

CITY OF WEST CHICAGO

WHERE HISTORY & PROGRESS MEET

INFRASTRUCTURE COMMITTEE

**Thursday, December 3, 2020
7:00 P.M. – Committee Room A**

During the COVID-19 Pandemic, those wishing to attend public meetings of the Infrastructure Committee are welcome to do so at City Hall. You may attend in person and listen to the audio of the meeting, or via teleconference from home or another location on the Zoom app. Downloading Zoom from zoom.us will provide the audio link to the meeting. Anyone wishing to provide comment on a topic or an agenda item may address the Infrastructure Committee by 4:00 p.m. the day of the meeting. You may do so by either an online form on the City's website, email to publicworks@westchicago.org, or voicemail message at (630) 293-2255. Your comment to the Infrastructure Committee will be read during the Public Participation portion of the agenda.

**Meeting ID: 823 6319 1196
Password: 621789**

AGENDA

1. Call to Order, Roll Call, and Establishment of a Quorum
2. Approval of Minutes
 - A. Infrastructure Committee of November 5, 2020
3. Public Participation / Presentations
4. Items for Consent
 - A. Procurement of Organic Enhanced Salt Brine Blend Liquid for Roadway Anti-Icing and Road Salt Pre-Wetting from Gasaway Distributors, Inc.
 - B. Change Order No.1 & Final - 2020 Emerald Ash Borer Insecticidal Treatment Program
 - C. Resolution No. 20-R-0074 – Contract Amendment No. 1 - Procurement of Coarse and Fine Aggregate Material Delivered For Fiscal Year 2021
 - D. Resolution No. 20-R-0076 – Contract Award – Donohue & Associates, Inc. – Phosphorous Removal Pilot Study for the West Chicago/Winfield Wastewater Authority Regional Wastewater Treatment Plant
5. Items for Discussion
6. Unfinished Business
7. New Business
8. Reports from Staff

9. Adjournment

475 Main Street
West Chicago, Illinois
60185

T (630) 293-2200
F (630) 293-3028
www.westchicago.org

Ruben Pineda
MAYOR
Nancy M. Smith
CITY CLERK

Michael L. Guttman
CITY ADMINISTRATOR



WHERE HISTORY & PROGRESS MEET

Draft

MINUTES

INFRASTRUCTURE COMMITTEE

November 5, 2020 7:00 P.M.

1. **Call to Order, Roll Call, and Establishment of a Quorum.** Chairman Beifuss called the meeting to order at 7:00 P.M. Roll call found Aldermen James Beifuss present in-person, and Aldermen Heather Brown, Sandra Dimas, Alton Hallett, and Noreen Ligino-Kubinski present via Zoom teleconference. Aldermen Matt Garling and Jeanne Short were absent.

Staff present in-person included Director of Public Works Robert Flatter. Water Treatment Plant Superintendent Joseph Munder and Administrative Assistant Ashley Heidorn were present via Zoom teleconference. Mayor Pineda has determined that in-person meetings are not practical and prudent.

2. **Approval of Minutes**

A. **Infrastructure Committee Minutes of October 1, 2020.** Alderman Brown made a motion, seconded by Alderman Ligino-Kubinski to approve the Meeting Minutes of October 1, 2020.

Roll call was taken. Voting Yea: Aldermen Beifuss, Brown, Dimas, Hallett, and Ligino-Kubinski. Voting Nay: 0.

3. **Public Participation / Presentations.** None.

4. **Items for Consent.** Alderman Beifuss requested discussion on Consent Items A, C, and E. Alderman Ligino-Kubinski made a motion, seconded by Alderman Dimas to approve:

- B. Ordinance No. 20-O-0023– Authorizing the Disposal of Surplus Equipment, Stock Inventory, and/or Personal Property Owned By the City Of West Chicago
- D. Resolution No. 20-R-0059– Authorizing the Transfer of Ownership of Oak Drive Right-Of-Way to DuPage County
- F. Resolution No. 20-R-0061 – Contract Award – Acres Group for the 2021 Parkway Tree Planting Program
- G. Resolution No. 20-R-0062 - Contract Award – Dry Anionic Polymer for Fiscal Year 2021
- H. Resolution No. 20-R-0063 - Contract Award - Liquid Carbon Dioxide for Fiscal Year 2021

- I. Resolution No. 20-R-0064 - Contract Award - Rotary Hydrated Lime For Fiscal Year 2021
- J. Resolution No. 20-R-0065 - Contract Award - Liquid Sodium Hypochlorite For Fiscal Year 2021
- K. Resolution No. 20-R-0066 - Contract Award – 2021 Janitorial Services for Municipal Buildings
- L. Resolution No. 20-R-0067 - IDOT Construction Engineering Services Agreement for Federal Participation for the Prince Crossing Road Local Agency Functional Overlay Project – Thomas Engineering Group, LLC

Roll call found the vote unanimous for approval. Voting Yea: Aldermen Beifuss, Brown, Dimas, Hallett, and Ligino-Kubinski. Voting Nay: 0.

