NORTH AURORA VILLAGE BOARD MEETING
MONDAY, JANUARY 20, 2025 – 7:00 P.M.
NORTH AURORA VILLAGE HALL - 25 E. STATE ST.

ZOOM VIEWING INFORMATION
Website Address: https://us02web.zoom.us/j/82845420032
Meeting ID: 828 4542 0032 | **Dial In:** +1 312 626 6799

AGENDA

CALL TO ORDER - SILENT PRAYER - MEDITATION – PLEDGE OF ALLEGIANCE

ROLL CALL

AUDIENCE COMMENTS

RECOGNITION
1. Holiday Property Recognition Contest Winners

CONSENT AGENDA
1. Village Board Minutes dated 01/05/2025
2. Bills List Dated 01/20/2025 in the Amount of **$637,142.42**
3. Approval of Resolution Approving a Professional Service Agreement with B&F Construction Code Services, Inc.

NEW BUSINESS
1. Approval of Resolution Approving a Collective Bargaining Agreement Between the Village of North Aurora and Illinois Fraternal Order of Police Labor Council
2. Approval to Waive Bid Process and Award Contract for 1.25 MG Princeton Drive Elevated Water Storage Tank Project to CBI Services, LLC in the Amount of **$7,556,954.00**

VILLAGE PRESIDENT

TRUSTEE COMMENTS

ADMINISTRATOR'S REPORT

VILLAGE DEPARTMENT REPORTS

ADJOURN

Initials: SB

NORTH AURORA VILLAGE BOARD MEETING

VILLAGE BOARD MEETING MINUTES

Monday, January 6, 2025

CALL TO ORDER
Mayor Gaffino called the meeting to order.

SILENT PRAYER - MEDITATION – PLEDGE OF ALLEGIANCE

ROLL CALL
In attendance: Mayor Mark Gaffino, Trustee Jason Christiansen, Trustee Laura Curtis, Trustee Mark Guethle, Trustee Mike Lowery, Trustee Todd Niedzwiedz, Trustee Carolyn Salazar

Staff in attendance: Village Administrator Steve Bosco, Finance Director Jason Paprocki, Community Development Director Nathan Darga, Village Attorney Kevin Drendel, Public Works Director Brian Richter, Police Chief Joe DeLeo.

AUDIENCE COMMENTS – None

APPOINTMENTS- Police Pension Board Appointment

1. Police Pension Board-Janet Godek

Mayor Gaffino appointed Janet Godek to the North Aurora Police Pension Board. All were in favor of the appointment.

CONSENT AGENDA

1. Village Board Minutes Dated 12/16/2024; Committee of the Whole Minutes Dated 12/16/2024
2. Bills List Dated 01/06/2025 in the Amount of $1,391,105.50
3. Approval of Resolution for Maintenance of Streets and Highways by North Aurora

Motion for approval made by Trustee Guethle and seconded by Trustee Curtis. **Roll Call Vote:** Trustee Guethle – yes, Trustee Lowery – yes, Trustee Niedzwiedz – yes, Trustee Salazar – yes, Trustee Christiansen – yes, Trustee Curtis –yes. **Motion approved (6-0)**.

NEW BUSINESS

1. **Approval of Ordinance Approving the Second Amendment to Ordinance 05-05-02-02, Which Granted a Special Use for a Planned Unit Development for the North Aurora Towne Centre in the Village of North Aurora**

Community Development Director Darga reminded the Village Board that this development was discussed at a previous Committee of the Whole meeting and the ordinance would be an amendment to

the Towne Center PUD to re-establish a residential component. This would be the area north of Orchard Gateway Boulevard. This would also approve the site plan for Clover's development on the easternmost five acres of that site. The development would be a 124 unit senior living building, for residents 55 years of age and up.

Motion for approval made by Trustee Curtis and seconded by Trustee Salazar. **Roll Call Vote:** Trustee Curtis –yes, Trustee Guethle – yes, Trustee Lowery – yes, Trustee Niedzwiedz – yes, Trustee Salazar – yes, Trustee Christiansen – yes. **Motion approved (6-0)**.

2. **Approval to Waive Bid Process for Public Works Facility Elevator and Award Contract to Schindler Elevator in the Amount of $127,440.00**

Public Works Director Richter reminded the Village Board that at the August 14th Board Meeting 30 bid packages were open for the construction of the new Public Works Facility, including the installation of the elevator. At that time Fredrick Quinn Corporation did not recommend awarding the bid, they were still in the process of reviewing the package. The bid amount was included in the Grand Maximum Pricing for the contract with the Village. Since September, FQC had been going back and forth with Otis Elevator on terms of the contract and have been unable to come to terms. Currently, FQC recommended the termination of negotiations with Otis and procure an alternate elevator vendor. FQC had updated the Village that they had been working with Schindler Elevator on procuring the contract. FQC was able to come to terms with Schindler and provided a recommendation letter. Richter stated that there were a limited number of companies that install elevators and going out to bid again for this contract could add extra weeks to the construction. Staff and FQC were recommending waiving the bid process for the installation of the elevator and recommends approving the bid from Schindler Elevators.

Motion for approval made by Trustee Salazar and seconded by Trustee Christiansen. **Roll Call Vote:** Trustee Salazar – yes, Trustee Christiansen – yes, Trustee Curtis –yes, Trustee Guethle – yes, Trustee Lowery – yes, Trustee Niedzwiedz – yes. **Motion approved (6-0)**.

VILLAGE PRESIDENT – Mayor Gaffino wished everyone a happy new year.

TRUSTEES COMMENTS – The Trustees also wished everyone a happy new year.

ADMINISTRATOR'S REPORT – Administrator Bosco pointed out that the Public Works Department was in the process of taking down the holiday lights in the park. Bosco extended gratitude and praise to Public Works Director Richter and his staff for the exemplary work they did decorating the park. Bosco also mentioned that Public Works had moved a lot of their equipment over to the old firehouse. The Water Department was currently operating out of the old fire barn, and things were going well.

VILLAGE DEPARTMENT REPORTS

1. **Finance** – None
2. **Community Development** – Director Darga stated that the Village's Planner Dave Hansen would be leaving the Village for a new opportunity. Darga wished him the best and stated that his would be big shoes to fill.
3. **Police** – None
4. **Public Works** – None

5. **Village Attorney**- None

ADJOURNMENT

Motion to adjourn was made by Trustee Guethle and seconded by Trustee Salazar. All in favor. **Motion approved**.

Respectfully Submitted,

Jessi Watkins
Village Clerk

Accounts Payable

To Be Paid Proof List

User: ablaser
Printed: 01/16/2025 - 1:48PM
Batch: 00502.01.2025

Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
161 Lincolnway GCCP, LLC									
468909									
01092025	1/9/2025	3,589.36	0.00	01/20/2025				No	0
90-000-E290 161 S Lincolnway Site Work				Rebate Remaining Escrow Balance					
01092025 Total:		3,589.36							
161 Lincolnway GCCP, LL		3,589.36							
ACSI Mechanical Group									
468558									
20250053SK	1/6/2025	2,488.38	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				New Regulator & Spring- PD					
20250053SK Total:		2,488.38							
21250086KL	1/3/2025	1,674.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Boiler Repair- PD					
21250086KL Total:		1,674.00							
ACSI Mechanical Group T		4,162.38							
Aflac									
030540									
222144	11/27/2024	457.90	0.00	01/20/2025				No	0
01-000-2053 AFLAC				AFLAC- Nov 2024					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
222144 Total:		457.90							
540799	12/26/2024	457.90	0.00	01/20/2025				No	0
01-000-2053 AFLAC				AFLAC- Dec 2024					
540799 Total:		457.90							
Aflac Total:		915.80							
Aftermath, Inc.									
035660									
JC2024-3635	12/20/2024	300.00	0.00	01/20/2025				No	0
01-440-4799 Misc.				Bio Hazard Cell/ Booking					
JC2024-3635 Total:		300.00							
Aftermath, Inc. Total:		300.00							
AIM									
046510									
1002466	11/1/2024	126.00	0.00	01/20/2025				No	0
01-435-4267 Finance Services				Flex125- Oct 2024					
1002466 Total:		126.00							
1002528	1/1/2025	126.00	0.00	01/20/2025				No	0
01-435-4267 Finance Services				Flex125- Dec 2024					
1002528 Total:		126.00							
AIM Total:		252.00							
Alexander Negro									
468235									
01072025	1/7/2025	50.00	0.00	01/20/2025				No	0
01-410-4016 Per Diem - Plan Commission				Plan/ Zoning Commission Meeting 1/7/25					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01072025 Total:		50.00							
Alexander Negro Total:		50.00							
Allegiant Fire Protection LLC									
467757									
SO079608	1/4/2025	400.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Fire Panel Troubleshoot- PD					
SO079608 Total:		400.00							
Allegiant Fire Protection LL		400.00							
Alta Material Handling									
468913									
SE3/8105	12/30/2024	4,995.00	0.00	01/20/2025				No	0
01-445-4421 Custodial Supplies				New Scrubber Machine- PD					
SE3/8105 Total:		4,995.00							
Alta Material Handling Tot		4,995.00							
Anna Helene Tuohy									
044040									
01072025	1/7/2025	50.00	0.00	01/20/2025				No	0
01-410-4016 Per Diem - Plan Commission				Plan/ Zoning Commission Meeting 1/7/25					
01072025 Total:		50.00							
Anna Helene Tuohy Total:		50.00							
AT&T Mobility									
468386									
*** **287322262314**	12/19/2024	324.55	0.00	01/20/2025				No	0

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01-430-4652 Phones and Connectivity				Cell Phone- Admin 11/30 - 12/19					
287322262314 Total:		324.55							
*** **287322262477**	12/19/2024	126.45	0.00	01/20/2025				No	0
01-441-4652 Phones and Connectivity				Cell Phone- CommDev 11/30 - 12/19					
287322262477 Total:		126.45							
*** **287322277733**	12/19/2024	751.96	0.00	01/20/2025				No	0
01-445-4652 Phones and Connectivity				Cell Phone- PW 11/30 - 12/19					
287322277733 Total:		751.96							
*** **287322279371**	12/19/2024	566.97	0.00	01/20/2025				No	0
60-445-4652 Phones and Connectivity				Cell Phone- Water 11/30 - 12/19					
287322279371 Total:		566.97							
*** **287322279713**	12/19/2024	1,460.99	0.00	01/20/2025				No	0
01-440-4652 Phones and Connectivity				Cell Phone- PD 11/30 - 12/19					
287322279713 Total:		1,460.99							
AT&T Mobility Total:		3,230.92							
Aurora Area Convention 003770									
01082025	1/8/2025	1,734.97	0.00	01/20/2025				No	0
15-430-4752 90% Tourism Council				NA Lodging Hotel Tax/ Nov 2024					
01082025 Total:		1,734.97							
01082025-2	1/8/2025	2,748.80	0.00	01/20/2025				No	0
15-430-4752 90% Tourism Council				Red Roof Inn Hotel Tax/ Nov 2024					
01082025-2 Total:		2,748.80							
Aurora Area Convention To		4,483.77							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
B & F Construction									
015600									
20350	12/23/2024	3,739.97	0.00	01/20/2025				No	0
01-441-4276 Inspection Services				Building Inspections- Nov 2024					
20350 Total:		3,739.97							
B & F Construction Total:		3,739.97							
BMI									
044400									
57004917	1/2/2025	446.00	0.00	01/20/2025				No	0
15-430-4751 North Aurora Days Expenses				Music License 2025					
57004917 Total:		446.00							
BMI Total:		446.00							
Brian Reid									
041970									
01132025	1/13/2025	550.00	0.00	01/20/2025				No	0
01-439-4015 Police Cssn Mtgs-per Diem				Police Commission Board Meetings (11) 8/17 - 11/25					
01132025 Total:		550.00							
Brian Reid Total:		550.00							
Camic Johnson, LTD.									
03989									
168	12/26/2024	350.00	0.00	01/20/2025				No	0
01-440-4260 Legal				Legal Fees					
168 Total:		350.00							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
Camic Johnson, LTD. Tota		350.00							
Capital Printing & Die Cutting, Inc									
468305									
INV-5439	12/18/2024	1,447.70	0.00	01/20/2025				No	0
01-440-4511 Vehicle Repair and Maint				Squad Graphics					
INV-5439 Total:		1,447.70							
INV-5480	1/6/2025	1,447.70	0.00	01/20/2025				No	0
01-440-4511 Vehicle Repair and Maint				Graphics					
INV-5480 Total:		1,447.70							
Capital Printing & Die Cut		2,895.40							
CDS Office Technologies									
025560									
INV1650695	10/23/2024	312.00	0.00	01/20/2025				No	0
01-430-4870 Equipment				Squad Computer Docking Support Arm (6)					
INV1650695 Total:		312.00							
CDS Office Technologies T		312.00							
Certified Laboratories Division									
048600									
8985251	1/2/2025	236.26	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Foam Aerosol- PW Garage					
8985251 Total:		236.26							
Certified Laboratories Divi		236.26							
Cintas Corporation									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
041590									
4214925475	12/17/2024	105.87	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Rug & Towel Cleaning- PW Garage					
4214925475 Total:		105.87							
4216281838	12/30/2024	105.87	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Towel & Mat Cleaning- PW Garage					
4216281838 Total:		105.87							
5244417209	12/13/2024	577.61	0.00	01/20/2025				No	0
01-445-4422 Safety Supplies				First Aid Supplies- PW Garage					
5244417209 Total:		577.61							
5245070405	12/18/2024	80.48	0.00	01/20/2025				No	0
01-445-4422 Safety Supplies				First Aid Supplies- PD					
5245070405 Total:		80.48							
5246254111	12/26/2024	591.01	0.00	01/20/2025				No	0
01-445-4521 Mosquito Control				Bleeding Control Kits- PW Garage					
5246254111 Total:		591.01							
oF94731144	10/18/2024	395.22	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Fire Extinguishers- PD					
oF94731144 Total:		395.22							
Cintas Corporation Total:		1,856.06							
City of Aurora									
027870									
237788	12/18/2024	1,055.00	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				Monthly Water Test- Nov 2024					
237788 Total:		1,055.00							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
City of Aurora Total:		1,055.00							
Coffman Truck Sales, Inc.									
000320									
622664	12/27/2024	40.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Safety Test- Truck #176					
622664 Total:		40.00							
622705	12/27/2024	40.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Safety Test- Truck #179					
622705 Total:		40.00							
622715	12/27/2024	40.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Safety Test- Truck #185					
622715 Total:		40.00							
622812	12/27/2024	40.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Safety Test- Truck #178					
622812 Total:		40.00							
Coffman Truck Sales, Inc. T		160.00							
Comcast Business									
468904									
226572700	12/1/2024	849.62	0.00	01/20/2025				No	0
01-440-4652 Phones and Connectivity				Circuit Police LEADS					
226572700 Total:		849.62							
Comcast Business Total:		849.62							
Commercial Tire Services, Inc.									
038680									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				**Description**		**Reference**			
3330048240	12/30/2024	120.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Disposal Fee					
3330048240 Total:		120.00							
Commercial Tire Services, I		120.00							
Commonwealth Edison									
000330									
*** **1100211222**	12/9/2024	49.88	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ Deerpath & Orchard Gateway					
1100211222 Total:		49.88							
*** **1392693000**	12/16/2024	2,953.06	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlight/ 211 River Rd					
1392693000 Total:		2,953.06							
*** **1715162000**	12/9/2024	115.99	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ Orchard & White Oak					
1715162000 Total:		115.99							
*** **2223921222**	12/9/2024	244.52	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ Orchard & Oak					
2223921222 Total:		244.52							
*** **2640852222**	12/9/2024	157.83	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1200 Orchard Gateway					
2640852222 Total:		157.83							
*** **3059412222**	12/9/2024	122.91	0.00	01/20/2025				No	0
01-445-4660 Street Lighting				Silo Lighting/ 8 W State Street					
3059412222 Total:		122.91							
*** **4475962222**	12/11/2024	116.83	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ Rt56 & Rt25					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
4475962222 Total:		116.83							
*** **4479349000**	12/16/2024	10.55	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1197 Comiskey					
4479349000 Total:		10.55							
*** **4966085000**	12/9/2024	104.93	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1802 Orchard Gateway					
4966085000 Total:		104.93							
*** **5673211222**	12/16/2024	10.55	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1193 Comiskey					
5673211222 Total:		10.55							
*** **5818778000**	12/9/2024	52.43	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1901 Orchard Gateway					
5818778000 Total:		52.43							
*** **6292668000**	12/9/2024	48.96	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 19 N Lincolnway					
6292668000 Total:		48.96							
*** **6997063000**	12/16/2024	2,638.52	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights					
6997063000 Total:		2,638.52							
*** **7192223333**	12/6/2024	18.81	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1051 Kettle					
7192223333 Total:		18.81							
*** **7866272222**	12/9/2024	99.31	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 4 S Willowway					
7866272222 Total:		99.31							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
*** **8845681222**	12/9/2024	141.63	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ Orchard & Comiskey					
8845681222 Total:		141.63							
9193234586	12/12/2024	8,445.00	0.00	01/20/2025				No	0
01-445-4662 Utility				Deposit- 2 Monroe					
9193234586 Total:		8,445.00							
*** **9669222000**	12/9/2024	112.06	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ 1600 Orchard Gateway					
9669222000 Total:		112.06							
*** **9954382000**	12/9/2024	278.28	0.00	01/20/2025				No	0
10-445-4660 Street Lighting and Poles				Streetlights/ Orchard & Orchard Gateway					
9954382000 Total:		278.28							
Commonwealth Edison Tot		15,722.05							
Constellation NewEnergy, Inc. 034130									
69572876901	11/30/2024	5,695.10	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #4/WTP 10/9 - 11/7					
69572876901 Total:		5,695.10							
69572876901-02	11/30/2024	6,505.82	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #6 10/7 - 11/5					
69572876901-02 Total:		6,505.82							
69572876901-03	11/30/2024	9,773.71	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #8 10/8 - 11/6					
69572876901-03 Total:		9,773.71							
69572876901-04	11/30/2024	6,902.14	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #7 10/10 - 11/8					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
	69572876901-04 Total:	6,902.14							
69572876901-05	11/30/2024	7,204.97	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #9 10/18 - 11/18					
	69572876901-05 Total:	7,204.97							
69572876901-06	11/30/2024	10,535.50	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #5/ETP 10/10 - 11/8					
	69572876901-06 Total:	10,535.50							
69797070401	12/30/2024	7,995.70	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #4/ WTP 11/7 - 12/9					
	69797070401 Total:	7,995.70							
69797070401-02	12/30/2024	6,579.08	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #6 11/5 - 12/5					
	69797070401-02 Total:	6,579.08							
69797070401-03	12/30/2024	10,242.28	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #8 11/6 - 12/6					
	69797070401-03 Total:	10,242.28							
69797070401-04	12/30/2024	6,245.56	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #7 11/8 - 12/10					
	69797070401-04 Total:	6,245.56							
69797070401-05	12/30/2024	7,105.42	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #9 11/18 - 12/17					
	69797070401-05 Total:	7,105.42							
69797070401-06	12/30/2024	12,183.25	0.00	01/20/2025				No	0
60-445-4662 Utility				Well #5/ETP 11/8 - 12/10					
	69797070401-06 Total:	12,183.25							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
	Constellation NewEnergy,	96,968.53							
Core & Main									
039040									
W161153	12/17/2024	3,275.00	0.00	01/20/2025				No	0
60-445-4480 New Meters,rprs. & Rplcmts.				1" Dual Check					
	W161153 Total:	3,275.00							
	Core & Main Total:	3,275.00							
D&A Powertrain Components, INC									
467649									
260909	1/3/2025	19.40	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				NPT Swivel					
	260909 Total:	19.40							
	D&A Powertrain Compone	19.40							
DACRA Adjudication Systems									
467842									
DT 2024-12-006	12/31/2024	2,500.00	0.00	01/20/2025				No	0
01-440-4513 Software Maintenance				Adjudication					
	DT 2024-12-006 Total:	2,500.00							
DT 2024-12-113	12/31/2024	225.70	0.00	01/20/2025				No	0
01-440-4513 Software Maintenance				Postage					
	DT 2024-12-113 Total:	225.70							
	DACRA Adjudication Syst	2,725.70							
Dixon Engineering, Inc.									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
030970									
24-1326	12/26/2024	4,900.00	0.00	01/20/2025				No	0
60-445-4255 Engineering				3/2024 ROU Inspection- Auto Mall Town					
24-1326 Total:		4,900.00							
24-1330	12/27/2024	8,500.00	0.00	01/20/2025				No	0
60-445-4255 Engineering				Antenna Survey & Structural Condition Letter					
24-1330 Total:		8,500.00							
24-1331	12/27/2024	1,750.00	0.00	01/20/2025				No	0
60-445-4255 Engineering				P25 Antenna Inspection					
24-1331 Total:		1,750.00							
Dixon Engineering, Inc. Tot		15,150.00							
Doug Botkin									
047330									
01072025	1/7/2025	50.00	0.00	01/20/2025				No	0
01-410-4016 Per Diem - Plan Commission				Plan/ Zoning Commission Meeting 1/7/25					
01072025 Total:		50.00							
Doug Botkin Total:		50.00							
Drendel & Jansons Law Group									
028580									
12713	12/23/2024	1,703.33	0.00	01/20/2025				No	0
01-445-4260 Legal				Legal Services- Aurora Packing/ Oct 2024					
12713 Total:		1,703.33							
Drendel & Jansons Law Gr		1,703.33							
Duke & Lee's Johnson's Garage & Towing, Inc.									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
045190									
082807	9/30/2024	1,329.58	0.00	01/20/2025				No	0
01-440-4511 Vehicle Repair and Maint				Humvee Repair					
082807 Total:		1,329.58							
082808	9/30/2024	2,999.79	0.00	01/20/2025				No	0
01-440-4511 Vehicle Repair and Maint				Humvee Repair					
082808 Total:		2,999.79							
Duke & Lee's Johnson's Ga		4,329.37							
Elisa L. Hatchett									
051830									
01132025	1/13/2025	550.00	0.00	01/20/2025				No	0
01-439-4015 Police Cssn Mtgs-per Diem				Police Commission Board Meetings (11) 8/17 - 11/25					
01132025 Total:		550.00							
Elisa L. Hatchett Total:		550.00							
Engineering Enterprises, Inc.									
467917									
82202	12/19/2024	5,646.25	0.00	01/20/2025				No	0
90-000-E299 Towne Centre Senior Apartments				Water Model- Clover Development					
82202 Total:		5,646.25							
Engineering Enterprises, In		5,646.25							
Feece Oil									
031060									
4131014	11/27/2024	2,151.23	0.00	01/20/2025				No	0
71-000-1340 Gas/Diesel Escrow				Diesel Fuel					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
4131014 Total:		2,151.23							
4131025	11/27/2024	2,911.36	0.00	01/20/2025				No	0
71-000-1340 Gas/Diesel Escrow				Mid-Grade Fuel					
4131025 Total:		2,911.36							
4135090	12/16/2024	1,241.28	0.00	01/20/2025				No	0
71-000-1340 Gas/Diesel Escrow				Diesel Fuel					
4135090 Total:		1,241.28							
4135108	12/16/2024	4,420.26	0.00	01/20/2025				No	0
71-000-1340 Gas/Diesel Escrow				Mid-Grade Fuel					
4135108 Total:		4,420.26							
4138638	1/2/2025	1,584.76	0.00	01/20/2025				No	0
71-000-1340 Gas/Diesel Escrow				Diesel Fuel					
4138638 Total:		1,584.76							
4138651	1/2/2025	2,977.35	0.00	01/20/2025				No	0
71-000-1340 Gas/Diesel Escrow				Mid-Grade Fuel					
4138651 Total:		2,977.35							
Feece Oil Total:		15,286.24							
Fifth Third Bank									
028450									
AH11272024-01	11/21/2024	22.39	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Laptop Backpack/ Amazon					
AH11272024-01 Total:		22.39							
AH11272024-02	11/21/2024	8.49	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Wireless Mouse/ Amazon					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
AH11272024-02 Total:		8.49							
AH11272024-03	11/21/2024	35.49	0.00	01/20/2025				No	0
60-445-4870 Equipment				Generator Cover/ Amazon					
AH11272024-03 Total:		35.49							
BR11272024-01	10/31/2024	49.89	0.00	01/20/2025				No	0
01-445-4530 Public Grounds/Parks Maint				VH Outside Floodlight/ Amazon					
BR11272024-01 Total:		49.89							
BR11272024-02	10/31/2024	151.98	0.00	01/20/2025				No	0
01-445-4530 Public Grounds/Parks Maint				VH Outside Floodlight/ Amazon					
BR11272024-02 Total:		151.98							
BR11272024-03	11/6/2024	62.97	0.00	01/20/2025				No	0
01-490-4759 Community Events				Christmas Decoration Plugs/ Amazon					
BR11272024-03 Total:		62.97							
BR11272024-04	11/9/2024	167.16	0.00	01/20/2025				No	0
01-490-4759 Community Events				Christmas Lights/ Amazon					
BR11272024-04 Total:		167.16							
BR11272024-05	11/12/2024	600.00	0.00	01/20/2025				No	0
01-490-4759 Community Events				6' Christmas Tree (10)/ Boy Scout Troop 12					
BR11272024-05 Total:		600.00							
BR11272024-06	11/12/2024	1,817.42	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Spare Wheels (4)/ AA Parts					
BR11272024-06 Total:		1,817.42							
BT11272024-01	11/21/2024	759.60	0.00	01/20/2025				No	0
01-490-4759 Community Events				Christmas Lights/ Amazon					
BT11272024-01 Total:		759.60							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
CW11272024-01	11/11/2024	94.84	0.00	01/20/2025				No	0
01-440-4460 Comfort Dog Supplies				Dog Supplies- Zelda/ Amazon					
CW11272024-01 Total:		94.84							
CW11272024-02	11/13/2024	184.98	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Standing Desk & Computer Mount/ Amazon					
CW11272024-02 Total:		184.98							
CW11272024-03	11/12/2024	739.18	0.00	01/20/2025				No	0
01-440-4460 Comfort Dog Supplies				Wellness Visit- Zelda/ Partners & Paws					
CW11272024-03 Total:		739.18							
CW11272024-04	11/18/2024	79.90	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Magnets & Stocking Holders/ Amazon					
CW11272024-04 Total:		79.90							
CW11272024-05	11/20/2024	40.00	0.00	01/20/2025				No	0
01-440-4390 Dues & Meetings				KCCOPA Giveaway Gift Card/ Slick City					
CW11272024-05 Total:		40.00							
CW11272024-06	11/20/2024	50.00	0.00	01/20/2025				No	0
01-440-4390 Dues & Meetings				KCCOPA Giveaway Gift Card/ Hardware Restaurant					
CW11272024-06 Total:		50.00							
CW11272024-07	11/25/2024	57.59	0.00	01/20/2025				No	0
01-440-4460 Comfort Dog Supplies				Food Cube & Chews- Zelda/ Amazon					
CW11272024-07 Total:		57.59							
CW11272024-08	11/25/2024	352.89	0.00	01/20/2025				No	0
01-440-4460 Comfort Dog Supplies				Zelda Stickers/ Stickeryou.com					
CW11272024-08 Total:		352.89							
DA11272024-01	11/4/2024	195.96	0.00	01/20/2025				No	0
01-445-4411 Office Expenses				Snowplow Cameras/ Amazon					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
DA11272024-01 Total:		195.96							
DA11272024-02	11/8/2024	194.88	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Laptop Charger, Landline Phone Recorder, Label Tape/ Am					
DA11272024-02 Total:		194.88							
DA11272024-03	11/9/2024	230.14	0.00	01/20/2025				No	0
01-430-4513 Software Maintenance				ArcGIS License/ ESRI					
DA11272024-03 Total:		230.14							
DA11272024-04	11/14/2024	27.59	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Dual Monitor Desk Mount/ Amazon					
DA11272024-04 Total:		27.59							
DA11272024-05	11/13/2024	47.97	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Squad Printer Power Cables/ Amazon					
DA11272024-05 Total:		47.97							
DA11272024-06	11/13/2024	359.99	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				55" TV- Investigations/ Target					
DA11272024-06 Total:		359.99							
DA11272024-07	11/14/2024	1.29	0.00	01/20/2025				No	0
01-490-4759 Community Events				Music For Christmas Tree/ Amazon Digital					
DA11272024-07 Total:		1.29							
DA11272024-08	11/14/2024	4.86	0.00	01/20/2025				No	0
01-490-4759 Community Events				Music For Christmas Tree/ Amazon Digital					
DA11272024-08 Total:		4.86							
DA11272024-09	11/15/2024	53.97	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Portable Chargers, TV Wall Mount- PD/ Amazon					
DA11272024-09 Total:		53.97							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
DA11272024-10	11/17/2024	54.60	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				Phone Case, USB Ext, DP Cable/ Amazon					
DA11272024-10 Total:		54.60							
DA11272024-11	11/18/2024	0.89	0.00	01/20/2025				No	0
01-490-4759 Community Events				Music For Christmas Tree/ Amazon Digital					
DA11272024-11 Total:		0.89							
DA11272024-12	11/19/2024	1.29	0.00	01/20/2025				No	0
01-490-4759 Community Events				Music For Christmas Tree/ Amazon Digital					
DA11272024-12 Total:		1.29							
DA11272024-13	11/18/2024	8.50	0.00	01/20/2025				No	0
01-490-4759 Community Events				Music For Christmas Tree/ Amazon Digital					
DA11272024-13 Total:		8.50							
DA11272024-14	11/18/2024	86.77	0.00	01/20/2025				No	0
01-490-4759 Community Events				Amp & 3.5mm Jack Cable- Christmas Tree/ Amazon Digita					
DA11272024-14 Total:		86.77							
DA11272024-15	11/27/2024	129.99	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				32" TV- VH Security/ Amazon					
DA11272024-15 Total:		129.99							
DA11272024-16	11/27/2024	129.99	0.00	01/20/2025				No	0
01-430-4420 IT Supplies				32" TV- VH Security/ Amazon					
DA11272024-16 Total:		129.99							
JD11272024-01	10/28/2024	58.99	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Office Supplies/ Office Depot					
JD11272024-01 Total:		58.99							
JD11272024-02	10/28/2024	68.66	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Office Supplies/ Office Depot					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
JD11272024-02 Total:		68.66							
JD11272024-03	11/3/2024	27.65	0.00	01/20/2025				No	0
01-440-4799 Misc.				Standard Citizen Assist/ Uber					
JD11272024-03 Total:		27.65							
JD11272024-04	11/1/2024	33.68	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Office Supplies/ Office Depot					
JD11272024-04 Total:		33.68							
JD11272024-05	11/2/2024	187.58	0.00	01/20/2025				No	0
01-440-4799 Misc.				Flowers For Funeral/ Hello Flowers					
JD11272024-05 Total:		187.58							
JD11272024-06	11/1/2024	1,892.75	0.00	01/20/2025				No	0
01-440-4870 Equipment				Treadmill Repair & Maintenance/ Huff N Puff					
JD11272024-06 Total:		1,892.75							
JD11272024-07	11/7/2024	406.78	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Kitchen Supplies/ Uline					
JD11272024-07 Total:		406.78							
JD11272024-08	11/15/2024	224.75	0.00	01/20/2025				No	0
01-440-4870 Equipment				Elliptical Repair/ Huff N Puff					
JD11272024-08 Total:		224.75							
JD11272024-09	11/15/2024	212.32	0.00	01/20/2025				No	0
01-440-4380 Training				Training Class Lunch/ Riverside Pizza					
JD11272024-09 Total:		212.32							
JD11272024-10	11/19/2024	265.00	0.00	01/20/2025				No	0
01-440-4380 Training				Membership Dues- De Leo/ ILACP					
JD11272024-10 Total:		265.00							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
JD11272024-11	11/21/2024	275.02	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Office Supplies/ Office Depot					
JD11272024-11 Total:		275.02							
JG11272024-01	11/1/2024	179.00	0.00	01/20/2025				No	0
01-440-4555 Investigations				Investigations App/ TLO TransUnion					
JG11272024-01 Total:		179.00							
JG11272024-02	11/13/2024	15.00	0.00	01/20/2025				No	0
01-440-4799 Misc.				Administrative App/ Canva					
JG11272024-02 Total:		15.00							
JG11272024-03	11/13/2024	260.49	0.00	01/20/2025				No	0
01-440-4558 Emergency Management				EMA Exercise Lunch/ Jimmy John's					
JG11272024-03 Total:		260.49							
JG11272024-04	11/14/2024	10.79	0.00	01/20/2025				No	0
01-440-4555 Investigations				Investigations App/ Apple.com					
JG11272024-04 Total:		10.79							
JG11272024-05	11/18/2024	146.14	0.00	01/20/2025				No	0
01-440-4558 Emergency Management				EMA Supplies- Ext Cords/ Home Depot					
JG11272024-05 Total:		146.14							
JG11272024-06	11/21/2024	78.16	0.00	01/20/2025				No	0
01-440-4390 Dues & Meetings				Supplies For KCCOPA Mtg/ Target					
JG11272024-06 Total:		78.16							
JG11272024-07	11/21/2024	125.00	0.00	01/20/2025				No	0
01-440-4390 Dues & Meetings				Monthly Chiefs Meeting Lunch (5)/ SQ Kane County Chief					
JG11272024-07 Total:		125.00							
JP11272024-01	11/14/2024	460.00	0.00	01/20/2025				No	0
01-435-4799 Misc.				ACFR COA Award/ GFOA					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
JP11272024-01 Total:		460.00							
JP11272024-02	11/22/2024	190.00	0.00	01/20/2025				No	0
01-435-4390 Dues & Meetings				Membership Renewal/ GFOA					
JP11272024-02 Total:		190.00							
KL11272024-01	11/18/2024	21.37	0.00	01/20/2025				No	0
01-440-4380 Training				Breakfast For Class/ Harner's Bakery					
KL11272024-01 Total:		21.37							
KL11272024-02	11/13/2024	90.18	0.00	01/20/2025				No	0
01-440-4160 Uniform Allowance				Shirts For COP Inv/ Galls					
KL11272024-02 Total:		90.18							
KL11272024-03	11/19/2024	147.47	0.00	01/20/2025				No	0
01-440-4380 Training				Dinner For Training/ Lou Malnati's					
KL11272024-03 Total:		147.47							
KL11272024-04	11/19/2024	90.18	0.00	01/20/2025				No	0
01-440-4160 Uniform Allowance				Shirts For COP Inv/ Galls					
KL11272024-04 Total:		90.18							
MQ11272024-01	10/31/2024	154.40	0.00	01/20/2025				No	0
01-440-4931 Vehicle Equip Fund Charges				Fleet/ IL SOS Vehicle					
MQ11272024-01 Total:		154.40							
MQ11272024-02	10/31/2024	95.00	0.00	01/20/2025				No	0
01-440-4380 Training				Car Seat Class/ Safe Kids Class					
MQ11272024-02 Total:		95.00							
MQ11272024-03	10/31/2024	95.00	0.00	01/20/2025				No	0
01-440-4380 Training				Car Seat Class/ Safe Kids Class					
MQ11272024-03 Total:		95.00							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
MQ11272024-04	11/4/2024	225.00	0.00	01/20/2025				No	0
01-440-4380 Training				Training/ Blue To Gold					
MQ11272024-04 Total:		225.00							
MQ11272024-05	11/6/2024	36.16	0.00	01/20/2025				No	0
01-440-4870 Equipment				Equipment/ Amazon					
MQ11272024-05 Total:		36.16							
MQ11272024-06	11/5/2024	1,081.00	0.00	01/20/2025				No	0
01-440-4496 DUI Prevention (DUI Fines)				Breath Ops/ Intoximeters					
MQ11272024-06 Total:		1,081.00							
MQ11272024-07	11/6/2024	9.99	0.00	01/20/2025				No	0
01-440-4870 Equipment				Equipment/ Amazon					
MQ11272024-07 Total:		9.99							
MQ11272024-08	11/6/2024	175.79	0.00	01/20/2025				No	0
01-440-4380 Training				Training Material/ American Heart					
MQ11272024-08 Total:		175.79							
MQ11272024-09	11/11/2024	48.57	0.00	01/20/2025				No	0
01-440-4498 Community Service				Vet's Day/ Dunkin Donuts					
MQ11272024-09 Total:		48.57							
MQ11272024-10	11/11/2024	58.06	0.00	01/20/2025				No	0
01-440-4498 Community Service				Vet's Day/ Dunkin Donuts					
MQ11272024-10 Total:		58.06							
MQ11272024-11	11/14/2024	38.38	0.00	01/20/2025				No	0
01-440-4799 Misc.				Drone Shipment Repairs/ FedEx					
MQ11272024-11 Total:		38.38							
MQ11272024-12	11/15/2024	175.00	0.00	01/20/2025				No	0
01-440-4558 Emergency Management				EMA Keys/ Vans Lock Service					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
MQ11272024-12 Total:		175.00							
MQ11272024-13	11/19/2024	58.40	0.00	01/20/2025				No	0
01-440-4557 Evidence Processing				Storage/ Home Depot					
MQ11272024-13 Total:		58.40							
MQ11272024-14	11/21/2024	400.00	0.00	01/20/2025				No	0
01-440-4390 Dues & Meetings				Police Commission/ IL Fire & Police					
MQ11272024-14 Total:		400.00							
MQ11272024-15	11/25/2024	277.68	0.00	01/20/2025				No	0
01-440-4411 Office Expenses				Business Cards/ Fast Color					
MQ11272024-15 Total:		277.68							
MQ11272024-16	11/26/2024	583.20	0.00	01/20/2025				No	0
01-440-4558 Emergency Management				EMA Car/ 110 Customs					
MQ11272024-16 Total:		583.20							
ND11272024-01	11/20/2024	75.00	0.00	01/20/2025				No	0
01-441-4380 Training				Luncheon Seminar- Marcy/ IL Assoc of Code Enforcement					
ND11272024-01 Total:		75.00							
NS11272024-01	10/30/2024	55.00	0.00	01/20/2025				No	0
01-430-4380 Training & Testing				Professional Development Class/ NIU Outreach					
NS11272024-01 Total:		55.00							
NS11272024-02	11/7/2024	17.82	0.00	01/20/2025				No	0
01-490-4759 Community Events				Making Spirits Bright Craft Supplies/ Amazon					
NS11272024-02 Total:		17.82							
NS11272024-03	11/8/2024	102.58	0.00	01/20/2025				No	0
01-490-4759 Community Events				Making Spirits Bright Craft Supplies/ Amazon					
NS11272024-03 Total:		102.58							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
NS11272024-04	11/19/2024	48.66	0.00	01/20/2025				No	0
01-490-4759 Community Events				Making Spirits Bright Craft Supplies/ Amazon					
NS11272024-04 Total:		48.66							
NS11272024-05	11/24/2024	11.94	0.00	01/20/2025				No	0
01-490-4759 Community Events				Making Spirits Bright Craft Supplies/ Amazon					
NS11272024-05 Total:		11.94							
Fifth Third Bank Total:		16,093.04							
Flock Safety									
468521									
INV-53556	12/17/2024	21,100.00	0.00	01/20/2025				No	0
71-430-4870 Equipment				Flock Cameras					
INV-53556 Total:		21,100.00							
Flock Safety Total:		21,100.00							
Fox Metro									
029650									
01032025	1/3/2025	30.00	0.00	01/20/2025				No	0
60-445-4480 New Meters,rprs. & Rplcmts.				New Inspections (1)					
01032025 Total:		30.00							
Fox Metro Total:		30.00							
FOX METRO WRD									
045480									
*** **N02-0164**	12/30/2024	86.57	0.00	01/20/2025				No	0
01-445-4662 Utility				Sewer Bill- VH 9/30 - 11/30					
N02-0164 Total:		86.57							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
*** **N02-5182**	12/30/2024	31.48	0.00	01/20/2025				No	0
01-445-4662 Utility				Sewer Bill- PW Garage 9/30 - 11/30					
N02-5182 Total:		31.48							
*** **N02-5784**	12/30/2024	86.57	0.00	01/20/2025				No	0
01-445-4662 Utility				Sewer Bill- PD 9/30 - 11/30					
N02-5784 Total:		86.57							
FOX METRO WRD Total		204.62							
Frank Marshall Electric									
028510									
92298	12/24/2024	596.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Sign Removal- 2 N Monroe					
92298 Total:		596.00							
92300	12/24/2024	406.15	0.00	01/20/2025				No	0
01-445-4530 Public Grounds/Parks Maint				Bridge Light Pol Receptacle					
92300 Total:		406.15							
Frank Marshall Electric To		1,002.15							
Global Water Technology, Inc.									
467862									
136603	12/15/2024	226.90	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Water Treatment- VH & PD					
136603 Total:		226.90							
Global Water Technology, I		226.90							
GPM Truck Center, Inc									
468885									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
35868AD	11/27/2024	1,907.66	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Engine Light Repair- 22 Freightliner					
35868AD Total:		1,907.66							
35920AD	12/23/2024	1,721.94	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Power Steering Repair- 2009 Ford E550					
35920AD Total:		1,721.94							
GPM Truck Center, Inc To		3,629.60							
Grainger									
031900									
9350266806	12/18/2024	588.90	0.00	01/20/2025				No	0
60-445-4569 Water Tower Rpr & Mtce				Heater For Auto Mall Tower					
9350266806 Total:		588.90							
Grainger Total:		588.90							
Hach Company									
014100									
14293151	12/12/2024	634.70	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				DR 300 Kit					
14293151 Total:		634.70							
14295887	12/16/2024	206.31	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				Chem Keys					
14295887 Total:		206.31							
14312338	1/1/2025	133.34	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				DR 300 Service Plan Thru 5/31/25					
14312338 Total:		133.34							
14313562	1/4/2025	1,238.34	0.00	01/20/2025				No	0

