capital costs only
- 2. Assumes the DWC will provide 0% financing for the recovery charges
- 3. Debt service incorporates typical issuance and reserve costs, as determined by Municapital.com municipal bond payment calculator

DuPage Water Commission Calculation of Capital Cost Recovery Charge as of May 1, 2017 For the Village of Oswego					
Fixed Assets (Audited a	s of 04-30-2017)				
` Land		\$	11,728,902		
Infrastructure)		364,135,069		
Buildings			104,453,344		
Office Equipmen			4,678,127		
Machinen			23,414,564 701,297		
	Vehicles				
CIF	,		813,872		,
Tota	ì	\$	509,925,175		
	Less: Feeder Mains & Meter Stations				
Less. I eeuel Mails & N	Less. Feeder Mains & Meter Stations				
			416,631,674		
Less: Total Rebates			106,326,287		
Total		\$	310,305,387		
		_			
				To	tal Capital Cost
					covery Charge
	MGD				
Village of Oswego	2.500		3.264%	\$	10,128,368
DuPage Water Commission (CY2015-CY2016 Avg)*	74.093				
Total	76.593				
*Includes Village of Bartlett CY2015-CY2016 as reported					

Figure 3 - Buy-in Costs for Village of Oswego

DuPage Water Commission Calculation of Capital Cost Recovery Charge as of May 1, 2017 For the United City of Yorkville

Fixed Assets (Audited as of 04- Land Infrastructure Buildings Office Equipment Machinery Vehicles	30-2017)	\$ 11,728,902 364,135,069 104,453,344 4,678,127 23,414,564 701,297		
CIP		813,872		
Total Less: Feeder Mains & Meter Sta	ations	\$ 509,925,175 93,293,501 416,631,674		
Less: Total Rebates Total		\$ 106,326,287 310,305,387		
				Capital Cost very Charge
United City of Yorkville	MGD 1.380	1.828%	¢	5,672,382
DuPage Water Commission (CY2015-CY2016 Avg)* Total	74.093 75.473	 1.020 /6	Ψ	3,012,302

^{*}Includes Village of Bartlett CY2015-CY2016 as reported

Figure 4 - Buy-in Costs for United City of Yorkville

7. Risks of Service Interruptions and Mitigation Measures

As the two communities transition from well supplies to Lake Michigan water supplied from the DWC system, there are some new risks to service interruptions that should be identified and considered. These risks are discussed below along with existing or proposed measures to mitigate the risks.

Interruption to DWC supply prior to Oswego/Yorkville connection point

The DWC system supplying the proposed water main extension to Oswego/Yorkville is a robust system with many redundancies built in to eliminate or minimize the possibility of service interruption. Below are the major types of potential service interruptions and the existing mitigation measures in place to minimize the risk:

Transmission Main Break

- The DWC system is looped prior to the Oswego/Yorkville connection point and can be supplied from either direction should a break occur in one of the two supplying mains.
- DWC maintains an inventory of repair materials for all pipe sizes and materials in the system.
- DWC has trained field crews on 24 hour call for emergency shutdowns.
- DWC has multiple on-call contracts with underground contractors for major pipeline repairs.

Power Failure

 DWC has three incoming electrical service lines from two different substations. In addition, they have five 2.5 mw standby generators for backup power supply.

Pump Failure

DWC currently has 9 high lift pumps with a system capacity of 185 mgd. Under average operating conditions, only 4 or 5 pumps are used. DWC also plans to install a 10th pump in 2018. In addition, DWC has elevated storage in the system that can be used to supplement supply in the event of a pump outage.

Interruption after Oswego/Yorkville connection point to the DWC supply

A single 30"/42" transmission main, approximately 19 miles in length, is proposed to supply both communities. A break or leak on this line poses the greatest risk of service interruption to one or both of the communities depending on its location. The assumption is that DWC will own, operate and maintain the proposed transmission main, so therefore, several of the same mitigation measures identified above would apply in this instance. They are:

- DWC maintains an inventory of repair materials for all pipe sizes and materials in the system.
- DWC has trained field crews on 24 hour call for emergency shutdowns.
- DWC has multiple on-call contracts with underground contractors for major pipeline repairs.

In addition, other proposed mitigation measures that could be considered to extend the water supply during an interruption of service include:

- Implementation of water use restrictions. The communities should develop operational scenarios that are part of their emergency response plans which detail customer notification protocols for curtailing water usage during a transmission main break event.
- Return to use of existing wells after the supply of Lake Michigan water in reservoir storage is depleted. DWC does not allow blending of water. The communities would need to maintain their wells and sample them on a monthly basis in addition to maintaining their well disinfection systems. This would appear to be the most feasible and lowest cost measure. However, it might result in exceeding EPA contaminant levels for certain water quality parameters and receiving a violation notice from IEPA.
- Construction of additional water storage reservoirs in both communities.

Other mitigation measures that may be available in the future as a result of continued growth and development in the area include:

- DWC may consider a redundant or looping main if more customers come on to the DWC system.
- If more communities connect to the DWC system and supply mains are looped, it may be possible to construct an emergency interconnection to another community.