5. Items for Discussion.

4.A. 2021 Forestry Maintenance Program – Rejection of Bids; 4.C. Resolution No. 20-R-0058 – Contract Award – Cemetery Management, Inc. (John B. Reynolds) for Cemetery Sexton Services For Fiscal Years 2021 thru 2023; and 4.E. Resolution No. 20-R-0060 – Contract Award – Kramer Tree Specialists, Inc. for the 2021 thru 2023 Citywide Monthly Brush Collection Program. Alderman Beifuss requested a summary of Consent Items A, C, and E. Mr. Flatter gave a verbal synopsis of the agenda items summaries for each Item. **Alderman Brown made a motion, seconded by Alderman Ligino-Kubinski to approve.**

Roll call found the vote unanimous for approval. Voting Yea: Aldermen Beifuss, Brown, Dimas, Hallett, and Ligino-Kubinski. Voting Nay: 0.

6. Unfinished Business. None.

7. New Business.

A. Fiscal Year 2021-2025 Capital Improvement Program. Mr. Flatter presented the Five-Year Capital Improvement Program (CIP) and indicated he was looking for authorization for the City Administrator to include it in the 2021 Budget. Following some discussion, there was a consensus to send the CIP on to the City Administrator for the 2021 Budget. **Alderman Dimas made a motion, seconded by Alderman Hallett to approve.**

Roll call found the vote unanimous for approval. Voting Yea: Aldermen Beifuss, Brown, Dimas, Hallett, and Ligino-Kubinski. Voting Nay: 0.

8. Reports from Staff. None.

9. Adjournment. At 7:47 P.M., Alderman Dimas made a motion to adjourn, seconded by Alderman Hallett. Roll call found the vote unanimous for approval.

Respectfully submitted,

Ashley Heidorn
Administrative Assistant of Public Works

CITY OF WEST CHICAGO

INFRASTRUCTURE COMMITTEE AGENDA ITEM SUMMARY

ITEM TITLE:

Procurement of Organic Enhanced Salt Brine Blend Liquid for Roadway Anti-Icing and Road Salt Pre-Wetting from Gasaway Distributors, Inc.

AGENDA ITEM NUMBER: 4.A**COMMITTEE AGENDA DATE:** December 3, 2020**COUNCIL AGENDA DATE:** December 7, 2020**STAFF REVIEW:** Robert E. Flatter, P.E., Director of Public Works**SIGNATURE** **APPROVED BY CITY ADMINISTRATOR:** Michael L. Guttman**SIGNATURE** _____**ITEM SUMMARY:**

Annually, since circa 2010, the City purchases and utilizes an organic enhanced salt brine blend liquid which is sprayed on City streets in advance of a snow storm event (i.e., anti-icing) and sprayed onto road salt as it is dispensed from trucks (i.e., pre-wetting) to enhance the snow and ice melting effects and minimize salt bounce. Typically the blend utilized is a 70/20/10 mixture consisting of 70% salt brine, 20% organic substance (e.g., beet juice, etc.), and 10% calcium chloride.

Associated with construction of the new salt barn at 1350 W. Hawthorne Lane, the City recently installed three 10,000-gallon poly-tanks for storage of the organic enhanced salt brine blend liquid. These three tanks, combined with the two existing 4,500-gallon tanks at the Street Division Garage, located at 135 W. Grandlake Boulevard, give the City a storage capacity of 39,000 gallons. Use of the organic enhanced salt brine blend liquid helps to minimize the use of road salt and, for small snow events (i.e., dustings of ½" or less), helps to minimize the need for snow response.

Use of the organic enhanced salt brine blend liquid is directly dependent on winter weather conditions, roadway temperatures, and number of snow or icing events. During the heart of winter, 5,400 gallons of liquid may be used per event (i.e., approximately 3,400 gallons to spray/anti-ice all roads in advance of the snow event and approximately 2,000 gallons to pre-wet road salt during the event).

Annually staff seeks comparable pricing for the 70/20/10 mixture delivered. For the 2020-2021 winter season, the lowest pricing received was from Gasaway Distributors, Inc. of Oak Brook Illinois, at \$0.85 per gallon. Pricing was also received from Industrial Systems, Ltd. of Lakemoor, Illinois, at \$1.12 per gallon, and SNI Solutions of Geneseo, Illinois, at \$1.20 per gallon.

Staff seeks authorization to purchase, and have delivered, up to 47,000 gallons of organic enhanced salt brine blend liquid from Gasaway Distributors, Inc. of Oak Brook, Illinois, for an amount not to exceed \$40,000.00, for the 2020-2021 winter season.

Purchase of the organic enhanced salt brine blend liquid will be paid from the Capital Projects Funds (08-34-53-4611) where adequate funds are budgeted for the 2020-2021 winter season.