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
60-445-4562 Testing (water)				Service Plan Visit- CL17 & Controllers					
14313562 Total:		1,238.34							
14314093	1/6/2025	3,139.62	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				Reagents					
14314093 Total:		3,139.62							
14316365	1/7/2025	1,672.35	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				Reagents					
14316365 Total:		1,672.35							
Hach Company Total:		7,024.66							
Heartland Business Systems, LLC									
468486									
755708-H	12/23/2024	1,046.64	0.00	01/20/2025				No	0
01-430-4513 Software Maintenance				Annual MS Office License					
755708-H Total:		1,046.64							
755709-H	12/23/2024	130.40	0.00	01/20/2025				No	0
01-430-4513 Software Maintenance				SharePoint Server Rental- Dec 2024					
755709-H Total:		130.40							
Heartland Business System		1,177.04							
High Star Traffic									
021520									
10199	12/18/2024	133.80	0.00	01/20/2025				No	0
01-445-4545 Traffic Signs & Signals				Street Name Signs (2)					
10199 Total:		133.80							
10200	12/18/2024	267.40	0.00	01/20/2025				No	0
18-445-4570 Sewers Rpr & Mtce				Manhole Protection Rings					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
10200 Total:		267.40							
10333	1/2/2025	3,025.55	0.00	01/20/2025				No	0
01-445-4545 Traffic Signs & Signals				Speed Limit & Street Name Signs & Post					
10333 Total:		3,025.55							
High Star Traffic Total:		3,426.75							
Intergovernmental Personnel Benefit Cooperative 467637									
01092025-01	1/9/2025	40,197.07	0.00	01/20/2025				No	0
01-440-4130 Health Insurance				Health Insurance- PD/ Oct 2024					
01092025-01 Total:		40,197.07							
01092025-02	1/9/2025	6,904.71	0.00	01/20/2025				No	0
01-430-4130 Health Insurance				Health Insurance- Admin/ Oct 2024					
01092025-02 Total:		6,904.71							
01092025-03	1/9/2025	4,276.06	0.00	01/20/2025				No	0
01-435-4130 Health Insurance				Health Insurance- PSEBA/ Oct 2024					
01092025-03 Total:		4,276.06							
01092025-04	1/9/2025	1,950.11	0.00	01/20/2025				No	0
01-435-4130 Health Insurance				Health Insurance- Finance/ Oct 2024					
01092025-04 Total:		1,950.11							
01092025-05	1/9/2025	4,686.34	0.00	01/20/2025				No	0
01-441-4130 Health Insurance				Health Insurance- CommDev/ Oct 2024					
01092025-05 Total:		4,686.34							
01092025-06	1/9/2025	16,022.73	0.00	01/20/2025				No	0
01-445-4130 Health Insurance				Health Insurance- PW/ Oct 2024					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01092025-06 Total:		16,022.73							
01092025-07	1/9/2025	13,981.54	0.00	01/20/2025				No	0
60-445-4130 Health Insurance				Health Insurance- Water/ Oct 2024					
01092025-07 Total:		13,981.54							
01092025-08	1/9/2025	1,275.54	0.00	01/20/2025				No	0
01-000-2055 Payroll Deductions				Health Insurance- Retirees/ Oct 2024					
01092025-08 Total:		1,275.54							
01092025-09	1/9/2025	4,924.86	0.00	01/20/2025				No	0
01-000-2055 Payroll Deductions				Health Insurance- Police Pension/ Oct 2024					
01092025-09 Total:		4,924.86							
01092025-10	1/9/2025	204.56	0.00	01/20/2025				No	0
01-430-4136 Dental Insurance				Dental Insurance- Admin/ Oct 2024					
01092025-10 Total:		204.56							
01092025-11	1/9/2025	64.33	0.00	01/20/2025				No	0
01-435-4136 Dental Insurance				Dental Insurance- Finance/ Oct 2024					
01092025-11 Total:		64.33							
01092025-12	1/9/2025	113.76	0.00	01/20/2025				No	0
01-441-4136 Dental Insurance				Dental Insurance- CommDev/ Oct 2024					
01092025-12 Total:		113.76							
01092025-13	1/9/2025	1,004.41	0.00	01/20/2025				No	0
01-440-4136 Dental Insurance				Dental Insurance- PD/ Oct 2024					
01092025-13 Total:		1,004.41							
01092025-14	1/9/2025	465.64	0.00	01/20/2025				No	0
01-445-4136 Dental Insurance				Dental Insurance- PW/ Oct 2024					
01092025-14 Total:		465.64							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01092025-15	1/9/2025	314.20	0.00	01/20/2025				No	0
60-445-4136 Dental Insurance				Dental Insurance- PW/ Oct 2024					
01092025-15 Total:		314.20							
01092025-16	1/9/2025	2,331.50	0.00	01/20/2025				No	0
01-000-2054 Insurance Employee Reimburse				Dental Insurance- Employee/ Oct 2024					
01092025-16 Total:		2,331.50							
01092025-17	1/9/2025	63.36	0.00	01/20/2025				No	0
01-440-4135 Life Insurance				Life Insurance- PD/ Oct 2024					
01092025-17 Total:		63.36							
01092025-18	1/9/2025	24.64	0.00	01/20/2025				No	0
01-445-4135 Life Insurance				Life Insurance- PW/ Oct 2024					
01092025-18 Total:		24.64							
01092025-19	1/9/2025	8.80	0.00	01/20/2025				No	0
01-430-4135 Life Insurance				Life Insurance- Admin/ Oct 2024					
01092025-19 Total:		8.80							
01092025-20	1/9/2025	5.28	0.00	01/20/2025				No	0
01-435-4135 Life Insurance				Life Insurance- Finance/ Oct 2024					
01092025-20 Total:		5.28							
01092025-21	1/9/2025	8.80	0.00	01/20/2025				No	0
01-441-4135 Life Insurance				Life Insurance- CommDev/ Oct 2024					
01092025-21 Total:		8.80							
01092025-22	1/9/2025	14.08	0.00	01/20/2025				No	0
60-445-4135 Life Insurance				Life Insurance- Water/ Oct 2024					
01092025-22 Total:		14.08							
01092025-23	1/9/2025	881.26	0.00	01/20/2025				No	0
01-000-2056 VSP - Employee Contributions				Vision/ Oct 2024					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01092025-23 Total:		881.26							
01092025-24	1/9/2025	677.00	0.00	01/20/2025				No	0
01-000-2052 Voluntary Life Insurance				Voluntary Life/ Oct 2024					
01092025-24 Total:		677.00							
01092025-25	1/9/2025	42,280.37	0.00	01/20/2025				No	0
01-440-4130 Health Insurance				Health Insurance- PD/ Nov 2024					
01092025-25 Total:		42,280.37							
01092025-26	1/9/2025	6,904.71	0.00	01/20/2025				No	0
01-430-4130 Health Insurance				Health Insurance- Admin/ Nov 2024					
01092025-26 Total:		6,904.71							
01092025-27	1/9/2025	4,276.06	0.00	01/20/2025				No	0
01-435-4130 Health Insurance				Health Insurance- PSEBA/ Nov 2024					
01092025-27 Total:		4,276.06							
01092025-28	1/9/2025	1,950.06	0.00	01/20/2025				No	0
01-435-4130 Health Insurance				Health Insurance- Finance/ Nov 2024					
01092025-28 Total:		1,950.06							
01092025-29	1/9/2025	4,686.34	0.00	01/20/2025				No	0
01-441-4130 Health Insurance				Health Insurance- CommDev/ Nov 2024					
01092025-29 Total:		4,686.34							
01092025-30	1/9/2025	16,022.64	0.00	01/20/2025				No	0
01-445-4130 Health Insurance				Health Insurance- PW/ Nov 2024					
01092025-30 Total:		16,022.64							
01092025-31	1/9/2025	17,413.05	0.00	01/20/2025				No	0
60-445-4130 Health Insurance				Health Insurance- Water/ Nov 2024					
01092025-31 Total:		17,413.05							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01092025-32	1/9/2025	1,275.54	0.00	01/20/2025				No	0
01-000-2055 Payroll Deductions				Health Insurance- Retirees/ Nov 2024					
01092025-32 Total:		1,275.54							
01092025-33	1/9/2025	4,924.86	0.00	01/20/2025				No	0
01-000-2055 Payroll Deductions				Health Insurance- Police Pension/ Nov 2024					
01092025-33 Total:		4,924.86							
01092025-34	1/9/2025	204.56	0.00	01/20/2025				No	0
01-430-4136 Dental Insurance				Dental Insurance- Admin/ Nov 2024					
01092025-34 Total:		204.56							
01092025-35	1/9/2025	64.33	0.00	01/20/2025				No	0
01-435-4136 Dental Insurance				Dental Insurance- Finance/ Nov 2024					
01092025-35 Total:		64.33							
01092025-36	1/9/2025	113.76	0.00	01/20/2025				No	0
01-441-4136 Dental Insurance				Dental Insurance- CommDev/ Nov 2024					
01092025-36 Total:		113.76							
01092025-37	1/9/2025	1,080.13	0.00	01/20/2025				No	0
01-440-4136 Dental Insurance				Dental Insurance- PD/ Nov 2024					
01092025-37 Total:		1,080.13							
01092025-38	1/9/2025	465.64	0.00	01/20/2025				No	0
01-445-4136 Dental Insurance				Dental Insurance- PW/ Nov 2024					
01092025-38 Total:		465.64							
01092025-39	1/9/2025	423.84	0.00	01/20/2025				No	0
60-445-4136 Dental Insurance				Dental Insurance- Water/ Nov 2024					
01092025-39 Total:		423.84							
01092025-40	1/9/2025	2,503.16	0.00	01/20/2025				No	0
01-000-2054 Insurance Employee Reimburse				Dental Insurance- Employee/ Nov 2024					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01092025-40 Total:		2,503.16							
01092025-41	1/9/2025	63.36	0.00	01/20/2025				No	0
01-440-4135 Life Insurance				Life Insurance- PD/ Nov 2024					
01092025-41 Total:		63.36							
01092025-42	1/9/2025	24.64	0.00	01/20/2025				No	0
01-445-4135 Life Insurance				Life Insurance- PW/ Nov 2024					
01092025-42 Total:		24.64							
01092025-43	1/9/2025	8.80	0.00	01/20/2025				No	0
01-430-4135 Life Insurance				Life Insurance- Admin/ Nov 2024					
01092025-43 Total:		8.80							
01092025-44	1/9/2025	5.28	0.00	01/20/2025				No	0
01-435-4135 Life Insurance				Life Insurance- Finance/ Nov 2024					
01092025-44 Total:		5.28							
01092025-45	1/9/2025	8.80	0.00	01/20/2025				No	0
01-441-4135 Life Insurance				Life Insurance- CommDev/ Nov 2024					
01092025-45 Total:		8.80							
01092025-46	1/9/2025	14.08	0.00	01/20/2025				No	0
60-445-4135 Life Insurance				Life Insurance- Water/ Nov 2024					
01092025-46 Total:		14.08							
01092025-47	1/9/2025	924.70	0.00	01/20/2025				No	0
01-000-2056 VSP - Employee Contributions				Vision/ Nov 2024					
01092025-47 Total:		924.70							
01092025-48	1/9/2025	677.00	0.00	01/20/2025				No	0
01-000-2052 Voluntary Life Insurance				Voluntary Life/ Nov 2024					
01092025-48 Total:		677.00							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
	Intergovernmental Personn	206,716.29							
Interstate Billing Service, Inc.									
049760									
3039773510	12/10/2024	175.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Transfer Pumps					
	3039773510 Total:	175.00							
3040007893	1/3/2025	605.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Valve Repair- Truck #180					
	3040007893 Total:	605.00							
3040009325	12/27/2024	430.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Truck Repair- Truck #180					
	3040009325 Total:	430.00							
	Interstate Billing Service, In	1,210.00							
ISARC									
467783									
1194	1/1/2025	75.00	0.00	01/20/2025				No	0
01-440-4390 Dues & Meetings				Annual Membership Renewal					
	1194 Total:	75.00							
	ISARC Total:	75.00							
Janco Chemical Supply, Inc									
000660									
294184	12/30/2024	189.75	0.00	01/20/2025				No	0
01-445-4421 Custodial Supplies				Custodial Supplies- VH					
	294184 Total:	189.75							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
	Janco Chemical Supply, In	189.75							
Johnson & Buh, LLC									
467744									
NAUR24-04	1/1/2025	6,450.00	0.00	01/20/2025				No	0
01-440-4260 Legal				Local DUI					
	NAUR24-04 Total:	6,450.00							
	Johnson & Buh, LLC Total	6,450.00							
JSN Contractors Supply									
041440									
87512	12/19/2024	145.00	0.00	01/20/2025				No	0
10-445-4661 Street Light Repair/Maint				Red Marking Flags (10)					
	87512 Total:	145.00							
	JSN Contractors Supply T	145.00							
Kimball Midwest									
467916									
102899654	12/18/2024	614.30	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Cable Ties, Clamps, Pins					
	102899654 Total:	614.30							
102941202	1/7/2025	178.07	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Hoses & Fittings					
	102941202 Total:	178.07							
	Kimball Midwest Total:	792.37							
Konica Minolta									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
024860									
9010252138	12/27/2024	10.99	0.00	01/20/2025				No	0
01-430-4411 Office Expenses				AP Printer Maintenance 12/21 - 1/20					
9010252138 Total:		10.99							
9010267088	1/1/2025	38.71	0.00	01/20/2025				No	0
01-430-4411 Office Expenses				Copier Maintenance- PW Garage 12/2/24 - 1/7/25					
9010267088 Total:		38.71							
Konica Minolta Total:		49.70							
Lee Jensen Sales Co., Inc.									
044070									
0031183-00	12/30/2024	440.00	0.00	01/20/2025				No	0
60-445-4422 Safety Supplies				Safety Harness					
0031183-00 Total:		440.00							
0031196-00	12/30/2024	24.00	0.00	01/20/2025				No	0
60-445-4870 Equipment				Swivel Hook Latch For Backhoe					
0031196-00 Total:		24.00							
Lee Jensen Sales Co., Inc. T		464.00							
LFG Wash, LLC									
468785									
147	11/9/2024	249.00	0.00	01/20/2025				No	0
01-445-4530 Public Grounds/Parks Maint				Power Wash Veterans Memorial Fountain & Pavers					
147 Total:		249.00							
LFG Wash, LLC Total:		249.00							
LifeVac LLC									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
468910									
217736	12/26/2024	1,377.31	0.00	01/20/2025				No	0
01-440-4870 Equipment				LifeVac/ Life Saving Equipment					
217736 Total:		1,377.31							
LifeVac LLC Total:		1,377.31							
Marberry Cleaners									
008430									
8A071065	12/23/2024	21.25	0.00	01/20/2025				No	0
01-440-4450 Prisoner Mtce & Supplies				Prisoner Blankets					
8A071065 Total:		21.25							
Marberry Cleaners Total:		21.25							
Meade Electric Company, Inc.									
027140									
711245	12/16/2024	84.71	0.00	01/20/2025				No	0
01-445-4545 Traffic Signs & Signals				Traffic Light Repair- Dogwood & Ritter					
711245 Total:		84.71							
Meade Electric Company,		84.71							
Menards									
016070									
40042	11/29/2024	319.64	0.00	01/20/2025				No	0
01-490-4759 Community Events				Extension Cord					
40042 Total:		319.64							
40902	12/13/2024	11.46	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Toggle Wall Anchors					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
40902 Total:		11.46							
41028	12/16/2024	187.78	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Wood To Build Weight Boxes- PW Trucks					
41028 Total:		187.78							
41083	12/17/2024	83.57	0.00	01/20/2025				No	0
01-445-4421 Custodial Supplies				Bleach, Cleaner, Sprayer					
41083 Total:		83.57							
41095	12/17/2024	12.83	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				2x10x12' Wood					
41095 Total:		12.83							
41484	12/27/2024	77.66	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Paint, Level					
41484 Total:		77.66							
41996	1/8/2025	108.39	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Light Bulb Photo Eye					
41996 Total:		108.39							
Menards Total:		801.33							
METRONET									
467874									
11242024-01	11/24/2024	859.71	0.00	01/20/2025				No	0
01-430-4652 Phones and Connectivity				Phone, Internet 11/24 - 12/23					
11242024-01 Total:		859.71							
11242024-02	11/24/2024	663.48	0.00	01/20/2025				No	0
01-445-4652 Phones and Connectivity				Phone, Internet 11/24 - 12/23					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
11242024-02 Total:		663.48							
11242024-03	11/24/2024	784.21	0.00	01/20/2025				No	0
60-445-4652 Phones and Connectivity				Phone, Internet 11/24 - 12/23					
11242024-03 Total:		784.21							
11242024-04	11/24/2024	637.21	0.00	01/20/2025				No	0
01-441-4652 Phones and Connectivity				Phone, Internet 11/24 - 12/23					
11242024-04 Total:		637.21							
11242024-05	11/24/2024	1,845.00	0.00	01/20/2025				No	0
01-440-4652 Phones and Connectivity				Phone, Internet 11/24 - 12/23					
11242024-05 Total:		1,845.00							
12242024-01	12/24/2024	864.35	0.00	01/20/2025				No	0
01-430-4652 Phones and Connectivity				Phone, Internet 12/24 - 1/23					
12242024-01 Total:		864.35							
12242024-02	12/24/2024	668.10	0.00	01/20/2025				No	0
01-445-4652 Phones and Connectivity				Phone, Internet 12/24 - 1/23					
12242024-02 Total:		668.10							
12242024-03	12/24/2024	788.84	0.00	01/20/2025				No	0
60-445-4652 Phones and Connectivity				Phone, Internet 12/24 - 1/23					
12242024-03 Total:		788.84							
12242024-04	12/24/2024	641.83	0.00	01/20/2025				No	0
01-441-4652 Phones and Connectivity				Phone, Internet 12/24 - 1/23					
12242024-04 Total:		641.83							
12242024-05	12/24/2024	1,849.64	0.00	01/20/2025				No	0
01-440-4652 Phones and Connectivity				Phone, Internet 12/24 - 1/23					
12242024-05 Total:		1,849.64							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
METRONET Total:		9,602.37							
Michael Brackett									
005890									
01072025	1/7/2025	50.00	0.00	01/20/2025				No	0
01-410-4016 Per Diem - Plan Commission				Plan/ Zoning Commission Meeting 1/7/25					
01072025 Total:		50.00							
Michael Brackett Total:		50.00							
Mid American Water									
013680									
242131A	11/21/2024	2,874.88	0.00	01/20/2025				No	0
60-445-4563 Fire Hydrant Repair/maint				Hydrant Parts					
242131A Total:		2,874.88							
Mid American Water Total:		2,874.88							
Motorola Solutions- STARCOM21									
002980									
9037620241202	1/1/2025	734.00	0.00	01/20/2025				No	0
01-440-4652 Phones and Connectivity				StarCom- Jan 2025					
9037620241202 Total:		734.00							
Motorola Solutions- STAR		734.00							
North Aurora NAPA, Inc.									
038730									
479531	12/2/2024	119.90	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Sensors (5)					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
479531 Total:		119.90							
479531-02	12/2/2024	303.31	0.00	01/20/2025				No	0
01-440-4511 Vehicle Repair and Maint				Squad Parts					
479531-02 Total:		303.31							
480120	12/10/2024	62.45	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Wiper Blades (5)					
480120 Total:		62.45							
480121	12/10/2024	44.71	0.00	01/20/2025				No	0
01-445-4870 Equipment				Brushes & Towels					
480121 Total:		44.71							
480174	12/11/2024	10.99	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Fuel Tank Retainer- Truck #145					
480174 Total:		10.99							
480361	12/13/2024	289.71	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Truck Parts					
480361 Total:		289.71							
480504	12/16/2024	15.56	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Flap Disc					
480504 Total:		15.56							
480578	12/17/2024	49.16	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Fuel Filters- Truck #186					
480578 Total:		49.16							
480582	12/17/2024	12.49	0.00	01/20/2025				No	0
01-445-4870 Equipment				AA Batteries					
480582 Total:		12.49							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
480659	12/18/2024	104.48	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Oil Filters- Truck #174					
480659 Total:		104.48							
480678	12/18/2024	399.00	0.00	01/20/2025				No	0
01-445-4870 Equipment				Jump Starter					
480678 Total:		399.00							
480709	12/18/2024	30.43	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Hydraulic Filter- Truck #176					
480709 Total:		30.43							
480847	12/20/2024	29.94	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Oil					
480847 Total:		29.94							
480988	12/24/2024	135.66	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				2010 International Sensor					
480988 Total:		135.66							
481029	12/26/2024	71.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Oil Pressure Sensor					
481029 Total:		71.00							
481031	12/26/2024	39.81	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Coolant Sensor					
481031 Total:		39.81							
481058	12/26/2024	15.20	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Temp Sender- Truck #180					
481058 Total:		15.20							
481070	12/26/2024	281.85	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				2010 International Valve Cover Gasket					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
481070 Total:		281.85							
481085	12/27/2024	137.39	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Wiper Blades					
481085 Total:		137.39							
481110	12/27/2024	174.38	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Battery					
481110 Total:		174.38							
481136	12/27/2024	-18.00	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Core Deposit Credit					
481136 Total:		-18.00							
481282	12/30/2024	41.99	0.00	01/20/2025				No	0
60-445-4511 Vehicle Repair and Maint				Brake Parts- Truck #149					
481282 Total:		41.99							
481284	12/30/2024	51.14	0.00	01/20/2025				No	0
60-445-4511 Vehicle Repair and Maint				Air Filters- Truck #149					
481284 Total:		51.14							
481285	12/30/2024	288.00	0.00	01/20/2025				No	0
60-445-4511 Vehicle Repair and Maint				Cool Out- Truck #149					
481285 Total:		288.00							
481391	1/2/2025	30.43	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				2010 International Filter					
481391 Total:		30.43							
481400	1/2/2025	55.08	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Brake Parts Cleaner					
481400 Total:		55.08							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
481404	1/2/2025	37.99	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Leak Head Gasket Seal					
481404 Total:		37.99							
481405	1/2/2025	47.36	0.00	01/20/2025				No	0
01-445-4870 Equipment				Disposable Gloves					
481405 Total:		47.36							
481444	1/2/2025	186.20	0.00	01/20/2025				No	0
01-445-4870 Equipment				Air Dyer Cartridges					
481444 Total:		186.20							
481466	1/3/2025	340.58	0.00	01/20/2025				No	0
01-445-4870 Equipment				Tools, Wrenches					
481466 Total:		340.58							
481482	1/3/2025	30.72	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Socket- Truck #180					
481482 Total:		30.72							
481483	1/3/2025	22.64	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Socket					
481483 Total:		22.64							
481484	1/3/2025	28.37	0.00	01/20/2025				No	0
01-445-4870 Equipment				Pliers					
481484 Total:		28.37							
481510	1/3/2025	183.74	0.00	01/20/2025				No	0
01-445-4511 Vehicle Repair and Maint				Fuel Filters- Truck #180					
481510 Total:		183.74							
North Aurora NAPA, Inc. T		3,653.66							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
North East Multi-Regional Training, Inc. 001520									
366794	12/10/2024	105.00	0.00	01/20/2025				No	0
01-440-4380 Training				Training Class- Smolik-Valles					
366794 Total:		105.00							
368346	12/19/2024	105.00	0.00	01/20/2025				No	0
01-440-4380 Training				Training Class- Gomez					
368346 Total:		105.00							
368376	12/19/2024	315.00	0.00	01/20/2025				No	0
01-440-4380 Training				Training Class					
368376 Total:		315.00							
North East Multi-Regional		525.00							
Office Depot 039370									
395858437001	11/25/2024	17.07	0.00	01/20/2025				No	0
01-430-4411 Office Expenses				Office Supplies					
395858437001 Total:		17.07							
395858437001-02	11/25/2024	17.07	0.00	01/20/2025				No	0
01-445-4411 Office Expenses				Office Supplies					
395858437001-02 Total:		17.07							
395858437001-03	11/25/2024	17.08	0.00	01/20/2025				No	0
60-445-4411 Office Expenses				Office Supplies					
395858437001-03 Total:		17.08							
395858437001-04	11/25/2024	17.08	0.00	01/20/2025				No	0
01-441-4411 Office Expenses				Office Supplies					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
395858437001-04 Total:		17.08							
397069434001	11/26/2024	26.07	0.00	01/20/2025				No	0
01-430-4411 Office Expenses				Office Supplies					
397069434001 Total:		26.07							
397069434001-02	11/26/2024	26.07	0.00	01/20/2025				No	0
01-445-4411 Office Expenses				Office Supplies					
397069434001-02 Total:		26.07							
397069434001-03	11/26/2024	26.07	0.00	01/20/2025				No	0
60-445-4411 Office Expenses				Office Supplies					
397069434001-03 Total:		26.07							
397069434001-04	11/26/2024	26.07	0.00	01/20/2025				No	0
01-441-4411 Office Expenses				Office Supplies					
397069434001-04 Total:		26.07							
397146154001	11/26/2024	12.56	0.00	01/20/2025				No	0
01-430-4411 Office Expenses				Office Supplies					
397146154001 Total:		12.56							
397146154001-02	11/26/2024	12.57	0.00	01/20/2025				No	0
01-445-4411 Office Expenses				Office Supplies					
397146154001-02 Total:		12.57							
397146154001-03	11/26/2024	12.57	0.00	01/20/2025				No	0
60-445-4411 Office Expenses				Office Supplies					
397146154001-03 Total:		12.57							
397146154001-04	11/26/2024	12.57	0.00	01/20/2025				No	0
01-441-4411 Office Expenses				Office Supplies					
397146154001-04 Total:		12.57							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
401704808001	12/13/2024	300.42	0.00	01/20/2025				No	0
60-445-4411 Office Expenses				Office Supplies- Toner					
401704808001 Total:		300.42							
401878284001	12/8/2024	13.29	0.00	01/20/2025				No	0
01-445-4411 Office Expenses				Office Supplies- Werner					
401878284001 Total:		13.29							
401878475001	12/6/2024	10.04	0.00	01/20/2025				No	0
01-430-4411 Office Expenses				Office Supplies					
401878475001 Total:		10.04							
401878475001-02	12/6/2024	10.04	0.00	01/20/2025				No	0
01-445-4411 Office Expenses				Office Supplies					
401878475001-02 Total:		10.04							
401878475001-03	12/6/2024	10.05	0.00	01/20/2025				No	0
60-445-4411 Office Expenses				Office Supplies					
401878475001-03 Total:		10.05							
401878475001-04	12/6/2024	10.05	0.00	01/20/2025				No	0
01-441-4411 Office Expenses				Office Supplies					
401878475001-04 Total:		10.05							
Office Depot Total:		576.74							
Paddock Publications, Inc.									
026910									
318736	12/23/2024	36.80	0.00	01/20/2025				No	0
90-000-E300 Randall Promenade II				Publishing					
318736 Total:		36.80							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
	Paddock Publications, Inc.	36.80							
Performance Construction & Engineering, LLC									
468556									
Pay 1 Final	12/19/2024	61,748.00	0.00	01/20/2025				No	0
60-460-4875 Capital Improvements				Old Central Tower Disconnect					
	Pay 1 Final Total:	61,748.00							
	Performance Construction	61,748.00							
Phil Jungels									
039230									
01132025	1/13/2025	550.00	0.00	01/20/2025				No	0
01-439-4015 Police Cssn Mtgs-per Diem				Police Commission Board Meetings (11) 8/17 - 11/25					
	01132025 Total:	550.00							
	Phil Jungels Total:	550.00							
Pitney Bowes Inc.									
017470									
1026571066	12/10/2024	20.08	0.00	01/20/2025				No	0
01-430-4505 Postage				Postage Machine					
	1026571066 Total:	20.08							
1026571066-02	12/10/2024	20.08	0.00	01/20/2025				No	0
01-445-4505 Postage				Postage Machine					
	1026571066-02 Total:	20.08							
1026571066-03	12/10/2024	20.09	0.00	01/20/2025				No	0
60-445-4505 Postage				Postage Machine					
	1026571066-03 Total:	20.09							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
1026571066-04	12/10/2024	20.09	0.00	01/20/2025				No	0
01-441-4505 Postage				Postage Machine					
	1026571066-04 Total:	20.09							
1026572596	12/11/2024	22.96	0.00	01/20/2025				No	0
01-430-4505 Postage				Postage Machine Maintenance					
	1026572596 Total:	22.96							
1026572596-02	12/11/2024	22.96	0.00	01/20/2025				No	0
01-445-4505 Postage				Postage Machine Maintenance					
	1026572596-02 Total:	22.96							
1026572596-03	12/11/2024	22.97	0.00	01/20/2025				No	0
60-445-4505 Postage				Postage Machine Maintenance					
	1026572596-03 Total:	22.97							
1026572596-04	12/11/2024	22.97	0.00	01/20/2025				No	0
01-441-4505 Postage				Postage Machine Maintenance					
	1026572596-04 Total:	22.97							
	Pitney Bowes Inc. Total:	172.20							
ProFlow Pumping Solutions									
039420									
INV30669	12/11/2024	1,705.93	0.00	01/20/2025				No	0
60-445-4567 Treatment Plant Repair/Maint				Hypo Pump Inspection & Repair					
	INV30669 Total:	1,705.93							
	ProFlow Pumping Solution	1,705.93							
R. J. O'Neil, Inc.									
029370									
00125841	12/9/2024	2,160.13	0.00	01/20/2025				No	0

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
01-445-4520 Public Buildings Rpr & Mtce				Quarterly Preventative Maintenance- PD					
00125841 Total:		2,160.13							
00125942	12/13/2024	698.22	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Preventative Maintenance- VH					
00125942 Total:		698.22							
00125950	12/13/2024	465.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				Heat Repair- PD Evidence Room					
00125950 Total:		465.00							
00126015	12/19/2024	1,190.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				RTU6 Troubleshoot & Repair- PD					
00126015 Total:		1,190.00							
00126103	12/31/2024	4,740.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				RP2 Install- Fire Department					
00126103 Total:		4,740.00							
00126114	1/2/2025	1,026.52	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				RTU 6 & 7 Heat Repair- PD					
00126114 Total:		1,026.52							
00126181	1/8/2025	17,051.50	0.00	01/20/2025				No	0
60-445-4568 Watermain Rprs. & Rplcmts.				Emergency Water Repair- 310 Banbury					
00126181 Total:		17,051.50							
R. J. O'Neil, Inc. Total:		27,331.37							
RAY O'HERRON Co., INC									
044220									
2379992	11/29/2024	830.00	0.00	01/20/2025				No	0
01-440-4160 Uniform Allowance				Ballistic Vest- McCoy					

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
2379992 Total:		830.00							
RAY O'HERRON Co., INC		830.00							
Richard Newell									
468236									
01072025	1/7/2025	50.00	0.00	01/20/2025				No	0
01-410-4016 Per Diem - Plan Commission				Plan/ Zoning Commission Meeting 1/7/25					
01072025 Total:		50.00							
Richard Newell Total:		50.00							
RSSI									
468860									
31221	1/6/2025	225.00	0.00	01/20/2025				No	0
60-445-4560 Water Studies				Radon Study					
31221 Total:		225.00							
RSSI Total:		225.00							
Russo Power Equipment Inc.									
036290									
SPI20881670	12/12/2024	86.99	0.00	01/20/2025				No	0
01-445-4422 Safety Supplies				Forestry Helmet System					
SPI20881670 Total:		86.99							
SPI20881670-02	12/12/2024	126.00	0.00	01/20/2025				No	0
01-445-4530 Public Grounds/Parks Maint				Sidewalk Salt					
SPI20881670-02 Total:		126.00							
Russo Power Equipment In		212.99							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
Scott Branson									
468155									
01072025	1/7/2025	50.00	0.00	01/20/2025				No	0
01-410-4016 Per Diem - Plan Commission				Plan/ Zoning Commission Meeting 1/7/25					
01072025 Total:		50.00							
Scott Branson Total:		50.00							
SEMPER FI LANDSCAPING, INC.									
468911									
2024-1407	12/20/2024	11,750.00	0.00	01/20/2025				No	0
17-007-4280 Professional/Consulting Fees				Oak Hill Detention Basin Engineering					
2024-1407 Total:		11,750.00							
SEMPER FI LANDSCAPI		11,750.00							
Springbrook Software LLC									
467920									
INV-019447	12/31/2024	180.00	0.00	01/20/2025				No	0
60-445-4510 Equipment/IT Maint				IVR Payments- Dec 2024					
INV-019447 Total:		180.00							
Springbrook Software LLC		180.00							
Superior Asphalt Materials LLC									
031440									
20241915	12/17/2024	114.67	0.00	01/20/2025				No	0
01-445-4540 Streets & Alleys Rpr & Mtce				Pothole Asphalt					
20241915 Total:		114.67							

*** means this invoice number is a duplicate.

Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
	Superior Asphalt Materials	114.67							
Technology Management Rev Fund									
007390									
T2512126	12/23/2024	517.01	0.00	01/20/2025				No	0
01-440-4652 Phones and Connectivity				LEADS					
	T2512126 Total:	517.01							
	Technology Management R	517.01							
Third Millennium Assoc. , Inc.									
033470									
32300	12/31/2024	2,861.66	0.00	01/20/2025				No	0
01-430-4507 Printing				Newsletter- Dec 2024					
	32300 Total:	2,861.66							
32300-02	12/31/2024	2,373.93	0.00	01/20/2025				No	0
60-445-4507 Printing				Water Bill- Dec 2024					
	32300-02 Total:	2,373.93							
	Third Millennium Assoc. ,	5,235.59							
Treasurer, State of Illinois									
009370									
66053	11/27/2024	3,987.93	0.00	01/20/2025				No	0
01-445-4545 Traffic Signs & Signals				Traffic Lights- Rt31, Rt56, Rt25					
	66053 Total:	3,987.93							
	Treasurer, State of Illinois T	3,987.93							
Tri-County Excavation & Construction									

*** means this invoice number is a duplicate.

Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				**Description**		**Reference**			
027350									
21-12-9305	12/26/2024	1,131.00	0.00	01/20/2025				No	0
01-445-4538 Snow Removal				Snow Plowing 12/26					
21-12-9305 Total:		1,131.00							
Tri-County Excavation & C		1,131.00							
Uline, Inc									
468220									
187083165	1/19/2025	672.42	0.00	01/20/2025				No	0
01-445-4530 Public Grounds/Parks Maint				Sidewalk Salt					
187083165 Total:		672.42							
187083165-02	1/19/2025	408.00	0.00	01/20/2025				No	0
01-445-4421 Custodial Supplies				Custodial Supplies					
187083165-02 Total:		408.00							
187516637	1/6/2025	408.51	0.00	01/20/2025				No	0
01-445-4421 Custodial Supplies				Custodial Supplies- PD					
187516637 Total:		408.51							
187521807	1/6/2025	110.56	0.00	01/20/2025				No	0
01-445-4421 Custodial Supplies				Mop & Handle- PD					
187521807 Total:		110.56							
Uline, Inc Total:		1,599.49							
USABlueBook									
035680									
INV00572525	12/18/2024	1,353.50	0.00	01/20/2025				No	0
60-445-4870 Equipment				Flushing Diff & Elbow Detector					
INV00572525 Total:		1,353.50							

*** means this invoice number is a duplicate.

Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
INV00572525-02	12/18/2024	66.95	0.00	01/20/2025				No	0
60-445-4423 Tools				Hydrant Wrench					
INV00572525-02 Total:		66.95							
INV00584197	1/6/2025	182.78	0.00	01/20/2025				No	0
60-445-4562 Testing (water)				Deionized Water					
INV00584197 Total:		182.78							
USABlueBook Total:		1,603.23							
Van's Lock & Key Service, Inc.									
005070									
107131	11/7/2024	45.00	0.00	01/20/2025				No	0
60-445-4799 Misc. Expenditures				Keys					
107131 Total:		45.00							
107349	12/17/2024	625.00	0.00	01/20/2025				No	0
01-445-4520 Public Buildings Rpr & Mtce				New Lock FD Barn					
107349 Total:		625.00							
Van's Lock & Key Service,		670.00							
Vesco Reprographic									
048980									
45997	12/17/2024	109.40	0.00	01/20/2025				No	0
01-441-4411 Office Expenses				Plotter Paper					
45997 Total:		109.40							
Vesco Reprographic Total:		109.40							
Waste Management									
016240									

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			
0000311-2011-6	12/16/2024	7,721.00	0.00	01/20/2025				No	0
01-445-4540 Streets & Alleys Rpr & Mtce				Street Sweeping					
0000311-2011-6 Total:		7,721.00							
Waste Management Total:		7,721.00							
Water Resources									
010380									
37785	12/20/2024	20,709.75	0.00	01/20/2025				No	0
60-445-4480 New Meters,rprs. & Rplcmts.				Meter Order					
37785 Total:		20,709.75							
Water Resources Total:		20,709.75							
Weldstar Company									
014090									
0002350662	11/25/2024	681.26	0.00	01/20/2025				No	0
01-445-4870 Equipment				Pressure Regulator					
0002350662 Total:		681.26							
0002354847	12/16/2024	385.97	0.00	01/20/2025				No	0
01-445-4870 Equipment				Cutting Attachment & Tip					
0002354847 Total:		385.97							
0002357285	12/24/2024	262.40	0.00	01/20/2025				No	0
01-445-4510 Equipment/IT Maint				Quarterly Cylinder Rent					
0002357285 Total:		262.40							
Weldstar Company Total:		1,329.63							

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Invoice Number	Invoice Date	Amount	Quantity	Payment Date	Task Label	Type	PO #	Close PO	Line #
Account Number				Description		Reference			

Report Total:	637,142.42

*** means this invoice number is a duplicate.

VILLAGE OF NORTH AURORA
BOARD REPORT

TO: VILLAGE PRESIDENT & BOARD OF TRUSTEES
CC: STEVE BOSCO, VILLAGE ADMINISTRATOR

FROM: NATHAN DARGA, COMMUNITY DEVELOPMENT DIRECTOR

SUBJECT: PROFESSIONAL SERVICE AGREEMENT WITH B & F

AGENDA: JAUARY 20, 2025 REGULAR VILLAGE BOARD MEETING

ITEM

A Resolution Approving a Professional Service Agreement with B & F Construction Code Services, Inc.

DISCUSSION

The Village has utilized B & F Construction Code Services, Inc ("B & F") for building plan review and building inspections since 2014. Recently, B & F informed the Village that they have an updated professional service agreement. The rates in the new agreement have been adjusted up for inflation. They are, however, still in line with the fees we charge for building permits and will not require any adjustments on our end at this time. Staff is recommending approval of the new Professional Service Agreement.

RESOLUTION No._____

A RESOLUTION APPROVING A PROFESSIONAL SERVICE AGREEMENT WITH B & F CONSTRUCTION CODE SERVICES, INC

WHEREAS, B & F Construction Code Services, Inc ("B & F") has provided building plan review and building inspection services to the Village since 2014; and

WHEREAS, B & F has submitted an updated Professional Service Agreement to the Village attached as Exhibit A; and

WHEREAS, the Community Development Department has reviewed the updated agreement and determined it to be in the best interest of the Village to retain the services of B & F.

NOW, THEREFORE, **BE IT RESOLVED** by the President and the Board of Trustees of the Village of North Aurora, as follows:

1. Recitals set forth above and incorporated herein as the material findings of fact of the President and the Board of Trustees.

2. The Village hereby approves the agreement attached as Exhibit A and authorizes the Village Administrator or his designee to fully execute the agreement.

3. This agreement shall be non-exclusive with the Village reserving the right to solicit the services of other providers if needed.

4. This Resolution shall take immediate force and effect from and after its passage and approval as provided by law.

Presented to the Board of Trustees of the Village of North Aurora, Kane County, Illinois this ____ day of _____, 2025, A.D.

Passed by the Board of Trustees of the Village of North Aurora, Kane County, Illinois this ____ day of _____, 2025, A.D.

Jason Christiansen	_____	Laura Curtis	_____
Mark Guethle	_____	Michael Lowery	_____
Todd Niedzwiedz	_____	Carolyn Bird Salazar	_____

Approved and signed by me as President of the Board of Trustees of the Village of North Aurora, Kane County, Illinois this ____ day of _____, 2025, A.D.

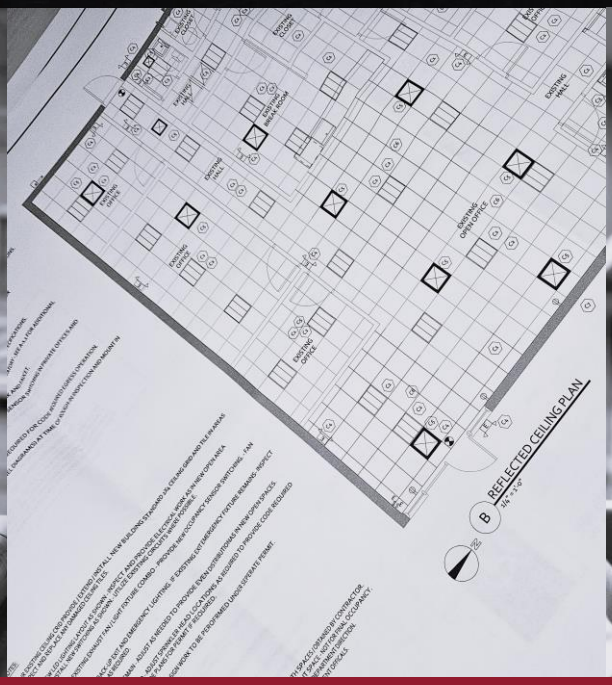
_____
ATTEST: Mark Gaffino, Village President

_____
Jessi Watkins, Village Clerk

Exhibit A

Professional Service Agreement

CONSTRUCTION CODE SERVICES, INC.
BUILDING & FIRE PROTECTION PLAN REVIEW
TRAINING • INSPECTIONS • CODE CONSULTING

January 3, 2025

Nathan Darga
Community Development Director
Village of North Aurora
25 E. State Street
North Aurora, IL 60542

Thank you for the opportunity to present a proposal to the Village of North Aurora for inspections, plan reviews, and property maintenance.

If you have any questions please give me a call at 847-428-7010 or email ryarbrough@bfccs.org.

Sincerely,

Richard A. Piccolo

Richard A. Piccolo
President
Master Code Professional

B & F CONSTRUCTION CODE SERVICES, INC.
2420 Vantage Road • Elgin, IL 60124
Telephone: (847) 428-7010 • Fax: (847) 428-3151

PROFESSIONAL SERVICE AGREEMENT

Statement of Qualifications

B & F Construction Code Services, Inc. provides building and fire protection plan review, and inspections. All technical personnel are certified and/or licensed to provide the services as described and requested.

Qualifications

B & F Construction Code Services, Inc. provides building and fire protection plan review, inspections and training services for municipal building departments. All inspection and plan review personnel are certified and/or licensed to provide the services as described.

We currently provide inspections and plan review for the Villages of Brookfield, Oak Lawn, Markham, Riverdale, Broadview, Forest Park, Matteson and the City of Harvey. We provide or have provided inspections and plan review for the Village of Hazel Crest, Richton Park, and University Park. We currently perform complete building department operations for the Villages of Winfield and Barrington Hills. We have assisted with complete building department operations in the Villages of Kingston and Hampshire. We also currently provide complete inspection and plan review services to West Chicago, Kingston, Kirkland, Shabbona, Hinckley, Waterman, Mettawa, Manhattan, Inverness, Elwood, Deer Park, Timberlane, and Poplar Grove.

In West Chicago, we provide full code enforcement services and administration including; inspections, notices of violation, tickets, adjudication, correspondence, testimony, etc.

There are other municipalities where we provide fill-in inspections when municipalities are in need of inspectors because of a large short-term workload or because they are down staff members due to vacations or extended leaves of absence. These municipalities include the City of Wheaton and Villages of Wheeling and Romeoville.

B & F Construction Code Services, Inc. performs plan review services for numerous other communities in Illinois and other states such as Michigan, New Jersey and Pennsylvania.

We have completed plan review and inspection services for large projects such as the new 3.8 Million Square Foot Amazon facility in Matteson as well as numerous Casino projects, including Four Winds Casinos in Michigan and Indiana, Bally (formerly Jumers) Casino in Rock Island, and Rivers Casino in Des Plaines.

Firm Information and Additional Qualifications

B & F Construction Code Services, Inc. is led by its founder Richard A. Piccolo who has more than forty years in the building code profession. For many years, we have been providing Plan Reviews, Inspections, Building Department Administration, Code Consulting, and Training Services for Municipal Building Departments, Architectural Firms, Developers and Construction Workers. Our expertise is in all the Major Model Codes including the ICC (International Code Council) series, Illinois Plumbing Code, BOCA, NFPA, Accessibility and accepted industry standards and practices. We have performed over 110,000 plan reviews, conducted more than 600,000 construction inspections and over 220,000 code enforcement inspections. We have trained thousands of industry professionals nationwide. Our services have become the most sought after in the industry because of our continual focus on the three elements we have consistently delivered since inception…Quality, Value and Service.

Educational

We have over 50 technical employees which include a full-time staff of qualified, licensed (where applicable) and certified staff of Plans Examiners, Building Inspectors, Property Maintenance Inspectors, and support personnel. Our affiliate company, the Building and Fire Code Academy (BFCA) provides training nationwide to industry professionals and has received approval by the State of Illinois as a Licensed Vocational School, approval by the International Association of Continuing Education & Training (IACET) and the approval of the American Institute of Architects (AIA).

The Building & Fire Code Academy works in conjunction with the State of Illinois and the Illinois Department of Employment Security to provide free training to help unemployed Municipal Building Department employees maintain their certification. BFCA is a State of Illinois Certified Workforce Provider. Individuals participating in a certificate program, or our flagship Code Enforcement Career Development Program receive first hiring preference over other applicants. Additionally, the Building & Fire Code Academy maintains a job placement service for our students.

What is unique about B & F Construction Code Services, Inc. is the combination of conducting inspections and training code officials across the country. Many of our competitors attend our training classes at our office and we appreciate their trust and confidence in our excellence in training.

This separates B & F Construction Code Services, Inc. from its competition and not to mention that all of our staff are company employees and we do not employ contract employees. We provide hours of training to make sure our staff is prepared prior to being assigned to a client.

B & F Construction Code Services, Inc. has developed a system to manage the varying needs of our clients. This includes a proprietary database, which tracks the adopted codes and their local amendments. It also tracks each project, which includes what was submitted, when the project is due, and the status of each project including first and all subsequent reviews.

All of our clients use our plan submittal form with each set of plans submitted. This form gives us the specific type of reviews and any special instructions for each project.

We are a professional staff with company uniforms, vehicles (identified by company name information on the vehicles), equipment, cell phones and the necessary materials to provide a high quality service for your needs.

Services to be Provided – Plan Review & Building Inspections

B & F Construction Code Services, Inc. shall:

Conduct complete plan reviews for commercial and residential projects for building, fire code, fire sprinkler, fire alarm, fire protection, plumbing, electrical, mechanical, energy, hood & duct, solar systems, pool, decks and accessory structures and any other plans requested to review in accordance with the codes and amendments adopted by the client. We can also provide high hazard use, NFPA 101, and virtually any other type of specialty reviews.

Conduct commercial and residential building, fire code, fire protection, plumbing, electrical, mechanical, energy, hood & duct, solar systems, commercial roofing, right-of-way, utility and property maintenance (rental, sale, transfer, and code enforcement) inspections. We are also able to perform annual fire inspections, life safety inspections, high hazard inspections, spray booth installations, and basically any other code related inspections.

Staff can attend pre-construction meetings and construction status meetings whenever requested. Upon availability, staff may be able to work at the client directly. The schedule shall be mutually agreed on. Code consulting services shall be provided via phone, email, field, and individual/group meetings. Video conferencing will be utilized as necessary or as requested.

Digital Plan Review

B&F Construction Code Services, Inc. now primarily accepts electronic plan review submittals, physical submittals are continued to be accepted. To date approximately 80% of submittals are currently via electronic means.

Plan Review Process

Plan reviews submitted to our office are processed typically within two (2) business days. Upon processing, the client will receive a receipt indicating the scope of the review and the completion date (based on date received). Once reviews are completed, plan review letters are sent to the client via email and can also be sent directly to the applicant if requested. If the applicant has questions regarding a review comment, our letters contain contact information for each plan reviewer.

Schedule to Perform Plan Reviews – All Disciplines

All first reviews are performed typically within eleven (11) business days from date received in our office and the second and all subsequent reviews are performed typically within five (5) business days. Typically there are no additional fees for any re-reviews up to three submittals, any subsequent submittals may be subject to an additional fee.

If a quicker turnaround time is desired, we offer Express Reviews. These Express Reviews are completed in four (4) business days and all second and subsequent reviews are also completed within four (4) business days.

Miscellaneous and simple projects can be reviewed in two (2) to three (3) business days. These reviews are subject to fee for re-reviews.

Schedule to Perform Inspections

Inspections require notice the day prior by 3:00 p.m. Inspections can be conducted between the hours of 8:30 a.m. and 3:30 p.m. Monday through Friday, excluding holidays. Inspection requests shall be emailed, called, or submitted online. Additionally the client can approve B & F Construction Code Services, Inc. schedule inspections directly at no additional cost. Inspections can be made outside of these timeframes on an as requested basis for an additional cost. Days of the week and times during the day for inspections will be determined mutually by both parties.