Available Water Supply from Storage During Service Interruption

Table 17 below shows the existing reservoir storage, 2020 average day demand and approximate duration of available water supply from storage for each community. Again, as discussed in Chapter 2, the Less Resource Intensive (LRI) demands were utilized in the following table due to water conservation measures undoubtedly being taken during a service interruption:

Table 17 – Available Water Supply from Storage During Service Interruption

Community	Existing Storage Volume (mg)	2020 Average Day Demand (mgd)	Approximate Duration of Available Water Supply from Storage (days)
Oswego	5.30	2.92	1.82
Yorkville	4.55	1.83	2.49

The duration length assumes:

- The storage reservoirs are completely full at the time of service interruption
- The entire volume of the reservoir can be used
- The water supply is not supplemented by the well system

From the information provided in the table, it can be seen that the water supply from reservoir storage will last a relatively short time, ranging from 1.8 days to 2.5 days. Interruptions of service due to a main break of the size and length proposed will typically exceed these times. The section below examines the tasks and timeframes associated with the control and repair of a transmission main break.

Potential Service Interruption Due to a Transmission Main Break

The assumptions are that the transmission main will be at a standard depth of bury (5 to 6 feet), located in the right-of-way with valves approximately every 1 mile and will have blow-offs or access points to dewater/flush the main. It is further assumed that the break will require pipe replacement and not be repairable with just a leak clamp. Breaks on pipes installed in river crossings, casings and in deep locations would need to be analyzed on a case-by-case basis but, in general, would require additional time to repair.

The tasks and timeframes associated with the control and repair of a transmission main break are shown in Table 18 below:

Table 18 – Tasks and Timeframes for Transmission Main Repairs

Tasks	Timeframe (hours)
Respond and shutdown	4
Identify break location	4
Utility call and markout (Digger/Julie)	8 to 24
Excavation and dewatering	8 to 24
Repair and filling	8 to 24
Flushing, disinfection, sampling and approval	24 to 48
Estimated Return to service from start of work	56 to 128 hours (2.3 to 5.3 days)

The total time range for repair assumes that the work is performed in order listed and continues around the clock. While there could be variations that could shorten or lengthen the timeframes, the table does demonstrate that there is probably not adequate existing reservoir storage for uninterrupted water supply during a main break and repair without the use of existing wells.

Conclusions

The greatest risk of service interruption would result from a main break downstream of the existing DWC system at 75th Street and Book Road (i.e. along the proposed 30"/42" transmission main that will supply Oswego and Yorkville). Estimated durations for the control and repair work could readily exceed the available volumes of water in existing reservoir storage for both communities. Maintaining the existing well system to supplement the existing reservoir storage during a service interruption is recommended until some of the other mitigation measures discussed above are put in place.

8. Recommendations

If it is decided to purchase treated Lake Michigan water from the DuPage Water Commission, we envision that the following steps will have to be taken as a minimum.

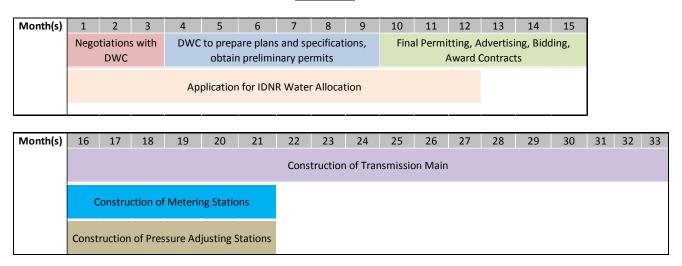
- Determine how many connection points to the DWC transmission main that each of the communities will want as well as their locations.
- Begin negotiations with DWC regarding contract terms and costs.
- Each community will need to apply to the Illinois Department of Natural Resources (IDNR) for a water allocation. As part of the process a pre-hearing and a hearing will be required.
- DWC will prepare plans and specifications for construction of the transmission main and the metering stations.
- Oswego and Yorkville will prepare plans and specifications for the construction of the pressure adjusting stations as well as any internal improvements to their water distribution systems.
- Permits The following permits as a minimum will be required prior to construction of the improvements:
 - Illinois Environmental Protection Agency
 - DuPage County Division of Transportation
 - Will County Division of Transportation
 - Kendall County Highway Department
 - Illinois Department of Transportation
 - Railroad Crossing Permits
 - U.S. Army Corps of Engineers Permit
- Easements will need to be acquired for the construction of the proposed improvements. The following general criteria will be utilized for easements;