ACTIONS PROPOSED:

Authorize the purchase and delivery of up to 47,000 gallons of organic enhanced salt brine blend liquid from Gasaway Distributors, Inc. of Oak Brook, Illinois, for an amount not to exceed \$40,000.00, for the 2020-2021 winter season.

CITY OF WEST CHICAGO

INFRASTRUCTURE COMMITTEE AGENDA ITEM SUMMARY

ITEM TITLE:

Change Order No.1 & Final - 2020 Emerald Ash Borer
Insecticidal Treatment Program

AGENDA ITEM NUMBER:

4.B.

COMMITTEE AGENDA DATE: December 3, 2020

COUNCIL AGENDA DATE: December 7, 2020

STAFF REVIEW: Robert E. Flatter, P.E., Director of Public Works

SIGNATURE



APPROVED BY CITY ADMINISTRATOR: Michael L. Guttman

SIGNATURE

**ITEM SUMMARY:**

On Friday, August 28, 2020, the City Administrator executed a Contract with Emerald Tree Care, LLC of Roselle, Illinois, to provide Basil System Soil injections as part of the on-going Citywide Emerald Ash Borer (EAB) Insecticidal Treatment Program. Treatment consists of Basil System Soil injections with an insecticide known as Imidacloprid and balanced with fertilizers, micronutrients, and organic bio-stimulants to support plant functions, promote root growth, improve overall plant health, and to manage the spread and negative impact of the EAB for Ash trees in various parkway and other City owned property locations. The Fiscal Year 2020 contract was executed for an amount not to exceed \$19,950.00, which was based on treatment for an estimated 15,960 diameter inches at a treatment cost of \$1.25 per inch diameter. However, the final cost of services is to be based on actual field measurements taken at the time of treatment.

The actual treated Ash tree total for Fiscal Year 2020 was 1,242 trees with a measured overall total of 17,778 diameter inches (1,818 diameter inch increase over the estimated amount), resulting in an overall contract amount of \$22,222.50 for services rendered. The additional cost of \$2,272.50 for the 2020 Emerald Ash Borer Insecticidal Treatment Program results in a final contract value that exceeds the spending authority of the City Administrator.

Therefore, staff recommends approval of Change Order No. 1 and Final, in the amount of \$2,272.50, to the Contract with Emerald Tree Care, LLC of Roselle, Illinois, for 2020 Emerald Ash Borer Insecticidal Treatment Program, resulting in an overall contract total of \$22,222.50.

ACTIONS PROPOSED:

Approve Change Order No. 1 and Final, in the amount of \$2,272.50, to the Contract with Emerald Tree Care, LLC of Roselle, Illinois, for 2020 Emerald Ash Borer Insecticidal Treatment Program, resulting in an overall contract total of \$22,222.50.

COMMITTEE RECOMMENDATION:

CITY OF WEST CHICAGO

PUBLIC WORKS

REQUEST FOR
AUTHORIZATION FOR CHANGE ORDERSTO: Michael Guttman
City Administrator

Project: 2020 Emerald Ash Borer Insecticidal Treatment Program

Authorization No. 1 and Final

Date: 10/31/2020

Contractor: Emerald Tree Care, LLC

Dear Sir:

I recommend that a change be made as follows to the above contract:

An (addition, extension, deduction) will be made from Station _____ to Station _____,
a net length of _____ miles. This change revises the total length to _____ miles.The estimated quantities are shown below. The first addition of an item not in the
original contract under the fund type is indicated by asterisk (*).

ITEM NO.	*	ITEM DESCRIPTION AND UNIT	QUANTITY	UNIT	UNIT PRICE	TOTAL ADDITION/REDUCTION
1		Additional inch diameter treated as measured in the field	1,818	Each	\$1.25	\$2,272.50

Totals: \$2,272.50

Amount of Original Contract: \$19,950.00
 Previous Change Orders:
 Net Change to Date: \$2,272.50
 % of Original Contract Price: 11.39%

State fully the nature and reason for the change:

Field measurement at the time of treatment exceeded the estimated quantity for the
original contract amount.

When the net increase or decrease to the contract exceeds \$10,000 or the time of completion is increased or
 decreased by 30 days or more, one of the following statements shall be checked.

- ☐ The undersigned determine that the circumstances that necessitate this change were not
reasonably foreseeable at the time of the original contract.
- ☐ The undersigned determine that the circumstances that necessitate this change were not
within the contemplation of the contract as signed.
- ☐ The undersigned determine that this change is in the best interest of the local agency and is
authorized by law.