The inspections are conducted as progress of the project takes place. All inspections are conducted and are documented with an inspection report indicating the results of the inspection. Inspector shall utilize company issued technology (tablets) to input inspection results real-time.

Inspectors shall contact customers, upon request, with estimated arrival times. We commit to adhere to inspection arrival times.

B & F Construction Code Services, Inc. maintains that it is the responsibility of the contractor or permit holder to ensure all required inspections are performed. B & F Construction Code Services, Inc. can provide evaluation services of inspection history, third party reports, and special inspections.

Costs for Services

Plan Review

See attached 2025 fee schedule for new construction and alteration plan review pricing. The cost of plan reviews shall be increased to the latest fee schedule every twenty four months.

Hourly Inspection Costs

Building, Electrical, Mechanical, and Energy, at $95 per hour and a minimum of 20 minutes per discipline plus one-way travel time.

Plumbing at $100 per hour and a minimum of 20 minutes plus one-way travel time.

Subdivision

Residential inspections for new construction in the proposed subdivision and the Lincoln subdivision (Building, Electrical, Mechanical, and Energy) are at a rate of $50 per discipline.

Residential inspections for new construction in the proposed subdivision and the Lincoln subdivision (Plumbing) are at a rate of $55 per discipline.

Fixed rate inspection are subject to the annual price increase as described for our hourly services.

General Project Consulting

Staff Consultations for new projects, code analysis, zoning issues, and other complex development issues shall be billed at $160 per hour.

Emergency Inspection

An inspector can be made available for emergency inspections outside normal business hours (7:30am – 4:30pm). The cost of the services shall be at our general consulting rate per hour. The time shall include travel both ways as well as any inspection and report writing time with a minimum of four hours (4 hrs.). For the purposes of this contract emergency inspections shall include, but not limited to, post fire inspections, inspections of structures after vehicle vs building incidents, determination of habitability or safety of structure, unsafe structures, building collapse, inspections required to restore utilities, large scale incidents that may require input from building department personnel.

After Hours Inspection

An inspector may be available for after-hours inspections outside normal business hours (7:30am – 4:30pm). The cost of the services shall be at hour general consulting rate per hour or double the fixed rate inspection for fire protection systems (fire alarm, fire sprinkler, special suppression, hood suppression, etc.) but no less than the hourly minimum. The time shall include travel both ways as well as any inspection and report writing time with a minimum of four hours (4 hrs.).

Hourly services that are provided off site from the B & F Construction Code Services, Inc. office are subject to travel costs of one way per inspector per day.

This contract shall be subject to annual price increases for all hourly services that shall not exceed the Consumer Price Index for All Urban Consumers (CPI-U) for the Chicago-Gary-Kenosha, IL, IN, WI Area issued by the United States Department of Labor between January 15 of the preceding calendar year and January 15 of the current calendar year or 3%, whichever is less.

Other Services

Cross Connection Program

Annual Cross Connection Surveys and Cross Connection Device testing for plumbing devices can be provided.

Ordinance Development

Assistance with the rewriting of existing ordinances or the development of new ordinances can be provided. This can include building codes, zoning, fees, property maintenance or any area where a building, zoning or planning department is involved. This can include agreements for building inspections, property maintenance inspections, zoning and planning and ordinances for building safety, zoning and fees. Building code updates will be priced based on complexity. Costs for these services are based per project.

Preliminary Reviews

Provide plan review and code consulting services for large and complex projects during initial stages (25%, 50%, etc. stage drawings) and address both high level design issues and specific questions the design professional may have. This service helps reduce final permitting and reduce the complexity of any code issues identified at that time.

ISO Specialty Project

Services for assisting in the production of ISO report shall be billed $125 per hour.

Property Maintenance

Property maintenance, property transfer, point of sale inspections, shall be billed at $85 per hour, and a minimum of 20 minutes per inspection.

Administrative Services

General Administrative Services shall be billed at $100 per hour, and one hour (1 hr.) minimum per day while at the client site. These services include, but are not limited to, the completion of small permit reviews, reviewing submittals, follow up with residents or contractors, permit extensions, etc.

The Village of North Aurora has the responsibility to provide notification of ordinances, planned unit developments, and all agreements relevant to the services we offer.

Point of Contact for Contract

Richard A. Piccolo, President, MCP

Sean Fallows, Director of Technical Services

Transmittal Method

As normal course of business, all correspondence from our main office shall be done electronically.

Start Date

All full services, including plan reviews and inspections, will commence on the agreed-upon date.

Fuel Surcharge

Fuel surcharge – In the event fuel cost increase to a national average of Five Dollars ($5.00) or more per gallon there will be eight percent (8%) added to the inspection (first and re-inspections) fee.

All B & F Construction Code Services, Inc. employees are covered by the following:

A. Workers Compensation Insurance;
B. General Liability Insurance; and
C. Professional Liability Insurance.

A Certificate of Insurance can be provided by request.

The client shall agree not to attempt to hire any of B & F Construction Code Services, Inc. officers, employees, agents, or consultants for a period of one (1) year after the individual is no longer employed by B & F Construction Code Services, Inc.

Client

Accepted By _____

Please Print _____

Title _____

Date _____

B & F Construction Code Services

Accepted By *Richard A. Piccolo*

Please Print *Richard A. Piccolo*

Title *President*

Date *January 3, 2024*

B&F CONSTRUCTION CODE SERVICES, INC.

Building & Fire Protection Plan Review

Training · Inspections · Code Consulting

Plan Review

Inspections

Code Consulting

System Testing

Fire Protection

Code Adoption

System Analysis

Accessibility

B & F Construction Code Services, Inc.

B & F Construction Code Services, Inc. provides complete Plan Review Services for Municipal building departments nationwide. Plan reviews are based on model building codes including the International Code Series, BOCA, UBC, SBCCI, CABO, NEC, NFPA, Life Safety, your local amendments, energy, and accessibility requirements.

For Building, Plumbing, Mechanical, Electrical, Energy Conservation, and Fire Suppression and Detection systems, you can count on professional, accurate, and time-saving service by a staff committed to excellence.

Plan reviews identify areas of noncompliance (arranged numerically) including the code and section referenced, and inform your office of compliance or noncompliance with applicable codes and standards.

Initial plan reviews are completed typically within 9 business days of receipt; additional reviews completed typically within 5 business days of receipt. Free telephone consultation for all projects, all disciplines, and all parties involved is included. Express plan review service is available for time-sensitive projects.

One Fee Per Project Discipline. Each project is invoiced for the first review only. Subsequent two reviews for the same project discipline are performed at no additional charge.

We accept plan reviews digitally or physically but prefer digital submittals. Digital Plan Reviews allow for faster and more efficient plan review and communication. If plans are paper, free FedEx Shipping of your plans and specifications to our office is provided for all municipal building departments.

Express Review Service is available for projects requiring an expedited review and is completed typically within 4 business days (additional fee required).

Choose the Billing Method that best suits your municipality. We will bill directly to the municipality or other responsible party as designated. Projects that are billed to the responsible party are subject to a processing fee.

Why More Municipalities Choose B & F Construction Code Services, Inc.…

- ◊ Nationwide
- ◊ We know the codes
- ◊ We include your local ordinances
- ◊ We're here when you need us
- ◊ Fast, accurate, reliable service
- ◊ No hidden costs, No extras
- ◊ We answer your questions
- ◊ No project too big or complex
- ◊ We are fully insured
- ◊ Proven knowledge & experience
- ◊ We provide the services you want & need
- ◊ Our reputation
- ◊ We're Always Here to Help

Codes and Standards that are utilized

- ◊ International Code Series (ICC)
- ◊ Legacy Codes
  - BOCA
  - Uniform
  - CABO / etc.
- ◊ National Fire Code
- ◊ NFPA Standards
- ◊ National Electrical Code
- ◊ Reference Standards
- ◊ Accessibility Codes
- ◊ State Codes/Amendments
- ◊ Local Ordinances

B & F Construction Code Services, Inc.
2420 Vantage Drive • Elgin, IL 60124
P.O. Box 5178 • Elgin, IL 60121
Phone: 847-428-7010 • Fax: 847-428-3151 • Toll Free 800-232-5523
www.constructioncodes.com • bfccs@bfccs.org

Plan Review Fee Schedule

COMMERCIAL

Building Size	Building Review	25% of Building Fee*	40% of Building Fee*	50 % of Building Fee*
Up to 30,000 ft.^{3}	$370.00	$100.00*	$148.00	$185.00
30,001 to 60,000 ft.^{3}	$480.00	$120.00	$192.00	$240.00
60,001 to 80,000 ft.^{3}	$525.00	$131.25	$210.00	$262.50
80,000 to 100,000 ft.^{3}	$600.00	$150.00	$240.00	$300.00
100,001 to 150,000 ft.^{3}	$775.00	$193.75	$310.00	$387.50
150,001 to 200,000 ft.^{3}	$875.00	$218.75	$350.00	$437.50
Over 200,000 ft.^{3}	$900.00 + $8.50 (per 10,000 Cu. Ft.)	$225.00 + $2.13 (per 10,000 Cu. Ft.)	$360.00 + $3.40 (per 10,000 Cu. Ft.)	$450.00 + $4.25 (per 10,000 Cu. Ft.)

Footing and Foundation	$325.00 Min.**
NFPA 101 Plan Review	40% of Building Review (Min. $325.00)
Mechanical Review	40% of Building Review*
Plumbing Review	40% of Building Review*
Accessibility Review	25% of Building Review*
Electrical Review	50% of Building Review*
Med Gas	50% of Building Review*
Fire Code	50% of Building Review (Min. $215.00)
Energy Code	50% of Building Review (Min. $215.00)
Commercial/Industrial Zoning	$200.00 per 15,000 square feet of site area ***
Hood & Duct Plan Review (Type 1 w/o suppression)	$270.00 per System
Hood & Duct Plan Review (Type 2)	$220.00 per System
Compressed Gas System	$500 up to 100 gallon capacity $1.75/gal over 100
High Piled Storage Racking	$500 ****
Storm Shelter	$1 per sq.ft.(Min. $500.00)
Solar Photovoltaic System	based on kw DC system size $1200.00 min *****
Solar Energy Storage System	20% of Solar Review
Energy Storage System	Consulting Rate
Electric Vehicle Charging Station	$575 ($165 per each additional charging station)
In-Ground Pool Plan Review	$550.00 per Pool
Spray Booth Plan Review	$450.00 per Booth
Sign Review	$275
HPM, High Hazard, Processing Piping,	x 1.5 of Plan Review
Medical Case Facilities (Institutional Use Groups)	x 1.5 of Plan Review
High Rise Buildings	x 1.5 of Plan Review
Data Center, Lithium Storage	x 1.5 of Plan Review
Technical Submittal Review	$125.00
Specialty Plan Review	$160.00 per Hour
Site Plans (review of sites without a building)	Consulting Rate
Preliminary Review	50% of the review, $800 min
Express Plan Review	x 2.5 of Plan Review
Direct Billing Processing Fee	$100.00

* minimum for each discipline when multiple disciplines are submitted at the same time. When submitted individually the rate shall be based on 75% of the building review rate

** Minimum includes up to 50,000 sq. ft. footprint, for every addition 50,000 sq. ft. is an additional $50 (this shall not be interpolated) and multistory buildings as defined by the IBC shall have an additional 20% added

*** minimum $400, for projects over a 250,000 sq.ft. of site area each additional 50,000 sq.ft. shall be $200

**** review of the racking system design, egress path, and emergency lighting

***** 201-1000kw DC $2000, 1001-2000kw DC $2800, 2001-3000kw DC $3500, over 3000kw DC $3500 + $500 per 1000KwDC

Plan Review Fee Schedule

RESIDENTIAL

This section deals with residential reviews per the International Residential Code.

New One and Two Single Family Dwellings*	
Up to 3,000 square feet (including basement)	$800.00 per Dwelling Unit
Up to 3,000 square feet (including basement and zoning)	$900.00 per Dwelling Unit
Over 3,000 square feet (including basement)	$0.25 per Square Foot**
Over 3,000 square feet (including basement and zoning)	$0.26 per Square Foot**
Miscellaneous Plan Review	$35 Per Discipline***
In-Ground Pool Plan Review	$475.00 per Pool
Priority Express Plan Review	x 2.5 of Base Plan Review
Solar (Photovoltaic) Systems****	$265.00
Solar (Photovoltaic) Systems w/ battery****	$350.00
Solar (Photovoltaic) Systems w/ battery and generator****	$400.00
Direct Billing Processing Fee	$50.00

* square footage includes all habitable spaces, all areas within the thermal envelope, garages, other attached covered area, basements (finished or unfinished), all decks are over four feet in either direction.
** the first 3,000 sq.ft. is $800/$900 respectively all additional square footage is calculated at $0.25 / $0.26 per sq.ft.
*** re-reviews are an additional cost, zoning will be treated as an additional discipline
**** projects that require a service update will be subject to an addition $100

Plan Review Fee Schedule

FIRE PROTECTION

Fire Suppression Systems	
1 to 100 sprinkler heads	$525.00
101 to 200 sprinkler heads	$575.00
201 to 300 sprinkler heads	$700.00
301 to 500 sprinkler heads	$900.00
Over 500 sprinkler heads	$900.00*
Modifications (1-20 sprinkler heads without calculations)	$250.00
Modifications (21-40 sprinkler heads without calculations)	$350.00
Residential systems (NFPA 13D)	$240.00
Fire Alarm Systems	
1 to 20 Devices	$215.00
21 to 40 Devices	$425.00
41 to 60 Devices	$700.00
61 to 80 Devices	$800.00
81 to 100 Devices	$900.00
Over 100 Devices	$1000.00 plus $5 per device over 100
Hood Suppression with 15 or less points	$215 per System
Hood Suppression with 16-29 flow points	$270.00 per System
Hood Suppression with 30 flow points or more	$320.00 per System
Chemical Suppression systems (excluding hood suppression)	$350 plus alarm fees
Carbon Dioxide / Clean Agents	$175 for up to 105 pounds of agent, $1 each pound over
Dedicated Fire Hydrant or Standpipe System	$25 per valve ($300 min)
Emergency Radio Communication Coverage (ERCC)	$0.005 per sq.ft. ($600 min)

*$1.25 per head for the heads 501-1000, $1 per heads 1,000-20,000, $0.75 per head over 20,000 sprinkler heads

CONSULTING

Code Consulting	
Senior Staff.	$195.00 per hour
Supervisor Staff	$175.00 per hour
Staff	$160.00 per hour
Village Management/Administration	
Senior Staff	$135.00 per hour
Supervisor Staff	$120.00 per hour
Staff	$100.00 per hour

OTHER SERVICES

Code Writing and Adoption Assistance
Water Flow/Backflow/Hydrant Flushing Device Testing
Special Safety Training and Disaster Planning
Building Department Analysis
Fire Protection System Analysis
Existing Building Evaluation

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Providing comprehensive and practical education in the application, implementation, and enforcement of building and fire codes for construction industry professionals nationwide.

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Architects completing Academy classes earn Learning Units (LUs). HSW (Health, Safety, and Welfare) credit may also be available. Other measures of accomplishment include contact, clock, or class hours.

Building & Fire Code Academy
2420 Vantage Drive • Elgin, IL 60124
Phone: 847-428-2951 • Fax: 847-428-2911 • Toll Free: 800-488-7057
www.bfcacademy.com • bfca@bfcacademy.com

Memorandum

To: Village President and Village Board of Trustees
From: Steven Bosco, Village Administrator
Date: 1-16-25
Re: Fraternal Order of Police (FOP) Police Sergeant's Contract

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The Police Sergeant collectively bargained 3-year contract (represented by the FOP) expired on May 31, 2024. The attached agreement is for a term of four-years and due to expire on May 31, 2028.

Attached is a resolution and newly proposed four-year collective bargaining agreement between the Village and the FOP.

RESOLUTION NO._____

A RESOLUTION APPROVING A COLLECTIVE BARGAINING AGREEMENT BETWEEN THE VILLAGE OF NORTH AURORA AND ILLINOIS FRATERNAL ORDER OF POLICE LABOR COUNCIL

BE IT RESOLVED by the President and Board of Trustees of the Village of North Aurora, Kane County, Illinois, as follows:

SECTION ONE: The Agreement dated _____, 2025, between the Village of North Aurora and the Illinois Fraternal Order of Police Labor Council (the "Agreement"), a copy of which is appended hereto and expressly incorporated herein by this reference, is hereby approved.

SECTION TWO: That the Village President and the Village Clerk are hereby authorized and directed to sign and attest, respectively, the Agreement on behalf of the Village of North Aurora.

SECTION THREE: SEVERABILITY. The various provisions of this Resolution are to be considered as severable, and if any part or portion of this Resolution shall be held invalid by any Court of competent jurisdiction, such decision shall not affect the validity of the remaining provisions of this Resolution.

SECTION FOUR: REPEAL OF PRIOR RESOLUTIONS. All prior Ordinances and Resolutions in conflict or inconsistent herewith are hereby expressly repealed only to the extent of such conflict or inconsistency.

SECTION FIVE: EFFECTIVE DATE. This Resolution shall be in full force and effect upon passage and approval.

Presented to the Board of Trustees of the Village of North Aurora, Kane County, Illinois this _____ day of _____, 2025

Passed by the Board of Trustees of the Village of North Aurora, Kane County, Illinois this _____ day of _____, 2025

Jason Christiansen	_____	Laura Curtis	_____
Mark Guethle	_____	Michael Lowery	_____
Todd Niedzwiedz	_____	Carolyn Bird Salazar	_____

Approved and signed by me as President of the Board of Trustees of the Village of North Aurora, Kane County, Illinois this _____ day of _____, 2025

_____
Mark Gaffino, Village President

ATTEST:

_____
Village Clerk

AGREEMENT

ILLINOIS FOP LABOR COUNCIL

and

VILLAGE OF NORTH AURORA

Police Sergeants

June 1, 2024– May 31, 2028

INTRODUCTION

This Agreement is voluntarily entered into by and between the Village of North Aurora, Kane County, Illinois, hereinafter referred to as the "Village" and the Illinois Fraternal Order of Police Labor Council, hereinafter referred to as the "Union," or “Labor Council” as the exclusive Collective Bargaining Agent for the employees of the Village of North Aurora who are described in the Collective Bargaining Unit described herein.

PREAMBLE

The Union, having been certified by the Illinois Labor Relations Board as the exclusive Collective Bargaining Agent for all full-time Sworn Police Officers of the rank of Sergeant employed by the Village, and the Village, having voluntarily endorsed the practices and procedures of collective bargaining as a fair and orderly way of conducting certain relations between them, and the intention of the parties to this Agreement being to provide for the appropriate wage structure, hours of employment, working conditions and benefits, and orderly and expeditious Grievance Procedure, all as set forth herein, the parties therefore agree to the following:

ARTICLE I - RECOGNITION & INTRODUCTORY CLAUSES

1.1 Recognition

Pursuant to the certification by the Illinois State Labor Relations Board Case No. S-RC-10-073, the Village hereby recognizes the Illinois Fraternal Order of Police Labor Council as the sole and exclusive bargaining representative for the purpose of collective bargaining on any and all matters related to wages, hours, and working conditions for employees in the following unit:

Included: All persons employed full time by the Village of North Aurora in its police department, in the following rank or title: Sergeant.

Excluded: All other employees employed with the Village of North Aurora.

1.2 Membership

As used herein, the term Sergeant shall refer to all those persons included in the Collective Bargaining Unit described above.

1.3 Fair Application of Rules

Work rules, policies, orders and directives are to be interpreted and applied fairly to all employees.

ARTICLE II - MANAGEMENT RIGHTS

2.1 Rights of Employer

Except as specifically limited by the express provisions of this Agreement, the Village retains all traditional rights to manage and direct the affairs of the Village in all of its various aspects and to manage and direct its employees, including, but not limited to the right to make and implement decisions with respect to the following matters without having to negotiate over such decisions or the effects of such decisions: to establish, plan, direct, control and determine the budget and all the operations, services, policies and missions of the Village to supervise and direct the working forces; to establish the qualifications for employment and job positions and to employ employees; to determine examination criteria and techniques and to conduct examinations; to schedule and assign work, to assign, transfer and reassign employees; to establish specialty positions and to select personnel to fill them; to establish work, performance and productivity standards and, from time to time, to change those standards; to assign overtime; to purchase or contract out for goods and services; to determine the methods, means, organization and number of personnel such operations and services shall be made or purchased, to make, alter and enforce reasonable rules, regulations, orders, policies and procedures; to evaluate promote or demote employees; to establish reasonable physical and mental .standards for employees; to determine whether work and/or services are to be provided by employees covered by this Agreement (including which employees) or by other employees or persons not covered by this Agreement; to discipline, suspend and discharge non-probationary employees for just cause (probationary employees without cause), to change or eliminate existing methods, equipment or facilities or introduce new ones; to determine the policies affecting the training of employees, to determine training needs and assign employees to training; to determine work hours (shift hours), to establish, change, add to or reduce the number of hours, shifts, tours of duty and schedules to be worked; to adopt change or modify work rules; to determine internal investigation procedures, to do all things expressly granted and reserved exclusively to the Village under Illinois Compiled Statutes 5 ILCS 315/4 or as modified, to take any and all actions as may be necessary to carryout the mission of the Village and the Police Department in the event of civil emergency as may be declared by the Village president, Chief of Police, or their authorized designees, which may include, but not be limited to, riots, civil disorders, tornado conditions, floods or other catastrophes. In the event of such emergency action, the provisions of this Agreement, other than compensation provision, may be suspended, if necessary, provided that all provisions of this Agreement shall be immediately reinstated once the

local disaster or emergency condition ceases to exist, and to carry out the mission of the Village.

ARTICLE III - NO STRIKES, NO LOCKOUTS

3.1 No Strike/Lockout Commitment

Neither the Illinois Fraternal Order of Police Labor Council or any member Sergeant shall call, institute, authorize, participate in, sanction, encourage or ratify any strike, work stoppage or other concerted refusal to perform duties by any Sergeant or Sergeant group, or other concerted interference with, in whole or in part, the full, faithful and proper performance of the duties of employment with Employer. Members shall not refuse to cross any picket line, by whomever established.

3.2 Resumption of Operations

In the event of an action prohibited by §1 of this Article, the Illinois Fraternal Order of Police Labor Council and its member Sergeants of the North Aurora Police Department shall immediately disavow such action and direct, both orally and in writing, that member Police Sergeants return to work without delay and shall use its best efforts to achieve a prompt resumption of normal operations. The Illinois Fraternal Order of Police Labor Council shall not incur liability for any damages, direct or indirect, upon complying with the requirements of this section.

3.3 No Lockout

The Village will not lock out any Employees during the term of this Agreement as a result of a labor dispute with the Union.

3.4 Judicial Restraint

Nothing contained herein shall preclude the Village, or the Union from obtaining judicial restraint and damages in the event the other party violates this Article.

3.5 Discipline of Strikers

Any member who violates the provisions of this Article shall be subject to immediate discharge. Any action taken by the Employer against any member who participates in actions prohibited by § 1 of this Article shall not be considered as a violation of this Agreement and shall not be subject to the agreed upon grievance procedure in Article VI of this Agreement; except that the issue of whether a member Sergeant in fact

participated in a prohibited action under § 1 of this Article shall be subject to the agreed grievance procedure in Article VI of this Agreement In no case shall any Sergeant or Steward of the Union be disciplined for the failure of any or all employees to obey their directives pursuant to §2 of this Article.

ARTICLE IV - UNION/VILLAGE RELATIONS

4.1 Bulletin Board

A Union Bulletin Board of reasonable size shall be available for use in an area of the Police Department agreeable to the parties. Such Bulletin Board shall be available for the posting of notices and materials relating to Union activities. Such materials shall be identified with the name of the Union and shall be signed or otherwise authenticated by an appropriate officer or representative thereof. Such materials shall not be derogatory of any person associated with the Village and shall not include items which are primarily endorsements of candidates for political office (other than offices of the Union).

4.2 Public Information

The Village shall make available to the Union, upon written request, normal and usual public information, including relevant financial data and statistics which are pertinent to the conduct of negotiations, the processing of grievances, or the enforcement of the terms of this Agreement. Such materials shall be provided within ten (10) working days, wherever possible, following a written request of the Union. If unable to provide such materials within ten (10) working days, the Village shall advise the Union of its need for additional time and the Union agrees that, within reason, additional time may be granted. The Village shall not be obligated hereunder to research or compile data or to provide the same information more than once.

4.3 No Discrimination

Neither the Village nor the Union shall discriminate against any employee because of race, creed, color, national origin, sex, or physical or emotional disability as defined by the Americans with Disabilities Act, or Union activities. Violations of this section shall not be subject to the grievance and arbitration provisions of this agreement. Violations of this section must be pursued through the appropriate State or Federal agencies or courts.

4.4 Dues Check Off

The Village shall deduct Union Dues from the salary of each member employee covered by this Agreement in amounts as determined by the Union, and, shall promptly transmit such funds to the Union, provided the amounts to be deducted shall be uniform for each Union member and provided the deduction is authorized by the member on written authorization form (attached hereto as Appendix "A"). Union Dues shall be deducted from the salaries of employees and transmitted to the Union on the same schedule (i.e. every pay day) that the Village normally pays its Police Department employees. The Village shall provide the Labor Council within thirty (30) days of promotion, the name, address, classification, rate of salary and starting date of any new employee hired into the Labor Council's bargaining unit.

When the Village makes such deductions for Union Dues and remits these funds to the Union, the Union shall indemnify, hold harmless and defend the Village, its Police Department, its elected officials, agents and employees in any action, complaint or suit or other proceeding which may be brought under §5 of this Article.

4.5 Bona Fide Religious Belief

This Article shall not be enforced in a manner inconsistent with §6g of the Illinois Public Labor Relations Act based upon the bona fide religious tenets or teachings of a church or religious body or which such employees are members provided, however that such employees be required to pay an amount equal to a lawful fair share to a non-religious charitable organization mutually agreed upon by the affected members and the Union.

4.6 Union Representatives and Visitation

The Village recognizes the right of the Union to elect, appoint, or otherwise name up to two (2) Sworn North Aurora Police Sergeants as local Labor Council representatives of the Union. The names of these two (2) Union representatives, along with their designated titles, shall be provided to the North Aurora Chief of Police or his designee immediately upon the conclusion of the negotiation of this Agreement, or at such other time as the identities of the four North Aurora Chapter Officers becomes known. Any subsequent changes in the names or titles of these Union representatives shall also be provided to the Chief of Police or his designee as such changes occur.

These Union representatives shall be deemed to be the Union's official on-site spokespersons. However, these on-site Union representatives shall not conduct Union business during regular working hours except with the permission of the Chief of Police or his designee or except in the carrying out of certain time-sensitive functions such as Grievance handling or the resolution of disputes between the Village and Union members.

Members of the bargaining unit selected to serve as authorized representatives of the Illinois Fraternal Order of Police Labor Council shall be certified in writing to the Employer. Each representative will be expected to perform his duties as representative on his own time. However, it is recognized that, from time to time, it will be necessary for the Union to carry on its activities during working hours; for example, investigation and processing of complaints, disputes and grievances as well as Labor Management meetings and/or negotiations. Where such activities are necessarily or reasonably to be performed during working hours, they may be done without loss of pay (i.e. "on duty") to the representative involved, provided that the representative obtains permission from the Chief of Police or his designee unless emergency circumstances, i.e., officer involved shooting or similar situation, requiring immediate action. On-duty activities will be limited to one (1) member at any one time and that member will remain in an available and on-call status should the need arise.

As many as two (2) members may participate in negotiating sessions, but only one shall be paid at any given time, without interfering with normal Police Department duties. Generally, the two (2) North Aurora Police Sergeants who participate in contract negotiations shall be the same individuals who are local Labor Council Officers of the Union.

ARTICLE V - DISCIPLINARY INVESTIGATION PROCEDURES

5.1 Police Officers' Bill of Rights

The Village agrees to abide by the Uniform Peace Officers' Disciplinary Act, (50 ILCS 725/1), commonly known as the Police Officers' Bill of Rights. In the event a Sworn Police Sergeant covered by this Agreement has reason to believe that the Village has violated the Uniform Peace Officers' Disciplinary Act, he or she will have the opportunity of filing a Grievance under the terms of this Agreement or, separately, filing an action in a court of law. The Village further agrees to abide by all applicable legal requirements, under appropriate State and Federal legislation concerning the right of employees to refuse to submit to oral or written investigatory interviews without Union representation where the employee reasonably believes that such interviews might result in disciplinary action. The Uniform Peace Officers' Disciplinary Act is hereby incorporated by reference and attached to this Agreement as Appendix B.

Pursuant to the Uniform Peace Officers' Disciplinary Act (50 ILCS 725/1), the term "affidavit" as described in §3.8(b) of the Act shall mean an affidavit sworn and subscribed to by an eyewitness with actual and personal knowledge of the event complained of.

Nothing in this section is intended to or should be construed to waive employees' right to Union representation during questioning that the employees reasonably believe may lead to discipline. Employees shall have such rights as set forth in the United States

Supreme Court decision in NLRB v. Weingarten, 20 U.S. 251 (1975) and Department of Central Management Services and Corrections (Morgan) decision I PERI par. 2020 (ISLRB, 1986)

5.2 Disciplinary Publicity

The Employer shall not cause Sergeants being questioned to be subjected to visits by the press or news media, nor shall their home address or photograph be given to the press or news media without the Sergeants express written consent.

5.3 Investigation Time Limits

All Village and/or Police Department investigations of North Aurora Police Sergeants who are accused of misconduct or violations of Village ordinances or Police Department rules and regulations shall be limited to sixty (60) calendar days from the dates such investigations are initiated to the dates that charges are formally filed or such investigations are terminated without charges being filed. At the end of sixty (60) days, any investigatory findings shall be disclosed to the Sergeant under investigation. However, the sixty (60) day time limit may be extended on a day-for-day basis to reflect any days that the Officer under investigation was not working for reasons of absenteeism, vacation, sickness, disability, bereavement or other normally recognized reasons for absence.

ARTICLE VI – GRIEVANCE PROCEDURE

6.1 Purpose and Filing Deadlines

It is the purpose of this Grievance Procedure to resolve as promptly and as expeditiously as possible any allegations by the Union and/or its members of any misinterpretation or misapplication of the terms of this Agreement. Any Grievance filed under the terms of this Article must be initiated not later than ten (10) working days after the occurrence of the event that prompts the Grievance, or not later than ten (10) working days after the Sergeant or Union reasonably becomes aware or, if the Grievance describes an ongoing situation, it must be filed not later than ten (10) working days after the underlying situation becomes known to either the Union or the member or members who file the Grievance.

6.2 Definitions

1) Grievance shall mean an allegation by the Union or by an affected member that there has been a violation, misinterpretation or misapplication of any provision of this Agreement;

2) Any employee covered by this Agreement may be represented by a Union official, staff representative, on-site representative or attorney at any meeting, hearing, or appeal relating to a Grievance, which has been formally presented;

3) The President of the Union or the appropriate designee shall be advised of any meeting, hearing or appeal relating to a Grievance which has been formally presented and a representative of the Union shall have the right to attend and participate in any such meeting, hearing or appeal;

4) The failure of the Grievant to act on any Grievance within the prescribed time limits articulated elsewhere in this Article will act as a bar to any further appeal within this Grievance Procedure. If the Village's designated representative shall neglect to proceed to render a decision within the time limits, the Grievance may be advanced to the next step of the Grievance Procedure. Time limits, may, however, be extended by mutual agreement;

5) The term "Working Days," as it applies to the Grievance Procedure described in this Agreement, shall mean Monday through Friday excluding weekends and Village Holidays.

6.3 Procedures

The party asserting a Grievance shall attempt to resolve the problem through informal communication with the immediate supervisor,

STEP 1 If the informal process with the immediate supervisor shall fail to resolve the problem, the Grievance may be formally presented in writing to the appropriate Lieutenant utilizing the form contained in appendix C. The filing of the formal written Grievance at this step must be within ten (10) working days of the date of the occurrence giving rise to the Grievance or from the date when the Grievant might reasonably have become aware of the incident or situation that results in the filing of the Grievance. Upon receipt of the formal written Grievance, the Lieutenant will arrange for a meeting to be held within ten (10) working days to review the Grievance. The formal Grievance shall clearly, identify all Grievants, summarize all relevant facts, identify all provisions of the Agreement allegedly violated, and describe the remedy which is requested. The Lieutenant shall provide a written answer to the Grievant (with a copy to the Union if the Union is not the Grievant) within ten (10) working days, of the meeting.

The answer shall include the reasons for any decision contained in the Village's response to the Grievance;

STEP 2 If the Grievance 'is not resolved at the preceding step, the Union may refer it to the Chief of Police or his designee by filing the same in writing within ten (10) working days of receipt of the answer from the previous Lieutenant level. The Chief of Police or his designee will arrange for a meeting to be held within the ten (10) working days of such referral to review the Grievance. Each party shall have the right to include in its presentation such witnesses as it deems necessary to develop facts pertinent to the Grievance. A written answer, including reason(s), shall be provided to the Grievant within ten (10) working days of the meeting provided for in this paragraph. In the event the Grievance arises from a decision or action made by the Chief of Police the Grievance may be initiated at Step 3 of this Article provided the time limits set forth in Step I of this Article are adhered to;

STEP 3 If the Grievance is not resolved at the preceding step, the Union may refer it to the Village President or the Village President's designee by filing the same in writing within ten (10) working days of receipt of the answer from the previous Chief of Police level. The Village President or his designee will arrange for a meeting to be held within the ten (10) working days of such referral to review the Grievance. Each party shall have the right to include in its presentation such witnesses as it deems necessary to develop facts pertinent to the Grievance. A written answer, including reason(s), shall be provided to the Grievant within ten (10) working days of the meeting provided for in this paragraph. In the event the Grievance arises from a decision or action made by the Village President or Board of Trustees, the Grievance may be initiated at Step 3 provided the time limits set forth in Step I of this Article are adhered to;

STEP 4 If the Grievance is not resolved at the Village President level, the Union may submit it to binding arbitration, provided written notice indicating such is filed with the Village President's office within ten (10) working days of the answer rendered by the Village President's office, or if no answer is filed, within ten (10) working days of the last day on which such answer was due.

The Union shall promptly request the Federal Mediation and Conciliation Service (FMCS) to provide a panel of qualified Arbitrators. Within seven (7) business days after receipt of the list from FMCS the two parties shall alternately strike one name at a time from the list, with the party striking first being determined by a toss of the coin. The arbitrator thus selected shall decide the merits of the grievance.

In making his/her recommendation, the Arbitrator shall not add to or enlarge upon this Agreement, and any suggested remedy, if appropriate, shall conform to Illinois law. The fees and expenses of the Arbitrator and the American Arbitration Association 'shall be shared equally by the Village and the Union. The parties likewise shall share the expenses of any transcript(s) which they may jointly request, but all other expenses which may be incurred by either party shall be borne by that party.

ARTICLE VII - DISCIPLINE AND DISMISSAL

7.1 Employee Security

Disciplinary action (oral reprimand, written reprimand, suspension or discharge) may only be imposed on an employee for just cause. The Village shall ordinarily follow the tenets of progressive discipline unless the facts and circumstances of the case require otherwise.

7.2 Performance Evaluation & Discipline

Any officer undergoing a performance evaluation shall have the opportunity of indicating his or her approval or disapproval of the evaluation by marking an appropriate "Approval" or "No Approval" box on the evaluation form and placing his or her signature near the box. Discipline resulting from the performance evaluation process may only be imposed after following the procedures of Article V. An officer questioning his or her evaluation shall have the opportunity to meet with the supervisor conducting the evaluation.

7.3 Access to Personnel Files

Personnel files kept by the Village on all full-time Sworn Police Sergeants shall be made available pursuant to the Illinois Personnel Record Review Act, 820 ILCS 40/ et seg.

7.4 Removal of Information From Personnel Files

Oral reprimands that are older than twelve (12) months shall not be used against the Officer for purposes of progressive discipline provided the infractions listed in the oral reprimand have not been repeated twelve (12) months from the date of the oral reprimand. Written reprimands that are older than twenty-four (24) months shall not be used against the Officer for purposes of progressive discipline provided the infractions listed in the written reprimand have not been repeated twenty-four (24) months from the date of the written reprimand.

7.5 Disciplinary Sequence

The typical disciplinary sequence for any employee covered by this Agreement shall be: (1) Verbal Warning; (2) Written Warning, with a copy to the employee's personnel file, (3) Suspension; (4) Dismissal.

Disciplinary action, up to and including termination of employment, shall be for a violation of a Village ordinance, or County or State or Federal law, or for a violation of Police Department policy or rules and regulations, so long as such rules and regulations have previously been reduced to writing and distributed to, posted or otherwise made available to all full-time North Aurora Police Officers covered by this Agreement. Any such disciplinary action shall be administered in a timely and progressive manner except that suspension or dismissal may result as the first step in the disciplinary procedure depending on the circumstances and severity of the offense.

7.6 Disciplinary Appeals

The parties agree that the Chief of Police (or the Chief's designee) shall have the right to suspend a non-probationary officer for up to thirty (30) days or dismiss a non-probationary officer for just cause, without filing charges with the Village Board of Fire and Police Commissioners. Neither the Police Chief nor the Village or their agents will file charges asking the Board of Fire and Police Commissioners to impose discipline on any non-probationary bargaining unit employee; instead all such discipline shall be imposed by the Police Chief or his designee. The decision of the Police Chief or the Chief's designee with respect to the suspension or dismissal action shall be deemed final, subject only to the review of said decision through the grievance and arbitration procedure. The sole recourse for appealing any such decision by the Chief of Police shall be for the employee to file a grievance as described herein.

If the employee elects to file a grievance as to his or her suspension or dismissal, the grievance shall be processed in accordance with Article 6 of this Agreement, except that it shall be filed at Step 4 of the procedure. If the grievance proceeds to arbitration and the arbitrator determines that the disciplinary action was not supported by just cause the arbitrator shall have the authority to rescind or to modify the disciplinary action and order back pay, or a portion thereof. No relief shall be available from the Board of Fire and Police Commissioners with respect to any matter which is subject to the grievance and arbitration procedure set forth in Article 6 of this Agreement. Any appeal of an arbitrator's award shall be in accordance with the provisions of the Uniform Arbitration Act as provided by Section 8 of the IPLRA.

Pursuant to Section 15 of the IPLRA and 65 ILCS § 10-2.1-17, the parties have negotiated an alternative procedure based upon the grievance and arbitration provisions of this Agreement, and the foregoing provisions with respect to the appeal and review of suspension or discharge decisions shall be in lieu of, and shall expressly supersede and preempt, any provisions that might otherwise be the Rules and Regulations of the Village Board of Fire and Police Commissioners, which is divested of jurisdiction to hear disciplinary matters involving bargaining unit members.

Discipline of probationary officers, as well as any verbal warnings, written reprimands or written warnings shall not be subject to the grievance and arbitration procedure.

ARTICLE VIII - SENIORITY

8.1 Definition of Seniority

The Village and the Union recognize that the Police Department seniority shall date from the employee's earliest date of continuous service as a full-time Sworn North Aurora Police Officer regardless of rank.

Pursuant to the terms of this Article, Police Department seniority shall be utilized to determine the status of individual Police Officers in matters of reduction in force, vacation, shift scheduling, days off selection and opportunities to work overtime as well as such other, matters that may arise from time to time and which may require a fair and equitable means of choosing one employee over another. Police Department seniority shall also be a consideration for transfers, promotions, opportunities to bid for specific assignments and training opportunities. However, in all cases, the seniority rights of full-time Sworn North Aurora Police Sergeants shall take precedence over any seniority rights deemed to be held by part-time Officers, temporary Officers, retired Officers who have returned to work on a part-time basis, and any other employees who are not full-time sworn North Aurora Police Officers.

8.2 Rank Seniority

Time in rank seniority may be considered in making assignments among the sergeants when all other qualifications are equal.

8.3 Hiring Date Conflicts

In the event that more than one employee covered by this Agreement has the same date of hire, Police Department seniority of the employees involved shall be resolved based on the order in which their names first appeared on the Village and/or Police Department eligibility list, with the earliest name appearing on the list being the most senior Officer.

8.4 Seniority List

The Village agrees to prepare a Police Department Seniority List and a Rank Seniority List on an annual basis, not later than December 31st of each year, and to provide the Union with a copy of such list, which the Union may then post on its Union bulletin board. In the event of errors or disputes over names or dates appearing on either Seniority List, the Union will call these matters to the attention of the Village as they arise. As new Sworn Police Officers are hired or promoted or as others leave the

employ of the Village, their names shall be added to or removed from the Seniority Lists not later than thirty (30) days from the date of such changes. The Village agrees to provide the Union with such updated Seniority Lists as they become available.

8.5 Lay-Off and Re-Call

Lay-Off

The Village, in its discretion, shall determine whether layoffs are necessary. If it is determined that layoffs are necessary, employees covered by this Agreement will be laid off and recalled in accordance with Illinois Statutes (65 ILCS 5/10-2.1-18).

Except in an emergency, no layoff will occur without at least thirty (30) calendar days' notification to the affected Member and the Council. The Village agrees to consult the Council, upon request, and afford the Council an opportunity to propose alternatives to the layoff, though such consultation shall not be used to delay the layoff. Employees on layoff do not accrue seniority during the period of the layoff.

Any Member who has been laid off shall be placed on the appropriate reinstatement list for up to two (2) years.

If it is determined that the lay-offs of Officers who perform the duties of full-time sworn Officers are necessary due to lack of work, lack of funds or other legitimate business reasons, the Village agrees that no covered member shall be laid off prior to the lay-off of any part-time sworn Officers. If it is determined that lay-offs of employees who perform the duties of a full-time Officer are necessary due to lack of work, lack of funds or other legitimate business reasons, the Employer agrees that no covered member shall be laid off prior to the lay-off of any part-time, temporary or contractual sworn Officers.

Re-Call

Covered members shall be recalled by seniority in the inverse order of their lay-off and be provided with a fourteen (14) calendar day notice of recall by certified or registered mail, return receipt requested, with a copy to the Labor Council. If the covered member does not respond within fourteen (14) calendar days after receipt of the notice, the Village may go to the next name on the recall list and the covered member will be deleted from the list. Covered members who establish to the Village that their failure to report/respond was due to extenuating circumstances beyond their control and occurred through no fault of their own will not be removed from the recall list, but they will forfeit their right to recall for the position(s) they failed to make a timely response. The Village shall be deemed to have met its notice obligation by mailing notice to the last mailing address provided by the employee.

8.6 Accrual and Non-Accrual of Seniority

Seniority shall accrue on a continuous basis from the employee's earliest date of continuous service as a full-time Sworn North Aurora Police Officer regardless of rank and shall be a factor in Departmental decisions as depicted in Article VIII of this Agreement. Seniority shall not accrue during any periods in which a Sergeant is on an unpaid authorized leave of absence or an unpaid disciplinary suspension in excess of thirty (30) days. However, seniority shall continue to accrue during any sick leave or disability leave that an employee may experience, provided that such leave does not exceed twelve (12) months. After twelve (12) months of continuous sick leave or continuous disability leave, employees shall not continue to accrue seniority. However, any seniority such employees have accrued up to that point shall continue to be carried by the Village in their names. Further, any employees who return to work as full-time Sworn Police Sergeants following extended sick leaves or extended disability leaves shall be entitled to claim and exercise all Police Department seniority, they have accumulated up to the point that their seniority ceased to accrue and, upon their return to active duty, the seniority of such employees shall once again continue to accrue.

Seniority shall be terminated whenever an employee resigns, is discharged for cause, retires, or has been laid off during a reduction in force and not called back for two (2) years.

8.7 Seniority and Vacation Scheduling

Wherever possible, vacation periods shall be selected and scheduled prior to November 30th of each year for vacations that will be taken for the following year. Vacations shall be selected and scheduled based on Police Department seniority within the Police Department. Additionally, consideration for vacation scheduling shall include the shift assignment of the Sergeant. If the vacation time is taken in split segments, the first segment is picked by seniority and the second segment is picked after those less senior have had the opportunity to select a vacation segment.

8.8 Seniority, Shift Scheduling and Days Off

Pursuant to Article VIII of this Agreement, the Village agrees that seniority shall be the determining factor in allowing Sergeants to bid on or otherwise select the shifts they will work and the days they will be off.

8.9 Seniority and Overtime

Scheduled overtime assignments shall be based on Police Department seniority utilizing the Police Department Seniority List described in Article VIII §3, by utilizing a "sign up" sheet and Sergeants will be eligible for this sign-up sheet, except if a particular level of training or expertise is required for a particular overtime assignment or detail, that assignment may be granted to an Officer or Sergeant of lesser seniority.

In the event of unscheduled overtime (i.e., sick call for a particular shift) the following procedure shall be followed:

1) Upon receipt of a sick call, the Supervisor shall notify each Officer, in the order of seniority regardless of rank, assigned to that particular shift. Only one (1) notification is required to each Officer to a telephone number provided by the Officer whether he/she answers or not. After the initial notification is made, the Supervisor may immediately continue on to the next Officer;

2) In the event the Supervisor is unable to reach an Officer utilizing the parameters set forth in No. 1 of Article VIII §9 the Supervisor shall then make a request to each Officer regardless of rank, in the order of seniority, to each currently working Officer at the time that the initial sick call was received,

3) Should each Officer refuse that was contacted pursuant to No 2 of Article. VIII §9, Officer(s) in the order of reverse seniority regardless of rank, will be ordered to cover the respective shift.