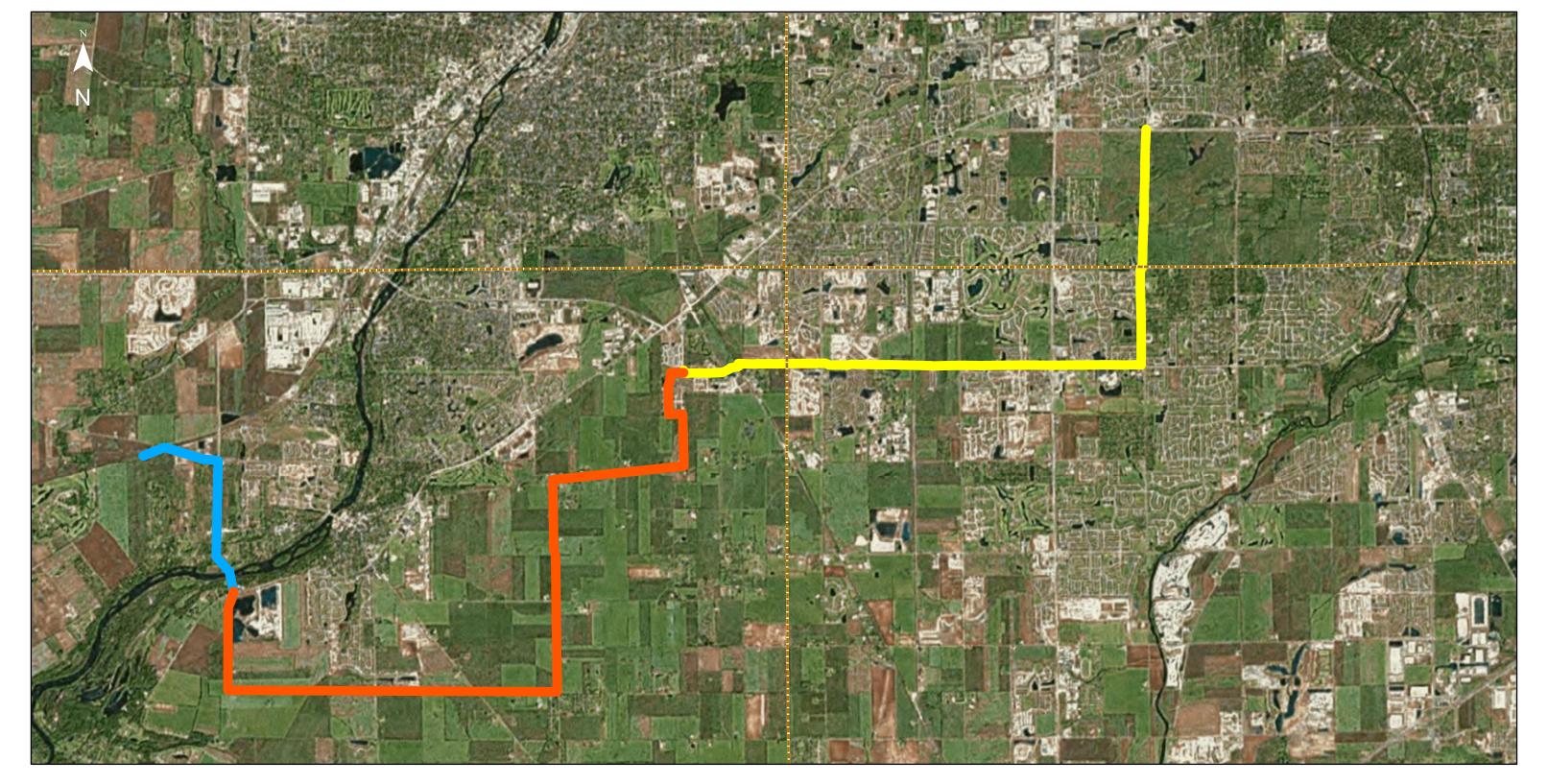
<u>Right of Way:</u> The facilities shall be within practical limits of existing or proposed public rights of way (R.O.W.) or easements where possible. Where it is not practical to locate the facilities within the right of way, they shall be located within existing or proposed easements adjacent to the right of way.

<u>Private Easements:</u> When public R.O.W. or utility corridors are not feasible, private easements shall be sized by the design team and acquired through the DuPage Water Commission's legal counsel.

On the following page, we have included an anticipated timeline for the project that would begin once the key decisions have been made.