Date: December 7, 2020

Date: December 7, 2020

Approved:

Attest:

Mayor Ruben Pineda_____
City Clerk Nancy M. Smith

CITY OF WEST CHICAGO

INFRASTRUCTURE COMMITTEE AGENDA ITEM SUMMARY

ITEM TITLE:

Resolution No. 20-R-0074 – Contract Amendment No. 1 -
Procurement of Coarse and Fine Aggregate Material Delivered
For Fiscal Year 2021

AGENDA ITEM NUMBER:4.Cc**COMMITTEE AGENDA DATE:** December 3, 2020**COUNCIL AGENDA DATE:** December 7, 2020**STAFF REVIEW:** Robert E. Flatter, P.E., Director of Public Works**SIGNATURE** **APPROVED BY CITY ADMINISTRATOR:** Michael L. Guttman**SIGNATURE** _____**ITEM SUMMARY:**

Aggregate Material, such as gravel, rock and sand, is used in numerous maintenance and repair activities performed by staff in the Public Works Department, including shoulder work on unimproved roads and alleys, sand bags, and underground utility repairs in or near streets and sidewalks. Aggregate material is ordered and delivered on an as needed basis and total quantities vary each year, mostly dependent on the number of utility repairs (i.e., watermain breaks, sanitary sewer blockages and repairs, etc.). Aggregate material purchase is budgeted and paid for from the Sewer Fund, Water Fund and General Fund. The specifications allow for variations in total unit quantities ordered based on the needs for each item, provided the total contract amount is not exceeded. Estimated quantities are used for bidding for the purpose of establishing unit prices.

The current 2020 Coarse and Fine Aggregate Materials Delivered contract, which was awarded to Viking Brothers, Inc. of Aurora, Illinois, in the amount of \$47,390.00, contains a clause that reads "The contract may be extended for two (2) additional years through mutual agreement between the Successful Bidder and the City of West Chicago for the same unit prices." On November 16, 2020, staff received a letter from Mr. Craig Melby, President of Viking Brothers, Inc., which indicated a willingness to hold its 2020 unit prices for Fiscal Year 2021 (letter attached).

Viking Brothers, Inc. performed very well during 2020. Therefore, it is staff's recommendation that a Contract extension be awarded for procurement of coarse and fine aggregate material delivered for Fiscal Year 2021 to Viking Brothers, Inc. of Aurora, Illinois, for an amount not to exceed \$47,390.00 (identical to contract/bid amount awarded for Fiscal Year 2020).

ACTIONS PROPOSED:

Approve Resolution No. 20-R-0074 authorizing the Mayor to execute Contract Amendment No. 1 with Viking Brothers, Inc. of Aurora, Illinois, for the procurement of coarse and fine aggregate material delivered for Fiscal Year 2021, for an amount not to exceed \$47,390.00.

COMMITTEE RECOMMENDATION:

RESOLUTION NO. 20-R-0074

**A RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE CONTRACT
AMENDMENT NO. 1 WITH VIKING BROTHERS, INC. FOR THE
PROCUREMENT OF COARSE AND FINE AGGREGATE MATERIAL
DELIVERED FOR FISCAL YEAR 2021**

BE IT RESOLVED by the City Council of the City of West Chicago, in regular session assembled, that the Mayor is hereby authorized to execute Contract Amendment No. 1 for the procurement of Coarse and Fine Aggregate Material Delivered, between Viking Brothers, Inc. and the City of West Chicago, for an amount not to exceed \$47,390.00, for Fiscal Year 2021, in substantially the form attached hereto and incorporated herein as Exhibit "A".

APPROVED this 7th day of December, 2020

AYES: _____

NAYES: _____

ABSTAIN: _____

ABSENT: _____

Mayor Ruben Pineda

ATTEST:

City Clerk Nancy M. Smith

FIRST AMENDMENT TO AGREEMENT BETWEEN THE
CITY OF WEST CHICAGO, ILLINOIS AND VIKING BROTHERS, INC. FOR
THE PROCUREMENT OF COARSE AND FINE AGGREGATE MATERIAL DELIVERED

This FIRST AMENDMENT, made this ____ day of December, 2020, between CITY OF WEST CHICAGO, a body politic and corporate, with offices at 475 Main Street, West Chicago, Illinois 60185 (hereinafter referred to as the CITY) and VIKING BROTHES, INC., licensed to do business in the State of Illinois, with offices at 1665 Eastwood Drive, Aurora, Illinois 60506 (hereinafter referred to as the CONTRACTOR), hereinafter together referred to as the "PARTIES":

R E C I T A L S

WHEREAS, the Illinois General Assembly has granted the CITY OF WEST CHICAGO (hereinafter "CITY") authority to enter into agreements for the purposes of providing professional services (pursuant to the Municipal Code, 65 ILCS 5/1-1-10, et. seq.); and,

WHEREAS, the CITY and CONTRACTOR had previously entered into an Agreement (hereinafter "AGREEMENT"), dated May 28, 2020, for services associated with the procurement and delivery of coarse and fine aggregate material during Fiscal Year 2020; and,

WHEREAS, per the AGREEMENT, the Contract may be extended for two (2) additional years through mutual agreement between the PARTIES; and,

WHEREAS, on November 16, 2020, Mr. Craig Melby, President of Viking Brothers, Inc., provided the CITY with written notice of its willingness to hold its prices for the 2020 Coarse and Fine Aggregate Material Delivered for Fiscal Year 2021 (contract to end December 31, 2021); and,

WHEREAS, the CITY was satisfied with the services provided and material delivered during Fiscal Year 2020; and,

WHEREAS, the CITY wishes to memorialize the terms and conditions of its FIRST AMENDMENT with the CONTRACTOR.