An Officer shall have the right to decline to work unscheduled overtime if another Officer of comparable training and skill levels is available and indicates a willingness to work the unscheduled overtime. Also, individual Officers who exercise their seniority rights in working either scheduled or unscheduled overtime shall be limited to a maximum of forty (40) hours of such overtime in any two-week pay period unless exigent circumstances exist as reasonably determined by the Chief of Police,

Nothing in this Agreement shall be construed as disallowing two (2) or more Officers from sharing an overtime shift.

8.10 Seniority and Rescheduling (Trading) of Shifts

The Village agrees that regularly scheduled shifts and regularly scheduled days off may periodically be voluntarily traded between individual Officers without regard to seniority or rank. In such instances, both Officers involved in a given shift trade must notify the Chief of Police or his designee of the starting time of the shift being traded. Also, such voluntary shift rescheduling must be reciprocal so that the Village will not be obligated to

compensate either Officer at an overtime rate, unless the original shift being traded was to have been an overtime shift. Specifically, Sergeants and Patrol Officers or Investigators may exchange back and forth within patrol shifts. Trades shall not take place if the trade results in a shift no longer having supervisor coverage (i.e. a trade cannot be the cause of a shift not having Sergeant or OIC coverage.) Nothing in this Agreement shall prohibit the use of Compensatory, Vacation or Holiday Time to repay an Officer for working a shift.

ARTICLE IX EMPLOYMENT PRACTICES & PROCEDURES

9.1 Court Time Compensation

The Village agrees that all full-time sworn police Sergeants will be compensated for court appearances at the minimum rate of three (3) hours at the rate of one and one-half (1-1/2) times the regular rate of pay or compensatory time, at the Officer's discretion. A four (4) hour minimum rate of pay at the rate of one and one-half (1 1/2) times the regular rate of pay or compensatory time, at the Sergeant's discretion, for appearances at jury trials in which the Officer testifies. Sergeants shall receive two (2) hours at one-and-one-half (1½) their regular rate of pay per day as court readiness pay unless the Sergeant is notified by 5:00 p.m. on the prior business day that he/she was scheduled to appear that his/her appearance will not be necessary.

9.2 Call - In Compensation

The Village agrees that any Sergeant who is called in at least one (1) hour prior to the start of a regularly scheduled shift, or who is called in on what would otherwise be a regularly scheduled day off, shall be compensated for a minimum of one (1) hour, to be paid at the normal overtime rate of pay or Compensatory Time, at the Officer's discretion, pursuant to §5 of this Article. For attendance to Staff Meetings outside a Sergeant's regular scheduled work period the minimum compensation shall be one and one half (1 ½) hours or actual time worked, whichever is greater, to be paid at the normal overtime rate of pay or Compensatory Time, at the Officer's discretion, pursuant to §5 of this Article. The use of flex time shall not be permitted to incur overtime under this provision.

9.3 Residency Requirement

The bargaining unit and the Village of North Aurora agree to a twenty-five (25) mile radius residency requirement from the corporate limits of North Aurora.

9.4 Uniforms and Equipment

The Village shall provide each sworn North Aurora Police Sergeant with an annual allotment of Twelve Hundred Dollars ($1200.00) per fiscal year for the replacement of uniforms and other related equipment. The annual allotment Twelve Hundred Dollars ($1200.00) will be paid to the Sergeants in one (1) installment on or before June 15 of each year, as a separate check, and count as taxable income.

The Village agrees to provide each sworn Sergeant with a new body armor vest and vest carrier, once every five (5) years. The Sergeant may upgrade the body armor vest supplied by the Village of North Aurora providing the Sergeant pays the difference in price.

The Village agrees that any employer driven changes to the uniform presently being worn will be provided for by the Employer at no cost to the employee.

9.5 Overtime Compensation and Compensatory Time

Full-time Sworn Police Sergeants may be required to work overtime in both emergency and non-emergency situations. In either case, overtime shall be duly authorized and approved by a supervisor. Sergeants required to work overtime shall be compensated for such time at the rate of one and one-half (11/2) times the regular rate of pay in either cash or compensatory time off at the Sergeant's option. Nothing in this Section shall conflict with the holiday overtime rate described in Article X, Section 1 of this Agreement.

Alternative Work Schedule (2184 Hour Schedule)

1. Patrol sergeants will work twelve (12) hour shifts. Based on operational needs and reasonable notice to the union, patrol sergeants may be assigned eight (8) or ten (10) hour shifts. If the assignment lasts more than thirty (30) days, the union will have the right to meet and confer with the police chief to determine the expected duration of the modified schedule. If no mutual agreement is reached on extending the modified schedule, the union will have the right to bargain with the employer over the impact of this continued schedule change. Pay periods remain eighty-four (84) hours paid in straight time.
    a. The normal workday will be twelve (12) hours, generally from 6:00 a.m to 6:00 p.m. or 6:00 p.m. to 6:00 a.m.
    b. Specialty positions (employees assigned as detectives, traffic enforcement officer, community policing officer, etc.), may be assigned to work shifts other than twelve (12) hour shifts.

c. Specialty positions (employees assigned as detectives, traffic enforcement officer, community policing officer, etc.), shall be scheduled to work eighty-four (84) hours each 14 day period. Overtime shall be paid after eighty-four (84) hours has been worked in the fourteen (14) day pay period. Unless the Sergeant and the Village mutually agree, there shall be no reduction of hours (Duty Reduction Time).

2.The work cycle for purposes of 7(k) of the federal Fair Labor Standards Act ("FLSA") shall be considered twenty-eight (28) days.

a. Overtime shall be paid for hours worked in excess of the Sergeant's assigned twelve (12) hour day; and all assigned work in excess of eighty-four (84) hours in a fourteen (14) day pay period.
b. All authorized paid time off shall count as hours worked and be included in determining whether a Sergeant has worked in excess of the twelve (12) hour day and he eighty-four (84) hour requirement per fourteen (14) day pay period.
c. Overtime shall be compensated at a rate of one and one-half (1 ½) times the Sergeant's regular hourly straight time rate of pay.
d. Patrol Sergeants will normally be assigned to work 2 on; 2 off; 3 on; 2 off; 2 on; 3 off; (Pitman Schedule) starting on Monday for two (2) of four (4) platoons and so forth during the fourteen (14) day work cycle.
e. All Sergeants, regardless of position, shall work 2184 hours per calendar year.

3. So long as the Department employs twelve (12) hour shifts for patrol, employees assigned to other duty or training may be assigned to daily shifts other than twelve (12) hour shifts.
    a. Sergeants assigned to other duty (SWAT, KCART, Honor Guard, etc.), shall work twelve (12) hours for the other duty day. If the other duty day does not last twelve (12) hours, Sergeants shall have the option to use paid time off or adjust their hours during the fourteen (14) day pay period so long as they work eighty-four hours in the fourteen (14) day pay period. The adjustment of hours shall be approved by the Chief or his designee.
    b. Sergeants who participate in ongoing professional training shall follow the conditions set forth in Section 12.4 of this Agreement.

4. All leave "days" awarded as part of the contract shall continue to equate to eight (8) hours per day, and shall also continue to accrue at that rate, i.e., the alternative work schedule shall not increase paid leave time, including vacations. An employee using a full leave day while assigned to the alternative work schedule shall have twelve (12) hours deducted from his or her accrued leave totals.

5. The application of the Alternative Work Schedule to any other Article or Section of this Agreement shall not result in the pyramiding of overtime.

"Hours actually worked" shall include paid compensatory time off, paid vacation leave, paid assigned holidays, paid jury service and paid time for serving as a witness and sick leave.

The combination of required overtime hours and regular-time hours shall not exceed sixteen (16) hours in any twenty-four (24) hour period for any given Sergeant's regularly scheduled hours (declared state of emergency notwithstanding). Also, no Sergeant shall be required to work sixteen (16) hours per day in any two (2) day period (declared state of emergency notwithstanding) and no Sergeant shall be required to work more than two (2) sixteen (16) hour days in any standard workweek (declared state of emergency notwithstanding). However, Sergeants who work a regular (8, 10 or 12) hour shift may volunteer for an additional four (4) hours of overtime for each day of the regular workweek, but in no case may such Sergeants be required to work more than forty (40) hours of overtime in any two-week pay period.

Overtime shall be paid along with regular-time compensation in the Sergeant's regularly scheduled paychecks, unless individual Sergeants elect to receive their overtime pay in the form of compensatory time.

Compensatory time may be used for time off in fifteen (15) minute increments. Compensatory time, which shall be earned at overtime rates, shall be granted to full-time Sworn Police Sergeants who indicate to the Chief of Police or his designee that they choose such compensatory time in lieu of actual payment of monies in their paychecks. Compensatory time may be used for time off on an hour-for-hour basis, and may be taken in increments as small as fifteen (15) minutes. Permission from the supervisor will be obtained prior to utilizing compensatory time and will not unreasonably be withheld taking into consideration manpower and emergency situations. Compensatory time may be accumulated up to a maximum of one hundred (100) hours and accrue from year to year over a given Sergeant's career. The Chief or his designee will keep accurate records of how much compensatory time is in each Sergeant's account. Account balance information will be made available to individual Sergeants who request such data during time periods established by the Chief or his designee or, if the Village finds it possible and economically feasible to do so, compensatory time balances shall be expressed on the paycheck stubs of individual Officers on a regular basis.

Unused compensatory time, up to the maximum of one hundred (100) hours, shall be rolled over from one year to the next and, upon a given Sergeant's unpaid leave of absence, termination, retirement, permanent disability or death, such accumulated compensatory time shall be paid to the Sergeant or his or her survivors at the then-prevailing hourly rate of pay. Upon retirement, individual Sergeants may choose to take their accumulated compensatory time in the form of a lump-sum payment or paid time off or a combination of both.

Sergeants shall be allowed to cash in accumulated compensatory time anytime during the year, as long as the request is made at least two (2) weeks in advance to the Chief of Police or his designee.

Sergeants who work hours associated with the end of Daylight Savings, in the Fall will earn one (1) hour of overtime at a rate of one and one-half (1 ½) times the regular rate of pay in either cash or compensatory time off at the Sergeant's option. Sergeants who work hours associated with the beginning of Daylight Savings, in the Spring, will have to work one (1) additional hour, either before or after their assigned shift, or in a form of paid time off to account for the loss of one (1) hour.

9.6 Secondary Employment

The Village agrees that all full-time sworn Police Sergeants covered by this Agreement who desire to take on secondary employment may do so. In instances where such secondary employment is not directly involved in law enforcement or security work, such secondary employment will be reported by the Officer to the Chief of Police or his designee for his information. Prior approval of the Chief of Police shall be required, but shall not unreasonably be withheld, for any Sergeant to work secondary employment. Officers working off-duty details that are contracted by the Village shall be governed by the terms of the North Aurora Police Department General Order regarding these details.

In no case will a Sergeant be allowed to work in uniform for a non-sanctioned detail.
In no case shall a Sergeant be allowed to work as a bouncer, process server or in any establishment whose primary revenue source is the sale of alcoholic liquor.

ARTICLE X - HOLIDAYS AND LEAVES

10.1 Holidays

The Village agrees that all full-time Sworn Police Sergeants shall receive eleven (11) annual paid holidays, which will be given on January 1st of each year. These holidays may be used anytime throughout the year subject to manpower requirements. If a Sergeant works the holiday, they will be paid at a rate of one and one half (1 1/2) times their regular rate of pay for each and every hour worked on the holiday. In the event a Sergeant is working overtime on a designated holiday, the Sergeant shall receive overtime pay at their overtime rate (2.25 times their regular hourly wage) for any hours worked. Sergeants are also able to utilize the "buy back" option. The "buy back" will be paid at a rate of one (1) hour of straight time pay for each hour of unused holiday time. The "buy back" can occur on any paycheck throughout the year.

The Holidays Are:

New Years Eve	Labor Day
New Years Day	Veterans Day
	Thanksgiving Day
Easter	Day after Thanksgiving
Memorial Day	Christmas Eve
Independence Day	Christmas Day

Should the Village, during the term of this contract, implement additional holiday or holidays for any group of Village employees, that holiday or holidays shall also be immediately granted to employees covered by this Agreement.

10.2 Personal Leave Days

All full-time Sworn Police Sergeants shall receive twenty-four (24) hours of paid personal leave per year. These twenty-four (24) personal leave hours can be taken at the discretion of the Sergeant for personal business. Notice shall be made to the appropriate supervisor by the Sergeant requesting to take a paid personal leave day and such permission shall not be unreasonably withheld taking into consideration manpower and emergency situations. Also, the Village agrees that paid personal leave days may be used in conjunction with regularly scheduled days off, vacation days or on any other scheduled on duty day. There will be no cash pay out for unused personal days unless the denial of their use is occasioned by the Village. There shall not be accrual of personal days from one year to the next.

10.3 Sick Leave

Sick leave is a privilege and shall only be allowed in case of actual sickness or disability of the employee. The Village agrees to provide all full-time sworn police Sergeants with ninety-six (96) hours of paid sick leave per calendar year. Sergeants will accumulate sick leave at a rate of eight (8) hours sick leave per calendar month to a maximum of seven hundred and twenty hours (720). Sick leave shall be granted in a minimum of one (1) hour increments for the injury or illness of an immediate family member that requires the presence of the employee. Immediate family defined for this section as Mother, Father, Spouse, Child or Stepchild.

During the term of this contract, should the Patrol Officers at any time accumulate sick leave at a rate of more than 8 (hours) sick leave per calendar month or more than the maximum of seven hundred and twenty hours (720), the Sergeants shall immediately receive the same amount as the Patrol Officers.

Sergeants requesting a sick leave day will make notification to the appropriate supervisor no later than one (1) hour before the start of the Sergeant's regularly scheduled shift except for uncontrolled or unforeseen circumstances.

Any supervisor or their designee may send a Sergeant home on sick leave if in their opinion the employee appears ill and threatens the health of other employees.

A Sergeant using three or more consecutive sick leave days may be required to present verification of illness from a medical doctor or medical facility or other recognized healthcare professional. The Chief of Police may require a physician's or other recognized healthcare professional's statement as a condition of sick leave pay for any absence of any duration.
In the absence of compelling justification, an employee will not receive sick benefits for any days taken just before or just after a scheduled vacation, holiday, or leave of absence. If an employee is sick on one of these days, a doctor's note and/or other evidence of illness satisfactory to the Chief of Police may be required before sick benefits will be extended.

If a Sergeant becomes sick while on vacation, holiday or leave of absence, sick leave will not be substituted for the vacation, holiday or leave of absence.

Should the Village, during the term of this contract, implement a sick leave buyback program for any group of Village employees, that program shall also be immediately applied to employees covered by this agreement.

10.4 Bereavement Leave

Up to forty (40) hours leave with pay shall be granted in the event of a death of an immediate family member, spouse, child or stepchild. Up to twenty-four (24) hours of bereavement leave will be granted for mother, father, brother, sister, stepfather, stepmother, grandparents, grandparents, grandparent of spouse, grandchild, mother-in-law, father-in-law, stepbrother or stepsister. Up to twelve (12) hours of leave will be granted for the death of aunts, uncles, brother-in-laws or sister-in-laws. Up to twenty-four additional hours may be granted for travel if the distance is more than 250 miles one way.

10.5 Jury Duty Leave, Court Leave

Any full-time Sworn Police Sergeant covered by this Agreement who is summoned as a witness in a criminal or civil Court proceeding or is summoned and reports for jury duty shall be granted leave to fulfill such duty. The 'Village shall compensate any Sergeant who is required to serve as a juror or participate in a Criminal or Civil Court proceeding

at his or her regular rate of pay, assuming such Court or Court-related appearance takes place when the Sergeant would have been scheduled to work. The Sergeant shall present proof of such service to the Chief of Police or his designee. Any fees or expense reimbursements that are paid to the Sergeant for such duty shall, in turn, be paid by the Sergeant to the Village.

10.6 Attendance at Meetings

The Employer agrees that the duly authorized local representatives of the Labor Council shall be allowed to use their available time off to attend general, executive or special meetings of the Labor Council, provided that reasonable notice of such meetings shall be given in writing to the Employer. Any Employee chosen as a delegate to an Illinois Fraternal Order of Police Labor Council conference shall be allowed the use of available time off options to attend any such meetings or conferences, provided that the employee submits a written request to the Employer.

ARTICLE XI - VACATION LEAVE

11.1 Earned Paid Vacation Requirements

A. The Village provides vacation time to full-time police Sergeants based on length of continuous service. Sergeants accrue vacation based on the anniversary date of their initial date of hire by the Village. Vacation time earned (based on the formula below) will be granted to the Sergeant on a per pay period basis, but no more than twice per month.

Each Sergeant will have a vacation bank. Time will be added to the bank twice each month and time used will be subtracted when taken. The maximum amount Sergeants will be allowed to accumulate in their vacation bank will be equal to one year's vacation plus one week. Any vacation time in excess of one year plus one week will be lost to the Sergeant; unless through no fault of the Sergeant or to meet the needs of the Village the Sergeant was unable to schedule said vacation. Vacation may be taken in accordance to the stipulations presented below.

The paid vacation schedule is as follows:

Years of Service	Annual Vacation Amount	Accrual Rate Twice a Month	
0 through 3 years	80 hours	3.333	
Beginning year 4 through completion of year 6	100 hours	4.166	
After 6 years through 14 years	120 hours	5.0	
After 14 years through 19 years	160 hours	6.666	
After 19 years	200 hours	8.333	

B. Generally, no more than eighty-four (84) hours of vacation can be taken at one time. If a Sergeant wishes to take a longer vacation, he must request Chief of Police approval.

C. Vacation Leave Requests

1) All vacation time is scheduled as the needs of the department allow.
2) Vacation pay will be based on the normally scheduled workweek at straight time.
3) Sergeants are not allowed to take cash payment for vacation pay in lieu of actual time off unless the purpose of the Village would be served or, at the time of termination of employment.
4) Vacation days are authorized by the Chief of Police on the basis of seniority recognizing that vacation schedules are subject to the workload of the department. The scheduling of all vacation days is subject to prior approval of the Chief of Police or his designee.
5) When an officer terminates employment with the Village, the balance of their vacation bank will be paid.

ARTICLE XII - HEALTH & WELFARE BENEFITS

12.1 Medical/Hospitalization/Life/Dental Insurance

The Village shall provide the same health insurance coverage at the same costs as provided to all other non-union Village employees.

12.2 Life Insurance

All full-time Sworn Police Sergeants shall be provided with life insurance in an amount equal to twenty-five thousand dollars ($25,000.00) at no cost to the Officer.

12.3 North Aurora Police Pension Plan

The Village of North Aurora in conjunction with the Board of Trustees of the North Aurora Police Pension Fund, is required by Illinois statute to maintain and administer a Pension Plan for its Police, to regularly deduct uniform, mandated employee contributions to this Pension Plan, and to make Village contributions to this Pension Plan on behalf of all North Aurora Police Officers covered by this Agreement who meet certain requirements, including vesting requirements, of both the Pension Plan and the State law that governs it.

In that Illinois law requires that such Police Pension Plans routinely issue accurate and audited financial reports to their covered members, and in that the Village of North Aurora desires to comply with Illinois law, and in that the Village recognizes that North Aurora Police have every right to be made aware of such financial considerations as fund balances, profits and losses on fund investments, loans that the fund may make from time to time, and details of elections of Pension Plan Board members, the Village, in cooperation with the Board of Trustees of the North Aurora Police Pension Fund, agrees to maintain a program of full disclosure of any and all Pension Plan information and data, including audited Annual Reports, to those North Aurora Police whose deferred salaries and employee contributions make up the Pension Plan's reason for existence.

12.4 Ongoing Professional Training

A. The following policies and rules must be adhered to by all Sergeants if seeking reimbursement for business and travel expenses.

1) The purpose of the travel shall be documented and approved in advance by the Chief of Police of his designee. The documentation shall show the dates and

times of travel, the points of departure and destination, the mode of transportation, mileage and the cost of transportation secured.

~~2)~~ Sergeant traveling on Village business shall follow the terms of the Police Department General Order in effect at the time of the travel relative to travel reimbursement.
   a. When travel is made by auto, proof of insurance is required in the amounts required by law.
   b. In determining the amount of reimbursement for air fare, compensation shall be in accordance with the most reasonably economical available fare.

3) Expenses will be paid based on the following:
   a. The officer's request for reimbursement must be accompanied by proof for any Village-related expense.
   b. Local travel – Personal auto use will generally be reimbursed at the current IRS approved amount per mile. Distance should be measured from the residence or workplace, whichever is less.
   c. Where an officer is requested to attend a training class, conference or seminar where lunch is not included in the registration expense, the employee is eligible for lunch reimbursement up to a maximum amount set by the Village Board from time to time.
   d. Claims for reimbursement should be submitted within one (1) week of completing the trip. Claims will not be paid if they are submitted after July 1st of the following fiscal year.

B. Attendance at lectures, meetings, training programs and similar activities will be compensated as follows:

1) Maximum compensation for voluntary attendance at such programs, shall be one (1) full working day.
2) Maximum compensation for attendance of programs requested by the Village shall be one (1) full working day unless employee can present documentation from the presenter of the program showing that the duration of the training involved was greater than one (1) full working day.
3) Attendance at such programs requires prior written approval of the Chief of Police or his designee.
4) Attendance at lectures, meetings, training programs and similar activities is subject to the availability of funds.

C. Sergeants may be required to return to work if programs last less than a full day.

D. Travel Time

1) Travel time during the regular workday does not involve compensation beyond the employee's regular salary or hourly wage for that working day.

12.5 Educational Expense Reimbursement

The Village will make reimbursement for accredited courses directly related to the employee's position with the Village (or necessary prerequisites for a program of study related to the employee's position with the Village) as set forth below.

Employees who seek reimbursement for a particular course must, prior to enrolling in said course, obtain the approval of the Chief of Police that the course is eligible for reimbursement, and provide any information or documentation necessary to verify that the course is eligible for reimbursement.

Reimbursement is based on the following:

1) Undergraduate Courses: A maximum of $300.00 per course shall be reimbursed for tuition, books and lab fees for successful completion of any eligible course.
2) Graduate Courses: A maximum of $500.00 per course shall be reimbursed for tuition, books and lab fees for successful completion of any eligible course.
3) A grade of "C" or better, or a "P" in a Pass/Fail system is required to qualify for reimbursement.
4) The Village will pay for any test which provides credit for courses required to complete an Associate's, Bachelor's or Graduate Degree.
5) The reimbursement policy does not apply to those courses which are taken on Village time and paid for by the Village.

ARTICLE XIII - BASE SALARY LEVELS & PREMIUM RATES

13.1 Rates

The following wage increases added to the matrix:
June 1, 2024: 4.50% across-the-board wage increases
June 1, 2025: 3.50% across-the-board wage increases
June 1, 2026: 3.25% across-the-board wage increases
June 1, 2027: 3.25 % across-the-board wage increases
All wage increases retroactive to June 1, 2024, on all hours compensated.

13.2 Progression through the Steps

a.) Upon promotion, Sergeants shall be placed at a step on the Sergeant’s wage matrix which provides a wage of at least 5% above the top Patrol Officer Step.

b.) In the event the top Patrol Step is adjusted during the term of this Agreement and the difference between the Sergeant's wage and top Patrol Officer is less than 5% because of that adjustment, the Sergeant's pay shall be adjusted to maintain the 5% difference.

c.) In the event a Sergeant is promoted to a step higher than the adjusted 5%, the existing Sergeant will be placed at the same step as the newly promoted Sergeant and their promotional anniversary date shall become the same date as the newly promoted Sergeant. The modification of a promotional anniversary date will only apply to the above-described salary purposes and shall not apply to other benefits related to seniority listed elsewhere in this agreement.

13.3 On Call Pay

Sergeants shall receive one (1) hour pay at time and one half (1 ½) for each twenty-four (24) hour period that they are on call which shall typically be their scheduled days off. Such compensation may be taken in pay or compensatory time at the Sergeant's discretion.

All Sergeants shall be eligible, and share equally, the opportunity to be the Supervisor On-Call and receive On-Call Pay. Newly promoted Sergeants may be excluded from eligibility during their first year of promotion. Each period the On-Call Duty is available to Sergeant Level Supervisors, the next Sergeant in the rotation will be assigned the On-Call Duty. Email notification will be sent to ALL current Sergeants as to On-call Duty availability. Sergeant rotation of the On-call Duty will be managed by all Sergeants cooperatively.
The rotation will begin and continue based upon Sergeant Seniority. Each Sergeant will be given equal opportunities to be assigned the On-call Supervisor. The On-call Duty is a mandatory assignment when made available to the Sergeant Level Supervisor. The On-call Duty responsibility may be traded or offered from one Sergeant to another Sergeant voluntarily. Immediate notification of On-call Duty assignment changes must be posted and emailed to all sworn officers. Supervisor On-call duty will be a minimum of twenty-four (24) hours. The maximum one sergeant shall be On-call is one (1) continuous week. Sergeants may accept or trade On-call duty from another Sergeant for a maximum of two (2) continuous weeks. Supervisor On-call is separate from Investigator On-call. The only sergeant eligible for the Investigator On-call Duty shall be the current sergeant assigned to investigations.

ARTICLE XIV MISCELLANEOUS WORKING CONDITIONS

14.1 Sergeant Deployment & Shift Scheduling

It shall be the right and responsibility of the Village President and the Chief of Police to deploy Officers covered by this Agreement to various details and assignments and to provide the necessary equipment and Department vehicles.

The Village agrees that shift assignments shall be made on an annual basis and that once a particular Sergeant is assigned to a particular shift that Sergeant shall remain on that shift until shift assignments are open to bidding by seniority in the following year. Wherever possible, shift assignments shall be bid on and established prior to December 31st in any given year and shall go into effect at the beginning of the first pay period in January of the following year. Nothing in this section shall be construed as to prohibit a shift switch between people as described in Article VIII §10 entitled "Seniority and Rescheduling (Trading) of Shifts"

14.2 Drug Screening

Sergeants shall not be required to submit to random drug testing, however such Sergeants may be required to submit to drug testing following auto accidents, weapons discharges and such other circumstances as are codified in State statute. Any such test shall be in accordance with the terms and conditions of the Illinois Controlled Substances Act, 720 ILCS 570/1 01.

14.3 Parental Leave

Should during the term of this Agreement, any other Village employee group receive parental leave benefits, that benefit shall also be provided to the F. O. P. represented employees.

ARTICLE XV – SEVERABILITY

In the event that any Article, paragraph, section or sub-section of this Agreement shall be held invalid and unenforceable by the Illinois Labor Relations Board or any Court of competent jurisdiction, or by any change in any substantially-enacted Federal or State legislation which would prohibit or nullify any section, sub-section or portion of this Agreement, such decision or enactment shall apply only to the specific section, subsection or portion thereof specified by the Labor, Board or Court decision, or change in law, and the remaining parts or portions of this Agreement shall remain in full force and effect. In such event, the parties shall, upon the request of either party, commence good faith bargaining over possible replacement language for the invalidated section, sub-section or portion of this Agreement.

ARTICLE XVI - ENTIRE AGREEMENT

This Agreement constitutes the complete and entire Agreement between the parties. This Agreement supersedes and cancels all prior practices and Agreements, whether written or oral, which conflict with the express terms of this Agreement. The parties acknowledge that during the negotiations which resulted in this Agreement, each had the unlimited right and opportunity to make demands and proposals with respect to any subject matter not removed by law from the area of collective bargaining and that the parties waive the right to negotiate on any issue whether known or unknown and that the understandings and Agreements reached by the parties after the exercise of that right and opportunity are set forth in this Agreement.

Before making any changes in working conditions not contained in this Agreement which are mandatory topics of bargaining, the Village shall notify the Union of its intention to make the proposed changes. Upon such notification, and if requested by the Union, the Village shall meet with the Union and discuss such changes before they are implemented. Any changes made without such notice shall be considered temporary pending the completion of such discussions. If the Union becomes aware of such a change and has not received the necessary notification, the Union will notify the Village as soon as possible and request discussion of such changes if discussion is desired. The failure of the Union to request such discussions shall in no way act as a waiver of any Union rights, stated or implied.

ARTICLE XVII- DURATION

This Agreement shall be effective as of the date it is signed by both parties. Salaries shall be retroactive to June 1, 2024. The Agreement shall remain in full force and effect until May 31, 2028.

Either party may notify the other in writing no less than sixty (60) days prior to the expiration date of this Agreement that it desires to modify or terminate this Agreement.

In the event that such notice is given, negotiations shall begin not later than fifteen (15) days after such notice is made unless mutually agreed to by the parties. This Agreement shall remain in full force and effect during the period of negotiations until such time as it is replaced by any subsequent Agreement

Agreed to, signed and entered into this _____day of _____.

Illinois Fraternal Order of Police Labor Council	Village of North Aurora
_____	_____
_____	_____
_____	_____

APPENDIX A Dues Authorization Form

Dues Authorization Form

ILLINOIS FRATERNAL ORDER OF POLICE
LABOR COUNCIL
974 CLOCKTOWER DRIVE
SPRINGFIELD, ILLINOIS 62704

I,_____, hereby authorize my employer,_____ _____ , to deduct from my wages the uniform amount of monthly dues set by the Illinois Fraternal Order of Police Labor Council, for expenses connected with the cost of negotiating and maintaining the collective bargaining agreement between the parties and to remit such dues to the Illinois Fraternal Order of Police Labor Council as it may from time to time direct. (In addition, I authorize my Employer to deduct from wages any back dues owed to the Illinois Fraternal Order of Police Labor Council from the date of its certification as exclusive bargaining representative to the date this dues deduction is implemented, in such manner as it so directs.)

Date:_____ Signed:_____

Address:_____

City:_____

State:_____ Zip:_____

Telephone:_____

Employment Start Date: _____

Title: _____

Employer, please remit all dues deductions to:

Illinois Fraternal Order of Police Labor Council
Attn: Accounting
974 Clock Tower Drive
Springfield, Illinois 62704

(217) 698-9433

Dues remitted to the Illinois Fraternal Order of Police Labor Council are not tax deductible as charitable contributions for federal income tax purposes; however, they may be deductible on Schedule A of Form 1040 as a miscellaneous deduction.

APPENDIX B UPODA

UNIFORM PEACE OFFICERS' DISCIPLINARY ACT

(50 ILCS 725/1) (from Ch. 85, par. 2551)
Sec. 1. This Act shall be known and may be cited as the "Uniform Peace Officers' Disciplinary Act".
(Source: P.A. 83-981.)

(50 ILCS 725/2) (from Ch. 85, par. 2552)
Sec. 2. For the purposes of this Act, unless clearly required otherwise, the terms defined in this Section have the meaning ascribed herein:
(a) "Officer" means any peace officer, as defined by Section 2-13 of the Criminal Code of 1961, as now or hereafter amended, who is employed by any unit of local government or a State college or university, including supervisory and command personnel, and any pay-grade investigator for the Secretary of State as defined in Section 14-110 of the Illinois Pension Code, including Secretary of State sergeants, lieutenants, commanders, and investigator trainees. The term does not include crossing guards, parking enforcement personnel, traffic wardens or employees of any State's Attorney's office.
(b) "Informal inquiry" means a meeting by supervisory or command personnel with an officer upon whom an allegation of misconduct has come to the attention of such supervisory or command personnel, the purpose of which meeting is to mediate a citizen complaint or discuss the facts to determine whether a formal investigation should be commenced.
(c) "Formal investigation" means the process of investigation ordered by a commanding officer during which the questioning of an officer is intended to gather evidence of misconduct which may be the basis for filing charges seeking his or her removal, discharge or suspension in excess of 3 days.
(d) "Interrogation" means the questioning of an officer pursuant to the formal investigation procedures of the respective State agency or local governmental unit in connection with an alleged violation of such agency's or unit's rules which may be the basis for filing charges seeking his or her suspension, removal, or discharge. The term does not include questioning (1) as part of an informal inquiry or (2) relating to minor infractions of agency rules which may be noted on the officer's record but which may not in themselves result in removal, discharge or suspension in excess of 3 days.
(e) "Administrative proceeding" means any non-judicial hearing which is authorized to recommend, approve or order the suspension, removal, or discharge of an officer.
(Source: P.A. 95-293, eff. 1-1-08.)

(50 ILCS 725/3) (from Ch. 85, par. 2553)
Sec. 3. Whenever an officer is subjected to an interrogation within the meaning of this Act, the interrogation shall be conducted pursuant to Sections 3.1 through 3.11 of this Act.
(Source: P.A. 83-981.)

(50 ILCS 725/3.1) (from Ch. 85, par. 2554)
Sec. 3.1. The interrogation shall take place at the facility to which the investigating officer is

assigned, or at the precinct or police facility which has jurisdiction over the place where the incident under investigation allegedly occurred, as designated by the investigating officer.
(Source: P.A. 83-981.)

(50 ILCS 725/3.2) (from Ch. 85, par. 2555)
Sec. 3.2. No officer shall be subjected to interrogation without first being informed in writing of the nature of the investigation. If an administrative proceeding is instituted, the officer shall be informed beforehand of the names of all complainants. The information shall be sufficient as to reasonably apprise the officer of the nature of the investigation.
(Source: P.A. 83-981.)

50 ILCS 725/3.3) (from Ch. 85, par. 2556)
Sec. 3.3. All interrogations shall be conducted at a reasonable time of day. Whenever the nature of the alleged incident and operational requirements permit, interrogations shall be conducted during the time when the officer is on duty.
(Source: P.A. 83-981.)

(50 ILCS 725/3.4) (from Ch. 85, par. 2557)
Sec. 3.4. The officer under investigation shall be informed in writing of the name, rank and unit or command of the officer in charge of the investigation, the interrogators, and all persons who will be present on the behalf of the employer during any interrogation except at a public administrative proceeding. The officer under investigation shall inform the employer of any person who will be present on his or her behalf during any interrogation except at a public administrative hearing.
(Source: P.A. 94-344, eff. 1-1-06.)

(50 ILCS 725/3.5) (from Ch. 85, par. 2558)
Sec. 3.5. Interrogation sessions shall be of reasonable duration and shall permit the officer interrogated reasonable periods for rest and personal necessities.
(Source: P.A. 83-981.)

(50 ILCS 725/3.6) (from Ch. 85, par. 2559)
Sec. 3.6. The officer being interrogated shall not be subjected to professional or personal abuse, including offensive language.
(Source: P.A. 83-981.)

(50 ILCS 725/3.7) (from Ch. 85, par. 2560)
Sec. 3.7. A complete record of any interrogation shall be made, and a complete transcript or copy shall be made available to the officer under investigation without charge and without undue delay. Such record may be electronically recorded.
(Source: P.A. 83-981.)

(50 ILCS 725/3.8) (from Ch. 85, par. 2561)
Sec. 3.8. Admissions; counsel; verified complaint.
(a) No officer shall be interrogated without first being advised in writing that admissions made in the course of the interrogation may be used as evidence of misconduct or as the basis for charges seeking suspension, removal, or discharge; and without first being advised in writing that he or she has the right to counsel of his or her choosing who may be present to advise him or her at any stage of any interrogation.
(b) Anyone filing a complaint against a sworn peace officer must have the complaint supported by a sworn affidavit.
(Source: P.A. 93-592, eff. 1-1-04.)

(50 ILCS 725/3.9) (from Ch. 85, par. 2562)

Sec. 3.9. The officer under investigation shall have the right to be represented by counsel of his or her choosing and may request counsel at any time before or during interrogation. When such request for counsel is made, no interrogation shall proceed until reasonable time and opportunity are provided the officer to obtain counsel.

If a collective bargaining agreement requires the presence of a representative of the collective bargaining unit during investigations, such representative shall be present during the interrogation, unless this requirement is waived by the officer being interrogated.

(Source: P.A. 83-981.)

(50 ILCS 725/3.10) (from Ch. 85, par. 2563)

Sec. 3.10. Admissions or confessions obtained during the course of any interrogation not conducted in accordance with this Act may not be utilized in any subsequent disciplinary proceeding against the officer.

(Source: P.A. 83-981.)

(50 ILCS 725/3.11) (from Ch. 85, par. 2564)

Sec. 3.11. In the course of any interrogation no officer shall be required to submit to a polygraph test, or any other test questioning by means of any chemical substance, except with the officer's express written consent. Refusal to submit to such tests shall not result in any disciplinary action nor shall such refusal be made part of his or her record.

(Source: P.A. 83-981.)

(50 ILCS 725/4) (from Ch. 85, par. 2565)

Sec. 4. The rights of officers in disciplinary procedures set forth under this Act shall not diminish the rights and privileges of officers that are guaranteed to all citizens by the Constitution and laws of the United States and of the State of Illinois.

(Source: P.A. 83-981.)

(50 ILCS 725/5) (from Ch. 85, par. 2566)

Sec. 5. This Act does not apply to any officer charged with violating any provisions of the Criminal Code of 1961, or any other federal, State, or local criminal law.

(Source: P.A. 83-981.)

(50 ILCS 725/6) (from Ch. 85, par. 2567)

Sec. 6. The provisions of this Act apply only to the extent there is no collective bargaining agreement currently in effect dealing with the subject matter of this Act.

(Source: P.A. 83-981.)

(50 ILCS 725/7) (from Ch. 85, par. 2568)

Sec. 7. No officer shall be discharged, disciplined, demoted, denied promotion or seniority, transferred, reassigned or otherwise discriminated against in regard to his or her employment, or be threatened with any such treatment as retaliation for or by reason of his or her exercise of the rights granted by this Act.

(Source: P.A. 83-981.)

APPENDIX C Grievance Form

GRIEVANCE (use additional sheets where necessary)

Date Filed: _____

Department: _____

Grievant's Name: _____
Last First M.I.

STEP ONE

Date of Incident or Date Knew of Facts Giving Rise to Grievance: Article(s) and Sections(s) of Contract violated: _____

_____ , and all applicable articles.

Briefly state the facts: _____

_____

_____

_____

_____

Remedy Sought: _____

_____

_____

Given To: _____ Date/Time: _____

_____ _____
Grievant's Signature FOP Representative Signature

EMPLOYER'S STEP ONE RESPONSE

_____

_____

_____

_____ _____
Employer Representative Signature Position

_____ _____
Person to Whom Response Given Date

STEP TWO

Reasons for Advancing Grievance: _____

_____

Given To: _____ Date/Time: _____

_____ _____

Grievant's Signature FOP Representative Signature

EMPLOYER'S STEP TWO RESPONSE

_____

_____

_____

_____ _____

Employer Representative Signature Position

_____ _____

Person to Whom Response Given Date

STEP THREE

Reasons for Advancing Grievance: _____

_____

Given To: _____ Date/Time: _____

_____ _____

Grievant's Signature FOP Representative Signature

EMPLOYER'S STEP THREE RESPONSE

_____

_____

_____

_____ _____

Employer Representative Signature Position

_____ _____

Person to Whom Response Given Date

REFERRAL TO ARBITRATION by Illinois FOP Labor Council

_____ _____

Person to whom Referral Given **Date**

_____

FOP Labor Council Representative

APPENDIX E INSURANCE COMMITTEE LETTER OF AGREEMENT

The Village will develop a process for the solicitation of input from all employee groups in order to garner feedback and ideas regarding the structure of the Village's health insurance program including, but not limited to ideas on cost containment alternate network options and plan structure. This will include meetings between employees and Village management for discussion.

Illinois Fraternal Order of Police
Labor Council

FOPLC

Village of North Aurora

DEPUTY CLERK

APPNDIX F SIDE LETTER TO COLLECTIVE

SIDE LETTER TO COLLECTIVE BARGAINING AGREEMENT

This Side Letter to the Collective Bargaining Agreement between the Illinois Fraternal Order of Police, Labor Council ("Labor Council") and the Village of North Aurora ("Village") is entered into this ____ day of July, 2012.

The purpose of this Side Letter is to document the understanding of the parties relative to the payment of a certain stipend to police sergeants of the Village of North Aurora Police Department. It was agreed by the parties during collective bargaining that the wage step table in the parties' collective bargaining agreement would be amended to remove the 10th step of that table. In return for this amendment, the Village agreed to pay to each member of the bargaining unit a one-time 10% stipend of their salary in effect as of the June 1, 2012. It is understood that the three (3) sergeants who did not submit an application for the position of Deputy Chief shall receive the 10% stipend through the next regular payroll process after contract signing. The two (2) sergeants who did submit application for the Deputy Chief position shall get either promotion or stipend upon appointment of the Deputy Chief.

The parties have also agreed that any sergeant who is promoted to Deputy Chief shall not be eligible for the payment of said stipend. However, should that sergeant who was promoted to Deputy Chief, at any time, be returned to the rank of sergeant, he shall be eligible for the one-time payment of the stipend in an amount of 10% of his regular salary as of the effective date of the contract, June 1, 2012.

This Side Letter shall become part of the parties' collective bargaining agreement and be appended thereto.

Illinois Fraternal Order of Police Labor Council	Village of North Aurora
_____	_____
_____	_____
_____	_____

Memorandum

To: Mark Gaffino, Village President & Board of Trustees

Cc: Steven Bosco, Village Administrator

From: Brian Richter, Public Works Director
Brandon Tonarelli, Assistant Public Works Director/Village Engineer

Date: January 13, 2025

Re: Waiving the Bidding Process and Award of the Contract for the Princeton Drive Elevated Water Storage Tank Project

---

At the Village Board meeting on December 4, 2023, Engineering Enterprises Inc. (EEI) was awarded the contract to design the new central water tower. EEI had determined that we need to build at a minimum an 1,000,000 gallon (1 MG) tower. The Village also bid an alternate for a 1,250,000 gallon (1.25 MG) tower to accommodate further future growth or additional increases from large water users. This is a change from the 750,000 MG tank that Rempe Sharpe originally designed.

Village staff along with EEI evaluated the four tank styles and determined a spheroid tank was the preferred style due to estimated construction costs, maintenance life-cycle costs, and the footprint of the tower necessary. The staff researched the number of companies that were identified as capable of building a spheroid water tower with a capacity of 1.0 MG and with a capacity of 1.25 MG as well as being able to conform to the USDOL Joint Apprenticeship Program requirement of the Village, and only one (1) company was identified being able to be able to meet these requirements.

At the September 16, 2024, Committee of the Whole Meeting, the Village Board directed Village staff with EEI's assistance to begin negotiations with CB&I for an agreement to construct the elevated water storage tank and to explore any potential cost savings suggested by the Contractor.

The Village's proposal documents were provided to CB&I, and they submitted a response on October 29, 2024. CB&I's proposal was responsive and in compliance with the specifications. They also included alternates for evaluation to potentially

reduce the cost of the project. CB&I also provided suggestions to further evaluate the type of foundation being utilized due to the high water table and moving the valve from below grade to a room inside the base of the tower as potential ways to reduce the project cost. A new foundation design was determined to save additional funds.

Village Staff, EEI, and CB&I have coordinated and evaluated all these options as well as updated the design to obtain final pricing.

With a cost differential of approximately $600,000 between the two tank sizes and the Village's needs, focus has been on the 1.25 MG tank.

Staff and EEI's review and recommendation of the deducts are as follows: the interior seam grinding deduct is not going to be accepted due to past tank paint maintenance projects, the welded seams are typically the first locations to rust and deteriorate, so not having this as smooth as possible may result in quicker deterioration at these locations. The containment deduct is planned to be accepted as after further evaluation and discussion the risk of paint overspray on this project does not appear to be an issue.

On December 16, 2024 at the Committee of the Whole meeting, the Village Board provided feedback that acceptance of a Parent Company Guarantee Letter ensuring faithful performance instead of Performance and Payment Bonds would be acceptable for this project.

As the Village, EEI, and CB&I were still working through any additional minor price adjustments and scope clarifications, at the Village Board meeting on December 16, 2024, the Village approved a Notification of Intent to Award to CB&I to keep the project moving forward to get it built in a timely manner.

The cost and scope details have now been finalized. The below table summarizes the cost based on proposed accepted and declined cost deductions for the 1.25 MG tank (Option B + Base).

Item Description	**Status**	**1.25 MG Tank**
Total Cost	N/A	$7,872,554.00
Construction Bond Addition	Decline	~~$240,000.00~~
Interior Seam Grinding Deduct	Decline	~~$117,000.00~~
Containment Deduct	Accept	$240,000.00
Revised Foundation with Heated Valve Room Deduct	Accept	$65,600.00
Total Cost	N/A	***$7,566,954.00***

Staff recommends waiving the bidding process and awarding the contract to CBI Services, LLC in the amount of $7,566,954.00 for Option B + Base and accept and decline the deductions as listed in the above table for the 1.25 MG Princeton Drive Elevated Water Storage Tank Project. The project has a completion date of January 22, 2027.

Contract for Princeton Drive Elevated Water Storage Tank Project

THIS AGREEMENT, made and concluded this **20th** day of January 2025, between the Village of North Aurora, an Illinois municipal corporation (hereinafter referred to as "Village") and CBI Services, LLC an Illinois Limited Liability Company (hereinafter referred to as "Contractor") for **Princeton Drive Elevated Water Storage Tank Project**.

WHEREAS, the Village requested a proposal for the Princeton Drive Elevated Water Storage Tank services (hereinafter "Services") and provided project specifications dated 12/12/2024 for such services, a copy of which is attached hereto and incorporated herein by reference as Exhibit "A" ("Project Specifications"); and

WHEREAS, Contractor submitted a proposal for the Services and Scope Clarifications dated 01/03/2025 that provided additional adjustments to the pricing of the Services. The Contractor submitted a proposal for Option B + Base in the amount of Seven Million Eight Hundred Seventy-Two Thousand Five Hundred Fifty-Four and 00/100 dollars ($7,872,554.00) in response to the request for proposal by the Village, a copy of which proposal and Scope Clarifications dated 01/03/2025 is attached hereto and incorporated herein.