Timeline





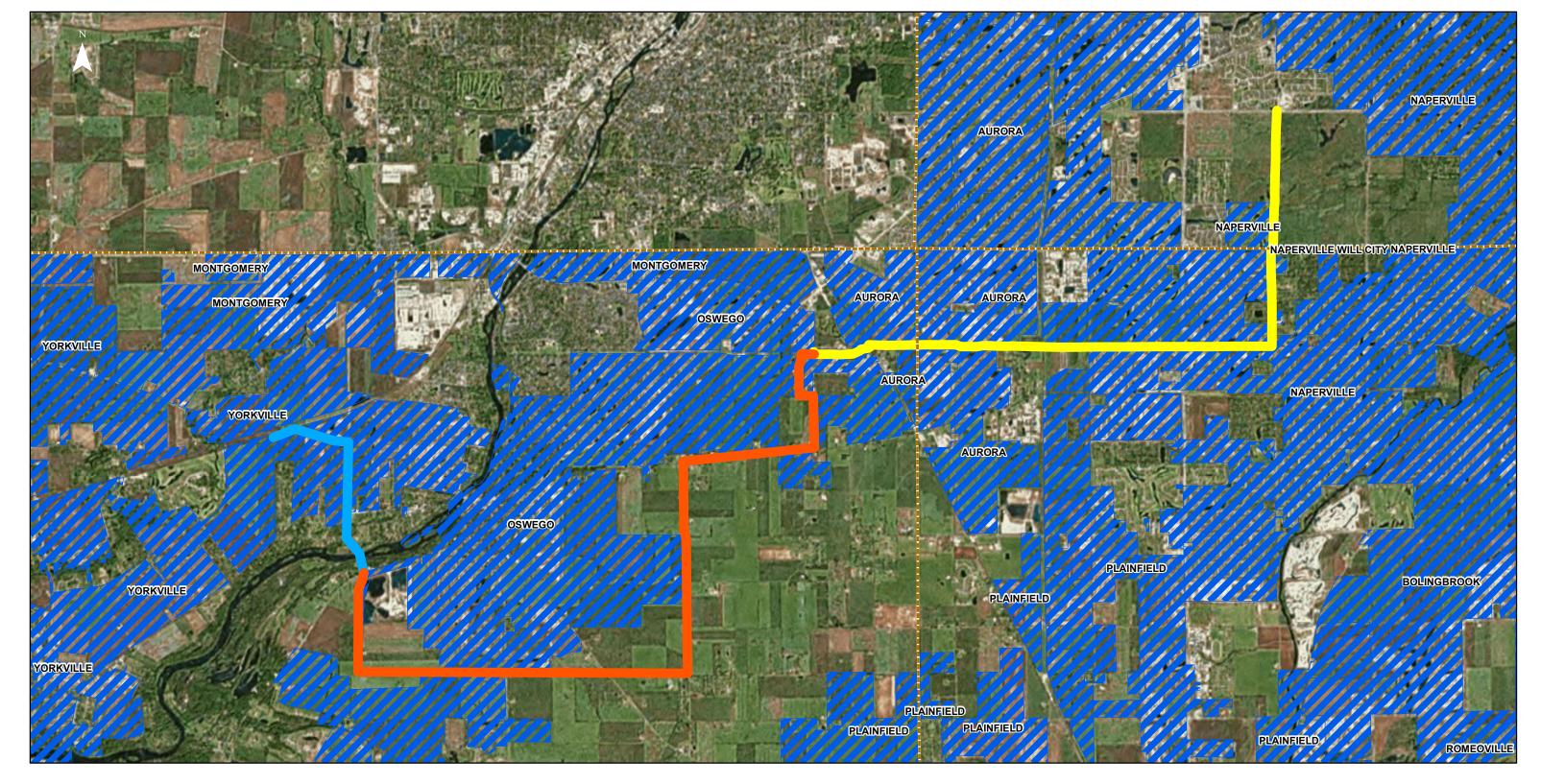
ROUTE MAP WITH KEY FEATURES

September 2017

Figure 5

VILLAGE OF OSWEGO AND UNITED CITY OF YORKVILLE FEASIBILITY STUDY TO RECEIVE LAKE MICHIGAN WATER VIA THE DUPAGE WATER COMMISSION





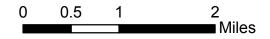
ROUTE MAP WITH MUNICIPAL BOUNDARIES

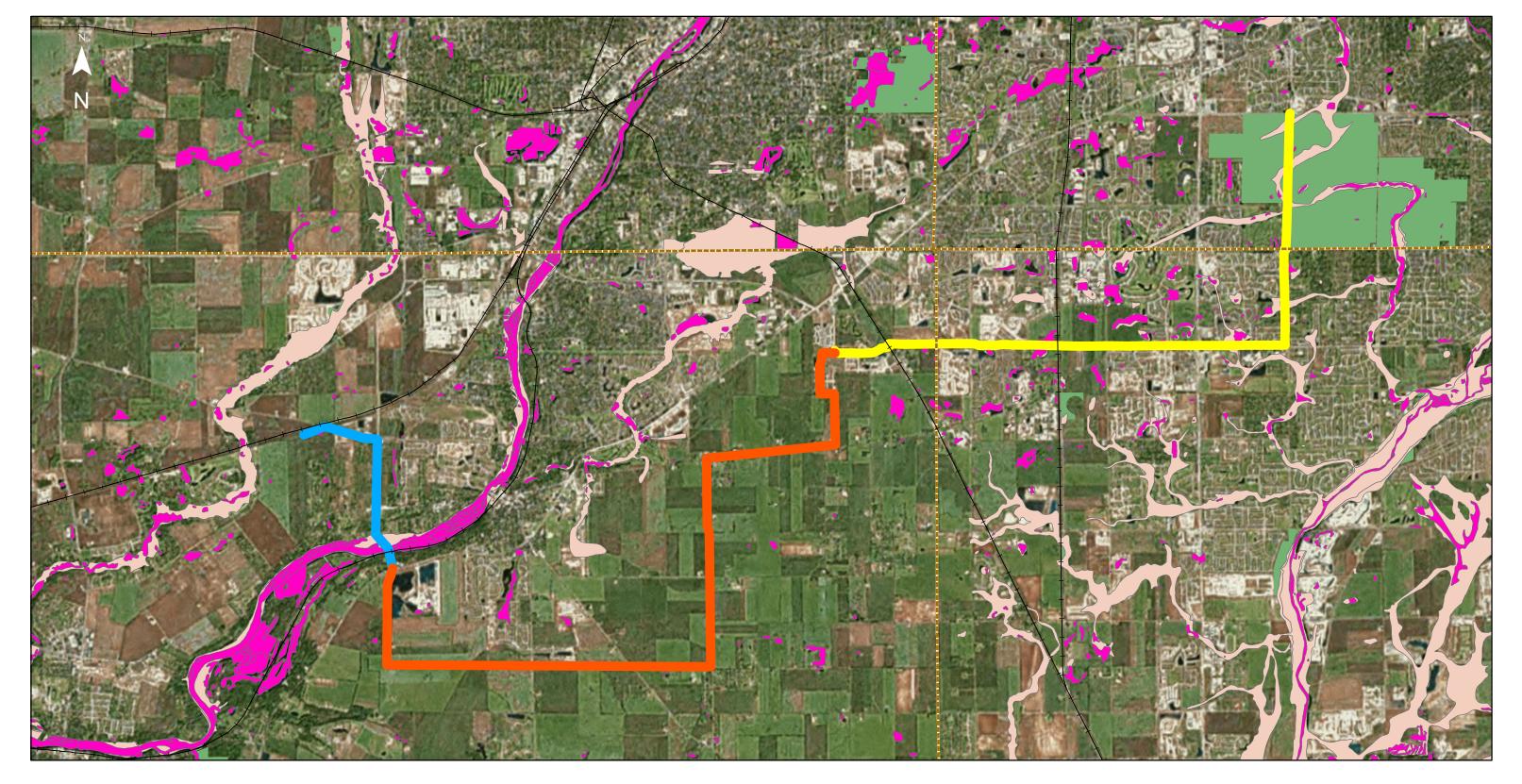
September 2017

Figure 6

VILLAGE OF OSWEGO AND UNITED CITY OF YORKVILLE FEASIBILITY STUDY TO RECEIVE LAKE MICHIGAN WATER VIA THE DUPAGE WATER COMMISSION