NOW, THEREFORE, in consideration of the promises, the mutual covenants, terms, and conditions herein set forth, and the understandings of each Party to the other, the Parties do hereby mutually covenant, promise and agree as follows:

1. The AGREEMENT, dated May 28, 2020, pertaining to the procurement of coarse and fine aggregate material delivered during Fiscal Year 2020, is hereby amended to reference an Agreement termination date of December 31, 2021.

All other provisions of the original AGREEMENT shall remain unchanged.

IN WITNESS OF, the parties set forth their hands and seals as of the date first written above.

CITY OF WEST CHICAGO

VIKING BROTHERS, INC.

BY: _____
RUBEN PINEDA
MAYOR

BY: _____
CRAIG MELBY
PRESIDENT

ATTEST BY:

ATTEST BY:

NANCY M. SMITH
CITY CLERK

NAME:
TITLE:



TO THE CITY OF WEST CHICAGO PUBLIC WORKS

VIKING BROS INC HAS BEEN ASKED TO EXTEND CURRENT PRICING FOR THE 2020 COURSE AND FINE AGGREGATE MATERIAL INTO 2021. VIKING BROS WILL AGREE TO EXTENDING THIS ONE MORE YEAR. THANK YOU.

CRAIG MELBY , PRESIDENT.

A large, stylized handwritten signature in black ink, which appears to be 'C. Melby'.

CITY OF WEST CHICAGO

INFRASTRUCTURE COMMITTEE AGENDA ITEM SUMMARY

ITEM TITLE:

Resolution No. 20-R-0076 – Contract Award – Donohue & Associates, Inc. – Phosphorous Removal Pilot Study for the West Chicago/Winfield Wastewater Authority Regional Wastewater Treatment Plant.

AGENDA ITEM NUMBER: 4.D.**COMMITTEE AGENDA DATE:** December 3, 2020**COUNCIL AGENDA DATE:** December 7, 2020**STAFF REVIEW:** Robert E. Flatter, P.E., Director of Public Works**SIGNATURE** **APPROVED BY CITY ADMINISTRATOR:** Michael L. Guttman**SIGNATURE** _____**ITEM SUMMARY:**

On June 1, 2015, authorized by Resolution No. 15-R-0030, the Mayor executed an Agreement with the DuPage River Salt Creek Workgroup for participation in its local funding program to complete alternate stream restoration projects required as a special condition of the City's National Pollutant Discharge Elimination System (NPDES) Permit for its then Regional Wastewater Treatment Plant; known today as the West Chicago/Winfield Wastewater Authority (WCWWA) Regional Wastewater Treatment Plant.

The WCWWA Regional Wastewater Treatment Plant (WWTP) operates under an NPDES permit regulated by the Illinois Environmental Protection Agency (IEPA); Permit No. IL0024369. As authorized by the Clean Water Act, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. Industrial, municipal, and other facilities must obtain permits from the IEPA if their discharges go directly to surface waters and must renew its permit every five years. For years, the USEPA has pressured the IEPA to impose new and stricter nutrient removal limitations on wastewater treatment plants consistent with national policy.

One local environmental group, the DuPage River Salt Creek Workgroup (DRSCW), formed in 2005 in response to concerns about Total Maximum Daily Loads (TMDLs) being set for the East & West Branches of the DuPage River and Salt Creek, is made up of local communities, Publically Owned Treatment Works (POTWs) or WWTPs, and private environmental organizations. The DRSCW has been working to produce comprehensive data sets for local watersheds to determine and resolve priority stressors to local aquatic systems. The organization continues to implement targeted watershed activities that resolve priority waterway problems efficiently and cost effectively. Working directly with the other environmental groups and the IEPA, the DRSCW has created, submitted, and received support for the implementation of special permit conditions and stream restoration projects. It is DRSCW's plan that implementation of its stream restoration projects will produce the greatest improvement in water quality and habitat for less money than individual POTW projects. As a result of being a member of the DRSCW and paying Project Funding Assessments, participating POTWs received a temporary reprieve from the IEPA to upgrade its own POTW and comply with strict phosphorus limits likely to be imposed by the IEPA.