WHEREAS, the Contractor's proposal for the 1.25 Million Gallon tank (Option B + Base) with the adjustments to pricing selected as shown in Table 1 below was accepted by the Village Board of Trustees at the regularly scheduled meeting on **January 20, 2025.**

Table 1

Item Description	**Status**	**1.25 MG Tank**
Total Cost	N/A	$8,112,554.00
Construction Bond Addition	Decline	~~$240,000.00~~
Interior Seam Grinding Deduct	Decline	~~$117,000.00~~

Containment Deduct	Accept	$240,000.00
Revised Foundation with Heated Valve Room Deduct	Accept	$65,600.00
Total Cost	N/A	***$7,566,954.00***

NOW THEREFORE, in consideration of **Seven Million Five Hundred Sixty-Six Thousand Nine Hundred Fifty-Four and 00/100 dollars ($7,566,954.00) to** be paid by the Village to the Contractor as follows for work described by the Project Specifications for the Princeton Drive Elevated Water Storage Tank Project, the parties hereto agree, and covenant as follows:

1. The Village and the Contractor agree the Project Specifications attached hereto and incorporated herein are essential documents to this Contract and are made a part thereof.

2. The Contractor shall fulfill all the Services in keeping with the Project Specifications and shall furnish all labor and equipment necessary to perform the Services in a professional and workman like manner with a Project completion date of January 22, 2027 (732 calendar days from date of Village approval).

3. The Contractor shall be solely responsible for its own employees, subcontractors and agents and for the performance of the Services and shall indemnify and hold the Village harmless from and against any claims or causes of action asserted by its employees, subcontractors and agents or claims, causes of action, liabilities or damages resulting or related to the performance of the Services.

4. If there is any conflict within contract documents the project specifications shall govern.

5. If not previously provided, the Contractor shall supply a Certificate or other proof of Insurance in acceptable form to the Village as a condition to the Village's obligations under this Contract in compliance with the Project Specifications.

6. The Contractor shall supply a Parent Company Guarantee Letter acceptable to the Village before performing the Services.

7. The Contractor acknowledges and agrees that, if the Illinois Prevailing Wage Act applies, the Contractor shall be responsible for such compliance and shall hold the Village and indemnify the Village from and against and claims or liabilities arising from a failure to comply.

8. Either party may terminate this Agreement upon thirty (30) days written notice by registered mail, or by personal delivery of notice, to the other party.

9. This instrument contains the entire agreement between the parties, and those statements, promises, or inducements made by either party or agent of either party that are not contained in this written agreement shall not be valid or binding.

10. In any claims for breach of this contract, the prevailing party shall be entitled to recovery all of its reasonable costs, including reasonable attorney fees.

11. Any litigation brought in regard to this Contract shall be brought in the Sixteenth Judicial Circuit, Kane County, Illinois.

12. This Agreement shall not be altered or modified in any way except in writing and signed by both parties.

[signatures to follow]

IN WITNESS WHEREOF, the said parties have executed these presents on the date above mentioned.

V**illage of North Aurora**

_____
By: Mark Gaffino, Village President

CBI Services, LLC

_____
Signature

_____
Printed Name, Title

SPECIFICATIONS AND CONTRACT DOCUMENTS

PRINCETON DRIVE ELEVATED WATER STORAGE TANK

Required For Use By: Public Works Department

VILLAGE OF NORTH AURORA

North Aurora, Illinois 60542

- **CONTRACTOR'S CERTIFICATION - BID PROPOSAL - PAGE #22**

***** MUST BE EXECUTED AND NOTARIZED *****

- **ALL SIGNATURES TO BE SWORN BEFORE A NOTARY PUBLIC**
- **ALL INSURANCE REQUIREMENTS MUST BE MET**

CONTRACT PERIOD:	January 2025 - XXXX
BID DEPOSIT:	**5% of Bid Amount** (*See Page 4, Item 7*) *(Bank Cashier's Check or Bid Bond)*
BOND REQUIRED:	Performance Bond **(100% of Contract)** (See page 4, Item 8) Payment Bond **(100% of Contract)** (See page 4, Item 8)
BID OPENING - DATE/TIME/LOCATION:	**N/A – Award per Village Discretion** VILLAGE HALL 25 East State Street North Aurora, Illinois 60542

Issued by:

Public Works Department
Village of North Aurora, Illinois
25 East State Street
North Aurora, Illinois 60542
(630) 897-8228

Advertisement for Bids

The Village of North Aurora will receive sealed bids for the Princeton Drive Elevated Water Storage Tank. The bids will be received at the North Aurora Village Hall, 25 East State Street, North Aurora, Illinois 60542 until 1:00 p.m. local time on Tuesday, October 15, 2024. At this time and date, the bids will be publicly opened and read aloud. All bids must be addressed as follows:

SEALED BID
Contractor Name
Contractor Address
Contractor Phone Number
Re: Princeton Drive Elevated Water Storage Tank
Designated Date of Bid Opening
Hour Designated for Bid Opening

Village of North Aurora
Attn: Brandon Tonarelli
Assistant Public Works Director / Village Engineer
25 East State Street
North Aurora, IL 60542

The bid packet can be downloaded, free of charge, at the Village's website http://northaurora.org/government/rfp-rfq-bidding.aspx or can be picked up at 25 East State Street, North Aurora, IL 60542 beginning Monday, September 30, 2024.

Each bid must be accompanied by a Bid Guarantee in the form of a Bid Bond from a company with an A-1 best rating, or a cashier's check in the amount of five percent (5%) of the total bid and made payable to the Village of North Aurora, 25 East State Street, North Aurora, Illinois, 60542. The Village of North Aurora reserves the right to reject any or all bids and to waive irregularities and informalities in the bids received.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the contract throughout including the (820 ILCS 130/0.01) Illinois Prevailing Wage Act (Ill. Rev. Stat. Ch. 48, Sects 39s-1-12) and the (30 ILCS 570/) Illinois Preference Act (Ill. Rev. Stat. Ch. 48, Sects. 2201-2207) and an Apprenticeship Training Program certified by the USDOL.

I. GENERAL CONDITIONS

1. DEFINITIONS

The following words and phrases, as used herein, shall have the meaning ascribed to them, as follows:

A. BIDDER shall mean:

Any individual, firm, partnership, or corporation submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.

B. VILLAGE shall mean the Village of North Aurora, Kane County, Illinois, an Illinois Municipal Corporation.

2. PREPARATION AND SUBMISSION OF BID PROPOSAL

The Bidder must submit his/her proposal in duplicate on the forms furnished by the Village of North Aurora. All blank spaces on the proposal form must be filled in if applicable. Authorized signature must be the individual owner of a proprietorship, a general partner of a partnership or a duly authorized officer, attested to by the Corporate Secretary, of a Corporation. The proposal is contained in these documents and must remain attached thereto when submitted. All signatures and spaces are to be completed in ink or typewritten, where applicable. Prices/costs shall be in United States dollars. Incorrect completion, execution or submission of bids shall be sufficient grounds for rejection of a bid. **The following documents <u>shall be executed</u> at the time of submission of a bid:**

- **BID PROPOSAL PAGES #18-21**
- **CONTRACTOR'S CERTIFICATION BID PROPOSAL - PAGE #22**
- **CONTRACTOR BID AGREEMENT PAGE #24**
- **APPRENTICESHIP OR TRAINING PROGRAM CERTIFICATION PAGE #25-26**

ALL PROPOSALS SHALL BE SUBMITTED IN SEALED ENVELOPES CARRYING THE FOLLOWING INFORMATION ON THE FACE:

CONTRACTOR NAME, ADDRESS, PHONE NUMBER, SUBJECT MATTER OF BID, DESIGNATED DATE OF BID OPENING AND HOUR DESIGNATED FOR BID OPENING.

3. ADDENDA

All addenda require signature and are to be included in the sealed bid. The Village will make every effort to make all bidders aware of addenda as they are issued, however, it is the responsibility of the bidder to check the web site for addenda, sign, print, and include them in the sealed bid. Addenda will be issued as needed up to 48 hours in advance of the bid opening and will be available on the Village's website.

4. QUESTIONS

All questions must be submitted in writing by Wednesday, October 16th, 2024 by contacting Brandon Tonarelli btonarelli@northaurora.org via email with the subject line "Princeton Drive Elevated Water Storage Tank Bid".

A questions and answers sheet will be issued as needed up to 48 hours in advance of the bid opening and will be available on the Village's website.

5. WITHDRAWAL OF BID PROPOSAL

Bidders may withdraw their bids at any time prior to the time specified in the Bid Notice as the closing time for the receipt of bids.

However, no bid shall be withdrawn or cancelled for a period of ninety (90) calendar days after said advertised closing time for the receipt of bids, nor shall the successful bid be withdrawn, cancelled, or modified after having been accepted by the Village.

6. SUBMISSION OF ALTERNATE BIDS

Bidder may submit alternate bids provided that:

- Cash bid proposals meet Village Specifications and are submitted separately.
- The Village shall not consider an alternate bid which fails to meet specifications.

7. BID DEPOSIT

When required on Page 1 of these Specifications, all bids shall be accompanied by a bid deposit in the amount specified. Bid deposits shall be in the form of a bank cashier's check drawn on a responsible bank doing business in the United States and shall be made payable to the Village of North Aurora, letter of credit, or bid bond.

The bid deposit of all except the three lowest bidders on each contract will be returned after the opening of the bids. The remaining bid deposits on each contract will be returned, with the exception of the accepted Bidder, after the contract is awarded. The bid deposit of the accepted Bidder will be returned after acceptance by the Village of satisfactory performance bond where such bond is required or completion of contract where no performance bond is required.

8. SECURITY FOR PERFORMANCE

When required on Page 1 of these Specifications, the successful Bidder or Bidders shall, within thirteen (13) calendar days after acceptance of the bid by the Village, furnish a performance bond and a payment bond in the full amount of the contract, in a form acceptable to the Village.

In the event that the successful Bidder(s) fails to furnish the performance bond and payment bond within thirteen (13) calendar days after acceptance of the bid by the Village, then the bid deposit of the successful Bidder shall be retained by the Village as liquidated damages and not as a penalty, it being agreed by the successful Bidder that said sum is a fair estimate of the amount of damages that said Village will sustain due to the successful Bidder's failure to furnish said bond.

9. EQUIVALENT PRODUCTS

In cases where a specified item is identified by a manufacturer's name, trade name or other reference, it is understood that the Bidder proposes to furnish the item as identified. If the Bidder proposes to furnish an "equal" item, the proposed "equal" item must be so indicated in the bid proposal. The Village shall be the sole determiner of the equivalence of the substitute offered.

10. BASIS OF AWARD

The Village reserves the right to accept or reject any and all bids, in whole or in part, and to waive technicalities.

11. ACCEPTANCE OF BID

The Village shall make its determination with respect to bids within ninety (90) days from the date of opening of bids. Should the Village fail to act within the times herein specified, all bids shall be rendered null and void.

12. SUBLETTING OR ASSIGNMENT OF CONTRACT OR CONTRACT FUNDS

No contract awarded by the Village of North Aurora shall be assigned, in whole or in part, or any part of the same sub-contracted unless designated on page 20 of this document. Sub-contractors added after the opening of the bid require the written consent of the Public Works Director or his designee. In no case shall such consent relieve the successful Bidder from his/her obligations or change the terms of the contract.

Any and all subcontractors shall be bound by contract to the same terms as the successful Bidder. Prior to commencing any work, subcontractors must place on file with the Village a certificate of insurance as outlined under "insurance".

The successful Bidder shall not transfer or assign any contract funds or claims due or to become due without the written approval of the Village Administrator having first been obtained.

13. COMPETENCY OF BIDDER

No bid shall be accepted from, or contract awarded to, any person, firm or corporation that is in arrears or is in default to the Village of North Aurora upon any debt contract, or other obligation or who has failed to perform faithfully any previous contract with the Village.

The Bidder, if required, must present within forty-eight (48) hours evidence satisfactory to the Village of performance ability, possession of necessary facilities, equipment, pecuniary resources and adequate insurance to comply with the terms of these specifications and contract documents. The Village hereby reserves the right to reject any bid submitted by a Bidder who, in the sole and exclusive discretion of the Village, cannot completely perform the services or deliver the goods specified in these specifications.

14. COMPLIANCE WITH OSHA STANDARDS, THE AMERICANS WITH DISABILITIES ACT, VILLAGE ORDINANCES AND STATE LAWS

The equipment supplied to the Village of North Aurora must comply with all requirements and standards as specified by the Occupational Safety and Health Act. All guards and protectors as well as appropriate markings will be in place before delivery. Items not meeting any OSHA specifications will be refused.

Each contracting agency shall ensure that every contract to which it is a party shall comply with all relevant aspects of the Americans with Disabilities Act.

The Contractor shall fully comply with all provisions of the *(820 ILCS 130/0.01) Illinois Prevailing Wage Act (Ill. Rev. Stat. Ch. 48, Sects 39s-1-12)*, *(30 ILCS 570/)*the *Illinois*

Preference Act (Ill. Rev. Stat. Ch. 48, Sects. 2201-2207), and the *(820 ILCS 265/) Substance Abuse Prevention on Public Works Projects Act* wherein the Act provides that no employee of the contractor or subcontractor working on this project may use, possess, distribute, deliver, or be under the influence of a drug, or use or be under the influence of alcohol, while performing work on a public works project. Additionally, the contractor is to maintain at all times and provide a copy upon request of a written program which meets or exceeds the program requirements of this Act.

The Contractor shall strictly comply with all applicable Federal, State, and Local laws, ordinances, rules, regulations and applicable standards for the duration of the Village's working relationship with the Contractor.

Any public works contract under the purview of the Illinois Prevailing Wage Act that is over $25,000 shall only be awarded to a contractor who is enrolled in a Joint Apprenticeship Training Program that is registered and certified with the United States Department of Labor, Bureau of Apprenticeship and Training.

15. MATERIAL INSPECTION AND RESPONSIBILITY

The Village shall have a right to inspect any material to be used in carrying out this contract. The Village does not assume any responsibility for the availability of any materials and equipment required under this contract.

16. TOXIC SUBSTANCES

Successful Bidder shall notify the Village of, and provide material safety data sheets for all substances used or supplied in connection with this contract which are defined as toxic under the Illinois Toxic Substances Disclosure to Employees Act.

Materials, components, or completed work not complying therewith, may be rejected by the Village and shall be replaced by the successful Bidder at no cost to the Village. Any materials or components rejected shall be removed within a reasonable time from the premises of the Village at the expense of the successful Bidder.

17. PRICE REDUCTIONS

If at any time after a contract is awarded the successful Bidder(s) makes a general price reduction in the comparable price of any material covered by the contract to customers generally, an equivalent price reduction based on similar quantities and/or considerations shall apply to the contract for the duration of the contract period (or until the price is further reduced). Such price reduction shall be effective at the same time and in the same manner as the reduction in the price to customers generally. For the purpose of this provision, a "general price reduction" shall mean any horizontal reduction in the price of an article or service offered (1) to successful Bidder's customers generally, or (2) in the successful Bidder's price schedule for the class of customers, i.e., wholesalers, jobbers, retailers, etc., which was used as the basis for bidding on this contract. An occasional sale at a lower price, or sale of distressed merchandise at a lower price, would not be considered a "general price reduction" under this provision. The successful Bidder shall invoice the Village at such reduced prices indicating on the invoice that the reduction is pursuant to the "price reduction" provision of this contract. The successful Bidder, in addition, shall within ten (10) days of any general price reduction, notify the Village Administrator of such reduction by letter. Failure to do so may result in termination of the contract.

18. TERMINATION OF CONTRACT

A. The Village may, by written notice of default to the successful Bidder, terminate the whole or part of this contract in any one of the following circumstances:

1. If the successful Bidder fails to make delivery of the supplies or to perform the services within the time specified herein or any extension thereof; or fails to provide

the supplies or to perform the service at the exact price accepted by the Village (and any charges for contract changes mutually agreed to by the Village and the successful Bidder); or

2. If the successful Bidder fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not cure such failure within such period of time as the Village Administrator may direct in writing.

3. If it is determined that successful Bidder knowingly falsified information provided to the Village.

4. If it is determined that successful Bidder offered substantial gifts or gratuities to a Village official, employee, or agent whether in their official capacity or not.

5. Any order is entered in any proceeding against the successful Bidder decreeing the dissolution of the successful Bidder and such order remains in effect for sixty (60) days.

6. The successful Bidder shall apply to any tribunal for the appointment of a trustee or receiver of any part of the assets of the successful Bidder, or commence any proceedings relating to the successful Bidder under any bankruptcy, reorganization, arrangement, insolvency, readjustment of debt, dissolution or other liquidation law of any jurisdiction, or any such application shall be filed, or any such proceedings shall be commenced, against the successful Bidder, and the successful Bidder indicates its approval, consent or acquiescence, or an order shall be entered appointing such trustee or receiver or adjudicating the successful Bidder bankrupt or insolvent, or approving the petition in any such proceeding, and such order remains in effect for sixty (60) days.

B. In the event the Village terminates this contract in whole or in part as provided in Paragraph (A) of this clause, the Village may procure, upon such terms in such manner as the Village Administrator may deem appropriate, supplies or services similar to those so terminated, and the successful Bidder shall be liable to the Village for any excess costs for such similar supplies or service, provided that the successful Bidder shall continue the performance of this contract to the extent not terminated under the provisions of this clause.

19. EQUAL EMPLOYMENT OPPORTUNITY

Each contracting agency shall ensure every contract to which it is a party shall contain the following clause.

EQUAL EMPLOYMENT OPPORTUNITY

In the event of the contractor's non-compliance with the provisions of this equal employment opportunity clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of the Human Rights ("Department"), the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of this contract, the contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, pregnancy, military status, or an unfavorable discharge from the

military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

2. That, if it hires additional employees in order to perform this contract or any portion thereof, it will determine the availability (in accordance with the department's rules and regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, pregnancy, military status, or an unfavorable discharge from military service.

4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations.

   If any such labor organization or representative fails or refuses to cooperate with the contractor in its efforts to comply with such act and rules and regulations, the contractor will promptly so notify the department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

5. That it will submit reports as required by the department's rules and regulations, furnish all relevant information as may from time to time be requested by the department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's rules and regulations.

6. That it will permit access to all relevant books, records, accounts, and work sites by personnel of the contracting agency and the department for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's rules and regulations.

7. That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such subcontractor. In the same manner as with other provisions of this contract, the contractor will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the department in the event any subcontractor fails or refuses to comply therewith. In addition, the contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

SUBCONTRACTS

Each public subcontractor shall in turn include the equal employment opportunity clause set forth within these rules and regulations in each of its subcontracts under which any portion of

the contract obligations are undertaken or assumed, said inclusion to be either verbatim or by reference so that the provisions of the clause will be binding upon such subcontractors.

CONTRACTS OR SUBCONTRACTS WITH RELIGIOUS ENTITIES
The requirements of the equal employment clause set forth above with respect to non-discrimination because of religion shall not apply to a religious corporation, association, educational institution or society with respect to the employment of individuals of a particular religion for the carrying on by such corporation, association, educational institution or society of its activities.

20. INSURANCE SPECIFICATIONS

A. The successful Bidder **shall not commence work** under the contract until he/she has obtained all insurance required herein and such insurance has been approved by the Village.

B. The successful Bidder shall maintain limits no less than:

TYPE OF INSURANCE	MINIMUM INSURANCE COVERAGE
COMMERCIAL GENERAL LIABILITY	
1. Comprehensive Form 2. Premises - Operations 3. Explosion & Collapse Hazard 4. Underground Hazard 5. Products/Completed Operations Hazard 6. Contractual Liability Coverage Included 7. Broad Form Property Damage - construction projects only. 8. Independent contractors 9. Personal Injury	**COMBINED SINGLE LIMIT PER OCCURRENCE FOR BODILY INJURY AND PROPERTY DAMAGE $1,000,000** **PERSONAL INJURY PER OCCURRENCE $1,000,000** **GENERAL AGGREGATE $2,000,000**
Business Automobile Liability Any Auto, Owned, Non-Owned Rented/Borrowed	**COMBINED SINGLE LIMIT PER OCCURRENCE FOR BODILY INJURY AND PROPERTY DAMAGE $1,000,000**
Worker's Compensation and Occupational Diseases	**STATUTORY LIMIT**
Employer's Liability Insurance per Occurrence	**$1,000,000**

Coverage shall be at least as broad as (1) Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village, its trustees, officials, and employees named as additional insured on a ISO Additional Insured Endorsement form CG2010 or CG2026; Primary and non-contributory ISO Endorsement: CG2001 04 13; and the Village of North Aurora named as Cancellation Notice Recipient (2) if requested, Owners and Contractors Protective Liability policy with the Village named as insured; (3) Insurance Services Office Business Auto Liability form number CA 0001 (Ed. 10/90 or newer), Symbol 01 "Any Auto"; and (4) Workers Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance. Owners, partners, and officers of the contractor must be covered by Workers Compensation Coverage if they are participating in the project.

Insurance coverages shall be primary as respects VILLAGE, its officials, agents, employees and volunteers. Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles

or self-insured retention as respects the Village, its officials, agents, employees, and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

The Contractor shall furnish the Village with certificates of insurance naming the Village, it officials, agents, employees and volunteers as additional insured, and with original endorsements affecting coverage required prior to commencement of any work. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf and shall be in a form acceptable to the Village. The insurance afforded by the policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after prior written notice by certified mail return receipt requested has been given to the Village. VILLAGE shall be endorsed to the policies as a Cancelation Notice Recipient. Such notice shall be addressed as shown in the heading of the endorsement.

C. In the event of accidents of any kind, the successful Bidder shall furnish the Village with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.

D. Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as respects the Village, its officials, agents, employees, and volunteers; or the successful Bidder shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

21. INSURANCE POLICY(S) ENDORSEMENT

SHALL BE PROVIDED PRIOR TO THE COMMENCEMENT OF WORK.

VILLAGE OF NORTH AURORA ("The Village")
25 East State Street
North Aurora, Illinois 60542

A. POLICY INFORMATION.

1. Insurance Company _____

2. Policy Number _____

3. Policy Term: (From) _____ (To) _____

4. Endorsement Effective Date_____

5. Named Insured _____

6. Address of Named Insured _____

7. Limit of Liability Any One Occurrence/
Aggregate $_____

8. Deductible or Self-Insured Retention (Nil unless otherwise specified)
$_____

B. VERIFICATION OF COVERAGE

When required on Page 1 of these Specifications, the successful Bidder or Bidders shall, **within thirteen (13) calendar days** after acceptance of the bid by the Village, furnish the Village with certificates of insurance naming the Village, it officials, agents, employees and volunteers as additional insureds, and with original endorsements affecting coverage required. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

The Bidder shall also be required to include on the Certificate of Insurance work classification code number 5037 "the painting of metal structures, over two stories, in the State of Illinois.

In the event that the successful Bidder(s) fails to furnish the insurance coverage within thirteen (13) calendar days after acceptance of the bid by the Village, then the bid deposit of the successful Bidder shall be retained by the Village as liquidated damages and not as a penalty, it being agreed by the successful Bidder that said sum is a fair estimate of the amount of damages that said Village will sustain due to the successful Bidder's failure to furnish said insurance.

C. POLICY AMENDMENTS.

Each policy shall contain, or be endorsed to contain, the following provisions:

1. INSURED.

(COMMERCIAL GENERAL LIABILITY AND BUSINESS AUTOMOBILE LIABILITY)

The Village, its officials, agents, employees, and volunteers are to be included as additional insureds with regard to liability and defense of claims arising from: (a) activities performed by or on behalf of the successful Bidder, (b) products and completed operations of the successful Bidder, (c) premises owned, leased or used by the successful Bidder, and (d) automobiles owned, leased, hired or borrowed by the successful Bidder. The coverage shall contain no special limitations on the scope of protection afforded to the Village, its officials, agents, employees, and volunteers.

2. CONTRIBUTION NOT REQUIRED.

(COMMERCIAL GENERAL LIABILITY AND BUSINESS AUTOMOBILE LIABILITY)

The insurance afforded by the policy shall be primary insurance as respects the Village, its officials, agents, employees, and volunteers; or stand in an unbroken chain of coverage excess of the successful Bidder's scheduled underlying primary coverage. In either event, any other insurance or self-insurance maintained by the Village, its officials, agents, employees, and volunteers shall be excess of this insurance and shall not contribute with it.

3. SEVERABILITY OF INTEREST.

(COMMERCIAL GENERAL LIABILITY AND BUSINESS AUTOMOBILE LIABILITY)

The insurance afforded by the policy applies separately to each insured who is seeking coverage or against whom a claim is made

or a suit is brought, except with respect to the Company's limit of liability.

4. SUBCONTRACTORS.

(ALL COVERAGES)

The successful Bidder shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated in these General Conditions.

5. PROVISIONS REGARDING THE INSURED'S DUTIES AFTER ACCIDENT OR LOSS.

(COMMERCIAL GENERAL LIABILITY AND BUSINESS AUTOMOBILE LIABILITY)

Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the Village, its officials, agents, employees, and volunteers.

6. CANCELLATION NOTICE.

(ALL COVERAGES)

The insurance afforded by the policy shall not be suspended, voided, canceled, reduced in coverage or in limits except after prior written notice by certified mail return receipt requested has been given to the Village. The Village shall be endorsed to the policy as a Cancelation Notice Recipient with notice addressed as shown in the heading of the endorsement.

7. SUBROGATION.

(WORKERS COMPENSATION AND EMPLOYERS' LIABILITY)

The insurer shall agree to waive all rights of subrogation against the Village, its officials, agents, employees, and volunteers for losses arising from work performed by the successful Bidder for the Village.

8. ACCEPTABILITY OF INSURERS.

(ALL COVERAGES)

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and licensed to do business in the State of Illinois.

9. ASSUMPTION OF LIABILITY.

(ALL COVERAGES)

The successful Bidder assumes liability for all injury to or death of any person or persons including employees of the successful Bidder, any subcontractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to the contract.

D. SIGNATURE OF INSURER OR AUTHORIZED REPRESENTATIVE OF THE INSURER.

I, _____ (print/type name), warrant, and by my signature hereon do so certify, that the required coverage is in place.

Signature of: _____
Authorized Representative (Original signature required on endorsement furnished to the Village).

Title: _____

Organization: _____

Address: _____

Phone: _____ Fax: _____

22. INDEMNITY HOLD HARMLESS PROVISION

To the fullest extent permitted by law, the successful Bidder hereby agrees to defend, indemnify and hold harmless the Village, its officials, agents, employees, and volunteers, against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, costs and expenses, which may in anywise accrue against the Village, its officials, agents, employees, and volunteers; arising in whole or in part or in consequence of the performance of the work by the successful Bidder, its employees, or subcontractors, or which may in anywise result therefore, except that arising out of the sole legal cause of the Village, its officials, agents, employees, and volunteers, and the successful Bidder shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefore or incurred in connection therewith, and, if any judgment shall be rendered against the Village, its officials, agents, employees, and volunteers, in any such action, the successful Bidder shall, at its own expense, satisfy and discharge same.

The successful Bidder expressly understands and agrees that any performance bond or insurance policies required by the contract, or otherwise provided by the successful Bidder, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Village, its officials, agents, employees, and volunteers, as herein provided.

The successful Bidder further agrees that to the extent that money is due the successful Bidder by virtue of the contract, an amount of said money as shall be considered necessary in the judgment of the Village, may be retained by the Village to protect itself against said loss until such claims, suits, or judgments shall have been settled or discharged and/or evidence to that effect shall have been furnished to the satisfaction of the Village.

23. INDEPENDENT CONTRACTOR

The Contractor shall be deemed to be an independent contractor, solely responsible for the control and payment of its employees and subcontractors, and compliance with all applicable Federal, State, and local laws.

24. COMPLIANCE WITH NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

In compliance with National Pollutant Discharge Elimination System (NDPES), and ILR40 permit requirements, consultants and contractors hired by the Village that will be engaged in any task or project that could potentially have an impact on water quality is required to have provided training to their employees to prevent and reduce storm water pollution from their activities.

25. COMPLIANCE WITH FREEDOM OF INFORMATION ACT

The Village is required by law to comply with the provisions of the Freedom of Information Act, 5 ILCS

140/1 et seq., as amended from time to time ("Act"). The Act requires the Village to provide, if requested to do so by any person, copies of documents that may be in your possession and related to this contract. As a condition of this contract, Contractor agrees to and shall provide to the Village, copies of any and all such documents when directed to do so by the Village. All such documents shall be delivered to the Village Clerk's Office NO LATER THAN three (3) working days after the date of the Village's direction to provide such documents. Failure of the Contractor to provide documents within said three (3) working days as provided above shall result in the assessment of any and all penalties, damages, and/or costs incurred by the Village to the Contractor which shall be paid immediately by the Contractor upon demand of the same by the Village.

II. PROJECT SPECIFICATIONS

1. INTENT

The intent of these plans, specifications and contract is to complete the construction of a new elevated water storage tank, including site preparation of a 1.33-acre site including mass grading, utility installation including watermain, construction of either a 1.25 MG or 1.0 MG watersphereoid elevated storage tank with all related appurtenances dependent upon Village selection following bid reviews, pavement installation, fence installation, and site restoration.

2. LOCATION OF UTILITIES

If excavation is necessary, the Contractor shall contact the Village of North Aurora Public Works Department at least seventy-two (72) hours before beginning work and the J.U.L.I.E. system in conformance with all J.U.L.I.E. standards. Electric, gas and telephone utilities must be located in the field prior to construction. The Village bears no responsibility for damage done to existing utilities during construction.

3. EXAMINATION OF SITE

The bidder shall carefully examine the site and become familiar with the conditions under which he will have to execute the work required under this contract. Failure to do so will in no way relieve the bidder of his responsibility under this contract.

4. ADDITIONAL WORK

The Village reserves the right to order additional work at the same unit price as provided for in the contractor's bid during the course of construction. Prior to commencing any additional work, the bidder shall submit his charges for performing the work and shall not proceed until the Public Works Director or his designee, has approved the charges in writing.

5. PROTECTION OF EXISTING FACILITIES

Existing facilities, including grounds, structures, landscaping, and so forth, shall be protected by the Contactor. Any damage to existing facilities caused by the Contractor's work, shall be reported to the Village in writing and shall be repaired and/or cleaned up promptly by the Contractor when ordered to do so by the Village at no additional cost. All repairs of damage shall be made to the satisfaction of the Village. Failure to repair damage shall be just cause for withholding payment for work which becomes due. If the Contractor fails to complete the repairs or clean-up immediately, or as otherwise directed by the Village, the Village shall provide notice to the Contractor and proceed to repair or replace the existing facilities and/or damaged property as may be deemed necessary at the Contractor's expense.

6. CONTRACTOR'S RESPONSIBILITY

The Contractor shall be responsible for constructing the improvements in accordance with the specifications. The Contractor shall have available on the job site at all times during construction a complete set of specifications with all revisions thereto. The Contractor shall employ only workmen skilled in their trade and shall furnish full time supervision of all construction. An English-speaking superintendent shall be at the site whenever construction is in progress. The superintendent shall have authority to receive and carry out instructions from the Village. The lack of a competent superintendent on the site during construction shall be just cause for the Village to order the work to cease.

7. SITE CONDITION AND CLEAN-UP

The Contractor shall store materials and equipment in a location approved by the Village and shall move same, if and when it becomes necessary at his own expense.

The Contractor shall have control over his employees' parking of automobiles on the site. The Contractor shall

keep the site neat and shall cleanup any debris when directed to do so by the Village. Upon completion of the improvement each site shall be left in a condition acceptable to the Village. Failure to keep the site neat, complete restoration of any disturbed areas, or cleanup debris to the satisfaction of the Village, when directed to do so shall be just cause for withholding payment due the Contractor and final acceptance will not be made until the site is in a condition acceptable to the Village.

8. TRESPASS ON LAND

The Contractor shall confine his operations and storage of materials and equipment to the job site public right-of-way or easements. The Contractor shall exercise extreme caution so as not to trespass upon property of third parties not involved in the contract. In the event that the Contractor is to enter upon the property of third parties in the execution of the work he shall obtain written permission prior to doing so and submit evidence of said written permission to the Village.

9. PROTECTION OF PUBLIC

The Contractor shall erect and maintain sufficient signs, barricades, lights and fences and shall employ competent flagmen and watchmen to warn and guard the public against the hazards created by the construction of the work. The Contractor shall not allow hazardous conditions to remain without affording adequate protection to the public. If, in the opinion of the Village a hazardous condition exists and the Contractor fails to correct the condition, or to protect the public, the Village may order the necessary precautions to safeguard the public, the cost of which will be deducted from payments due the bidder. Flagrant disregard for the safety of the public shall constitute just reason for the Village to order cessation of work.

10. GUARANTEE

All work and materials furnished under this contract shall be guaranteed by the Contractor against defects failure improper performance and non-compliance with the contract documents for a period of one (1) year after completion and acceptance of the work under this contract. All guarantees and warrantees required shall be furnished by the successful Bidder and shall be delivered to the Village before the final payment voucher is issued. During the guarantee period, the Contractor shall repair and replace, at his own expense, when so ordered by the Village, all work that develops defects whether these defects may be inherent in the functioning of the piece of operating equipment, materials furnished or workmanship performed. Any equipment or material, which is repaired or replaced, shall have the guarantee period extended one (1) year from the date of the last repair or replacement.

11. START OF WORK AND COMPLETION

The Contractor's representatives who are assigned to this project shall be required to attend a pre-construction meeting with Village staff prior to commencing work. The Contractor shall be required to follow the order and route for the work which is delineated during the preconstruction meeting. It is anticipated that the Contractor shall commence work within a reasonable time after the award**.** Weather related time delays will be reviewed by both parties and determined by the Village.

12. FAILURE TO COMPLETE WORK ON TIME AND CONTRACT VIOLATIONS

Time is of the essence to the contract. Should the Contractor fail to complete the work within the working days stipulated in the contract or on or before the completion date stipulated in the contract or within such extended time as may have been allowed, the Contractor shall be liable and shall pay to the Village the amount shown in the following schedule of deductions, not as a penalty but as liquidated damages, for each day of overrun in the contract time or such extended time as may have been allowed. The liquidated damages for failure to complete the contract on time are approximate, due to the impracticality of calculating and proving actual delay costs. This schedule of deductions establishes the cost of delay to account for administration, engineering, inspection, and supervision during periods of extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate of the costs that will be borne by the Village during extended and delayed performance by the Contractor of the work, remaining incidental work, correction of work improperly completed, or repair of work damaged as a result of the Contractor. The liquidated damage amount specified will accrue and be assessed until final completion of the total physical work of the contract even though the work may be substantially complete. The Village will deduct these liquidated damages from any monies due or to become due to the Contractor from the Village.

Schedule of Deductions for Each Calander Day of Overrun in Contract Time:

$2300 per Calander Day

The other provisions of the Contract have been established to allow for the efficient completion of this project, without creating additional burden or hardship on Village residents or additional administration and/or operating expenses for the Village.

13. PAYMENT

Final payment will be made when the work, written reports and hard-drive (media copy) are reviewed and accepted by the Village. The Contractor shall submit final waivers-of-lien covering all labor, material, equipment, services and so forth, prior to receiving final payments.

14. ACCEPTANCE

The work shall not be accepted by the Village until the Village has determined that all work is complete and in accordance with the specifications.

15. MATERIAL SAFETY DATA SHEETS

The Contractor shall supply the Village with Material Safety Data Sheets (MSDS) for all chemicals being used as part of this project.

16. ACCESSIBILITY OF CONTRACTOR

The Contractor shall supply cell phone numbers (primary and secondary numbers), daytime office numbers, fax numbers, and pager numbers of supervisors handling this contract and the supervisors shall be available twenty four (24) hours a day.

17. SPECIAL PROVISIONS FOR CONSTRUCTION

See attached Special Provisions and Specifications

18. ENGINEERING PLANS

See Final Engineering Plans.

PRINCETON DRIVE ELEVATED WATER STORAGE TANK
BID PROPOSAL

The Bidder proposes to complete the project for the following prices by XXXX, or less:

Item No.	SPECIAL PROVISION	BASE BID ITEMS	UNIT	QUAN.	Unit Price	Total
1		PERIMETER EROSION BARRIER	FOOT	2240	$3.95	$8,848.00
2	*	STABILIZED CONSTRUCTION ENTRANCE	EACH	1	$14,250.00	$14,250.00
3	*	EARTH EXCAVATION (SITEWORK ONLY)	CU YD	925	$33.00	$30,525.00
4		CONCRETE WASHOUT	EACH	1	$3,750.00	$3,750.00
5	*	CONSTRUCTION SITE PERIMETER FENCE	FOOT	1200	$7.25	$8,700.00
6	*	CONNECTION TO EXISTING WATER MAIN, 16-INCH	EACH	1	$37,250.00	$37,250.00
7	*	WATER MAIN, 16-INCH D.I.P., CLASS 52, WITH POLYETHYLENE WRAP	FOOT	71	$525.00	$37,275.00
8	*	WATER MAIN, 16-INCH D.I.P., CLASS 54, WITH POLYETHYLENE WRAP	FOOT	39	$525.00	$20,475.00
9	*	FIELD LOK GASKET, 16"	EACH	4	$425.00	$1,700.00
10	*	NON-DRAINING FIRE HYDRANT ASSEMBLY, COMPLETE	EACH	1	$12,500.00	$12,500.00
11	*	BUTTERFLY VALVE & VALVE VAULT, 16-INCH IN 60-INCH VAULT	EACH	3	$29,250.00	$87,750.00
12	*	INSERTION VALVE & VALVE VAULT, 16-INCH IN 60-INCH VAULT	EACH	1	$46,215.00	$46,215.00
13	*	DUCTILE IRON FITTINGS	POUND	951	$10.00	$9,510.00
14	*	NON-SPECIAL, NON-HAZARDOUS WASTE DISPOSAL - TYPE 1	CU YD	100	$212.00	$21,200.00
15	*	NON-SPECIAL, NON-HAZARDOUS WASTE DISPOSAL - TYPE 2	CU YD	100	$143.00	$14,300.00
16		REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	100	$21.50	$2,150.00
17	*	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	100	$95.00	$9,500.00
18	*	FOUNDATION MATERIAL	CU YD	200	$115.00	$23,000.00
19	*	WATER MAIN TESTING - PRESSURE AND DISINFECTION	LSUM	1	$1,250.00	$1,250.00
20		RIPRAP RR-3	SQ YD	12	$180.00	$2,160.00
21		AGGREGATE SUBGRADE IMPROVEMENT 12-INCH	SQ YD	860	$19.30	$16,598.00
22		GEOTEXTILE FABRIC	SQ YD	860	$3.00	$2,580.00
23	*	HOT-MIX ASPHALT BINDER COURSE, IL 19.0	TON	285	$108.00	$30,780.00
24	*	HOT-MIX ASPHALT SURFACE COURSE, MIX D	TON	205	$111.00	$22,755.00
25		HOT-MIX ASPHALT SURFACE REMOVAL, 6-INCH	SQ YD	840	$12.00	$10,080.00
26	*	PCC SIDEWALK, 5-INCH	SQ FT	190	$15.00	$2,850.00
27	*	SPLASH PAD	LSUM	1	$1,850.00	$1,850.00

28		CONCRETE BOLLARD	EACH	1	$1,150.00	$1,150.00
29	*	CONTAINMENT	LSUM	1	$240,000.00	$240,000.00
30	*	TESTING AND DISINFECTION FOR FINAL COMPLETION	LSUM	1	$6,000.00	$6,000.00
31	*	FURNISH AND INSTALL CATHODIC PROTECTION	LSUM	1	$41,200.00	$41,200.00
32	*	SCADA, COMPLETE AND OPERATIONAL	LSUM	1	$59,180.00	$59,180.00
33	*	SCADA FIBER WIRE IN PCC ENCASED CONDUIT	FOOT	400	$44.55	$17,819.00
34	*	GRIDBEE GS-9 TANK MIXER	LSUM	1	$50,747.00	$50,747.00
35	*	30KVA TRANSFORMER ON CONCRETE PAD	LSUM	1	$6,876.00	$6,876.00
36	*	QUAZITE HANDHOLE	EACH	4	$6,619.50	$26,478.00
37	*	HUBBELL RATIO PAR 3 LIGHT POLE WITH PCC FOUNDATION, COMPLETE	EACH	2	$10,744.00	$21,488.00
38	*	CCTV SECURITY SYSTEM, 8-CAMERA, CABINET AND ANTENNA, COMPLETE	LSUM	1	$28,516.00	$28,516.00
39	*	CAT6 CABLE IN PCC ENCASED CONDUIT, 4 CABLE	FOOT	470	$36.24	$17,035.00
40	*	ELECTRIC CABLE IN PCC ENCASED CONDUIT, 4/C, NO 10 GROUND	FOOT	470	$46.18	$21,704.00
41	*	ELECTRIC CABLE IN PCC ENCASED CONDUIT, 3/C, NO 6 GROUND	FOOT	400	$32.78	$13,110.00
42	*	ELECTRICAL GROUNDING SYSTEM, COMPLETE	LSUM	1	$43,477.00	$43,477.00
43	*	SWING GATES	FOOT	44	$220.00	$9,680.00
44	*	CHAIN LINK FENCE W/ BARBED WIRE TOP TREATMENT	FOOT	870	$51.50	$44,805.00
45	*	FENCE REMOVAL	FOOT	125	$8.00	$1,000.00
46	*	RESTORATION	SQ YD	6500	$14.70	$95,550.00
47	*	RESTORATION WETLAND BUFFER	SQ YD	1200	$15.95	$19,140.00
48	*	ALLOWANCE - ITEMS ORDERED BY THE ENGINEER	UNIT	30000	$1.00	$30,000
					SUBTOTAL BASE BID =	$1,274,756.00

Item No.	SPECIAL PROVISION	OPTION A BID ITEMS (1.00 MG TANK)	UNIT	QUAN.	Unit Price	Total
49	*	1,000,000 GALLON SPHEROID ELEVATED WATER STORAGE TANK, INCLUDING DESIGN AND CONSTRUCTION (ELEVATION 852.5 TCL) **	LSUM	1	$3,889,144.00	$3,889,144.00
50	*	FOUNDATION AND VALVE VAULT, INCLUDING PIPING, BUTTERFLY VALVE, ELECTRICAL CONDUITS AND APPURTENANCES FOR TANK	LSUM	1	$1,414,217.00	$1,414,217.00
51	*	EXTERIOR WET PAINTING, COMPLETE	LSUM	1	$257,900.00	$257,900.00
52	*	INTERIOR WET PAINTING, COMPLETE	LSUM	1	$94,100.00	$94,100.00
53	*	INTERIOR DRY PAINTING, COMPLETE	LSUM	1	$356,148.00	$356,148.00
54	*	LETTERING AND LOGO	LSUM	1	$22,500.00	$22,500.00
**		**Performance Bond (100%) Not Included in Item 49				
					SUBTOTAL OPTION A BID =	$6,034,009.00

		SUBTOTAL BASE BID =	$1,274,756.00
		TOTAL OPTION A + BASE BID PRICE =	$7,308,765.00

Total OPTION A + BASE BID Price In Words:

Seven million, three hundred eight thousand, seven hundred sixty-five dollars.

Item No.	SPECIAL PROVISION	OPTION B BID ITEMS (1.25 MG TANK)	UNIT	QUAN.	Unit Price	Total
55	*	1,250,000 GALLON SPHEROID ELEVATED WATER STORAGE TANK, INCLUDING DESIGN AND CONSTRUCTION (ELEVATION 852.5 TCL) **	LSUM	1	$4,324,597.00	$4,324,597.00
56	*	FOUNDATION AND VALVE VAULT, INCLUDING PIPING, BUTTERFLY VALVE, ELECTRICAL CONDUITS AND APPURTENANCES FOR TANK	LSUM	1	$1,514,217.00	$1,514,217.00
57	*	EXTERIOR WET PAINTING, COMPLETE	LSUM	1	$284,900.00	$284,900.00
58	*	INTERIOR WET PAINTING, COMPLETE	LSUM	1	$91,200.00	$91,200.00
59	*	INTERIOR DRY PAINTING, COMPLETE	LSUM	1	$360,384.00	$360,384.00
60	*	LETTERING AND LOGO	LSUM	1	$22,500.00	$22,500.00
**		** Performance Bond (100%) Not Included in Item 55				
					SUBTOTAL OPTION B BID =	$6,597,798.00
					SUBTOTAL BASE BID =	$1,274,756.00
					TOTAL OPTION B + BASE BID PRICE =	$7,872,554.00

Total OPTION B + BASE BID Price In Words:

Seven million, eight hundred seventy-two thousand, five hundred fifty four dollars

Start Date	November 12, 2024
Calendar Completion Date	XXXXX

The Village reserves the right to accept or reject any bid, to contract work with whomever and in whatever manner the Village decides, to abandon the work entirely, or to waive any informality or non-substantive irregularity as the interest of the Village may require. The Village reserves the right to award a bid proposal based on any combination of the Base Bid and/or Alternates at the Village's choosing.