ROUTE MAP WITH KEY FEATURES

September 2017

Figure 7

VILLAGE OF OSWEGO AND UNITED CITY OF YORKVILLE FEASIBILITY STUDY TO RECEIVE LAKE MICHIGAN WATER VIA THE DUPAGE WATER COMMISSION



AECOM

AECOM 303 East Wacker Drive Suite 1400 Chicago, IL 60601 www.aecom.com 312 373 7700 tel 312 373 6800 fax

March 30, 2018

Ms. Jennifer Hughes
Director of Public Works/Village Engineer
Village of Oswego
100 Parkers Mill
Oswego, II 60543

Reference:

Proposal for Additional Services Related to

Feasibility Study to Receive Lake Michigan Water

Via the DuPage Water Commission

Dear Ms. Hughes:

Per your request of March 3, 2018, AECOM Technical Services, Inc. (AECOM) is presenting this Proposal to perform the subject additional services. Per your request, the additional services are as follows:

- 1. Complete the route study as follows for the three communities (Oswego, Yorkville and Montgomery).
 - a. Begin at the existing DuPage Water Commission (DWC) transmission main near the intersection of 75th Street and Book Road to 378 Ogden Falls Boulevard (Ogden Falls water tower). This will be the Oswego connection point no. 1.
 - b. Continue from the Ogden Falls water tower to 700 Cole Avenue (Hunt Club Water tower). This will possibly be Oswego connection point no. 2.
 - c. Continue from the Hunt Club water tower south to 2224 Tremont Avenue (water tower). This will be Yorkville connection point no. 1.
 - d. Continuing from the Yorkville connection point no. 1 to Mill Road and then proceeding in Mill Road to 6701 Tuscany Trail (water tower). This will possibly be Oswego connection point No. 3.
 - e. From Mill Road, the route will proceed to 3099 Lehman Crossing (water tower). This will be Yorkville connection point no. 2.
 - f. There will be one connection point for the Village of Montgomery. This route will start at the Ogden Falls water tower (see item a) above) and proceed to 891 Knell Road via two alternate routes.
 - i. Alternate A will be via US30.
 - ii. Alternate B will be via Orchard Road

2. <u>Village of Oswego Internal Distribution System Improvements</u>

AECOM will utilize the Village of Oswego's existing water model to determine the additional internal piping required to distribute water throughout the Village for each alternate. This will include appropriate pressures, water age, pipe diameters, locations as well as need and timing for any additional storage at the connection points. Opinion of probable construction costs will be derived for each alternate as follows:

a. Alternate A – DWC – this alternate will include the need and timing for multiple takeoff points.

AECOM

Ms. Jennifer Hughes March 30, 2018 Page 2

Alternate B – Fox River Water Treatment Plant (WTP) – this alternate will assume that some
of the existing wells will be maintained and that well water will be pumped to the WTP for
mixing. This may require new piping to distribute the treated water.

3. Report (Addendum)

AECOM will prepare a draft copy of the Addendum to the original study which will contain capital costs as well as the annual costs. After review of the Draft report by the three communities, we will finalize the report. We have included four (4) meetings in our scope as follows:

- a. Scope
- b. Review of Draft Copy
- c. Meeting with representatives of Oswego, Yorkville and Montgomery
- d. Meeting with Oswego Village Board

Associated Engineering Costs

AECOM's cost to perform the aforementioned services area as follows:

1.	Completion of Route Study	\$10,000.00*
2.	Village of Oswego Internal Distribution System Improvements	\$18,000.00
3.	Report	\$15,000.00
4.	Update the DWC hydraulic model to include the Village of	\$6,000.00
	Montgomery	
	Total	\$49,000,00

^{*}The breakdown for the three communities based on equal cost splits for pipeline segments along the route per your email of March 22, 2018 that apply to each:

- If Alternative A is used for Montgomery: Oswego \$2,900, Yorkville \$4,610, Montgomery
 \$2,490
- If Alternative B is used for Montgomery: Oswego \$2,650, Yorkville \$4,210, Montgomery \$3,140

Assumptions

This Proposal is based upon the following assumptions:

- 1. The average and maximum day water usages for the Village of Montgomery will be provided to AECOM.
- 2. The location of the Fox River Water Treatment Plant (Item 2, Alternative 2 above) will be per the "Sub-Regional Water Supply and Treatment Planning 2016 Study" prepared for the Village of Oswego dated January, 2017. The improvements for delivering the well water to the plant and the plant infrastructure indicated in this study will be used as a baseline for confirming the costs for this alternate. AECOM will review the costs in this study and apply any suggested revisions or updates to similar unit costs used for the DWC alternative that will allow for an "apples-to-apples" comparison. In addition, AECOM will determine the infrastructure needed to most effectively deliver the treated water from the plant to the Oswego distribution system. It is our understanding

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Ms. Jennifer Hughes March 30, 2018 Page 3

that these improvements would likely consist of transmission mains that would tie into the distribution systems at multiple locations, in a similar manner that is being considered for the DWC alternate.