With participation in the DRSCW watershed activities and planning projects, the WCWWA is committed to paying for DRSCW's planning projects thru DRSCW's Fiscal Year 2022-2023 (ending February 28, 2023). Most of the projects are not in the West Branch of the DuPage River, which is West Chicago's watershed. The following provides an overview of the annual WCWWA Project Funding Assessments per the current Agreement:

CITY OF WEST CHICAGO

<u>Fiscal Year:</u>	<u>Project Assessment:</u>
18-19	\$ 76,056.00
19-20	\$126,081.00
20-21	\$129,863.00
21-22	\$133,759.00
22-23	\$137,772.00

Renewal of the WCWWA's NPDES permit is currently under review by the IEPA. As a likely condition of the permit renewal, the IEPA will require continued participation in the DRSCW and paying Project Funding Assessments to continue to receive a temporary reprieve from the IEPA to comply with strict phosphorus limits inevitably to be imposed at some future date. The DRSCW has been negotiating with the IEPA on permit language. DRSCW's draft language includes an extension of the implementation of Phosphorus limits of 1 mg/L monthly average for an additional three years along with an additional three years of Project Funding Assessments (anticipated to be approximately \$125,000.00 annually for the WCWWA). Alternately, we could elect to remain members of the DRSCW but stop paying Project Funding Assessments, which in turn, the IEPA will impose a phosphorus limit(s) with specific compliance dates as a condition of our renewed permit. The unknown factor is at what limit the IEPA will restrict phosphorus (i.e., 1.0 mg/l, 0.5 mg/l, or 0.1 mg/l) and how long it will give the WCWWA to comply with said limit.

The IEPA has not stated when it will begin issuing new NPDES permits to those POTWs currently seeking renewal; with either phosphorus limits with which the POTW must comply, or with special conditions requiring the permittee to participate in the DRSCW watershed activities and planning projects. The DRSCW anticipates that permit language will be resolved in mid-December 2020 with permits being issued by the IEPA shortly thereafter.

To help determine the best course of action for the WCWWA, in anticipation of the pending nitrogen and phosphorus limits inevitably to be imposed on future NPDES permits, the City needs to gain an understanding of the improvements and costs that will be required at the WWTP if strict phosphorus limits were to be imposed as a new NPDES permit condition. This will help determine which is more cost effective: 1) participation in the DRSCW and continued payment of Project Funding Assessment (estimated at \$125,000 per year for Fiscal Year 23-24 thru 27-28) or, 2) make necessary compliance upgrades to the WWTP. Staff believes that with recent improvements at the WWTP, most notably the replacement of the antiquated tertiary sand filters with rotation disk membrane filters, compliance with a 1.0 mg/l limit could be easily achieved with chemical addition.

As a result, the City desires to hire Donohue & Associates, Inc. (Donohue) to review and evaluate the WWTP current facilities and operations, conduct a chemical dosing phosphorus removal study, to determine potential improvements required, and associated costs for nitrogen and phosphorus removal compliance (e.g., for 1.0 mg/l, 0.5 mg/l, and 0.1 mg/l limit). At staff's request, Donohue has provided a proposal, and is willing to perform a phosphorus removal study, for an amount not to exceed \$53,700.00 (see attached proposal for additional clarification).

The phosphorus removal study will be paid for by the WCWWA.

ACTIONS PROPOSED:

Approve Resolution No. 20-R-0076 authorizing the Mayor to execute an Agreement with Donohue & Associates, Inc., for an amount not to exceed \$53,700.00, for professional engineering services related to a Phosphorous Removal Pilot Study for the West Chicago/Winfield Wastewater Authority Regional Wastewater Treatment Plant.

COMMITTEE RECOMMENDATION:

RESOLUTION NO. 20-R-0076

**A RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE A
PROFESSIONAL ENGINEERING SERVICES AGREEMENT WITH
DONOHUE & ASSOCIATES, INC. FOR SERVICES RELATED TO A
PHOSPHOROUS REMOVAL PILOT STUDY FOR THE WEST
CHICAGO/WINFIELD WASTEWATER AUTHORITY REGIONAL
WASTEWATER TREATMENT PLANT**

BE IT RESOLVED by the City Council of the City of West Chicago, in regular session assembled, that the Mayor is hereby authorized to execute a Professional Engineering Services Agreement for services related to a Phosphorous Removal Pilot Study for the West Chicago/Winfield Wastewater Authority Regional Wastewater Treatment Plant, between the City of West Chicago and Donohue & Associates, Inc., for an amount not to exceed \$53,700.00, in substantially the form attached hereto and incorporated herein as Exhibit "A".

APPROVED this 7th day of December, 2020.

AYES: _____

NAYES: _____

ABSTAIN: _____

ABSENT: _____

Mayor Ruben Pineda

ATTEST:

City Clerk Nancy M. Smith

Project Plan

Quality Work,
On Time,
On Budget



Phosphorus Removal Study

West Chicago/Winfield
Wastewater Authority

Date: November 16, 2020

PART I

PROJECT DESCRIPTION/SCOPE OF SERVICES/TIMING

A. Project Purpose and Description

The West Chicago/Winfield Wastewater Authority (OWNER) owns and operates a wastewater treatment facility rated at 7.64 mgd daily average flow (DAF) and 20.3 mgd design maximum flow (DMF). The treatment plant consists of screening, grit removal, primary clarification, activated sludge, secondary clarification, tertiary disk filtration, disinfection, anaerobic digestion, belt filter press, and landfill of dewatered biosolids.