Name of Bidder:	CBI Services, LLC.
Address:	14107 S. Route 59 Plainfield, Il. 60544
Telephone No.	779-205-9682 Email. Kyle.arlen@cbi.com
Contact Name:	Kyle Arlen
Title:	Business Development Specialist
Date:	10/29/2024

I Kyle Arlen verify that I am authorized to provide the above pricing on
(print name)

behalf of CBI Services, LLC.
(company name)

And will hold the above pricing for a period of 90 days from the date of the bid opening.

Kyle Arlen
Signature

10/29/2024
Date

Contractor's Certification

In compliance with P.A. 85-1295-Illinois Revised Statute, Chapter 31, Section 33E-11, and applicable local ordinances.

Print Name:
Contractor _____

Corporation _____ Individual _____ Partnership _____ Other _____
(if other specify type)

As part of his/her bid on the above sole-referenced Contract, hereby certifies that the Contractor is not barred from bidding on the above referenced contract as a result of a violation of either Section 33E-3 Bid-rigging or 33E-4 Bid-stating of Article 33E of the Illinois Criminal Code of 1961, as amended.

Date: _____

Contractor By: _____

Title: _____

(State of Illinois) SS County of _____

I, the undersigned, a notary public in and for the State and County aforesaid, hereby certify that

_____ appeared before me this day in person and, being first duly sworn an oath, acknowledged that he/she executed the foregoing certification as his/her free act and deed.

Dated: _____

Notary Public: _____

List of Subcontractors and Suppliers

The sub-contractors and suppliers listed below will be involved in this contract work in the assignments listed. We understand that any deviation from this list must be requested and approved in writing ten (10) days before the start of the work that is involved.

Failure to complete this list may result in rejection of bid. Write "none" in the boxes below if no sub-contractors or suppliers will be used.

Legal name, current telephone number and address of all subcontractors must be included.

Sub-Contractors	**Work Assignment**

Suppliers	**Material**

Contractor Bid Agreement

To: The Village of North Aurora
25 E. State Street
North Aurora, IL 60542

The undersigned bidder, in compliance with your advertisement for bids for work as specified, and related documents prepared by or at the direction of the Village of North Aurora, Owner, and having examined the locations and being familiar with all conditions surrounding the Work, including availability of labor and material, does hereby proposed to furnish materials, labor, equipment and services and pay for same and shall perform all work required for the completion of the Project, in accordance with the contract documents and at the price stated.

Bidder certifies this bid to be for the project described herein and to be in accordance with plans, specifications and contract documents, including the invitation for bids.

In no event shall any delays or extensions of time be construed as cause or justification for payment of extra compensation to the contractor. Any claims for an increase of the contract time shall be made in writing to the Village within seven (7) days of the cause.

Signed:_____

Print Name: _____

Title: _____

Date: _____

(State of Illinois) SS County of _____

I, the undersigned, a notary public in and for the State and County aforesaid, hereby certify that _____ appeared before me this day in person and, being first duly sworn an oath, acknowledged that he/she executed the foregoing certification as his/her free act and deed.

Dated: _____

Notary Public: _____

Apprenticeship or Training Program Certification

The Village has passed by Resolution on September 21, 2009, a resolution that any public works contract under the purview of the Illinois Prevailing Wage Act that is over $25,000 shall only be awarded to a contractor who is enrolled in a Joint Apprenticeship Training Program that is registered and certified with the United States Department of Labor, Bureau of Apprenticeship and Training.

1. Each bidder is required to certify and provide information on the apprenticeship or training program(s) approved and registered with the United States Department of Labor's Bureau of Apprenticeship and Training in which the ***bidder*** participates that is relevant to the portion(s) of this project that is/are subject to the State of Illinois' Prevailing Wage Act below.

Trade	Name	Amount ($)	Apprenticeship Program Name	U.S. Dept. of Labor Registration Number
Boilermakers	Int. Brotherhood Boilermakers		Boilermakers National App. Program (BNAP)	C-2022-01

The requirements of this certification and disclosure are a material part of the contract, and the bidder shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. **The Bidder shall submit a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by the contractor.**

2. In accordance with the Resolution, please provide the following information for all proposed major *subcontractors* for this project.

Trade	Name	Amount ($)	Apprenticeship Program Name	U.S. Dept. of Labor Registration Number
Civil	WF Johnston	$2,000,000-	local 150	IL0087880193
Paint	Neumann	$103,984-	Painters District Council No. 30	IL0047800944
Electrical	Black Electric	$350,774-	local 134 EJATT Program	IL0150007

The requirements of this certification and disclosure are a material part of the contract, and the bidder shall require this certification provision to be included in all approved subcontracts. The bidder is responsible for making a complete report and shall make certain that each type of work or craft job category that will be utilized on the project is accounted for and listed. **The Bidder shall submit a copy of each applicable Certificate of Registration issued by the United States Department of Labor evidencing such participation by all subcontractors.**

Signed: _____

Print Name: Sheldon Traxler

Title: Labor Relations

Company: CBI Services LLC

Date: 9/26/2024

(State of Illinois) SS County of Will

I, the undersigned, a notary public in and for the State and County aforesaid, hereby certify that

Sheldon Traxler appeared before me this day in person and, being first duly sworn an oath, acknowledged that he/she executed the foregoing certification as his/her free act and deed.

Dated: 9/26/2024

Notary Public: Margaret C. Slaboszewski

OFFICIAL SEAL
MARGARET C SLABOSZEWSKI
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:10/30/24

REFERENCES

The Bidder must list a minimum of four (4) municipal references, for in-kind work. The references provided must list municipality, contact person, address and telephone number.

Municipality: _____

Contact Person: _____

Address: _____

Phone #: _____ Fax: _____

Project Included: _____ Project Year: _____

Municipality: _____

Contact Person: _____

Address: _____

Phone #: _____ Fax: _____

Project Included: _____ Project Year: _____

Municipality: _____

Contact Person: _____

Address: _____

Phone #: _____ Fax: _____

Project Included: _____ Project Year: _____

Municipality: _____

Contact Person: _____

Address: _____

Phone #: _____ Fax: _____

Project Included: _____ Project Year: _____

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY
CG 20 10 07 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

PRIMARY AND NONCONTRIBUTORY – OTHER INSURANCE CONDITION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

The following is added to the **Other Insurance** Condition and supersedes any provision to the contrary:

Primary And Noncontributory Insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured under your policy provided that:

(1) The additional insured is a Named Insured under such other insurance; and

(2) You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

GENERAL CONDITIONS

1. *DEFINITIONS*

1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

1.2 ADDENDA – Written, graphic, or pictorial instruments issued prior to the execution of the Agreement which modify or interpret any part of the CONTRACT DOCUMENTS, including the DRAWINGS and SPECIFICATIONS, by additions, deletions, clarifications or corrections.

1.3 BID – The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.

1.4 BIDDER – Any person, firm or corporation submitting a BID for the work.

1.5 BONDS – Bid, Performance, and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the CONTRACT DOCUMENTS.

1.6 CHANGE ORDER – 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 an adjustment in the CONTRACT PRICE or CONTRACT TIME.

1.7 CONTRACT AND CONTRACT DOCUMENTS – The CONTRACT is comprised of all the CONTRACT DOCUMENTS, which form the integrated agreement between the Owner and the Contractor. The CONTRACT DOCUMENTS include the Advertisement for Bids, Information for Bidders, BID, Bid Bond, Agreement between the Owner and Contractor, Payment Bond, Performance Bond, General Conditions, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, FIELD ORDER, , SPECIAL PROVISIONS, DRAWINGS, STANDARD SPECIFICATIONS, ADDENDA, and other documents as provided herein, whether issued before or after the execution of the Agreement.

1.8 CONTRACT PRICE – The total monies payable to the CONTRACTOR under the terms and conditions of the CONTRACT DOCUMENTS.

1.9 CONTRACT TIME – The number of calendar days, working days, or combination stated in the CONTRACT DOCUMENTS for the completion of the WORK.

1.10 CONTRACTOR – The person, firm or corporation with whom the OWNER has executed the Agreement.

1.11 DRAWINGS – The part of the CONTRACT DOCUMENTS which show the characteristics and scope of WORK to be performed and which have been prepared or approved by the ENGINEER.

1.12 ENGINEER – The person, firm or corporation named as such in the CONTRACT DOCUMENTS.

1.13 FIELD ORDER – A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.

1.14 NOTICE OF AWARD – The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.

1.15 NOTICE TO PROCEED – Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.

1.16 OWNER – A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.

1.17 PROJECT – The undertaking to be performed as provided in the CONTRACT DOCUMENTS.

1.18 RESIDENT PROJECT REPRESENTATIVE – The authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.

1.19 SHOP DRAWINGS – All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by

the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.

1.20 SPECIAL PROVISIONS – Part of the CONTRACT DOCUMENTS consisting of additions and revisions to the STANDARD SPECIFICATIONS covering conditions peculiar to an individual CONTRACT.

1.21 STANDARD SPECIFICATIONS – A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship, methods of measurement, and payment, which are generally accepted as industry standard and are specifically referenced in the SPECIAL PROVISIONS as peculiar to an individual CONTRACT.

1.22 SUBCONTRACTOR – An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.

1.23 SUBSTANTIAL COMPLETION – That date as certified by the ENGINEER when the construction of the PROJECT or a specified part thereof is sufficiently completed, in accordance with the CONTRACT DOCUMENTS, so that PROJECT or specified part can be utilized for the purposes for which it is intended.

1.24 SUPPLEMENTAL GENERAL CONDITIONS – Modifications to General Conditions required by a Federal agency for participation in the PROJECT and approved by the agency in writing prior to inclusion in the CONTRACT DOCUMENTS, or such requirements that may be imposed by applicable state laws.

1.25 SUPPLIER – Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.

1.26 WORK – All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.

1.27 WRITTEN NOTICE – Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

2. *ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS*

2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the CONTRACT DOCUMENTS.

2.2 The additional drawings and instruction thus supplied will become a part of the CONTRACTOR DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

3. *SCHEDULES, REPORTS AND RECORDS*

3.1 The CONTRACTOR, promptly after being awarded the Contract, shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the CONTRACT DOCUMENTS for the WORK to be performed, and shall update any such schedule as shall be required by the current conditions of the Work. No payment for the WORK shall be made until the CONTRACTOR has submitted an approved schedule.

3.2 Prior to the first partial payment estimate the CONTRACTOR shall submit construction progress schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part, which shall not exceed the time limits as contained in the CONTRACT DOCUMENTS, and, as applicable:

3.2.1 The dates at which special detail drawings will be required; and

3.2.2 Respective dates for submission of SHOP DRAWINGS, the beginning of manufacturer, the testing and the installation of materials, supplies and equipment.

3.3 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK.

4. *DRAWINGS*

4.1 CONTRACTOR and any SUBCONTRACTOR or Supplier or other individual or entity performing or furnishing any of the WORK under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER'S consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the PROJECT or any other projects without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the WORK, or termination or completion of the Contract. Nothing herein shall preclude the CONTRACTOR from retaining copies of the CONTRACT DOCUMENTS for record purposes.

4.2 The intent of the Contract Documents is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

4.3 In case of conflict between the DRAWINGS and the SPECIAL PROVISIONS, THE SPECIAL PROVISIONS shall govern. In the case of a conflict between the DRAWINGS AND THE STANDARD SPECIFICATIONS, the DRAWINGS shall govern. Calculated dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over STANDARD DRAWINGS.

4.4 Any discrepancies found between the DRAWINGS and CONTRACT DOCUMENTS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or CONTRACT DOCUMENTS shall be immediately reported to the ENGINEER in writing within three business days. The ENGINEER shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

5. *SHOP DRAWINGS*

5.1 The CONTRACTOR shall provide SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S approval of any SHOP DRAWINGS shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS. The approval of any SHOP DRAWING which substantially deviates from the requirements of the CONTRACT DOCUMENTS shall be evidenced by a CHANGE ORDER.

5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS, that he has determined and verified materials, field measurements, field construction criteria and they are in conformance with the requirements of the CONTRACT DOCUMENTS.

5.3 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

6. *MATERIALS, SERVICES AND FACILITIES*

6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the WORK within the specified time. Materials and equipment shall be new and of good quality unless otherwise provided by the CONTRACT DOCUMENTS.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.

6.5 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

7. *INSPECTION AND TESTING*

7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the CONTRACT DOCUMENTS.

7.2 The OWNER shall provide all inspection and testing services not required by the CONTRACT DOCUMENTS.

7.3 The CONTRACTOR shall provide at his expense the testing and inspection services required by the CONTRACT DOCUMENTS.

7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

7.5 Inspections, tests or approvals by the engineer or others shall not relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.

7.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection or testing thereof.

7.7 If any WORK is covered contrary to the written instructions of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense. The CONTRACTOR shall not cover any portion of the work without proper testing or inspection as required by the CONTRACT DOCUMENTS.

7.8 If the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR, at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

8. *SUBSTITUTIONS*

8.1 Whenever a material, article or piece of equipment is identified in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, it shall be understood

that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

9. *PATENTS*

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular manufacturer or manufacturers is specified, however if the CONTRACTOR has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

10. *SURVEYS, PERMITS, REGULATIONS*

10.1 The OWNER shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of benchmarks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets. The Contractor shall field verify utility locations and shall be responsible to have public and private utilities located within the areas being disturbed to implement the Work on site.

10.2 The CONTRACTOR shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing and any necessary changes shall be adjusted as provided in Section 13. CHANGES IN THE WORK.

11. *PROTECTION OF WORK, PROPERTY AND PERSONS*

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the WORK may affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

12. *SUPERVISION BY CONTRACTOR*

12.1 The CONTRACTOR will supervise and direct the WORK using the Contractor's highest degree of skill and attention as exercised by similar contractors in the Chicago Metropolitan Area. He will be solely responsible for and control the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

13. *CHANGES IN THE WORK*

13.1 The OWNER may at any time, as the need arises, order changes within the scope of WORK without invalidating the Agreement. If such changes increase or decrease the amount due under the CONTRACT DOCUMENTS, or the

time required for performance of the WORK, an equitable adjustment shall be authorized by CHANGE ORDER.

13.2 The ENGINEER, also, may at any time, by issuing a FIELD ORDER, make changes in the details of the WORK. The CONTRACTOR shall proceed with the performance of any changes in the WORK so ordered by the ENGINEER unless the CONTRACTOR believes that such FIELD ORDER entitles him to a change in CONTRACT PRICE or TIME, or both, in which event he shall give the ENGINEER WRITTEN NOTICE thereof within seven (7) days after the receipt of the ordered change. Thereafter the CONTRACTOR shall document the basis for the change in CONTRACT PRICE or TIME within thirty (30) days. The CONTRACTOR shall not execute such changes pending the receipt of an executed CHANGE ORDER or further instruction from the OWNER.

14. *CHANGES IN CONTRACT PRICE*

14.1 The CONTRACT PRICE may be changed only by a CHANGE ORDER. The value of any WORK covered by a CHANGE ORDER or of any claim for increase or decrease in the CONTRACT PRICE shall be determined by one or more of the following methods in the order of precedence listed below:

(a) Unit prices previously approved.
(b) An agreed lump sum.
(c) The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the WORK to cover the cost of general overhead and profit.

15. *TIME FOR COMPLETION AND LIQUIDATED DAMAGES*

15.1 The date of beginning and the time for completion of the WORK are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.

15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.

15.3 The parties acknowledge that the CONTRACT TIME is of the essence, and that the OWNER will suffer damages if the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted by the OWNER. It is acknowledged that such damages are difficult to calculate and that the parties agree that the liquidated damages as specified in the BID are reasonable, and are intended as liquidated damages and not as a penalty. In the event the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.

15.4 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.

15.4.1 To any preference, priority or allocation order duly issued by the OWNER.

15.4.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and

15.4.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

16. *CORRECTION OF WORK*

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

17. *SUBSURFACE CONDITIONS*

17.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the OWNER by WRITTEN NOTICE of:

17.1.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the CONTRACT DOCUMENTS; or

17.1.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in WORK of the character provided for in the CONTRACT DOCUMENTS.

17.2 The OWNER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the WORK, an equitable adjustment shall be made and the CONTRACT DOCUMENTS shall be modified by a CHANGE ORDER. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given the required WRITTEN NOTICE; provided that the OWNER may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. *SUSPENSION OF WORK, TERMINATION AND DELAY*

18.1 The OWNER may suspend the WORK or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to any suspension, in accordance with the CONTRACT DOCUMENTS.

18.2 If the CONTRACTOR is adjudged a bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the WORK is finished. If the unpaid balance of the CONTRACT PRICE exceeds the direct and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

18.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

18.4 After ten (10) days from delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the Contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment in accordance with the requirements of the Illinois Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by arbitrators in accordance with the requirements of the Illinois Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover the OWNER payment for all WORK executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days written notice to the OWNER and the ENGINEER stop the WORK until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of the WORK.

18.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if not time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessarily caused by the failure of the OWNER or ENGINEER.

19. *PAYMENTS TO CONTRACTOR*

19.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. A sworn "Contractor's Affidavit" shall be submitted with each payment request in sufficient form for the OWNER to determine the CONTRACTOR'S right to payment and compliance with the Illinois Mechanic's Lien Law. Each payment request shall include properly executed waivers of lien in conformity with information set forth on a properly completed Contractor's Affidavit. In the event the OWNER is satisfied with the CONTRACTOR'S payment procedures, the OWNER may accept partial waivers of lien of subcontractors and suppliers. If payment is requested on the bases of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER will, within ten (10) days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, in accordance with the requirements of the Illinois Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimate. The OWNER shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the CONTRACT DOCUMENTS. The OWNER at any time,

however, after fifty (50) percent of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5) percent on the current and remaining estimates. When the WORK is substantially complete (operational or beneficial occupancy), the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site.

19.3 Prior to SUBSTANTIAL COMPLETION, the OWNER, with the approval of the ENGINEER and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portions of the WORK. Such use shall not constitute an acceptance of such portions of the WORK.

19.4 The OWNER shall have the right to enter the premises for the purpose of doing work not covered by the CONTRACT DOCUMENTS. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK, or the restoration of any damaged WORK except such as may be caused by agents or employees of the OWNER.

19.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK. Provided, however, neither final payment nor release of any remaining retained percentages shall become due and payable unless and until the CONTRACTOR has submitted to the OWNER a Consent of Surety in Final Payment to the issuer of the Payment BOND.

19.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation of a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged where upon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

19.7 If the OWNER fails to make payment in accordance with the requirements of the Illinois Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., after approval by the ENGINEER, in addition to other remedies available to the CONTRACTOR, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the CONTRACTOR.

20. *ACCEPTANCE OF FINAL PAYMENT AS RELEASE*

20.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance BOND and Payment BOND.

21. *INSURANCE*

21.1 The CONTRACTOR shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR'S execution of the WORK, whether such execution be by himself or by any SUBCONTRACTOR or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

21.1.1 Claims under workmen's compensation, disability benefit and other similar employee benefit acts;

21.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

21.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees

21.1.4 Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person; and

21.1.5 Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of Insurance acceptable to the OWNER shall be filed with the OWNER prior to commencement of the WORK. These Certificates shall contain a provision that the OWNER is an additional non-contributory primary insured and that coverages afforded under the policies will not be cancelled unless at least fifteen (15) days prior WRITTEN NOTICE has been given to the OWNER.

21.3 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, liability insurance as hereinafter specified.

21.3.1 CONTRACTOR'S General Public Liability and Property Damage Insurance including vehicle coverage issued to the CONTRACTOR and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the CONTRACT DOCUMENTS, whether such operations be by himself or by any SUBCONTRACTOR under him, or anyone directly or indirectly employed by the CONTRACTOR or by a SUBCONTRACTOR under him. Insurance shall be written with a limit of liability of not less than $2,000,000 (or such other sum as may be contained in the Contract Documents) for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than $2,000,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than $1,000,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than $1,000,000 aggregate for any such damage sustained by two or more persons in any one accident.

21.3.2 The CONTRACTOR shall acquire and maintain, if applicable, Fire and Extended Coverage insurance upon the PROJECT to the full insurable value thereof for the benefit of the OWNER, the CONTRACTOR, and SUBCONTRACTORS as their interest may appear. This provision shall in no way release the CONTRACTOR or CONTRACTOR'S surety from obligations under the CONTRACT DOCUMENTS to fully complete the PROJECT.

21.4 The CONTRACTOR shall procure and maintain, at his own expense, during the CONTRACT TIME, in accordance with the provisions of the laws of the state in which the work is performed. Workmen's Compensation Insurance, including occupational disease provisions, for all of his employees at the site of the PROJECT and in case any work is sublet, the CONTRACTOR shall require such SUBCONTRACTOR similarly to provide Workmen's Compensation Insurance, including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. In case any class of employees engaged in hazardous work under this contract at the site of the PROJECT is not protected under Workmen's Compensation statute, the CONTRACTOR shall provide, and shall cause each SUBCONTRACTOR to provide, adequate and suitable insurance for the protection of his employees not otherwise protected.

21.5 The CONTRACTOR shall secure, if applicable, "All Risk" type Builder's Risk Insurance for WORK to be performed. Unless specifically authorized by the OWNER, the amount of such insurance shall not be less than the CONTRACT PRICE totaled in the BID. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft and smoke during the CONTRACT TIME, and until the WORK is accepted by the OWNER. The policy shall name as the insured the CONTRACTOR, the ENGINEER, and the OWNER.

22. *CONTRACT SECURITY*

22.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNER with a Performance Bond and a Payment Bond in penal sum equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the state in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the state in which the WORK is to be performed or is removed from the list of Surety Companies accepted on Federal BONDS, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums on such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

22.2 The BOND shall also provide for the faithful performance by the CONTRACTOR of the requirements of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq.

23. *ASSIGNMENTS*

23.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

24. *INDEMNIFICATION*

24.1 The CONTRACTOR will indemnify and hold harmless the OWNER and the ENGINEER and their agents and employees from and against all claims, damages, losses and expenses including attorney's' fees arising out of or resulting from the performance of the WORK, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom;' and is caused in whole or in part by any negligent or willful act or omission of the CONTRACTOR, SUBCONTRACTOR, or anyone directly or indirectly employed by any of them or anyone for whose acts of they may be liable.

24.2 In any and all claims against the OWNER or the ENGINEER, or any of their agents or employees, by any employee of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way be

any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the CONTRACTOR under this paragraph shall not extend to the liability of the ENGINEER, his agents or employees arising out of the preparation or approval of maps, DRAWINGS, opinions, reports, surveys, CHANGE ORDERS, designs or SPECIFICATIONS.

25. *SEPARATE CONTRACTS*

25.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

25.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

25.3 If the performance of additional WORK by other CONTRACTORS or the OWNER is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written notice thereof shall be given to the CONTRACTORS prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entities him to an extension of the CONTRACT TIME, he may make a claim therefor as provided in Sections 14 and 16.

26. *SUBCONTRACTING*

26.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty SUBCONTRACTORS.

26.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(s), in excess of fifty (50) percent of the CONTRACT PRICE, without prior written approval of the OWNER.

26.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

26.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

26.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

27. *ENGINEER'S AUTHORITY*

27.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

27.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspections may be made at the factory of fabrication plant of the source of material supply.

27.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

27.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

28. *LAND AND RIGHTS-OF-WAY*

28.1 Prior to issuance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

28.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

28.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

29. *GUARANTY*

29.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION except that the warranty period for punch list items shall commence on the date of final payment. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and conform to the requirements of the CONTRACT DOCUMENTS, and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the

CONTRACTOR the cost thereby incurred. The Performance BOND shall remain in full force and effect through the guarantee period.

30. *ARBITRATION*

30.1 All claims, disputes and other matters in question arising out of, or relating to, the CONTRACT DOCUMENTS or the breach thereof, except for claims which have been waived by the making and acceptance of final payment as provided by Section 20, for less than $50,000 shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

30.2 Notice of the demand for arbitration shall be field in writing with the other party to the CONTRACT DOCUMENTS and with the American Arbitration Association, and a copy shall be filed with the ENGINEER. Demand for arbitration shall in no event be made on any claim, dispute or other matter in question which would be barred by the applicable statute of limitations.

30.3 The CONTRACTOR will carry on the WORK and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

31. *TAXES*

31.1 The CONTRACTOR will pay all sales, consumer, use and other similar taxes required by the law of the place where the WORK is performed.

32. *PREVAILING WAGES*

32.1 The PROJECT calls for the construction of a “public work” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq. (the “Act”). The Act requires CONTRACTORS and SUBCONTRACTORS to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the works is to be performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor’s website at:

http://www.state.il.us/agency/idol/rates/rates.HTM

All CONTRACTORS and SUBCONTRACTORS rendering services on the PROJECT must comply with all requirement of the Act, including but not limited to all wage, notice and record keeping duties.

32.2 The prevailing rate of hourly wages applicable for the OWNER has been established by Resolution enacted in accordance with law. A copy of the most current enactment may be obtained from the OWNER

32.3 The prevailing rate of hourly wages applicable to the OWNER and to the PROJECT may be revised at any time by the Illinois Department of Labor. Any such revised rates will apply to the PROJECT in accordance with law.

32.4 The CONTRACTOR shall submit to the OWNER monthly certified payroll records related to work on the PROJECT, together with a statement verifying that the records are true and accurate and otherwise meeting the requirements of 820 ILCS 130.5.

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PRINCETON DRIVE ELEVATED WATER STORAGE TANK
SPECIAL PROVISIONS

Table of Contents

SP-1 LOCATION OF IMPROVEMENTS

The project is located on a Village lot next to a water treatment plant and south of a ComEd ROW at 600 Princeton Drive, North Aurora, IL 60542.

SP-2 DESCRIPTION OF IMPROVEMENTS

The project includes the site preparation of a 1.33-acre site including mass grading, utility installation including watermain, construction of either a 1.25 MG or 1.0 MG watersphereoid elevated storage tank with all related appurtenances dependent upon Village selection following bid reviews, pavement installation, fence installation, and site restoration.

SP-3 CONSTRUCTION SCHEDULE

Site work is estimated to start May 1, 2025.

The Contractor may issue submittals for review prior to this date, however access to the ComEd ROW for water main connection will not be allowed until easements are granted.

The improvements shall be fully complete by ***XXXXX***. Should the Contractor fail to complete the work by ***XXXXX***, the Contractor shall be liable to the Village of North Aurora in the amount specified in the Village's contract documents.

SP-4 PRE-BID SITE VISIT

All bidders are encouraged to visit the site prior to preparation of bid. Submission of the bid is acknowledgement that the Bidder is aware of and accepting of existing conditions prior to the installation of the improvements.

SP-5 MANDATORY PRE-BID MEETING, BIDDING REQUIREMENTS, AND CONTRACT ADDENDA

All bidders are invited to attend the pre-bid meeting, on ***October 9, 2024, 1:00 PM at the Village of North Aurora Public Works Building***. The purpose of the meeting will be to present the project scope and address any questions regarding preparing bids on the proposed improvements.

Should further questions arise at the mandatory pre-bid meeting or afterwards, said questions shall be submitted to the Engineer by 5:00 PM on ***October 16, 2024***. Additional questions from the pre-bid meeting and any further questions will be addressed via addendum on ***October 21, 2024.***

Acknowledgement of receipt of any addendum shall be incorporated into submitted bids and shall be required in order to accept any bid at the time of opening. Prospective bidders without acknowledgement of receipt of any addends

will not be entertained for acceptance and their bids will be discarded without further consideration upon review after the time of bid opening.

Bids will be opened at 1:00 PM on ***October 29, 2024.***

SP-6 APPLICABLE SPECIFICATIONS

The following Special Provisions supplement the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition; the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, adopted April 1, 2022 (hereinafter referred to as the Standard Specifications); the Illinois Department of Transportation Standard Specifications for Traffic Control Items, latest edition; the Manual on Uniform Traffic Control Devices, latest edition and Illinois Urban Manual, latest edition. In case of conflict with any part or parts of said Specifications, these Special Provisions shall take precedence.

SP-7 CONSTRUCTION RESTRICTIONS

Construction shall only be permitted from 7:00 am to 7:00 pm Monday through Friday, and 8:00 am to 6:00 pm on weekends and holidays. Any requested variations to these hours shall be approved by the Village in writing, in advance of any operations outside of the hours detailed above.

All engines and engine-driven equipment used in relation to this project shall be equipped with an adequate muffler in constant operation and properly maintained to prevent excessive noise.

No construction equipment, materials or contractors' vehicles shall be placed or driven on the residential parkways without written authorization from the Engineer. For example, concrete trucks have to be equipped with enough chutes do that it is NOT necessary to drive over the parkway area to reach the item being poured. Failure to comply with this item will result in job suspension until the Engineer receives acceptable documentation that the Contractor agrees to restore the area in question at their expense, and that they specify the steps that will be implemented to insure it will not happen again.

SP-8 LOCATION OF EXISTING UTILITIES

Locations of all utilities shown on the Plans are approximate only and are not necessarily complete. The Contractor shall make their own investigations and familiarize themselves with the location of all utilities and structures that may be found in the vicinity of the construction and assumes responsibility for all utilities whether shown or not, and must realize that the actual locations and/or elevations of the utilities may be different than indicated. It is understood and agreed that the Contractor has considered in their bid all of the permanent and temporary utility appurtenances in their present or relocated positions.

The Contractor shall notify J.U.L.I.E. (1-800-892-0123) and all utility companies and the Village of North Aurora, a minimum of 72 hours prior to beginning any construction or underground investigations. The Contractor shall then have the responsibility to determine from the public utility companies the locations of underground pipes, conduits or cables adjoining or crossing the construction area.

Should any damage occur due to the Contractor's negligence, repairs shall be made by the Contractor at their expense in a manner acceptable to the Engineer. The Contractor shall notify all utility companies of their construction schedule and coordinate construction operations with the utility companies so that relocation of utility lines and structures may proceed in an orderly manner.

All overhead utilities and poles shall be temporarily supported when working nearby (incidental to the contract).

Special note should be taken of the existing 30-inch transmission gas line within the ComEd ROW. The contractor shall coordinate their operations with Nicor watch and protect. No vibratory rolling shall be allowed within ten feet of either side of said gas main.

SP-9 MATERIAL TESTING

The Contractor will be responsible for all quality control testing. The Village of North Aurora will be providing quality assurance testing for their own benefit.

Any item requiring testing shall be scheduled with the Engineer no sooner than 48 hours in advance.

SP-10 CONSTRUCTION STAKING

Construction staking and layout will be provided by the Engineer. It is the Contractor's responsibility to confirm all staking (location and grade) prior to construction. Any errors shall be brought to the immediate attention of the Engineer and resolved prior to construction.

Staking shall be requested no sooner than 48 hours in advance.

The CONTRACTOR shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

SP-11 RECORD DRAWINGS

Record drawings will be the responsibility of the Engineer. The Contractor shall keep detailed notes of depths and locations of all underground utilities to assist the Engineer in assembling the record drawings.

SP-12 CONSTRUCTION DEBRIS

The following shall be added to the third paragraph of Article 202.03 of the Standard Specifications:

"The Contractor shall not conduct any generation, transportation, or recycling of construction or demolition debris, clean or general or uncontaminated soil generated during construction, remodeling, repair, and demolition of utilities structures, and roads that is not commingled with any waste, without the maintenance of documentation identifying the hauler, generator, place of origin of the debris or soil, the weight or volume of the debris or soil, and the location, owner, and operator of the facility where the debris or soil was transferred, disposed, recycled, or treated. This documentation must be maintained by the Contractor for 3 years."

SP-13 VANDALISM

Any work (finished concrete, asphalt, etc.) which has been vandalized, will be REPLACED, not repaired, by the Contractor at their expense. It is recommended by the Village of North Aurora that the Contractor finish a normal days' concrete pour by 2:00 pm to allow the concrete to set up before the crew leaves the job.

SP-14 HOUSEKEEPING

Equipment (shovel, form boards, tarps, etc.) shall not lay abandoned for a period of more than 24 hours. The jobsite shall be maintained with a neat and orderly appearance. All construction materials shall be staged and stockpiled in an orderly manner, and shall be available for inspection at all times.

The Contractor shall backfill with topsoil along all newly poured concrete (curbs, sidewalk, monolithic walk, drives, and drive approaches) within ten (10) calendar days of pour. Failure to backfill along new concrete within the allotted 10 days shall also result in the quantity of new concrete items not backfilled being withheld from pay estimates until they have been backfilled to the satisfaction of the Engineer.

The Contractor shall backfill with topsoil along all newly paved HMA entrance pavement within ten (10) calendar days of paving. Failure to backfill within the allotted 10 days shall also result in the quantity of new HMA pavement not backfilled being withheld from pay estimates until they have been backfilled to the satisfaction of the Engineer.

Prior to backfilling along new concrete or HMA pavement, any affected areas adjacent to new construction shall be protected with Type II barricades at ALL locations where the difference in grade is greater than 2".

SP-15 PROTECTION OF WORK, PROPERTY AND PERSONS

The Contractor will be responsible for initiating, maintaining and supervising all

safety precautions and programs in connection with the WORK. The Contractor will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction, and will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. The Contractor will notify owners of adjacent utilities when prosecution of the work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the Contract Documents or to the acts or omissions of the Owner or the Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor.

In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or Owner, shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt written notice of any significant changes in the work or deviations from the Contract Documents caused thereby, and a change order shall thereupon be issued covering the changes and deviations involved.

The Contractor shall take all necessary precautions for the protection of public and private property. This shall include the location and identification of property markers prior to and during construction. The Contractor is responsible for the damage or destruction of property resulting from neglect, misconduct or omission in his manner or method of execution or non-execution of the work, or caused by defective work or the use of unsatisfactory materials and such responsibility shall not be released until the work has been completed and accepted and the requirements of these specifications complied with.

Whenever public or private property is so damaged or destroyed, the Contractor shall, at their expense, restore such property to a condition equal to that which existed prior to such damage or injury by repairing rebuilding or replacing it as may be directed, or they shall otherwise make good such damage or destruction in an acceptable manner. If they fail to do so, the Village will withhold any payouts toward completed work until arrangements are made to correct any damage as described above.

SP-16 PROTECTION OF EXISTING DRAINAGE FACILITIES

During construction, if the Contractor encounters or otherwise becomes aware of any sewer, underdrains or field drains within the right-of-way other than those shown on the Plans, they shall so inform the Engineer who shall direct the work necessary to maintain or to replace the facilities in service and to protect them from damage during construction if to be maintained. Existing facilities to be maintained that are damaged because of non-compliance with this provision shall be replaced at the Contractor's own expense.

Should the Engineer direct the replacement of a facility, the necessary work and payment shall be done in accordance with Section 601 and 602 and Article 109.04 respectively of the Standard Specifications.

SP-17 COOPERATION WITH OTHER CONTRACTORS

The Contractor shall cooperate with other contractors that are working on/or near any portion of the project site. The Contractor shall schedule their construction to minimize conflicts in common work areas and to maintain continuity in construction and traffic management. Contractor will be given the names of other contractors who will work on/or near the project site. It is the Contractor's responsibility to contact each contractor and coordinate the sequence of work with them.

SP-18 SUBMITTALS

Shop drawings, cut sheets and or mix designs shall be submitted for the following items:

- All water main products
- HMA and PCC mix designs
- All required water storage tank designs and related appurtenances

SP-19 PERMITTING

The Village of North Aurora will obtain the necessary IEPA permits for the construction of the water main. It is the Contractors responsibility to read these permits and comply with their provisions. The Village has paid/will pay any application fees associated with these permits. See Appendix A.

A signed LPC-662 form with supporting documentation is found in Appendix B. Any additional testing or documentation beyond what is provided with the LPC-662 and preliminary analysis that is necessary to dispose of the material shall be the Contractor's responsibility.

All other permits which may be necessary for construction are the responsibility of the Contractor to obtain.

SP-20 MOBILIZATION

This Contract contains no provisions for mobilization. Therefore, Section 671 of the Standard Specifications is deleted.

SP-21 KEEPING ROADS OPEN TO TRAFFIC

All streets within and adjacent to the project limits shall be required to remain open at all times. Signage should be placed according to the Traffic Control Standards. Provisions shall be made so that access to residences, businesses and the park district entrance is maintained. All work associated with the above shall be considered incidental to TRAFFIC CONTROL AND PROTECTION.

If during construction it is deemed necessary to temporarily close a road or lane of traffic, the Engineer shall be notified a minimum of 72 hours in advance so that residents, local agencies and emergency responders can be properly notified. All roads shall be open to traffic at the end of each working day.

SP-22 WORK OUTSIDE THE ROW

The Village has acquired the necessary permanent and temporary construction easements as shown on the plans. No construction, disturbance or stockpiling of materials will be allowed outside of the right-of-way or easements.

SP-23 PLAN QUANTITY ASSUMPTIONS

Non-Special, Non-Hazardous Soil Waste Disposal, Foundation Material, Removal and Disposal of Unsuitable Material, and Aggregate Subgrade Improvement are assumed quantities for the purpose of establishing a unit price.

SP-24 EPOXY COATING ON REINFORCEMENT

All references in the Standard Specifications, Technical Specifications, and Special Provisions for reinforcement, dowel bars, tie bars and chair supports, and wire ties for the tank foundation, transformer pad and splash pad shall be epoxy coated, unless otherwise noted.

SP-25 DUST CONTROL – MECHANICAL SWEEPING

This work shall consist of controlling the dust and air-borne dirt generated by construction activities, and shall be provided according to Article 107.36 and the following Special Provisions.

The Contractor shall have available a mechanical sweeper on the jobsite for removal of dust and loose gravel/dirt/debris for purposes of dust control at all times.

On an as needed basis as determined by the Engineer, the Contractor shall utilize a mechanical street sweeper to remove all dust, gravel, sand, dirt from roadways to minimize the presence of construction dust nuisance on the jobsite and all

surrounding areas. The Contractor should plan for a weekly sweeping at minimum just prior to the weekend, and additional times during peak construction operations. Debris must be removed to the satisfaction of the Engineer.

To ensure prompt response to the Resident Engineer's request for dust control, the Contractor shall conduct the dust control operation before the end of the day when notified before 12 pm. Any subsequent notification will require operations to begin first thing the following day.

All costs related to Dust Control will not be paid for separately but shall be included in the unit pay items included in the Contract.

SP-26 STABILIZED CONSTRUCTION ENTRANCE

This work shall consist of furnishing, installation, maintenance, and removal of stabilized pad of aggregate underlain with filter fabric as shown on the plans or directed by the Engineer.

Aggregate size shall be IDOT Coarse Aggregate Graduation: CA-1 CA-2 CA-3, or CA-4. Filter Fabric shall consist of synthetic polymers composed of at least 85 percent by weight polypropylene, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene chlorides. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet lights.

The course aggregate shall be a thickness of 6 inches or more. The stone entrance should not be filled until the area has been inspected and approved by the Engineer.

The rock shall be dumped and spread into place in approximately horizontal layers not more than 3 feet in thickness. It shall be placed in a manner to produce a reasonable homogeneous stable fill that contains no segregated pockets, or larger or small fragments or large unfilled space caused by bridging of larger fragments. No compaction will be required beyond that resulting from the placing and spreading operations.

The minimum width and length shall be 20 and 40 feet, respectively. All surface water flowing or diverted toward the construction entrance shall be piped across the entrance. Any pipe used for this will be considered incidental to the STABILIZED CONSTRUCTION ENTRANCE. The stabilized construction entrance will have positive drainage away from the roadway.

The entrance shall remain in place and be maintained until the disturbed area is stabilized. Any sediment spilled onto public rights-of-way must be removed immediately by means of mechanical sweeping.

This work shall be paid for at the contract unit price per SQUARE YARD for STABILIZED CONSTRUCTION ENTRANCE, which shall include all material,

equipment, and labor necessary to complete this work.

SP-27 EARTH EXCAVATION (SITEWORK ONLY)

This work shall consist of the excavation and transportation of suitable and restricted-use excavated material to embankment locations throughout the limits of the contract, or the excavation, transportation, and disposal of excavated material as required for improvements outside of construction for the proposed water tower.

This item shall be constructed according to Article 202 of the Standard Specifications and the following:

Useable topsoil found on the site will be allowed to be stockpiled and incorporated in the work according to Article 211 of the Standard Specifications. Measurement and payment for any Topsoil Excavation shall be included in the quantity and cost of EARTH EXCAVATION (SITEWORK ONLY). The cost of Topsoil Placement, as well as Topsoil Furnish and Placement in order to provide a complete 6-inches of topsoil at all locations shall be included in the cost of RESTORATION.

The volume of EARTH EXCAVATION shall be the cut volume difference between the original ground, including existing topsoil and the finished ground line, including placed and furnished topsoil as required and the subgrade line under pavements and appurtenances. An additional six inches of excavation will be counted in all restored areas to allow for removal of material required to place six inches of topsoil.

Earth Excavation shall be paid for at the Contract unit price per cubic yard of EARTH EXCAVATION (SITEWORK ONLY), which prices shall include other items of work included under the general heading of Earthwork for which no payment item is included in the Contract.

SP-28 REMOVAL AND DISPOSAL OF EXCAVATED MATERIAL (“UNCONTAMINATED SOIL”)

Any excavated material that meets the requirements of disposal at a CCDD facility and not needed for backfill or embankment shall be removed and disposed of off the site at a location or locations provided by the Contractor. The cost of removal, transportation and disposal of the excavated material (“uncontaminated soil”) is considered incidental to the pay item requiring excavation.

A signed LPC-662 form with supporting documentation is found in Appendix B. Any additional testing or documentation beyond what is provided with the LPC-662 and preliminary analysis that is necessary to dispose of the material shall be the Contractor’s responsibility.

If the Contractor chooses to dispose of the material at a permitted CCDD facility, the Contractor shall coordinate with said facility or facilities prior to bidding to determine if the information provided with the LPC-662 is adequate. The Engineer should be informed immediately of any deficiencies.

SP-29 NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 1

Any excess excavated material that does not meet the requirements for disposal at a CCDD facility and not needed for backfill or embankment shall be removed and disposed of at a permitted receiving facility (i.e. landfill) provided by the Contractor or other approved location. The cost of removal, transportation and disposal of the non-special, non-hazardous soil will be paid for at the contract unit price per ton for NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 1. Documentation from the permitted receiving facility indicating date, time, weight, driver, truck number, etc. shall be provided to the Engineer as requirement for payment for this work item.

Based on the information provided in the LPC-662, it is not anticipated that any contaminated material will be encountered; however, if any material is rejected from the CCDD facility it shall be brought back to the site or other location as determined by the Engineer. At that time, the Engineer will determine the level of testing required for necessary disposal of NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 1. All testing shall be paid for by the Village of North Aurora.

Any cost to the Contractor for additional hauling, dumping, airing out soil, reloading, etc. shall be considered in the unit price per ton for NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 1.

SP-30 NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 2

Any excess excavated material that does not meet the requirements for disposal at a CCDD facility and not needed for backfill or embankment shall be removed and disposed of at a location owned by the Village of North Aurora. The cost of removal, transportation and disposal of the non-special, non-hazardous soil will be paid for at the contract unit price per ton for NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 2. Measurement and/or cross sections of the dumped material at the Village of North Aurora facility will be required for payment for this work item.

Based on the information provided in the LPC-662, it is not anticipated that any contaminated material will be encountered; however, if any material is rejected from the CCDD facility it shall be transported to the Village's designated location.

Any cost to the Contractorfor additional hauling, dumping, etc. shall be considered in the unit price per cubic yard for NON-SPECIAL, NON-HAZARDOUS SOIL WASTE DISPOSAL – TYPE 2.

SP-31 FOUNDATION MATERIAL

This work shall consist of removal of unsuitable material from under proposed water main and related appurtenances and structures separate from the footprint of the foundation for the proposed elevated water storage tank and replacement with compacted aggregate.

Foundation Material shall be in accordance with Section 20 of the Standard Specifications for Water & Sewer Main construction in Illinois except that the foundation material shall be IDOT gradation CA-7 virgin crushed limestone, meeting the requirements of Section 1004 of the Standard Specifications.

FOUNDATION MATERIAL shall be measured for payment in cubic yards and shall include all costs associated with the removal and disposal of unsuitable material.

SP-32 SELECTED GRANULAR BACKFILL

Selected granular backfill (also referred to as trench backfill throughout) shall be installed in accordance with applicable sections of Article 550 of the Standard Specifications and the following Special Provisions.

Pipe bedding shall consist of four inches of compacted CA-07. Following placement, the pipe shall be haunched with CA-07. The CA-07 aggregate shall then be carried up to one foot above the top of the pipe and compacted in place. The remaining trench backfill shall be CA-06, meeting the requirements of Section 1004. All CA-6 material placed in such trenches shall be mechanically compacted in maximum one-foot lifts. All trench backfill must be limestone (CA-06, Grade 8). Crushed gravel meeting CA-06 will not be acceptable.

Selected granular backfill shall be required for water main where any portion of the trench lies under or within 2' of existing or proposed pavement, and driveways.

The Contractor shall be responsible for maintaining the stone trenches as directed by the Village and/or Engineer.

SELECTED GRANULAR BACKFILL will not be paid for separately but shall be included in the cost of the item requiring backfill, which includes but is not limited to: water main, storm and sanitary sewer, services, hydrants, structures, and exploratory excavations.

SP-33 CONSTRUCTION SITE PERIMETER FENCE

This work shall consist of erecting a temporary chain link fence, gates and accessories. This work shall follow the requirements set forth in Section 664 of the Standard Specifications.

Construction Site Perimeter Fence is required to secure construction site at project limits. The fence shall be a minimum of 6 feet in height and shall be attached or mounted securely, to prevent the fence from being moved or knocked over. The Resident Engineer shall approve all methods of attachment.