- 3. We will need permission from the DuPage Water Commission to calibrate and utilize their model. We have not included any meetings with the Water Commission in our scope of work.
- 4. The Village has an existing, calibrated, Bentley WaterGEMS hydraulic model, which includes future Village demands (i.e. 15.6 mgd during maximum day demand) and future Village distribution system expansion. The model is considered an accurate representation of the water distribution system, and no updates (e.g. demands, pipe C-values, etc.) will be needed, other than those listed in this Proposal. Also, there are seven different existing models in the files that were provided to us; we will only run the one model that Oswego desires to utilize. The key improvements needed to accommodate current water demand conditions will be itemized with budgetary costs indicated. Since the allocation of future water demands within the distribution system are likely uncertain, the proposed improvements and associated costs for future conditions will be more general and based on feasibility for accommodating higher water demands within the pressure zones. Our recommendations will be based on the development of a strategy that minimizes changes to the Village's water system, and is expected to include multiple (up to 3) connection points into at least 2 of the pressure zones.
- 5. All modeling will be performed as extended period simulation analyses.
- 6. No fire flow analyses will be performed.
- 7. For the route study, four (4) primary transmission main segments will be evaluated in a workshop setting with key stakeholders from Oswego, Yorkville and Montgomery. At the conclusion of this workshop, it is assumed that a firm route will be agreed upon for these four (4) segments. AECOM will then evaluate each of these segments in detail to provide refined opinions of probable costs that address specific challenges expected to be encountered along the routes (highway/ railroad/water crossings, potential wetlands, restoration considerations, etc.).

We hope that this is the information that you are looking for. We will be happy to meet with you and discuss the Proposal. We are also open to adding or deleting items as you may desire.

In the meantime, please do not hesitate to contact us with any questions that you may have.

Very truly yours

AECOM TECHNICAL SERVICES, INC.

Michael H. Winegard, P.E.

Vice President



100 Parkers Mill • Oswego, IL 60543 • (630) 554-3618

Website: www.oswegoil.org

AGENDA ITEM

MEETING TYPE: Committee of the Whole

MEETING DATE: April 17, 2018

SUBJECT: Feasibility of Receiving Lake Michigan Water – Status Report

ACTION REQUESTED:

Consideration and Discussion of the Feasibility Study to Receive Lake Michigan Water via the DuPage Water Commission

BOARD/COMMISSION REVIEW:

N/A

ACTION PREVIOUSLY TAKEN:

Date of Action	Meeting Type	Action Taken
N/A	N/A	N/A

DEPARTMENT: Public Works

SUBMITTED BY: Public Works Director/Village Engineer Jennifer M. Hughes, P.E., CFM

FISCAL IMPACT:

None at this time.

BACKGROUND:

The Illinois State Water Survey projects that Oswego could run out of ground water in the next 20-40 years. As the process of securing and implementing a new water source could take ten years, the Village has begun to proactively plan for a new water source. The 2014 Water Study prepared by HR Green identified two viable sources: the Fox River through a new water plant or Lake Michigan via the DuPage Water Commission (DPWC). In 2016, Engineering Enterprises (EEI) performed a sub-regional water analysis finding that a joint Fox River water plant with Yorkville and Montgomery is the preferred alternative for Oswego. In February 2017, the Village received supplemental information from the DPWC which indicated that the Lake Michigan option might be more cost effective than envisioned in the original HR Green report. The Village and the United City of Yorkville contracted with AECOM Technical Services, Inc. to determine if it is technically feasible to connect to DPWC and if so, to estimate the costs.

DISCUSSION:

Feasibility

AECOM determined that connection to DPWC is feasible. Future system improvements will need to be made to ensure adequate pressure at the points where the communities receive water as demands grow over time.

DPWC would construct a 42" transmission main from the connection point in Naperville to the Ogden Falls water tower. From there a cross-town transmission main would deliver water to additional connection points in Oswego before continuing to Yorkville.

Costs

AECOM estimated the costs to connect to DPWC to be \$8.57/1,000 gallons. This rate is above the base rate necessary to support operations and maintenance of the existing infrastructure. They did not analyze any savings realized if the wells are decommissioned but it is likely that some of these costs will be offset by the new pumping costs required for the DPWC option.

Cost Summary Table			
	Oswego	Yorkville	Total
DPWC Buy-in	\$10,128,368	\$5,672,382	\$15,800,750
Transmission Line	\$45,498,600	\$ 25,151,400	\$70,650,000
Capital Costs			
Total Cost	\$55,626,968	\$30,823,782	\$86,450,750

Note: 1.The transmission line capital cost excludes costs of internal improvements to distribute water throughout the Village from the Ogden Falls water tower.

2. The cost split between Oswego and Yorkville is preliminary and needs further review and calculation.

The DPWC has preliminarily offered to allow the Village to finance the buy-in cost at zero percent interest over thirty years per terms of their agreement with the Village of Bartlett.