The OWNER has contracted with Donohue & Associates, Inc. (ENGINEER) to prepare a phosphorus study utilizing Biowin and a chemical feed trial to determine the chemical use needed to meet a 1.0, 0.5 and 0.1 mg/l effluent phosphorus limits.

The first phase of nutrient removal study includes development of a sampling program for the facility and data analysis for the sampling program. The ENGINEER will develop a recommended sampling program. Samples will be collected by OWNER's staff and analyzed by OWNER's laboratory staff or a third party laboratory. If required, the OWNER will contract with the laboratory directly to perform the analyses identified by the ENGINEER. The ENGINEER will analyze the data provided by the laboratory for use in the process model.

The second phase of the study will be development, calibration, and validation of a steady state process model.

The third phase of the study will be use of the process model to evaluate various options needed to meet removal levels. Options evaluated will include chemical phosphorus removal and biological phosphorus removal. A pre-screening analysis will be done to perform a high level screening of potential alternatives. The pre-screening analysis will be reviewed with the OWNER and pared down to the most reasonable alternatives for more detailed evaluation. Up to four total alternatives will be evaluated.

The last phase of the study will be to develop costs for each alternative, including capital and operating costs, and present the results of the studies in a report.

The OWNER also wishes to conduct a chemical phosphorus removal pilot study to evaluate the relationship between chemical phosphorus removal and actual chemical usage to establish a more definitive annual chemical cost estimate as well as to determine impacts to the solids processing facilities. Chemical phosphorus removal increases sludge production due to formation of chemical precipitate. The OWNER would like to investigate the impact of the increased sludge production on the liquid and solids process treatment trains. The OWNER's staff will conduct the pilot work including setup, chemical dosing, and sampling. ENGINEER will provide assistance with planning, providing a spreadsheet for data recording,

trouble-shooting, and data analysis. ENGINEER assumes the pilot testing will run for 8 weeks and be performed for 3 different chemicals. ENGINEER will use the results of the pilot to revise the chemical doses and annual costs developed in the modeling evaluation to provide more accurate planning estimates.

B. Scope of Services

Basic Services to be provided by ENGINEER for this Project under this Agreement are as follows:

1. Project Development and Management

- 1.1. Assign Terry Boyer, PE, as the Project Manager who will coordinate Project activities and will be the principal liaison between the OWNER and ENGINEER.
- 1.2. Prepare a Project plan that addresses the Project background and location; the Project purpose and description; OWNER and Project team member information and roles; a work outline for design services; Project schedule; Project budget by work tasks; and additional information that may be appropriate.
- 1.3. Conduct a project kick-off meeting with the OWNER's representatives to review Project goals and objectives and to review the proposed Project schedule.
- 1.4. Provide monthly progress reports to the OWNER to document services performed and schedule status. This is typically performed as part of the monthly Project invoicing routine.

2. Existing Facility Study for Phosphorus Removal and Expansion

2.1. Special Monitoring Program

- a. Attend a one day site visit to tour the WWTP. The purpose of the site visit is to gather background knowledge and identify flow streams that require sampling.
- b. Prepare a draft monitoring program for the facility to accomplish the following sampling and testing activities:
 - i. ENGINEER will recommend phosphorus and nitrogen sampling and testing activities to be added to the facilities' regular operations monitoring program.
 - ii. ENGINEER will recommend additional sampling and testing for two separate periods of a two week special monitoring program. These separate periods will be summer months and winter months. This program will provide the necessary data to fully characterize the influent wastewater at the facility for model setup.
- c. Attend a meeting to review the draft monitoring program with the OWNER's plant staff and laboratory staff.

- d. Incorporate OWNER staff comments and prepare final version of the monitoring programs. Deliver the final version in electronic format.
- e. Receive electronic data files with available operating and performance data related to influent quality, flow rates, performance monitoring, aeration rates, RAS pumping rates, etc.
- f. Receive electronic data files from the special monitoring program and prepare summary tables displaying average, minimum, and maximum values for each of the sampling parameters. Compare these values with default model values.
- g. Prepare influent characteristic input tables for use with the BioWin process simulator program for the facility. These tables will be used for setting up BioWin models of the facilities.