Locations shall be as shown on the plans and/ or as directed by the Resident Engineer. The Resident Engineer may adjust Construction Site Perimeter Fence locations as needed. Double swing gates are to be included to allow the passage of construction vehicles during working hours and locked during off hours. Two copies of the key shall be made available to the Village.

Construction Site Perimeter Fence that is determined by the Resident Engineer to be damaged, rendering it ineffective for its intended use, will be replaced by the Contractor immediately. No additional compensation will be provided for replacing damaged fence.

CONSTRUCTION SITE PERIMETER FENCE will be measured for payment in feet, along the top of the fence from center to center of end posts, including length occupied by gates, which includes all material, labor and equipment required to construct, mount/ attach, move, support, maintain and remove the fence, gates, and associated hardware.

SP-34 PIPE INSTALLATION FOR WATER MAINS

This work shall include the installation of any required DIP water mains as shown in the plans.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

Water main shall be 16-inch zinc coated DIP, Class 54 with V-Bio polyethylene wrap from the tower to Valve Vault #1. All remaining water main shall be 16-inch zinc coated DIP, Class 52 with V-Bio polyethylene wrap. All pipe, fittings and appurtenances shall be manufactured in the United States.

Pipe shall be installed in accordance with the Standard Specifications for Water & Sewer Main construction in Illinois and manufacturer's instructions for installing the type of pipe specified.

For DIP pipe:

All water main shall be wrapped with polyethylene in accordance with AWWA/ANSI C105/A21.5, Method A. When lifting polyethylene-encased pipe, a fabric type sling or a suitably padded cable or chain shall be used to prevent damage to the polyethylene. Any damage to the polyethylene wrap shall be taped with a polyethylene adhesive tape. Excess damage to the polyethylene encasement will result in a new polyethylene tube for that pipe.

Brass wedges shall be installed at each push joint for electrical conductivity. Wedges shall be installed 180° apart. Two (2) wedges shall be installed per joint for water main up to 12" and two (2) pairs of two (2) wedges shall be installed per joint on water main larger than 12".

Excavation and backfill for water mains shall conform to the typical sections shown in the plans and shall conform to the provisions of Sections 20, 21 and 22 of the Standard Specifications for Water & Sewer Main Construction in Illinois.

The trench unless otherwise specified shall have a flat bottom. The pipe shall be laid on 4 inches of bedding stone graded true and even so that the barrel of the pipe will have a bearing for its full length. Bell holes shall be excavated for joints.

Any part of the trench excavated below grade shall be corrected with an approved material and thoroughly compacted.

When water is encountered in the trench, it shall be removed during pipe laying and jointing operations. Provisions shall be made to prevent floating of the pipe. Trench water shall not be allowed to enter the pipe at any time. Dewatering, if required, shall be considered incidental to the Contract.

This work shall be paid for at the contract unit price per foot for WATER MAIN, of the size, type and class specified. Price shall include all necessary labor, material, and equipment to install the water main, including, but not limited to providing and installing the pipe, V-Bio polyethylene wrap, threaded rods, retainer glands, blocking, bedding stone and other materials (not listed for payment separately). Any trench backfill required for the water main installation shall be considered incidental to the WATER MAIN.

SP-35 NON-DRAINING FIRE HYDRANT ASSEMBLY, COMPLETE

Hydrants shall be manufactured to the latest and best design conforming to the current AWWA Specifications C-502, “Standard for Dry Barrel Fire Hydrants” and shall be of the break away style traffic design.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

Hydrants shall be easy and economical to install and maintain, shall incorporate no parts requiring field adjustment, and shall place nozzle at least eighteen inches (18") above the hydrant ground line to fully comply with the National Fire Protection Association, Fire Protection Handbook, 13th Edition.

Hydrants shall be equipped with automatic drain.

All contractors/suppliers shall include (A) a detailed drawing to include a parts list indicating the material construction and applicable ASTM Standards for each part or item; and (B) flow data for the proposed hydrant if requested.

6-inch Fire Hydrants to be supplied shall be Clow F-2545 (Medallion) with two (2), two and one half inch (2 1/2") NST (National Standard Threads) hose nozzles and one four and one half inch (4 1/2") NST Pumper Nozzle. The main valve opening size shall be five and one quarter inch (5 1/4"). The inlet shall be six inch (6") mechanical joint (complete with accessories). Hydrants shall open by turning left (counter clockwise). Hydrants shall be painted red at the factory. Hydrants shall be covered prior to backfilling to prevent any damage to the paint surface.

Hydrants shall be installed in accordance with applicable provisions of Section 45 of the Standard Specification.

All 6” mechanical joint auxiliary gate valves shall be constructed with a cast iron valve box, two piece 5 ¼” shafts, screw-type Tyler Model 664-S or approved

equal, and the lids shall be marked “water”. Valve box extensions, if required, are considered incidental.

The 6” ductile iron pipe extending to the hydrant from the mainline water main shall be considered incidental.

This work shall be paid for at the contract unit price each for NON-DRAINING FIRE HYDRANT ASSEMBLY, COMPLETE, of the type specified. Price shall include labor and material necessary to install the hydrant, the valve, valve box, valve box stabilizer, valve box grip, the connection pipes from the tee to the hydrant, trench backfill, and thrust block as detailed on the Plans.

Ductile Iron Fittings required for the hydrants will be paid for at the contract unit price per pound for DUCTILE IRON FITTINGS.

SP-36 BUTTERFLY VALVE AND VALVE VAULT

This work shall consist of furnishing and installing a butterfly valve and valve vault as shown on the plans and as described herein.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

Butterfly valves shall be Clow, Mueller, or Waterous Valves in accordance with AWWA C504.

The butterfly valves shall be suitable for ordinary water works service, intended to be installed in a normal position on buried pipelines for water distribution systems.

Butterfly valves shall conform with AWWA C540. Main line valves shall be furnished with MEGALUG mechanical joint restraints. Valves shall be bubble tight at 285 psi water working pressure. All gate valves shall have a non-rising stem, shall have a standard 2” square operating nut and shall open in a counter-clockwise direction.

Each valve shall have marker’s name, pressure rating and year in which manufactured cast on the body. Prior to shipment from the factory, each valve shall be tested by hydrostatic pressure equal to twice the specified working pressure.

Valve Vaults shall be reinforced concrete in accordance with ASTM C478 and C443. Valve vaults shall be 60-inch for 8-inch diameter and larger valves. The casting shall be as specified in the Engineering Plans.

All valve vaults shall be watertight and shall include booted wall penetrations. All structure joints shall be sealed with two applications of butyl rope and two applications of gator wrap.

This work shall be paid for at the contract unit price per each for BUTTERFLY VALVE AND VALVE VAULT of the size specified. Price shall include providing

and installing the valve, valve vault, casting, trench backfill, all fittings, and all necessary labor, tools, equipment, and materials necessary to complete this work.

SP-37 INSERTION VALVE AND VALVE VAULT, 16-INCH IN 60-INCH VAULT

The contractor shall install insertion valves at the locations indicated on the plans, or as per the direction of the Village of North Aurora and/or Engineer. Insertion type valves shall comply with AWWA C509 for permanent valve installation and shall be installed under pressure without disruption in service.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

All valve vaults shall be watertight and shall include booted wall penetrations. All structure joints shall be sealed with two applications of butyl rope and two applications of gator wrap.

This work will be paid for at the contract unit price per each for INSERTION VALVE AND VALVE VAULT, of the size specified and shall include supplying and installing a 5' diameter vault, installed completed and in-place.

The contract unit price shall include all labor, material, and equipment necessary to perform the work, which prices shall include all excavation and backfill, bedding and cover, bracing, pipe joint material and restraint, pipe, trench dewatering, disinfection, removal and disposal of waste excavated materials, protection, replacement or repair of existing utilities, and removal of existing fittings and labor. Any open cut trenching within four (4) feet of a proposed pavement, driveway, or sidewalk shall be backfilled with granular trench backfill and shall be included in the contract unit price for the inserting valve.

SP-38 CONNECTION TO EXISTING WATER MAIN

The Contractor shall make connections to the existing water mains at locations shown on the plans and as described herein.

Where the connection of new work and old require interruption of services and notification of customers affected, the foreman of the Utility (Village), the Engineer, and the Contractor shall mutually agree upon a date and time for connections which will allow ample time to assemble labor and materials, and to notify all customers affected. Customers shall be notified at least 48 hours prior to being taken out of service.

Valves on existing mains shall not be operated by the Contractor (unless otherwise authorized by the Village) and will be closed and opened only by the employees of the Village's Water Department.

The Contractor shall expose the water main to be connected and shall confirm the size and type of piping present. The Contractor shall obtain the necessary

materials required to make a proper connection. The Contractor shall not proceed until they have all the required materials on site.

Excavation shall begin at the location of the proposed tee and shall proceed west until the first existing bell is encountered. The new valve and vault #3 shall be installed in such a manner as to leave nearly a full stick of existing water main pipe in the ground to the west of the new valve and vault. The new valve #3 shall be installed at the nearest possible existing bell location, against a freshly cut piece of the existing main.

No pipe joints will be allowed between the new valve vault and the new tee.

The new tee and the new solid sleeve to the existing water main to the east of the tee shall be installed together with threaded rod prior to breaking off of the retainer gland gripping nuts.

Field Lok gaskets shall be installed in all push joints within 40 feet of the new tee.

The Contractor shall limit the time for interconnections to four (4) hours. In no case, shall a customer(s) be out of service overnight.

Once the new water mains have been tested and approved for service then the Contractor shall, under the direction of the Engineer and Village, place the new water main in service.

This work will be paid for at the contract unit price per each for CONNECTION TO EXISTING WATER MAIN of the size specified. Price shall include all equipment, labor, excavating, dewatering and preparation of the existing main, installation of the the new tee and solid sleeve with threaded rod, CA-07 aggregate, trench backfill, and other materials (not listed for payment separately) required to make proper connections of the existing water mains to the proposed water mains.

Fittings shall be paid for per pound for DUCTILE IRON FITTINGS. Field Lok gaskets shall be paid as each for FIELD LOK GASKET, 16". Required water main shall be paid per foot for WATER MAIN,16-INCH D.I.P. of the class specified.

SP-39 DUCTILE IRON FITTINGS

This work shall include any retainer glands, compact fittings and labor required for the complete installation of ductile iron fittings separate from fittings required for the connection to the existing water main.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

Any fittings beyond those indicated on the Engineering Plans required to install the water main in accordance with the Engineering Plans are considered incidental to the cost of the water main. All fittings associated with the connection shall all be considered included in the cost of CONNECTION TO EXISTING WATER MAIN.

All vertical water main adjustments shall be accomplished by deflection, not bends in the water main. However, if fittings are necessary as deemed by the Engineer to lower the water main to avoid conflicts with other existing utilities and provide for water main protection, then they will be paid at the contract unit price per pound for DUCTILE IRON FITTINGS. Weight of fittings on the Bid Schedule does not include weight of mechanical joint accessories.

All fittings shall require poly wrap.

This work will be paid for at the contract price per pound for DUCTILE IRON FITTINGS which includes all material, provision and installation of all thrust blocking per the Standard Specifications for Water and Sewer Main Construction in Illinois, mechanical joint accessories, and labor necessary for installation.

SP-40 MECHANICAL JOINT ACCESSORIES

These items are for labor and materials required for installation of appurtenances separate from ductile iron fittings. All retainer gland accessories are required to be Megalug brand or approved equal, manufactured in the United States and all connectors and mechanical fasteners are required to be stainless steel, clearly marked on all products.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

Mechanical Joint Accessories, consisting of, but not limited to, gaskets, retainer glands and stainless steel bolts, are considered incidental to the cost of DUCTILE IRON FITTINGS. Weight of fittings on the Bid Schedule does not include weight of accessories.

SP-41 RETAINER GLANDS AND FIELD LOK GASKETS

All mechanical joint fittings, valves and hydrants shall be restrained with retainer glands.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

Retainer glands shall be UNI-FLANGE SERIES 1400 Wedge Action retainer gland MEGALUGS. In addition to the “megalug” style retaining glands to be used at all mechanical joint fittings, each branch of a tee shall require the gasket at each joint forty feet beyond the fitting shall be a Field Lok 350 gasket or approved equal.

Restrained joints shall be installed per the following requirements:

The following are the minimum restrained joint length that must be satisfied in addition to the thrust blocking for water main with polyethylene wrap:

Minimum Restrained Length on Each Side of Fitting (ft)				
	8”	10”	12”	16”
11.25° Horizontal Bend	5	6	7	10
22.5° Horizontal Bend	10	12	15	19
45° Horizontal Bend	21	25	30	39
Water Main Lowering	56	69	83	111
Dead End	59	71	85	112

Minimum Length of Tee branch to be Restrained (ft)					
	6”	8”	10”	12”	16”
8” Tee Run X Branch	36	52			
10” Tee Run X Branch	33	50	65		
12” Tee Run X Branch	31	49	63	78	
16” Tee Run X Branch	27	45	60	76	105

Minimum Restrained Length of Larger Pipe Side (ft)			
	8”	10”	12”
Reducer: 10” X	24		
Reducer: 12” X	45	25	
Reducer: 16” X	82	67	48

The restrained joints shall be incidental to the cost of the water main.

The cost of Field Lok gaskets shall be paid as each at the contract unit price for FIELD LOK GASKET of the size specified.

The cost of furnishing and installing retainer glands is considered incidental to the project.

SP-42 THRUST BLOCKING

Blocking to prevent movement of lines under pressure at bends, tees, caps, valves, plugs and hydrants shall be Portland Cement Concrete, a minimum of twelve inch (12") thick, placed between undisturbed, solid ground and the fittings, and shall be anchored in such a manner that pipe and fitting joints will be accessible for repairs. The Contractor shall provide a polyethylene cover over the pipe and/or fitting joints prior to installation of the concrete.

Under no circumstances will “dead man” pipe insertion be allowed as a substitution for thrust blocking of newly installed water main.

The cost of thrust blocking is included in the cost of the water main of the size specified or in the cost of CONNECTION TO EXISTING WATER MAIN as applicable.

SP-43 HYDROSTATIC TESTS AND DISINFECTION OF THE WATER MAIN

The Contractor shall perform Hydrostatic Tests in accordance with Division IV, Section 41 of the Technical Specifications and applicable provisions of AWWA C-600 and C-603.

The water main shall maintain a pressure of 150 psi for two (2) hours with no pressure loss. The gauge should be of good quality and condition, and be fluid filled. The gauge should have large enough range for the pressure being tested and should be capable of reading a minimum pressure of one (1) psi. The testing length shall be limited to 1000 foot. If more than 1000 foot of water main is tested, the allowable leakage will be based upon 1000 foot.

Upon completion of the newly laid water main, the water main shall be disinfected in accordance with the American Water Works Association, Procedure Destination, AWWA C-651.

The Contractor is responsible for coordinating the collection of bacteriological water samples as required by the Illinois Environmental Protection Agency. The Village shall witness the water sampling be performed.

Water samples collected on two (2) successive days from the treated piping system shall show satisfactory bacteriological results. Bacteriological analyses must be performed by a laboratory certified by the IEPA and approved by the Engineer.

Should the initial treatment result in an unsatisfactory bacterial test, the original chlorination procedure shall be repeated by the Contractor until satisfactory results are obtained and is incidental to the Contract.

This work will be paid for at the contract unit price per Lump Sum for WATER MAIN TESTING – PRESSURE AND DISINFECTION. Price shall include all necessary labor and materials to pressure test, disinfect, and test the water main including whips, application of chlorine and de-chlorination, all as required to place the water main in service in accordance with the IEPA regulations.

SP-44 FENCE REMOVAL

This work shall consist of the complete removal of the existing fence along the west side of the water treatment plant.

Following the removal of the fence top and fabric, fence posts and any concrete footings shall be completely pulled up and removed from the ground. The resulting hole shall be filled with FA-02 gradation sand to an elevation of one foot below the ground surface and topped with topsoil.

Removal shall be completed in such a manner that each limit of fence removal as shown on the plans will yield a completely usable remaining fence and post for continuation of new fence placement as shown on the plans.

Fence Removal shall be paid for at the Contract unit price per foot of FENCE REMOVAL which shall include removal of all components, backfill as specified, and preparation of the existing fence for continuation of placement of new fence as shown in the plans.

SP-45 HOT-MIX ASPHALT

This work shall be in accordance with Sections 406 and 1030 of the Standard Specifications.

The Contractor shall submit mix designs for binder and surface course to the Engineer for approval. Mix designs shall conform to the requirements in the Hot-Mix Asphalt Mixture Requirements Table in the plans and shall be pre-approved by the Illinois Department of Transportation.

Hot-Mix Asphalt shall be paid for at the Contract unit price per ton for HOT-MIX ASPHALT BINDER COURSE, IL 19.0 or HOT-MIX ASPHALT SURFACE COURSE, MIX D.

SP-46 PCC SIDEWALK 5-INCH

This work shall be in accordance with Sections 311 and 424 of the Standard Specifications insofar as applicable except that the SI concrete shall be fiberized.

Concrete fibers shall be added at the batch plant and shall be of the longest variety available.

The concrete shall be 5-inches thick, except at driveways where it shall be 6-inches thick. The width of sidewalk shall match the existing width of the sidewalk unless otherwise specified by the Engineer.

In areas where there is currently no sidewalk and new sidewalk is proposed, the Contractor shall provide for the removal of approximately nine inches of existing vegetation, topsoil and subgrade. Excavation shall be paid for per cubic yard of EARTH EXCAVATION (SITEWORK ONLY).

The depth of excavation shall provide for the installation of a minimum of 4-inches of CA-06 Subbase Granular Material, Type B, except at the tower where it shall be constructed over AGGREGATE SUBGRADE IMPROVEMENT 12-INCH.

This work shall be paid for at the contract unit price per square foot for PCC SIDEWALK 5-INCH. Price shall include provision of four inches of compacted aggregate base, reinforcement fibers, equipment, compaction of aggregate to the satisfaction of the Engineer, and labor necessary to complete this work. Any additional stone required to bring the sidewalk base to grade shall be incidental to the cost for PCC SIDEWALK 5-INCH.

SP-47 SPLASH PAD

This work shall consist of constructing a PCC splash pad as shown in the details

of the plans.

The Contractor shall provide and compact 5 inches of compacted CA-06 aggregate base. The cost of aggregate base shall be included in the cost of SPLASH PAD.

Concrete fibers shall be added at the batch plant and shall be of the longest variety available.

The Contractor shall form and pour the PCC splash pad according to the section and at the elevations shown on the plans.

This work shall be paid at the Contract unit price per Each for SPLASH PAD, which shall include providing, placing, and compacting five inches of aggregate base, reinforcement fibers, and all other work necessary to complete this item to the lines and grades shown on the plans.

SP-48 30KVA TRANSFORMER ON CONCRETE PAD

This work shall consist of the provision, installation, and connection of a 30KVA transformer on a concrete pad.

Bond breaker shall be placed on the floor slab of the tower prior to pouring of a 6-inch thick concrete slab. Plan dimensions of the slab shall be 5'x5' and it shall be reinforced with 6x6 welded wire fabric. Allowance shall be made through the slab for penetration of the electrical service conduit running to a 60 amp 3-pole stainless disconnect switch.

The 480D-208Y /120V transformer shall be compliant with NEMA 3R specifications and shall be connected to the stainless disconnect switch.

This work shall be paid at the Contract unit price per lump sum for 30KVA TRANSFORMER ON CONCRETE PAD, which shall include provision of the concrete pad and transformer as described above and shown in the plans, including all wiring, disconnect switch, and conduit internal to the tank for a complete connection to the tank electrical panel.

All other, non-encased conduit and wiring, including connections, verticals, wiring and electrical panel within the elevated water storage tank shall be included in the cost for SPHEROID ELEVATED WATER STORAGE TANK of the size chosen by the Village.

SP-49 QUAZITE HANDHOLE

This work shall consist of providing and installing a Quazite handhole as shown in the plans or as directed by the Engineer.

The handhole shall be model PG1324BA12 or approved equal, and shall be a stackable box with a standard open base. The dimensions shall be 25" x 12" x 15.5 inch.

Connections to pvc conduit shall be watertight. PCC encasement of the conduit shall be continued up to the exterior of the pull boxes following installation.

This work will be paid for at the contract unit price per each for QUAZITE HANDHOLE which shall include excavation, installation to grade, connections and all appurtenances necessary to complete this work.

SP-50 SCADA FIBER WIRE IN PCC ENCASED CONDUIT

New SCADA fiber wire shall be installed in 2-Inch PVC, PCC Encased Conduit. PVC Conduit shall be in accordance with all local building codes for direct bury flexible conduit, encased symmetrically inside a concrete duct per the details in the plans.

The conduit shall contain SCADA fiber wire as required in SECTION 16900 of the Technical Specifications.

SCADA fiber shall be measured in in place along the actual center line of PCC encased conduit constructed, and shall include a second run of empty 2-inch PVC conduit within the PCC encasement.

This work will be paid for at the contract unit price per foot for SCADA FIBER WIRE IN PCC ENCASED CONDUIT which shall include the installation of all appurtenances, concrete encasement with required reinforcement, and equipment necessary to complete this work. The second run of empty PVC conduit will not be measured separately for payment but shall be included in the linear foot measurement for SCADA FIBER WIRE IN PCC ENCASED CONDUIT.

All other, non-encased conduit and wiring, including connections, verticals and wiring within the elevated water storage tank and adjacent to and within the existing water treatment plant, shall be included in the cost for SPHEROID ELEVATED WATER STORAGE TANK of the size chosen by the Village.

SP-51 CAT6 CABLE IN PCC ENCASED CONDUIT, 4 CABLE

New CAT6 cable shall be installed in 2-Inch PVC, PCC Encased Conduit. PVC Conduit shall be in accordance with all local building codes for direct bury flexible conduit, encased symmetrically inside a concrete duct per the details in the plans.

The conduit shall contain CAT6 direct bury plenum cable.

CAT6 cable shall be measured in in place along the actual center line of PCC encased conduit constructed.

This work will be paid for at the contract unit price per foot for CAT6 CABLE IN PCC ENCASED CONDUIT, 4 CABLE which shall include the installation of all appurtenances, concrete encasement with required reinforcement, and equipment necessary to complete this work.

All other, non-encased conduit and wiring, including connections, verticals and wiring within the elevated water storage tank and adjacent to and within the existing water treatment plant, shall be included in the cost for SPHEROID ELEVATED WATER STORAGE TANK of the size chosen by the Village.

SP-52 ELECTRIC CABLE IN PCC ENCASED CONDUIT, 3/C, NO 6 GROUND

New electrical service shall be installed in 4-Inch PVC, PCC Encased Conduit. PVC Conduit shall be in accordance with all local building codes for direct bury flexible conduit, encased symmetrically inside a concrete duct per the details shown on the plans.

The conduit shall contain three No 1 insulated electrical conductors, and one No 6 ground conductor according to SECTION 16123 of the Technical Specifications.

Electric cable shall be measured in in place along the actual center line of PCC encased conduit constructed and shall include a second run of empty 4-inch PVC conduit within the PCC encasement.

This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN PCC ENCASED CONDUIT, 3/C, NO. 6 GROUND which shall include the installation of all appurtenances, concrete encasement with required reinforcement, and equipment necessary to complete this work. The second run of empty PVC conduit will not be measured separately for payment, but shall be included in the linear foot measurement for ELECTRICAL CABLE IN PCC ENCASED CONDUIT, 3/C, NO 6 GROUND. The second run of empty PVC conduit will not be measured separately for payment but shall be included in the linear foot measurement for ELECTRICAL CABLE IN PCC ENCASED CONDUIT, 3/C, NO 6 GROUND.

All other, non-encased conduit and wiring, including connections, verticals and wiring within the elevated water storage tank and adjacent to and within the existing water treatment plant, shall be included in the cost for SPHEROID ELEVATED WATER STORAGE TANK of the size chosen by the Village.

SP-53 ELECTRIC CABLE IN PCC ENCASED CONDUIT, 4/C, NO 10 GROUND

New electrical service shall be installed in 2-Inch PVC, PCC Encased Conduit. PVC Conduit shall be in accordance with all local building codes for direct bury flexible conduit, encased symmetrically inside a concrete duct per the details shown on the plans.

The conduit shall contain four No 6 insulated electrical conductors, and one No 10 ground conductor according to SECTION 16123 of the Technical Specifications.

Electric cable shall be measured in in place along the actual center line of PCC encased conduit constructed.

This work will be paid for at the contract unit price per foot for ELECTRIC CABLE IN PCC ENCASED CONDUIT, 4/C, NO. 10 GROUND which shall include the installation of all appurtenances, concrete encasement with required reinforcement, and equipment necessary to complete this work.

All other, non-encased conduit and wiring, including connections, verticals and wiring within the elevated water storage tank and adjacent to and within the existing water treatment plant, shall be included in the cost for SPHEROID ELEVATED WATER STORAGE TANK of the size chosen by the Village.

SP-54 HUBBELL RATIO PAR 3 LIGHT POLE WITH PCC FOUNDATION, COMPLETE

This work shall consist of providing, installing, and connecting a Hubble Ratio PAR3 light pole with luminaire, pulling and connecting of wiring, including the excavation, placement of reinforcement and conduit sweeps, placement and finishing of a PCC light pole foundation as shown in the plans and plan details.

The foundation shall be a minimum of 6 feet deep, and 36-inch diameter, and shall include all anchor bolts, conduit sweeps, appurtenances, and grounding rods necessary for the light pole installation.

This work shall be measured and paid for at the Contract unit price per each for HUBBLE RATIO PAR3 LIGHT POLE WITH PCC FOUNDATION, COMPLETE. This price shall include all material, equipment, excavation, backfill, conduit, reinforcement, coordination with the installation of other underground utilities and all appurtenances required to complete the work.

SP-55 CCTV SECURITY SYSTEM, 8-CAMERA, CABINET AND ANTENNA, COMPLETE

This work shall consist of providing, installing, connecting, and providing startup for a new CCTV security system compatible with the existing water treatment plan security system as shown in the plans and plan details.

Security cameras shall be a Bullet Camera with a 9-22mm lens, model number 4.0C-H5A-BO2-IR 4MP H5A or approved equal, motion activated and shall be capable of facial and license plate recognition.

Four cameras shall be mounted to each light pole as shown on the plans. The cameras shall be wired to a new emergency service repeater CCTV cabinet within the tower base. The system shall communicate to the existing CCTV

security system within the nearby water treatment plant via an antenna installed on top of the new tower.

The contractor shall utilize the Village's approved vendor, Griffen Systems to provide installation and start up:

Paul Grefenstette
Griffon Systems, Inc.
630-607-0346
paul@griffonsys.com

This work shall be measured and paid for at the Contract unit price per lump sum for CCTV SECURITY SYSTEM, 8-CAMERA, CABINET AND ANTENNA, COMPLETE. This price shall include all material, equipment, including cameras, CCTV cabinet, antenna, coordination with the Village's vendor, installation, including all vertical wiring and conduit as well as all wiring and conduit internal to the elevated water storage tank, and all appurtenances, fasteners, and hangers required to complete the work.

SP-56 SPHEROID ELEVATED WATER STORAGE TANK

This work shall include the complete construction of either a 1.00 MG or 1.25 MG spheroid elevated water storage facility as option selected by the Village according to 13200 Tank Specifications as included in the Contract and as shown on the plans.

All materials contacting water shall be certified to NSF 61 and ANSI/NSF 372.

The successful bidder shall submit all aspects of design criteria, including all coatings, to the Engineer for review and approval. All designs of a structural nature shall be certified by a structural engineer and submitted by the Contractor at their own cost.

It shall be the responsibility of the Contractor to ensure that all electrical requirements of the Contract are fulfilled as part of product design and construction, including but not limited to routing, sizing and number of electrical conduits and connections as required by their submitted and approved design and as required by the plans.

All items consisting of poured in place concrete shall be additionally reinforced with concrete fibers of the longest available variety.

SCADA equipment shall be according SECTIONS 16900 and 16901 of the Technical Specifications, as provided by Tri-R Systems.

Cathodic Protection shall be according to Appendix C of the Contract as provided by Corrpro Waterworks.

All quantities, including required excavation, extending to a diameter two feet

beyond the outermost limits of the structure footing shall be considered included in the cost of SPHEROID ELEVATED WATER STORAGE TANK, of the size selected by the Village.

This work shall be paid for as Lum Sum for SPHEROID ELEVATED WATER STORAGE TANK, of the size selected by the Village which will include all structural components, coatings, electrical components and connections, services and wiring, and all water distribution products and components beginning at two foot beyond the outer limits of the structure foundation, and all coordination, manpower, design, appurtenances and equipment required to the complete the functional installation as required by the Contract.

SP-57 CONTAINMENT

This work shall consist of providing containment of all surface preparation debris and painting overspray.

The entire tank and structure shall be enclosed and surface preparation debris contained. Refer to SSPC-GUIDE 6 (CON), "Guide for Containing Debris Generated During Paint Removal Operations".

Refer to SSPC-GUIDE 7 (DIS). NOTE: All surface preparation debris must be disposed of in accordance with applicable federal, state and local regulations.

The painting contractor shall cut and grind flush all exterior containment structure lugs and prepare and paint areas as described in the exterior painting section of these specifications.

Upon removal of the exterior lugs, the painting contractor shall also repair any damaged interior coating by methods described in the interior painting section of these specifications. Abrasive blasting to bare metal (SSPC-SP6) will be required in the damaged areas.

The Village realizes there will be a number of days in which wind gusts may prevent the use of the containment system. The Contractor should anticipate this and plan to perform other tasks on these days. If there is an excessive amount of windy and inclement days precluding the use of the containment system, thereby jeopardizing completion within the time specified, the Contractor may request in writing to the Engineer for a time extension. The Village and Engineer will determine if a time extension is warranted.

It shall be the Contractor’s responsibility to comply with all federal, state and local requirements governing the removal and disposal of lead and/or chromium based paint and all requirements governing worker safety.

The Contractor shall furnish and require all workers and authorized persons (Engineer, Owner) to wear personal protective equipment required for the type of environment to which they are exposed. The protective equipment shall include,

but not be limited to, respiratory protection equipment (meeting OSHA requirements), eye protection, ear protection, protective clothing and other items as required. The Contractor shall provide for decontamination of workers, authorized persons and equipment in the work area so that lead is not transmitted beyond the containment area.

The Contractor shall be responsible for the clean-up in accordance with federal, state and local laws of any release (consistent with federal and state guidelines) of hazardous substances which result from his work. No additional compensation will be provided for any such clean-up.

To prevent emission of hazardous materials into the surrounding atmosphere and area, the Contractor shall contain his abrasive blasting operations with a properly designed, erected and operated enclosure, or by the use of vacuum blasting equipment (if approved for use by the Engineer), or by a combination of the two methods.

The Contractor shall completely enclose the tank container and structure with fire-retardant 100% impervious screening to contain the blasting debris and/or paint overspray. The debris must be contained within 30 feet of the base of the tank. Areas of the roof within the surrounding screen shall be contained with pie shape screens with side curtains so that blasting debris falls within the surrounding screen. All roof blasting shall be accomplished within the pie shape screens. The mesh size shall limit emissions into the atmosphere. The enclosure shall be designed to be raised and lowered within fifteen (15) minutes to prevent storm damage to the enclosure, the tank, personnel, and surrounding property. The enclosure shall be designed not to impose excessive loading on the tank and tank appurtenances. Membranes that are impervious to the abrasive and paint debris shall be placed on the ground around the base of the tank to prevent the contained material and any runoff from contaminating the ground.

The containment system shall meet the additional requirements of the Society of Protective Coatings - Guide 6 for Class 3A containment as follows:

CONTAINMENT MATERIALS:

Type A1: Rigid - Containment materials consist of singular panels, interlocking panels or modular fabrications constructed of plywood, aluminum, rigid metal, plastic or similar materials.

Type A2: Flexible - Containment materials are comprised of screens, tarps, drapes, plastic sheeting or similar materials.

AIR PERMEABILITY OF CONTAINMENT MATERIALS:

Type B1: Air Impermeable - Materials that are impervious to dust or wind including but not limited to:

Tarps or Drapes - Formed or woven material free of holes or openings

Plastic Sheeting - Single or double ply, heavy wall construction plastic. Reinforced plastic may be necessary for some applications. Sheeting should be fire resistant.

Panels - Panels of plywood, aluminum, corrugated plastic, metal or similar rigid materials.

Type B2a: Air Penetrable-Tightly Woven – Material that is tightly woven, but not coated. Material is capable of retaining airborne particles but because it is not coated, does not meet the definition of Air Impenetrable. Tightness of the weave may be compromised with extended use.

SUPPORT STRUCTURE:

Type C1: Rigid Support Structures - Allow no movement and are comprised of scaffolding and framing to which the containment materials are affixed.

Type C2: Flexible Support Structures - Allow minor movement and are comprised of cables, chains or similar systems to which the containment materials are affixed.

TREATMENT OF JOINTS:

Type D1: Fully Sealed Joints - All mating joints between the containment materials and the structure and floor are sealed. Sealing includes overlapping of seams when using flexible materials (overlap a minimum of 2 feet) and the use of stitching, taping, caulking, or other sealing measures.

ENTRYWAYS:

Type E3: Entryway Through Overlapping Door Tarps - The use of multiple flaps overlapping door tarps to minimize dust escape through the entryway.

AIR MAKE-UP POINTS:

Type F1: Controlled Air Supply (Intake) – The use of baffles, louvers, flap seals, filters, and ducts on supply air points to preclude inadvertent escape of abrasive and debris. They may or may not be used with fans.

Type F2: Open Air Supply (Intake) - Open air entry points without the use of ducts, valves or baffles.

INPUT AIR FLOW:

Type G1: Forced Input Air Flow – Fans or blowers are used at the supply air points or other locations within containment to assist air flow through the containment structure. When used with a negative pressure system, the input air

flow must be properly balanced with the exhaust capacity throughout the range of operations.

Type G2: Natural Input Air Flow - Fans or blowers are not required at air entry points.

AIR PRESSURE INSIDE CONTAINMENT:

Type H3: Not Required: Specified degree of negative pressure not required.

AIR MOVEMENT INSIDE CONTAINMENT:

Type I2: Minimum Air Movement is Not Specified: Reduce airborne lead exposure in accordance with the provisions of 29 CFR 1926.62 and to prevent the escape of airborne lead particulates from the containment.

EXIT AIR FLOW/DUST COLLECTION:

Type J2: Air Filtration Not Required – Natural exhaust air flow shall be employed.

In areas where the Contractor intends to use vacuum blasting equipment, the Contractor must submit to the Engineer for approval (prior to the start of any work) full operational data on the system.

As a minimum, the vacuum equipment shall be of a series which has demonstrated containment of a removed lead based paint. This is to have been determined by a independent competent testing authority (university or similar laboratory) to meet the following criteria:

99% containment of the removed surface containment.

Maintenance of ambient air quality so as to have no detectable contaminate at 15 feet downward during operation.

If approved for use by the Engineer, the Contractor shall require the manufacturer to conduct a demonstration of the proposed equipment of sufficient duration and scope to establish full compliance with the requirements.

Improper use of the enclosure, vacuum blasting equipment or any other approved containment system will not be permitted. Spilling of more than a total of five pounds of blasting residue, or random emissions of blast residue, of a cumulative duration exceeding 10% of the time spent performing the surface preparation and clean-up shall be considered unacceptable. Operations will be halted until the Engineer approves the Contractor's plan to correct the problem. In addition, the OWNER reserves the right to stop work or to require additional containment methods, if the Contractors's operations create a nuisance beyond the project site in the sole opinion of the Owner, Engineer or the Owner's designated representative.

The containment system attachments to the tank shall be designed by a Professional Engineer registered in the State of Illinois not to impose excessive loading on the tank and tank appurtenances. The Contractor shall submit the Structural Engineer (S.E.) designed, stamped, and signed details of the containment system and the attachment details for review prior to installation of the containment system on the tank. The containment system will place additional loads on the tank which the tank was not originally designed for. The Contractor shall reinforce the tank as necessary to assure no damage or permanent deformation occurs to the tank. Any damage done to the tank as a direct or indirect result of the containment system shall be repaired or sections replaced by the Contractor at no additional cost to the Owner. Neither the Engineer nor the Owner assumes any responsibility for the structural ability of the tank to support the containment system.

This work shall be measured and paid for at the Contract unit price per lump sum for CONTAINMENT. This price shall include all material, equipment, storage of materials at a separate location and appurtenances required to complete the work.

SP-58 FURNISH AND INSTALL CATHODIC PROTECTION

This work shall consist of providing and installing a cathodic protection system, complete will all fasteners, appurtenances, and electrical connections required for a complete system as shown in Appendix C of the Contract Documents.

The proposed Cathodic Protection System shall be designed, provided and installed by Corrpro Waterworks per the proposal in Appendix C.

The Contractor shall submit drawings, signed by a licensed professional engineer in the state of Illinois, for review.

The Contractor shall be responsible for coordination with Corrpro Waterworks and providing any necessary welded brackets, fittings, or miscellaneous items, as required by Corrpro Waterworks including, but not limited to, a mounting bracket for the rectifier, anode support rings, entrance penetration coupling, and interior wet cable protection brackets. The rectifier mounting bracket shall be the same material as the tank wall, legs of the mounting bracket shall be welded all around, approximate dimensions for the mounting area of 22” by 26”, to be verified by the Contractor prior to installation. This coordination and any brackets, fittings, or miscellaneous items shall be incidental to the Contract with the OWNER.

The cathodic protection system shall not be energized until after the First Anniversary Inspection of the painting has been conducted. Upon completion of the First Anniversary Inspection, the Contractor shall have the Corrpro Waterworks calibrate the cathodic protection system for proper operation. The Contractor shall forward the certified results of the installation and calibration to the Owner and Engineer.

This work will be paid for at the contract unit price per Lump Sum for FURNISH AND INSTALL CATHODIC PROTECTION, which shall include the installation of all fasteners and appurtenances, coordination with Corrpro, all engineering design, labor, materials, equipment, electrification of the system and testing necessary to complete this work.

SP-59 GRIDBEE GS-12 TANK MIXER

This work shall consist of providing and installing a tank mixing system, complete will all fasteners, appurtenances, and electrical connections required for a complete system as shown in Appendix D of the Contract Documents.

The proposed Tank Mixing System shall be factory delivered, placed and a startup performed per the proposal in Appendix D.

The Contractor shall be responsible for coordination with IXOM Watercare and providing any necessary welded brackets, fittings, conduit and wiring for power supply, tank penetrations or miscellaneous items, as required by IXOM Watercare.

The tank mixer shall be controlled via the SCADA panel according to 16900 of the Technical Specifications.

This work will be paid for at the contract unit price per Lump Sum for GRIDBEE GS-12 TANK MIXER, which shall include the installation of all fasteners and appurtenances, coordination with IXOM Watercare, all engineering design, labor, materials, equipment, power supply and electrification of the system and connection and programming of the SCADA control necessary to complete this work.

SP-60 ELECTRICAL GROUNDING SYSTEM, COMPLETE

This work shall consist of providing, installing, and connecting an electrical grounding system as shown in the plans.

The grounding system shall consist of a buried copper grounding mat not less than 26-inches below grade. The mat shall consist of #6 copper conductors on a 6x6 spacing for a 30-foot radius around the outside base of the elevated water storage tank.

Connections shall be made to the discharge water main in the valve pit, the elevated water storage tank, all fence and gate poles, and light poles. All connections shall be exothermically welded.

The Contractor shall supply a ¼" x 4' x 16" copper grounding bar in a green NEMA 3R enclosure as manufactured by Chicago Switchboard.

This work shall be measured and paid for at the Contract unit price per lump

sum for ELECTRICAL GROUNDING SYSTEM, COMPLETE. This price shall include all material, equipment, excavation, backfill, coordination with the installation of other underground utilities and all appurtenances required to complete the work.

SP-61 CHAIN LINK FENCE WITH BARBED WIRE TOP TREATMENT

This work shall consist of providing and installing a 6-foot-tall chain link fence with barbed wire top treatment for the proposed improvement enclosure.

It is advised that materials are promptly ordered so that the requirements of this provision can be met. The manufacture's literature shall be submitted prior to installation. Materials shall be stored at an offsite and secure location until they can be installed.

Chain link fence and double swing gates shall be fused and bonded, vinyl coated black.

The chain link fence shall be installed in such a way as to provide two 11-foot double swing gates with a cast-in-place drop rod assembly as shown in the plan details.

This work shall be measured and paid for at the Contract unit price per foot for CHAIN LINK FENCE WITH BARBED WIRE TOP TREATMENT. This price shall include all material, equipment, temporary storage of materials at a secure location and appurtenances required to complete the work, but shall not include the length for the 22-foot clear opening of the double swing gates.

The double swing gates shall be paid for separately at the Contract unit price per foot for SWING GATE. This price shall include all material, equipment, temporary storage of materials at a secure location, labor, excavation, pouring and installation of post foundations and drop stops as required to complete this work.

SP-62 RESTORATION

The Contractor shall restore all areas disturbed during construction of the improvements or as part of any of their activities to a condition equal to or better than the original condition.

Prior to earthwork operations, Topsoil shall be stripped from the entire site to a depth of six inches and stockpiled on site for future placement. Topsoil placement shall be completed as follows:

Preparation of subsoil

1. Prepare sub-soil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.

2. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated sub-soil.

Placing topsoil

1. Spread topsoil to a minimum depth of six inches.
2. Place topsoil during dry weather and on dry unfrozen sub-grade.
3. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
4. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.

All ditches, parkways, and other grassed areas disturbed during construction shall be restored to their original shape, contour and condition. Seeding, including finish grade preparation of seedbed, fertilizer and planting shall be as set forth in Section 250 of the Standard Specifications. The seeding mixture used shall be IDOT Class 2 (lawn mixture). Topsoil (six-inch (6") minimum thickness) shall be provided. Erosion control blanket shall be installed per section 251 of the Standard Specifications.

The Contractor shall be responsible for maintaining all restored areas until such a time as the Village accepts these areas, including removing all weeds. This acceptance will be granted after the Contractor has both fulfilled the minimum required maintenance items and has established a stand of grass (where required) which meets the acceptance standards set forth in these Special Provisions.

Acceptance of seeded areas will be determined by inspection by the Village and Engineer. In order for an area to be accepted, it shall conform the following:

a) Grass shall display a reasonably uniform distribution of grass plants
b) Grass shall display vigorous growth and be green and healthy in appearance.

Areas having bare spots larger than one (1) square foot will not be accepted. In this situation, the bare spots must be re-seeded in accordance with seeding and maintenance specifications.

The Contractor shall have a representative on the job at all times when work is being performed.

Additional areas damaged by machinery, construction equipment, Contractor negligence or over-excavation beyond the limits shown on the Plans shall be repaired in accordance with this Special Provision, at the Contractor's expense.

Unless otherwise listed for payment separately, all work under the general heading RESTORATION will be paid for at the contract unit price per square yard for which price shall be payment in full for restoring the areas disturbed, including furnishing and placement of six inches of topsoil, seeding, and erosion control blanket.

SP-63 RESTORATION WETLAND BUFFER

The Contractor shall restore all areas disturbed during construction of the

improvements or as part of any of their activities to a condition equal to or better than the original condition.

Prior to earthwork operations, Topsoil shall be stripped from the entire site to a depth of six inches and stockpiled on site for future placement. Topsoil placement shall be completed as follows:

Preparation of subsoil

1. Prepare sub-soil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
2. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated sub-soil.

Placing topsoil

1. Spread topsoil to a minimum depth of six inches.
2. Place topsoil during dry weather and on dry unfrozen sub-grade.
3. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
4. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.

All ditches, parkways, and other grassed areas disturbed during construction shall be restored to their original shape, contour and condition. Seeding, including finish grade preparation of seedbed, fertilizer and planting shall be as set forth in Section 250 of the Standard Specifications. The seeding mixture used shall be IDOT Class 4 (native grass). Topsoil (six-inch (6”) minimum thickness) shall be provided. Erosion control blanket shall be installed per section 251 of the Standard Specifications.

A compensatory are of wetland buffer shall be seeded at a 45-foot width from the wetland boundary as shown in the plans near the west end of the project site.

The Contractor shall be responsible for maintaining all restored areas until such a time as the Village accepts these areas, including removing all weeds. This acceptance will be granted after the Contractor has both fulfilled the minimum required maintenance items and has established a stand of grass (where required) which meets the acceptance standards set forth in these Special Provisions.

Acceptance of seeded areas will be determined by inspection by the Village and Engineer. In order for an area to be accepted, it shall conform the following:

c) Grass shall display a reasonably uniform distribution of grass plants
d) Grass shall display vigorous growth and be green and healthy in appearance.

Areas having bare spots larger than one (1) square foot will not be accepted. In this situation, the bare spots must be re-seeded in accordance with seeding and maintenance specifications.

The Contractor shall have a representative on the job at all times when work is being performed.

Additional areas damaged by machinery, construction equipment, Contractor negligence or over-excavation beyond the limits shown on the Plans shall be repaired in accordance with this Special Provision, at the Contractor's expense.

Unless otherwise listed for payment separately, all work under the general heading RESTORATION WETLAND BUFFER will be paid for at the contract unit price per square yard for which price shall be payment in full for restoring the areas disturbed, including furnishing and placement of six inches of topsoil, seeding, and erosion control blanket.