Estimated Unit Cost per 1,000 Gallons with 4% Financing for Capital Costs Only (Table 16 from						
AECOM Rej	AECOM Report)					
Community	Average	Total	Annual	Per	1,000 Gallor	ns
	Daily	Project	Debt	Debt	Wholesale	Net
	Consumption	Cost	Service	Service for	Cost	Wholesale
	(gpd)			Construction		Cost
				and Buy-In		
Oswego	2,500,000	\$55,626,968	\$3,093,000	\$3.69	\$4.88	\$8.57
Yorkville	1,380,000	\$30,823,782	\$1,866,700	\$3.71	\$4.88	\$8.59

Note: 1. Assumes financing using a 30 year bond at 4% interest for capital costs only

- 2. Assumes the DWC will provide 0% financing for the recovery charges
- 3. Debt service incorporates typical issuance and reserve costs, as determined by Municapital.com municipal bond payment calculator

Remaining Issues to Be Resolved

A few issues remain before staff can present a complete assessment and recommendation regarding the choice between the Fox River and Lake Michigan Water. Staff proposes to enter a contract with AECOM to study these issues. This agreement will be presented for approval at the April 17, 2018 Village Board meeting.

Oswego has not yet studied what improvements will be needed to our internal distribution system under either option. The wells are distributed throughout the Village so there is not a need to have internal transmission pipes. Under the Fox River option, we will need to maintain our wells. We will transmit raw water from the wells to the treatment plant where the well water will be mixed with river water and processed. The finished water will then need to be distributed throughout the Village. We need to understand what pipes are needed and how much they will cost. Similarly, if DPWC provides water at the Ogden Falls water tower, we need to understand if transmission mains are needed to bring water to the well sites for distribution. The required piping on these options could be significant and is not currently figured into the rate analysis.

AECOM conducted a high level estimate of the cost to install the transmission main for the purposes of the feasibility study. Staff would like AECOM to refine this estimate based upon the selected route, identifying segments under pavement versus field, and determining if there are any additional costs such as placing the main beneath railroad tracks.

RECOMMENDATION:

Staff recommends approving the agreement with AECOM at the April 17, 2018 Village Board meeting.

ATTACHMENTS:

 Final Report - Feasibility Study to Receive Lake Michigan Water Via the DuPage Water Commission – October 2017

Dupage Water Commission (DWC) and Sub-Regional Fox River System Cost Comparison

United City of Yorkville & Village of Oswego

CAPITAL COST COMPARISON (Present Value - 2017)

The second secon		Yorkville	Oswego	Total
DWC Extension				
Connection Fees	\$	5,672,382	\$ 10,128,368	\$ 15,800,750
Large Diameter Water Main Construction Cost Estimate (AECOM)	\$	24,628,080	\$ 44,551,920	\$ 69,180,000
Large Diameter Water Main Construction Cost Estimate (Adjustment) $^\xi$	\$	2,906,028	\$ 5,256,972	\$ 8,163,000
2nd Delivery Structure	\$	900,000	\$ 900,000	\$ 1,800,000
Receiving Stations ⁿ	\$	23,000,000	\$ 24,000,000	\$ 47,000,000
Tota	: \$	57,106,490	\$ 84,837,260	\$ 141,943,750
Sub-Regional Fox River System ^θ				
Additional Wells	\$	3,323,800	\$ 1,808,835	\$ 5,132,634
Well Transmission Main Network	\$	9,864,248	\$ 14,130,127	\$ 23,994,375
Fox River Intake & LSWTP ^µ	\$	28,358,673	\$ 40,599,827	\$ 68,958,500
Treated Water Transmission Main Network ⁷	\$	12,730,800	\$ 7,390,229	\$ 20,121,029
Tota	: \$	54,277,521	\$ 63,929,018	\$ 118,206,539
Comparison				
Capital Cost Increase For DWC Connection	\$	2,828,969	\$ 20,908,242	\$ 23,737,211
% Increase For DWC Connection		5.2%	32.7%	20.1%

Notes:

O&M RATE COMPARISON (Present Value - 2017)

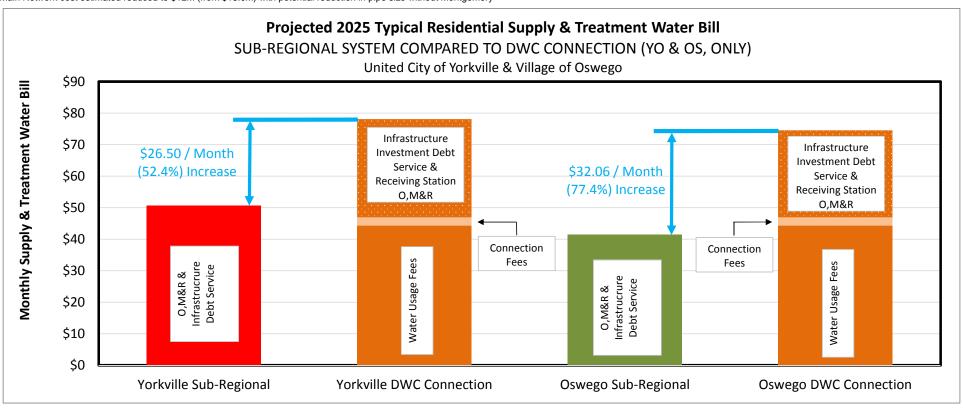
	Rate	Unit
DWC Rate	\$ 4.88	/ 1,000 gallons
Sub-Regional Fox River System [®]	\$ 3.00	/ 1,000 gallons
O&M Rate Increase For DWC Connection	\$ 1.88	/ 1,000 gallons
% Increase For DWC Connection	62.7%	

lotes:

Sub-Regional Fox River System present value rate adjusted up to \$3.00 / 1,000 gallons (up from \$2.25) without Montgomery

RISK CONSIDERATIONS

- Potential for Lake Michigan allocation extension to the west being closed due to international water disputes
- Fox River plant subject to revised surface water mandates
- Taste and odor issues within Lake Michigan; High water age of system will
- Algae taste and odor issues within the Fox River
- Lake Michigan/DWC rates subject to City of Chicago rate changes
- Future expansion of DWC transmission main would require a second 20 mile transmission main
- Under DWC connection option, Water Works System water losses will need to be under 10% annually
- Long term sustainability of back-up wells is a concern if more communities do not switch to alternative supplies



 $^{^{\}xi}$ 42-Inch and 30-Inch transmission main unit cost increased \$50 / LF & \$75 / LF, respectively.