2.2. Model Setup and Evaluations

- a. Evaluate historic influent flows and loadings to the plant from 2015 to present along with the monitoring program data. This data will be used to set up the framework of the influent characterization for the model.
- b. Evaluate historic operations data from 2015 to present along with the special monitoring program data and receive input from the operations staff to setup the framework of the existing plant simulation and calibration.
- c. Develop a steady state model of the existing facility with a focus on the activated sludge treatment train using the BioWin Process Simulator.
- d. Calibrate and validate the model using special monitoring and historic operations data along with input from the staff on operating strategies.
- e. Using the calibrated and validated model, evaluate the following three levels of nutrient removal in order to account for potentially more stringent limits in the future:
 - i. Effluent total phosphorus limit of 1 mg/L and effluent total nitrogen limit of 10 mg/L.
 - ii. Effluent total phosphorus limit of 0.5 mg/L and effluent total nitrogen limit of 8 mg/L.
 - iii. Effluent total phosphorus limit of 0.1 mg/L and effluent total nitrogen limit of 6 mg/L.
- f. Perform a pre-screening analysis of the options for nutrient removal.
- g. Meet with the OWNER to discuss the pre-screening analysis and to decide on the four alternatives for the alternatives evaluation.
- h. Identify conceptual upgrades required for each of the three levels of nutrient removal along with estimated annual chemical requirements. Phosphorus removal will be evaluated based on both biological and chemical removal strategies.
- i. Identify process control philosophy and modifications required for the alternatives evaluated.
- j. Identify impacts to the solids storage and processing areas of the WWTP for the alternatives evaluated.

- k. Identify construction sequencing requirements for each of the alternatives evaluated.

2.3. Report Preparation and Workshop

- a. Prepare a draft Nutrient Removal Planning Report presenting the background, analysis, and results of the nutrient removal evaluations for the WWTP.
- b. Prepare conceptual layout sketches of identified upgrades on a WWTP site plan and include as figures in the report.
- c. Prepare conceptual construction and annual operating cost estimates of identified upgrades for the facility and include as tables in the report.
- d. Deliver the draft report in electronic PDF format and attend a workshop to review and discuss the draft report with the OWNER's engineering staff and WWTP staff.
- e. Revise the Nutrient Removal Planning Report based on the comments from the review meeting and deliver the final report in electronic PDF format.

2.4. Chemical Phosphorus Removal Pilot Assistance

- a. Prepare a draft chemical phosphorus removal pilot study protocol, monitoring program, and schedule.
- b. Submit the draft protocol, monitoring program, and schedule to OWNER for review and comment.
- c. Conduct a kickoff workshop to discuss the pilot study and make any revisions to the protocol and monitoring program.
- d. Incorporate OWNER's comments and finalize the protocol, monitoring program, and schedule.
- e. Provide assistance to OWNER during the pilot testing to answer questions, review preliminary findings, and make necessary adjustments to protocol and monitoring program. ENGINEER assumes a total of 24 hours of assistance including one site visit and up to 3 chemicals will be pilot tested.
- f. Prepare a draft memorandum summarizing the results of the pilot investigation and submit to the OWNER for review and comment. Results will include monitoring observations, dose response, sludge production, impact to the liquid process and solids processing trains, revised annual chemical estimates, and revised annual cost estimates (previously developed in above model evaluation).
- g. Conduct a review workshop with OWNER to discuss the results and conclusions out of the pilot study.
- h. Incorporate OWNER's comments into the memorandum and finalize. Provide OWNER with PDF files of final memorandum.

C. Project Timing

Donohue shall be authorized to commence the Services set forth herein upon execution of this Agreement.

Existing Facility Study for Phosphorus Removal

- a. The chemical phosphorus pilot study will be completed within 90 calendar days from notice to proceed and is dependent on OWNER setup of pilot test equipment and chemical totes.
- b. Biowin Modeling will be completed within 180 calendar days from notice to proceed and is dependent on the timing required to perform cold weather and warm weather special sampling.

D. Exclusions

The following items have not been included in the scope of services for this project:

1. Laboratory testing fees for the Biowin special sampling.
2. Chemical, chemical feed facilities and rental fees for the chemical addition pilot study.

PART II

OWNER RESPONSIBILITIES

A. Owner agrees to:

1. Identify a person authorized to act as the Owner's representative to respond to questions and make decisions on behalf of Owner, accept completed documents, approve payments to Donohue, and serve as liaison with Donohue as necessary for Donohue to complete its Services.
2. Furnish to Donohue copies of existing documents and data pertinent to Donohue's Scope of Services, including but not limited to and where applicable: design and record drawings for existing facilities; property descriptions, land use restrictions, surveys, geotechnical and environmental studies, or assessments.
3. Provide to Donohue existing information regarding the existence and locations of utilities and other underground facilities.
4. Provide Donohue safe access to premises necessary for Donohue to provide the Services.
5. Inform Donohue whenever Owner observes or becomes aware of a Hazardous Environmental Condition that may affect Donohue's Scope of Services or time for performance.

PART III

COMPENSATION, BILLING AND PAYMENT

A. COMPENSATION

Compensation for the professional engineering services as defined in Part I shall be in accordance with ENGINEER's standard charge out rates in effect at the time the Services are performed. Routine expenses will be billed at cost and subconsultant costs will include a 10% markup. The total compensation for these basic Services will not exceed \$53,700.00 without prior written approval from OWNER.

B. Donohue will bill Owner monthly, with net payment due in 30 days.

C. Donohue will notify Owner if Project scope changes require modifications to the above-stated contract value. Services relative to scope changes will not be initiated without written authorization from Owner.