¹ Receiving Station costs based on comparison to Bartlett's cost estimate; YO = 2 - valve/meter/pump station & 2 - 2.0 MG GSTs @ Each; OS = 2 - valve/meter/pump station & 2 - 2.25 MG GSTs @ Each

⁶ All Sub-regional Fox River System original costs inflated 3% per year for 2 years due to original costs in 2015 dollars

[&]quot;Total intake and LSWTP reduced to \$65M (from total of \$71.6M) with potential reduction in size without Montgomery; Costs distributed 41.4% YO & 58.6% OS based on 2050 MDD

YO Treated Water Transmission Main Network cost estimated reduced to \$12M (from \$13.0M) with potential reduction in pipe size without Montgomery







Via Email

To: Daniel Di Santo – Village Administrator, Village of Oswego

Bart Olson - City Administrator, United City of Yorkville

From: Jeffrey W. Freeman, P.E., CFM, LEED AP - Vice President

Date: February 23, 2018

Re: Sustainable Water Supply Planning – Water Production Unit Cost Comparison

EEI Job #: OS1701/YO1724-C

During the January 22, 2018 meeting with DuPage Water Commission (DWC) representatives and representatives of both of your communities, there was a discussion whether the calculated \$3.00 / 1,000 gallons would be sufficient to support the operation, maintenance and replacement (OM&R) costs of the sub-regional Fox River Supply System. The purpose of this memorandum is to describe how the OM&R rate was developed and then compare the rate to similar water production facilities currently in operation.

Fox River Supply System OM&R Rate Development

The Fox River Supply System OM&R rate was developed by first defining the required energy, labor, maintenance/service and operating supplies (chemicals) needed to operate the system. We worked with the City of Elgin and City of Aurora to gather unit costs for the operating supplies. We then estimated annual costs for the other OM&R components. The OM&R rate (aka water production rate) was developed by dividing the total OM&R costs by the projected billed units (in 1,000 gallon increments) of water to be sold to the three communities.

City of Aurora Water Production Rate Comparison

The City of Aurora Water Production Division (WPD) operates the City's water supply (mixture of shallow and deep wells and Fox River intake) and Lime Softening Water Treatment Plant (WTP). The City of Aurora currently provides water to a resident population of approximately 200,000, along with the commercial, industrial and institutional land uses within the City of Aurora. The proposed water supply system and Lime Softening WTP for the proposed Fox River Supply System are very similar to the City of Aurora's water production facilities.

Since the City of Aurora WPD and the City of Aurora Water Distribution Division are separate, it was relatively easy for the City of Aurora to segregate their water production cost from their water distribution cost. The City of Aurora provided the following historical water production costs, which would cover the same expenditures within the Fox River Supply System OM&R rate, for the years 2011 – 2016:

	Actual WPD	WPD Annual	Cost per
<u>Year</u>	Expenditures	Pumpage (gallons)	1,000 gallons
2011	\$10,084,000	6,024,699,000	\$1.67
2012	\$10,742,000	6,346,343,000	\$1.69
2013	\$10,669,000	5,939,861,000	\$1.80
2014	\$10,814,000	5,905,437,000	\$1.83
2015	\$10,950,000	5,745,210,000	\$1.91
2016	\$11,126,000	6,073,370,000	\$1.83

City Water, Light, and Power (CWLP) Water Production Rate Comparison

The CWLP utility is a municipal owned utility that provides water to the City of Springfield and some of the surrounding communities. CWLP estimates the population within their service area is approximately 150,000. CWLPs main source of water supply is Lake Springfield. The treatment train instituted at CWLPs Lime Softening WTP, which includes powdered activated carbon addition, lime softening utilizing ClariCones, pH adjustment, filtration and disinfection, is very similar to the City of Aurora's and the Fox River Supply System. CWLP staff stated their most recent water production unit costs were as follows:

Water Production	OM&R Costs
Component	(\$ / 1,000 gallons)
Supply	\$0.1024
Pumping	\$0.1868
Purification	\$0.7195
Billing (Total System)	\$0.2434
Administrative & General (Total System	n) <u>\$0.4036</u>
Total:	\$1.655 7

Conclusion

The City of Aurora's water production rate ranged from \$1.67 - \$1.91 / 1,000 gallons from 2011 – 2016, with the highest rate being in 2015. CWLP's most recent water production rate was \$1.66 / 1,000 gallons. Given the fact that the sub-regional Fox River Supply System is comparable to the City of Aurora and CWLP water production systems, it would appear the \$3.00 / 1,000 gallons OM&R rate is a reasonably conservative water production rate for the Fox River Supply System.

Please let us know if you have any comments or questions.

pc: Jennifer Hughes, P.E., CFM – Director of Public Works, Village of Oswego (via email) Eric Dhuse – Public Works Director, United City of Yorkville (via email) PGW, BPS, STD, CRW, CLV – EEI (via email)