SP-64 EROSION CONTROL

Erosion control measures shall be required as stated on the Plans or as deemed necessary by the Engineer and shall be in compliance with the most recent revisions to the Illinois Urban Manual. It should be noted that inlet protection (aka Catch All) is required at all open grate inlets tributary to disturbed areas and shall be periodically monitored for silt build up and should be emptied once the baskets are over half full.

All downstream wetland areas shall be protected with a double row of silt fence.

All areas disturbed during construction shall be seeded as soon as possible after final grading. The Contractor will be responsible for cleaning the pavement, drainage structures, swales, storm sewers and culverts prior to final acceptance and at such times during construction as necessary to maintain drainage and protect adjacent property.

Unless otherwise listed for payment separately, all costs related to erosion control shall be incidental to the contract.

SP-65 DEWATERING

Dewatering, as required, will be considered incidental to this Contract.

SP-66 INCIDENTAL WORK

The intent of the Contract Documents is that the CONTRACTOR shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.

It is considered by the Contract that ample area for material and equipment storage and staging is shown in the plans. Therefore no provision for traffic control and protection is included in the Contract, but shall be considered as included in the cost of the Contract.

All work shown on the Plans, described in the applicable specifications or in these Special Provisions and not covered by a pay item, will be considered as included in the cost of the Contract.

SP-67 ALLOWANCE – ITEMS ORDERED BY THE ENGINEER

When additional work not indicated in the contract drawing is requested in writing by the Contractor, Village or Engineer during construction, this additional work shall be measured and paid for as described in Articles 104.02 and 109.04 of the Standard Specifications.

Payment for all additional work shall be made from the ALLOWANCE - ITEMS ORDERED BY THE ENGINEER pay item which shall be measured in units. A unit shall be valued at one dollar.

PRINCETON DRIVE ELEVATED WATER STORAGE TANK
SPECIFICATION AND BID DOCUMENT
VILLAGE OF NORTH AURORA
TECHNICAL SPECIFICATIONS

SECTION 01041

PROJECT COORDINATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Construction mobilization.

B. Submittals.

C. Closeout procedures.

1.2 RELATED SECTIONS

A. Section 01700 - Contract Closeout: Contract Closeout Procedures.

1.3 CONSTRUCTION MOBILIZATION

A. Cooperate with the Engineer in allocation of mobilization areas of site; for easement access, traffic, and parking facilities.

B. During construction, coordinate use of site and facilities through the Engineer.

C. Comply with Engineer's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

1.4 SUBMITTALS

A. Submit preliminary shop drawings, product data and samples in accordance with Section 01300 for review and compliance with Contract Documents. Revise and resubmit as required.

B. Submit applications for payment on forms for review, and for transmittal to Engineer.

C. Submit requests for interpretation of Contract Documents, and obtain instructions through the Engineer.

D. Process requests for substitutions, and change orders, through the

Engineer.

E. Deliver closeout submittals for review and preliminary inspection reports, for transmittal to Engineer.

1.5 CLOSEOUT PROCEDURES

A. Notify Engineer when Work is considered ready for Substantial Completion.

B. Comply with Engineer's instructions to correct items of work listed in executed Certificates of Substantial Completion.

C. Notify Engineer when Work is considered finally complete.

D. Comply with Engineer's instructions for completion of items of Work determined by Engineer's final inspection.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Applicability of Reference Standards.

B. Provisions of Reference Standards at site.

C. Acronyms used in Contract Documents for Reference Standards and current designations. Source of Reference Standards.

1.2 RELATED SECTIONS

A. Conditions of the Contract.

1.3 QUALITY ASSURANCE

A. For Products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date specified in the specification sections.

C. Obtain copies of standards when required by the Contract Documents.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.

F. The contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Engineer shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 SCHEDULE OF REFERENCES

AASHTO — American Association of State Highway and Transportation Officials
444 North Capitol Street, N.W.
Washington, DC 20001

ACI — American Concrete Institute
P.O. Box 19150
Reford Station
Detroit, MI 48219

AISC — American Institute of Steel Construction
400 North Michigan Avenue
Eighth Floor
Chicago, IL 60611

AISI — American Iron and Steel Institute
1000 16th Street, N.W.
Washington, DC 20036

ANSI — American National Standards Institute
1430 Broadway
New York, NY 10018

AWWA — American Water Works Association
6666 West Quincy Avenue
Denver, CO 80235

FSS — Federal Specifications and Standards
General Services Administration
Specifications Unit (WFSIS)
7th and D Streets SW
Washington, DC 20407

IDOT — Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

NBS — National Bureau of Standards, Product Standards
U.S. Department of Commerce
Washington, DC 20234

NEMA — National Electrical Manufacturer's Association
2101 L Street, N.W.
Washington, DC 20037

NFPA National Fire Protection Association
Battery March Park
Quincy, MA 02269

PCI Prestressed Concrete Institute
201 North Wacker Drive
Chicago, IL 60606

SS Standard Specifications for Water and
Sewer Main Construction in Illinois
c/o Illinois Society of Professional Engineers
1304 South Lowell Avenue
Springfield, IL 62704

UL Underwriter's Laboratories, Inc.
333 Pfingston Road
Northbrook, IL 60062

1.5 ABBREVIATIONS OF WORDS AND PHRASES

A. Abbreviations of words and phrases applicable to this project, other than listed above for reference standards, shall be as shown on the Drawings.

1.6 SYMBOLS

A. Symbols representing construction materials and equipment applicable to this project shall be as shown on the Drawings.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.

B. Proposed Products list.

C. Shop Drawings.

D. Schedule of Drawings

E. Product Data.

F. Manufacturer's installation instructions.

G. Manufacturers' certificates.

1.2 RELATED SECTIONS

A. Section 01400 - Quality Control: Manufacturers' field services and reports.

B. Section 01700 - Contract Closeout: Contract warranties, and closeout submittals.

1.3 SUBMITTAL PROCEDURES

A. Transmit each submittal with Engineer accepted form.

B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.

D. Schedule submittals to expedite the Project, and deliver to Engineer at 52 Wheeler Road, Sugar Grove, IL 60554. Coordinate submission of related items.

E. For each submittal for review, allow 15 days excluding delivery time to

and from the contractor.

F. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.

G. Provide space for Contractor and Engineer review stamps.

H. Revise and resubmit, identify all changes made since previous submission.

I. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.

J. Submittals not requested will not be recognized or processed.

K. Each shop drawing, sample and product data submitted by the Contractor shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the Contractor: "Certification Statement: by this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements." Shop drawings and product data sheets 11-in x 17-in and smaller shall be bound together in an orderly fashion and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package. Provide to the Resident Project Representative a copy of each transmittal sheet for shop drawings, product data and samples at the time of submittal to the Engineer.

L. The Contractor shall utilize a 10-character submittal identification numbering system in the following manner:

The first character shall be a D, S, M, or R, which represents Shop/Working Drawing, and other Product Data (D), Sample (S), Operating/Maintenance Manual (M), or Request for Information (R).

1. The next five digits shall be the applicable Section Number.
2. The next digit shall be the letters A Thru Z to sequentially identify each initial separate item or drawing submitted under each Section Number.
3. The last character shall be a two digit number, 01-99, indicating the submission, or resubmission of the same Drawing, i.e., "01=1st submission, 03=3rd submission, etc. A typical submittal number would be as follows:

D-03300-H-02

D = Shop Drawing
03300 = Section of Concrete
H = The eighth initial submittal under this section
02 = The second submission (first resubmission) of that particular shop drawing.

M. Repetitive Review

1. Shop Drawings and other submittals will be reviewed no more than twice at the Owner's expense. All subsequent reviews will be performed at times convenient to the Engineer and at the Contractor's expense, based on the Engineer's prevailing rates. The Contractor shall reimburse the Owner for all such fees invoiced to the Owner by the Engineer. Submittals are required until stamped as "Reviewed" or "Furnish as Corrected"
2. Any need for more than one resubmission, or any other delay in obtaining Engineer's review of submittals, will not entitle Contractor to extension of the Contract Time.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 SHOP DRAWINGS

A. Within 15 calendar days after date of Notice to Proceed, submit list of shop drawing submittals anticipated. Obtain approval of this list by the Engineer prior to submission of any working drawings.

B. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Engineer.

C. Shop Drawings: Submit for review. After review, produce copies and distribute in accordance with the SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.

D. Indicate special utility and electrical characteristics, utility connection

requirements, and location of utility outlets for service for functional equipment.

1.6 PRODUCT DATA

A. Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Engineer.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

C. Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

D. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - CONTRACT CLOSEOUT.

1.7 MANUFACTURER INSTALLATION INSTRUCTIONS

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer in quantities specified for Product Data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.8 MANUFACTURER CERTIFICATES

A. When specified in individual specification sections, submit certification by manufacturer to Engineer, in quantities specified for Product Data.

B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

PART 2 PRODUCTS

A. SCADA.

B. Mixing System.

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality assurance - control of installation.

B. Tolerances

C. References.

D. Inspecting and testing laboratory services.

E. Manufacturers' field services and reports.

1.2 RELATED SECTIONS

A. Section 01090 - Reference Standards.

B. Section 01300 - Submittals: Submission of manufacturers' instructions and certificates.

C. Section 01410 - Testing Laboratory Services.

D. Section 01600 - Material and Equipment: Requirements for material and product quality.

E. Section 01650 - Starting of Systems.

1.3 QUALITY ASSURANCE - CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified

requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality.

F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.4 TOLERANCES

A. Monitor tolerance control of installed Products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.5 REFERENCES

A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current on date specified in the individual specification sections, except where a specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. The contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Engineer shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.6 INSPECTING AND TESTING LABORATORY SERVICES

A. An independent testing firm will perform inspections, tests, and other services specified in individual specification sections and as required by the Engineer.

B. Inspecting, testing, and source quality control may occur on or off the

project site. Perform off-site inspecting or testing as required by the Engineer.

C. Reports will be submitted by the independent firm to the Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

D. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.

E. Testing or inspecting does not relieve Contractor to perform Work to contract requirements.

F. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Engineer. Payment for retesting will be charged to the Contractor.

1.7 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship and start-up of equipment, as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

C. Submit report in duplicate within 30 days of observation to Engineer for information.

PART 2 PRODUCTS

A. SCADA.

B. Mixing System.

C. Cathodic Protection System

PART 3 EXECUTION

A. The complete SCADA installation is to be completed by Tri-R

Systems. It is the responsibility of the Prime Contractor to provide all user manuals and warranty certificates provided by all subcontractors as part of this work and to ensure that all system testing is completed as part of the complete installation.

B. Gridbee Mixing System. The Mixing System shall be installed by the Prime Contractor according to manufacturer specifications. It is the responsibility of the Prime Contractor to coordinate installation requirements with manufacturers and provide all user manuals and warranty certificates provided by all subcontractors as part of this work.

C. Corrpro Cathodic Protection System. The Cathodic Protection System shall be installed by Corrpro Waterworks according to manufacturer specifications. It is the responsibility of the Prime Contractor to coordinate installation requirements with manufacturers and provide all user manuals and warranty certificates provided by all subcontractors as part of this work.

END OF SECTION

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Contractor employs and pays for independent testing laboratory to perform specified services.

1.02 SELECTION AND PAYMENT

A. Contractor will employ and pay for services of an independent testing laboratory to perform specified inspecting and testing.

B. Employment of testing laboratory in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

1.03 QUALITY ASSURANCE

A. Comply with requirements of ANSI/ASTM D3740 and ANSI/ASTM E329.

B. Laboratory Staff: Maintain a full-time registered Engineer on staff to review services.

C. Laboratory authorized to operate in State in which project is located.

D. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

1.04 CONTRACTOR SUBMITTALS

A. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full-time registered Engineer and responsible officer.

B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.05 LABORATORY RESPONSIBILITIES

A. Perform tests on samples submitted by Contractor

B. Provide qualified personnel at site after due notice; cooperate with Engineer and Contractor in performance of services.

C. Perform specified inspecting, sampling, and testing of Products in accordance with specified standards.

D. Ascertain compliance of materials and mixes with requirements of Contract Documents.

E. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or Products.

F. Perform additional inspection and tests required by Engineer.

1.06 LABORATORY REPORTS

A. After each inspection and test, promptly submit one copy of laboratory report to Engineer, Owner, Contractor and one copy to Record Documents File.

B. Include:
1. Date issued,
2. Project title and number,
3. Name of inspector,
4. Date and time of sampling or inspection,
5. Identification of product and specifications section,
6. Location in the Project,
7. Type of inspection or test,
8. Date of test,
9. Results of tests,
10. Conformance with Contract Documents.

C. When requested by Engineer, provide interpretation of test results.

1.07 LIMITS ON TESTING LABORATORY AUTHORITY

A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

B. Laboratory may not approve or accept any portion of the Work.

C. Laboratory may not assume any duties of Contractor.

D. Laboratory has no authority to stop the Work.

1.08 CONTRACTOR RESPONSIBILITIES

A. Deliver to laboratory at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.

B. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.

C. Provide incidental labor and facilities;
   1. to provide access to Work to be tested,
   2. to obtain and handle samples at the site or at source of Products to be tested,
   3. to facilitate tests and inspections,
   4. to provide storage and curing of test samples.

D. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
   1. When tests or inspections cannot be performed after such notice, Contractor shall pay for laboratory personnel and travel expenses incurred due to Contractor's negligence.

E. Arrange with laboratory and pay for additional samples and tests required for Contractor convenience.

F. Employ and pay for services of separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required when initial tests indicate work does not comply with Contract Documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

A. HMA QC/QA Plan

B. PCC QC/QA Plan

C. Geotechnical Testing

END OF SECTION

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SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Transportation and handling.

B. Storage and protection.

C. Product options.

D. Substitutions.

1.2 RELATED SECTIONS

A. Instructions to Bidders: Product options and substitution procedures.

B. Section 01400 - Quality Control: Product quality monitoring.

1.3 TRANSPORTATION AND HANDLING

A. Transport and handle Products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.

C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.4 STORAGE AND PROTECTION

A. Store and protect Products in accordance with manufacturers' instructions, with seals and labels intact and legible.

B. Store sensitive Products in weather tight, climate controlled enclosures.

C. For exterior storage of fabricated Products, place on sloped supports, above ground.

D. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of Product.

E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

F. Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

1.6 SUBSTITUTIONS

A. Engineer will consider requests for Substitutions only within 15 days after date established in Notice to Proceed.

B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that the Bidder:
   1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
   2. Will provide the same warranty for the Substitution as for the specified Product.
   3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension which may subsequently become apparent.
   5. Will reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities.

E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. Substitution Submittal Procedure:

1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
2. Submit shop drawings, product data, and certified test results attesting to the proposed Product equivalence. Burden of proof is on proposer.
3. The Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

A. SCADA.

B. Mixing System.

C. Cathodic Protection System.

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01650

STARTING OF SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Starting systems.

B. Demonstration and instructions.

1.2 RELATED SECTIONS

A. Section 01400 - Quality Control: Manufacturers field reports.

B. Section 01700 - Contract Closeout: System operation and maintenance data and extra materials.

1.3 STARTING SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Engineer seven days prior to start-up of each item.

C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or for other conditions which may cause damage.

D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Verify wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable Contractors' personnel in accordance with manufacturers' instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Submit a written report in accordance with Section 01400 that equipment or system has been properly installed and is functioning correctly.

1.4 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of Products to Village's personnel two weeks prior to date of Substantial Completion.

B. Demonstrate Project equipment by a qualified manufacturers' representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with City's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

PART 2 PRODUCTS

A. SCADA.

B. Mixing System.

C. Cathodic Protection System.

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Closeout procedures.
B. Final cleaning.
C. Adjusting.
D. Project record documents.
E. Operation and maintenance data.
F. Warranties.
G. Spare parts and maintenance materials.

1.2 RELATED SECTIONS

A. Section 01650 - Starting of Systems: System start-up, testing, adjusting, and balancing.

1.3 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.

B. Provide submittals to Engineer that are required by governing or other authorities.

C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.

C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

D. Clean filters of operating equipment.

E. Clean debris from roofs, gutters, downspouts, and drainage systems.

F. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.5 ADJUSTING

A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.6 PROJECT RECORD DOCUMENTS

A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, Product Data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by City.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Field changes of dimension and detail.
   2. Details not on original Contract drawings.

1.7 OPERATION AND MAINTENANCE DATA

A. Submit data bound in 8-1/2 x 11 inch text pages, three D side ring binders with durable plastic covers along with an electronic copy of the information.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS" and title of project.

C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Contents: Prepare a Table of Contents with each Product or system description identified, typed, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      1) Significant design criteria.
      2) List of equipment.
      3) Parts list for each component.
      4) Operating instructions.
      5) Maintenance instructions for equipment and systems.
      6) Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      1) Shop drawings and product data.
      2) Air and water balance reports.
      3) Certificates.
      4) Photocopies of warranties and bonds.

E. Submit 1 draft copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.

F. Submit two sets of revised final volumes, within 10 days after final inspection.

1.8 WARRANTIES

A. Provide notarized copies.

B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.

C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.

D. Submit prior to final Application for Payment.

E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.9 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 2 PRODUCTS

A. SCADA.

B. Mixing System.

C. Cathodic Protection System.

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 03100

CONCRETE FORMWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Formwork for cast-in place concrete, with shoring, bracing and anchorage.

B. Openings for other work.

C. Form accessories.

D. Form stripping.

1.2 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

A. Section 03300 - Cast-In-Place Concrete: Supply of concrete accessories for placement by this section.

1.3 RELATED SECTIONS

A. Section 03200 - Concrete Reinforcement.

B. Section 03300 - Cast-in-Place Concrete.

1.4 REFERENCES

A. IDOT Standard Specifications for Road and Bridge Construction, 2012, Section 500.

B. ACI 347 - Recommended Practice For Concrete Formwork.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with IDOT Section 500.

B. Perform Work in accordance with ACI SP-4, ACI 301, ACI 318 and ACI 347R.

C. Conform to applicable code for design, fabrication, erection, and removal of formwork.

1.6 REGULATORY REQUIREMENTS

A. Conform to applicable code for design, fabrication, erection and

removal of formwork.

1.7 COORDINATION

A. Coordinate work under provisions of Section 01400.

B. Coordinate this Section with other Sections of work which require attachment of components to formwork.

PART 2 PRODUCTS

2.1 FORM MATERIALS

A. Form Materials: Plyform, Class I, minimum thickness ¾ inch, in accordance with the American Plywood Association Standards.

2.2 FORMWORK ACCESSORIES

A. Form Ties: Internal disconnect, or snap-type galvanized metal, leaving metal no closer than 1 inch from surface of concrete or a hole no larger than 3/4 inch diameter. Include rubber washer water stop on ties for walls with internal tanks. Regular metal form ties shall be acceptable in lieu of galvanized metal.

B. Form release agent: Colorless mineral oil that will not stain concrete. Release agent shall be FDA approved for use with water facilities.

C. Corners: Chamfered, rigid plastic type, ¾ x ¾ inch size; maximum possible lengths.

D. Dovetail anchor slot: Galvanized steel, 22 gage thick, foam filled, release tape sealed slots.

E. Flashing Reglets: Galvanized steel, 22 gage thick, longest possible lengths, with alignment splines for joints, foam filled, release tape sealed slots, anchors for securing to concrete formwork.

F. Waterstops: 6”x1/4” PVC waterstops shall be provided at all construction joints unless otherwise noted on the Contract Documents. Hydrophilic rubber waterstops shall be used for all new to existing concrete applications or if otherwise noted on the Contract Documents. 6”x1/4” PVC waterstops shall be by Vinylex Corporation or Engineer approved equal. Hydrophilic rubber waterstops shall be Greenstreak Hydrotite.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.2 EARTH FORMS

A. Earth forms are not permitted.

3.3 ERECTION - FORMWORK

A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.

B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to over stressing by construction loads.

C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

D. Align joints and make watertight. Keep form joints to a minimum.

E. Obtain approval before framing openings in structural members which are not indicated on Drawings.

F. Install void forms in accordance with manufacturer's recommendations. Protect forms from moisture or crushing.

3.4 INSERTS, EMBEDDED PARTS, AND OPENINGS

A. Provide formed openings where required for items to be embedded in passing through concrete work.

B. Locate and set in place items which will be cast directly into concrete.

C. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.

D. Install accessories in accordance with manufacturer's instructions, straight, level, and plumb. Ensure items are not disturbed during concrete placement.

3.5 FORM CLEANING

A. Clean forms as erection proceeds, to remove foreign matter within forms.

B. Clean formed cavities of debris prior to placing concrete.

C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.

D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.6 FORMWORK TOLERANCES

A. Construct formwork to maintain tolerances required by ACI 301.

3.7 FIELD QUALITY CONTROL

A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.

3.8 FORM REMOVAL

A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

C. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.

END OF SECTION

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Reinforcing steel bars, wire fabric and accessories for cast-in-place concrete.

1.2 RELATED SECTIONS

A. Section 03100 - Concrete Formwork.

B. Section 03300 - Cast-in-Place Concrete.

1.3 REFERENCES

A. ACI 318 - Building Code Requirements For Reinforced Concrete.

B. ANSI/ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 318.

1.5 COORDINATION

A. Coordinate with placement of formwork, formed openings and other Work.

PART 2 PRODUCTS

2.1 REINFORCEMENT

A. Reinforcing Steel: ASTM A615, 60 ksi yield grade; plain billet steel bars.

B. Welded Steel Wire Fabric: ASTM A185 in flat sheets unfinished.

2.2 ACCESSORY MATERIALS

A. Tie Wire: Minimum 16 gage annealed type, manufactured by certified supplier.

B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions.

2.3 FABRICATION

A. Fabricate concrete reinforcing in accordance with ACI 318.

PART 3 EXECUTION

3.1 PLACEMENT

A. Place, support and secure reinforcement against displacement. Do not deviate from required position.

B. Do not displace or damage vapor barrier.

C. Accommodate placement of formed openings.

D. Maintain concrete cover around reinforcing.

3.2 FIELD QUALITY CONTROL

A. Field inspection will be performed under provisions of Section 01400.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cast-in-place concrete.

B. Slabs on grade.

C. Control, expansion and contraction joint devices associated with concrete work, including joint sealants.

D. Thrust blocks and manholes.

1.2 RELATED SECTIONS

A. Section 03100 - Concrete Formwork: Formwork and accessories.

B. Section 03200 - Concrete Reinforcement.

1.3 REFERENCES

A. ACI 301 - Structural Concrete for Buildings.

B. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.

C. ACI 305R - Hot Weather Concreting.

D. ACI 306R - Cold Weather Concreting.

E. ACI 308 - Standard Practice for Curing Concrete.

F. ANSI/ASTM D994 - Preformed Expansion Joint Filler for Concrete (Bituminous Type).

G. ASTM C33 - Concrete Aggregates.

H. ASTM C94 - Ready-Mixed Concrete.

I. ASTM C150 - Portland Cement.

1.4 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 01700.

B. Accurately record actual locations of embedded utilities and components which are concealed from view.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 301.

B. Acquire cement and aggregate from same source for all work.

C. Conform to ACI 305R when concreting during hot weather.

D. Conform to ACI 306R when concreting during cold weather.

1.6 FIELD SAMPLES

A. Provide under provisions of Section 01400. Coordinate with Section 03100.

1.7 COORDINATION

A. Coordinate the placement of required openings in the well house floor slab.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

A. Cement: ASTM C150, Type I - Normal.

B. Fine and Coarse Aggregates: ASTM C33.

2.2 ADMIXTURES

A. Air Entrainment: ASTM C260.

2.3 ACCESSORIES

A. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days.

2.4 JOINT DEVICES AND FILLER MATERIALS

A. Joint Filler: ASTM D994; Asphalt impregnated fiberboard or felt, 1/4 inch thick; tongue and groove profile for sidewalk and curb and gutter.

B. Expansion and contraction joints: Locate, construct and seal expansion and contraction joints as required per IDOT Standard Specifications Section 503.

C. Poured joint sealers: Place joint sealer per IDOT Standard Specifications Section 420.

2.5 CONCRETE MIX

A. Concrete mix shall be ready-mix class SI concrete per IDOT Standard Specifications Section 1020.

B. Use accelerating admixtures in cold weather only when approved by Engineer. Use of admixtures will not relax cold weather placement requirements.

C. Use calcium chloride only when approved by Engineer.

D. Use set retarding admixtures during hot weather only when approved by Engineer.

E. Add air entraining agent to normal weight concrete mix for work exposed to exterior.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions.

B. Verify requirements for concrete cover over reinforcement.

C. Verify that anchors, openings, structures, vaults, conduit, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

D. Concrete shall not be placed until the forms and reinforcing for the whole unit to be placed have been completed, cleaned, inspected and approved by the Engineer. No reinforcing shall be "floated into position".

3.2 PREPARATION

A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

B. In locations where new concrete is dowelled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

3.3 PLACING CONCRETE

A. Place concrete in accordance with ACI 304.

B. Notify Engineer minimum 24 hours prior to commencement of operations.

C. Ensure reinforcement, openings, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.

D. Install vapor barrier under interior slabs on grade. Lap joints minimum 6 inches and seal watertight by taping edges and ends.

E. Repair vapor barrier damaged during placement of concrete reinforcing. Repair with vapor barrier material; lap over damaged areas minimum 6 inches and seal watertight.

F. Separate slabs on grade from vertical surfaces with 1/2 inch thick joint filler.

G. Place joint filler in floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.

H. Extend joint filler from bottom of slab to within 1/2 inch of finished slab surface. Provide finish joint sealer as required.

I. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

J. Place concrete continuously between predetermined expansion, control, and construction joints.

K. Do not interrupt successive placement; do not permit cold joints to occur.

L. Saw cut joints within 24 hours after placing. Use 3/16 inch thick

blade, cut into 1/4 depth of slab thickness.

M. Screed slabs on grade level, maintaining surface flatness of maximum 1/4 inch in 10 feet.

3.4 CONCRETE FINISHING

A. Provide formed concrete surfaces to be left exposed with the finish as Scheduled in this Section.

B. Finish concrete floor surfaces in accordance with ACI 301.

C. Broom finish concrete sidewalks and curb and gutter.

3.5 CURING AND PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

C. Cure floor surfaces in accordance with ACI 308.

3.6 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed in accordance with ACI 301 and under provisions of Section 01400.

B. Provide free access to Work and cooperate with appointed firm.

C. Submit proposed mix design to inspection and testing firm for review prior to commencement of Work.

D. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.

E. Three concrete test cylinders will be taken for every 75 or less cubic yards of concrete placed.

F. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete it represents.

G. One slump test will be taken for each set of test cylinders taken.

3.7 PATCHING

A. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.

B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.

C. Patch imperfections in accordance with ACI 301.

3.8 DEFECTIVE CONCRETE

A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

B. Repair or replacement of defective concrete will be determined by the Engineer.

C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

END OF SECTION

SECTION 06100

ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Wood framing.
   2. Wood supports.
   3. Wood blocking.
   4. Wood cants.
   5. Wood nailers.
   6. Wood furring.
   7. Wood grounds.
   8. Wood sheathing.
   9. Plywood backing panels.

1.02 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product indicated.
   1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that materials comply with requirements.

B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses.

C. Research/Evaluation Reports: For the following:
   1. Treated wood.
   2. Power-driven fasteners.
   3. Powder-actuated fasteners.
   4. Expansion anchors.
   5. Metal framing anchors.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
   1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.02 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
   1. Factory mark each piece of lumber with grade stamp of grading agency.
   2. For exposed lumber indicated to receive stained or natural finish, mark grade stamp on end or back of each piece.
   3. Provide dressed lumber, S4S, unless otherwise indicated.
   4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

B. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
   1. Allowable Design Stresses: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

C. Wood Structural Panels:
   1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
   2. Comply with "Code Plus" provisions in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial."

2.03 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).

B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.

C. Mark each treated item with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.

D. Application: Treat items indicated on Drawings, and the following:
   1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

2.04 DIMENSION LUMBER

A. General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.

B. Framing Other Than Non-Load-Bearing Partitions: Construction or No. 2 grade and any of the following species:
   1. Douglas fir-larch, WCLIB, or WWPA.
   2. Hem-fir or Hem-fir (north); NLGA, WCLIB, or WWPA.
   3. Southern pine; SPIB.

2.05 SHEATHING

A. Plywood Roof Sheathing: Exterior, Structural I fir sheathing, 5/8 inch thick.

2.06 PLYWOOD BACKING PANELS

A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch thick.

2.07 MISCELLANEOUS MATERIALS

A. Fasteners:
   1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
   2. Power-Driven Fasteners: CABO NER-272.
   3. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

B. Metal Framing Anchors: Made from hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.
   1. Manufacturers:
      a. Alpine Engineered Products, Inc.
      b. Simpson Strong-Tie Company, Inc.
      c. United Steel Products Company, Inc.
   2. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal

framing anchors, for application indicated, with building code in effect for Project.

3. Allowable Design Loads: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

C. Building Paper: Asphalt-saturated organic felt complying with ASTM D 226, Type I (No. 15 asphalt felt), unperforated.

D. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01 that is approved for use with type of construction panel indicated by both adhesive and panel manufacturers.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring**,** nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

B. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.

C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Published requirements of metal framing anchor manufacturer.
2. Table 2305.2, "Fastening Schedule," in the BOCA National Building Code.

D. Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.

E. Framing Standard: Comply with AFPA's "Manual for Wood Frame Construction," unless otherwise indicated.

F. Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.

1. Comply with "Code Plus" provisions in above-referenced guide.

G. Fastening Methods:

1. Sheathing: Nail to wood framing.

2. Plywood Backing Panels: Nail or screw to supports.

H. Apply building paper horizontally with 2-inch overlap and 6-inch end lap; fasten to sheathing with galvanized staples or roofing nails. Cover upstanding flashing with 4-inch overlap.

I. Repair damaged or deteriorated galvanized coating on exposed surfaces with galvanized repair paint according to ASTM A780 and manufacturer's written instructions.

END OF SECTION

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SECTION 07210

BUILDING INSULATION

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Cavity wall insulation.
   2. Concealed building insulation.

1.02 SUBMITTALS

A. Product Data: For each product indicated.

B. Product test reports.

C. Research/evaluation reports.

1.03 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84 for surface-burning characteristics and other methods indicated with product, by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

B. Mold Growth and Humidity Test Results: Insulation shows no evidence of mold growth, delamination, or other deterioration due to the effects of high humidity, after inoculation with Chaetomium globosium on all surfaces and storing for 60 days at 100 percent relative humidity in the dark.

PART 2 - PRODUCTS

2.01 INSULATING MATERIALS

A. General: Provide insulating materials that comply with requirements and with referenced standards and, for preformed units, in sizes to fit applications indicated, selected from manufacturer's standard thicknesses, widths, and lengths.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Dow Chemical Company

b. Owens Corning

B. Extruded-Polystyrene Board Insulation: ASTM C 578, Type VI, 1.80 lb/cu. ft. , with maximum flame-spread and smoke-developed indices of 75 and 450, respectively.

C. Extruded-Polystyrene Drainage Panels: ASTM C 578, Type VI, 1.80 lb/cu. ft. and fabricated with one side having a matrix of drainage and edge channels.

D. Glass-Fiber Board Insulation:
1. Foil-Faced, Glass-Fiber Board Insulation: ASTM C 612, Type IA or Types IA and IB; faced on one side with foil-scrim-kraft or foil-scrim-polyethylene vapor retarder, with maximum flame-spread and smoke-developed indices of 25 and 50, respectively; and of the following properties:
a. Nominal density of 3 lb/cu. ft., thermal resistivity of 4.3 deg F x h x sq. ft./Btu x in. at 75 deg F.

E. Mineral-fiber blanket insulation consisting of fibers manufactured from glass:
1. Unfaced Mineral-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indices of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
2. Faced Mineral-Fiber Blanket Insulation: ASTM C 665, Type III, Class A; Category 1, faced with foil-scrim-kraft, membrane on one face.

F. Foil Faced, Polyisocyanurate Board Insulation: ASTM C 1289, Type I, Class 1 or 2, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, based on tests performed on unfaced core on thicknesses up to 4 inches.

2.02 VAPOR RETARDERS

A. Polyethylene Vapor Retarder: ASTM D 4397, 6 mils thick, with maximum permeance rating of 0.13 perm.

B. Reinforced-Polyethylene Vapor Retarders: 2 outer layers of polyethylene film laminated to an inner reinforcing layer consisting of either nylon cord or polyester scrim and weighing not less than 25 lb/1000 sq. ft., with maximum permeance rating of 0.0507 perm.

2.03 AUXILIARY INSULATING MATERIALS

A. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.

B. Protection Board: Premolded, semirigid asphalt/fiber composition board, 1/4 inch thick, formed under heat and pressure, of standard sizes.

2.04 INSULATION FASTENERS

A. Adhesively Attached, Spindle-Type Anchors with Washers: Plate formed from perforated galvanized carbon-steel sheet, 0.030 inch thick by 2 inches square, welded to projecting steel spindle with a diameter of 0.105 inch and length capable of holding insulation of thickness indicated securely in position with 1-1/2- inch- square or diameter self-locking washers complying with the following:
   1. Washers formed from 0.016-inch- thick galvanized steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less than in place.

B. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates indicated without damaging insulation, fasteners, and substrates.

PART 3 - EXECUTION

3.01 INSTALLATION

A. General: Install insulation to comply with insulation manufacturer's written instructions applicable to products and application indicated. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

B. Install perimeter insulation on vertical surfaces by setting units in adhesive.
   1. If not otherwise indicated, extend insulation a minimum of 24 inches below exterior grade line.
   2. Protect below-grade insulation on vertical surfaces from damage during backfilling by applying protection board set in adhesive.

C. Protect top surface of perimeter underslab insulation from damage during concrete work by applying protection board.

D. Install cavity wall insulation as follows:
   1. Install foam plastic insulation with small pads of adhesive spaced approximately 24 inches o.c. both ways on inside face, as recommended by manufacturer. Fit courses of insulation between wall ties and other confining obstructions in cavity, with edges butted tightly both ways. Press units firmly against inside wythe of masonry or other construction as shown.
      a. Supplement adhesive attachment of insulation by securing boards with two-piece wall ties designed for this purpose and specified in Division 4 Section "Unit Masonry Assemblies."

E. Installation of General Building Insulation: Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
   1. Seal joints between closed-cell (nonbreathing) insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant.
   2. Set vapor-retarder-faced units with vapor retarder to warm side of construction, unless otherwise indicated. Do not obstruct ventilation spaces, except for firestopping.
      a. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to surrounding construction to ensure airtight installation.
   3. Install mineral-fiber blankets in cavities formed by framing members according to the following requirements:
      a. Use blanket widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
      b. Place blankets in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
   4. Install board insulation on concrete substrates by adhesively attached, spindle-type insulation anchors as follows:
      a. Fasten insulation anchors to substrates with insulation anchor adhesive according to anchor manufacturer's written instructions.
      b. Apply insulation standoffs to each spindle to create cavity width indicated between substrate and insulation.
      c. After adhesive has dried, install board insulation by pressing insulation into position over spindles and securing it tightly in

place with insulation-retaining washers, taking care not to compress insulation below indicated thickness.

5. Stuff glass-fiber, loose-fill insulation into miscellaneous voids and cavity spaces where shown. Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft.

F. Installation of Vapor Retarders: Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with adhesives or other anchorage system as indicated. Extend vapor retarder to cover miscellaneous voids in insulated substrates, including those filled with loose-fiber insulation.

1. Seal overlapping joints in vapor retarders with adhesives or vapor-retarder tape according to vapor-retarder manufacturer's instructions. Seal butt joints and fastener penetrations with vapor-retarder tape. Locate all joints over framing members or other solid substrates.
2. Firmly attach vapor retarders to substrates with mechanical fasteners or adhesives as recommended by vapor-retarder manufacturer.
3. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarder.
4. Repair any tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarder.

END OF SECTION

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SECTION 08711

DOOR HARDWARE

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes the following:
   1. Commercial door hardware for the following:
      a) Swinging doors.
   2. Cylinders for doors specified in other Sections.

1.02 SUBMITTALS

A. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Samples for Initial Selection: Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of door hardware indicated.

C. Samples: For exposed door hardware of each type indicated below, in specified finish, full size. Tag with full description for coordination with the Door Hardware Schedule. Submit samples before, or concurrent with, submission of the final Door Hardware Schedule.
   1. Door Hardware: As follows:
      a) Hinges.
      b) Locks and latches.
      c) Exit devices.
      d) Cylinders and keys.
      e) Operating trim.
      f) Closers.
      g) Stops and holders.
      h) Door gasketing.
      i) Thresholds.
      j) Miscellaneous items.
   2. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

D. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule

with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening.
3. Content: Include the following information:
   a) Type, style, function, size, label, hand, and finish of each door hardware item.
   b) Manufacturer of each item.
   c) Fastenings and other pertinent information.
   d) Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
   e) Explanation of abbreviations, symbols, and codes contained in schedule.
   f) Mounting locations for door hardware.
   g) Door and frame sizes and materials.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

E. Keying Schedule: Prepared by or under the supervision of supplier, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

F. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.

G. Warranties: Special warranties specified in this Section.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural

Hardware Consultant, available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

D. Regulatory Requirements: Comply with provisions of the following:
   1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1, and FED-STD-795, "Uniform Federal Accessibility Standards," as follows:
      a) Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
      b) Door Closers: Comply with the following maximum opening-force requirements indicated:
         1) Interior Hinged Doors: 5 lbf applied perpendicular to door.
      c) Thresholds: Not more than 1/2 inch high. Bevel raised thresholds with a slope of not more than 1:2.

E. Keying Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings." Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
   1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
   2. Preliminary key system schematic diagram.
   3. Requirements for key control system.
   4. Address for delivery of keys.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver keys to manufacturer of key control system.

D. Deliver keys to Owner by registered mail or overnight package service.

1.05 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.06 WARRANTY

A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of operators and door hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

C. Warranty Period: One year from date of Substantial Completion.

1.07 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 PRODUCTS

2.01 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this Section and the door hardware sets indicated in door and frame schedule.
   1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturer's products.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

2.02 HINGES AND PIVOTS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:
   1. Hinges:
      a) Hager Companies (HAG).

B. Standards: Comply with the following:
   1. Butts and Hinges: BHMA A156.1.
   2. Template Hinge Dimensions: BHMA A156.7.

C. Quantity: Provide the following, unless otherwise indicated:
   1. Three Hinges: For doors with heights 61 to 90 inches.

D. Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

Maximum Door Size (inches)	Hinge Height (inches)	Metal Thickness (inches)	
		Standard Weight	Heavy Weight
32 by 84 by 1-3/8	3-1/2	0.123	-
36 by 84 by 1-3/8	4	0.130	-
36 by 84 by 1-3/4	4-1/2	0.134	0.180
42 by 90 by 1-3/4	4-1/2	0.134	0.180
48 by 120 by 1-3/4	5	0.146	0.190

E. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

F. Hinge Weight: Unless otherwise indicated, provide the following:
   1. Entrance Doors: Heavy-weight hinges.
   2. Doors with Closers: Heavy-weight hinges.
   3. Interior Doors: Heavy-weight hinges.

G. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior Hinges: Stainless steel, with stainless-steel pin.
2. Interior Hinges: Stainless steel, with stainless-steel pin.

H. Hinge Options: Comply with the following where indicated in the Door Hardware Schedule or on Drawings:
1. Corners: Square.

I. Fasteners: comply with the following:
1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
2. Screws: Phillips flat-head screws; machine screws (drilled and tapped holes) for metal doors. Finish screw heads to match surface of hinges.

2.03 LOCKS AND LATCHES

A. Manufacturers: Subject to compliance with requirements, provide products by the following:
1. Mechanical Locks and Latches:
a) Schlage Lock Company; an Ingersoll-Rand Company (SCH).

B. Standards: Comply with the following:
1. Bored Locks and Latches: BHMA A156.2.
2. Auxiliary Locks: BHMA A156.5.
3. Exit Locks: BHMA A156.5.

C. Bored Locks: BHMA Grade 1; Series 4000.

D. Auxiliary Locks: BHMA Grade 1.

E. Lock Trim: Comply with the following:
1. Lever: Cast.
2. Escutcheon (Rose): Cast.
3. Lockset Designs: Provide the lockset design designated below or, if sets are provided by another manufacturer, provide designs that match those designated:
a) Bored Locks: Schlage D Series, Design – Athens.

F. Lock Functions: Function numbers and descriptions indicated in the Door Hardware Schedule comply with the following:
1. Bored Locks: BHMA A156.2.

G. Lock Throw: Comply with testing requirements for length of bolts to comply with requirements, and as follows:
1. Bored Locks: Minimum 1/2-inch latchbolt throw.
2. Deadbolts: Minimum 1-inch bolt throw.

H. Backset: 2-3/4 inches, unless otherwise indicated.

2.04 EXIT DEVICES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Corbin Russwin Architectural Hardware; Div. of Yale Security Inc. (CR).
   2. Yale Security Inc.; Div. of Williams Holdings (YAL).

B. Standard: BHMA A156.3.
   1. BHMA Grade: Grade 1.

C. Certified Products: Provide exit devices listed in BHMA's "Directory of Certified Exit Devices."

D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.

E. Outside Trim: Pull with cylinder; material and finish to match locksets, unless otherwise indicated.
   1. Match design for locksets and latchsets, unless otherwise indicated.

F. Provide keyed cylinder dogging on all exterior doors with rim latches.

2.05 CYLINDERS AND KEYING

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Cylinders: Same manufacturer as for locks and latches.
   2. Key Control Systems:
      a) Key Control Systems, Inc. (KCS).
      b) Sargent Manufacturing Company; Div. of ESSEX Industries, Inc. (SGT).

B. Standards: Comply with the following:
   1. Cylinders: BHMA A156.5.
   2. Key Control System: BHMA A156.5.

C. Cylinder Grade: BHMA Grade 1.

D. Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:
   1. Number of Pins: Six.
   2. Bored-Lock Type: Cylinders with tailpieces to suit locks.

E. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
   1. Removable Cores: Core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

F. Construction Keying: Comply with the following:
   1. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys.
      a) Replace construction cores with permanent cores, as directed by Owner.

G. Keying System: Unless otherwise indicated, provide a factory-registered keying system complying with the following requirements:
   1. Master Key System: Cylinders are operated by a change key and a master key.
   2. Existing System: Master key or grand master key locks to Owner's existing system.

H. Keys: Provide nickel-silver keys complying with the following:
   1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
      a) Notation: Information to be furnished by Owner.
   2. Quantity: In addition to one extra blank key for each lock, provide the following:
      a) Cylinder Change Keys: Three.
      b) Master Keys: Five.

I. Key Control System: BHMA Grade 1 system, including key-holding hooks, labels, two sets of key tags with self-locking key holders, key-gathering envelopes, and temporary and permanent markers. Contain system in metal cabinet with baked-enamel finish.
   1. Portable Cabinet: Tray for mounting in file cabinet, equipped with key-holding panels, envelopes, and cross-index system.
   2. Capacity: Able to hold keys for 150 percent of the number of locks.

2.06 STRIKES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Strikes: Same manufacturer as for locks and latches.

B. Standards: Comply with the following:
   1. Strikes for Bored Locks and Latches: BHMA A156.2.
   2. Strikes for Auxiliary Deadlocks: BHMA A156.5.

C. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

2.07 CLOSERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Surface-Mounted Closers:
      a) LCN Closers; an Ingersoll-Rand Company (LCN).
      b) Norton Door Controls; Div. of Yale Security Inc. (NDC).
      c) Yale Security Inc.; Div. of Williams Holdings (YAL).

B. Standards: Comply with the following:
   1. Closers: BHMA A156.4.

C. Surface Closers: BHMA Grade 1.

D. Certified Products: Provide door closers listed in BHMA's "Directory of Certified Door Closers."

E. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.08 STOPS AND HOLDERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Ives: H. B. Ives (IVS).
   2. LCN Closers; an Ingersoll-Rand Company (LCN).
   3. Norton Door Controls; Div. of Yale Security Inc. (NDC).

4. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
5. Rockwood Manufacturing Company (RM).
6. Yale Security Inc.; Div. of Williams Holdings (YAL).

B. Standards: Comply with the following:
1. Stops and Bumpers: BHMA A156.16.
2. Combination Overhead Holders and Stops: BHMA A156.8.
3. Door Silencers: BHMA A156.16.

C. Stops and Bumpers: BHMA Grade 1.

D. Combination Overhead Stops and Holders: BHMA Grade 1.

E. Silencers for FRP Door Frames: BHMA Grade 1; neoprene or rubber, minimum diameter 1/2 inch; fabricated for drilled-in application to frame.

2.09 DOOR GASKETING

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Door Gasketing:
a) National Guard Products, Inc. (NGP).
b) Pemko Manufacturing Co., Inc. (PEM).
c) Reese Enterprises, Inc. (RE).
d) Zero International, Inc. (ZRO).
2. Door Bottoms:
a) National Guard Products, Inc. (NGP).
b) Pemko Manufacturing Co., Inc. (PEM).
c) Reese Enterprises, Inc. (RE).
d) Zero International, Inc. (ZRO).

B. Standard: Comply with BHMA A156.22.

C. General: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners.
1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
2. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

D. Air Leakage: Not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Gasketing Materials: Comply with ASTM D 2000 and AAMA 701/702.

2.10 THRESHOLDS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. National Guard Products, Inc. (NGP).
   2. Pemko Manufacturing Co., Inc. (PEM).
   3. Reese Enterprises, Inc. (RE).
   4. Zero International, Inc. (ZRO).

B. Standard: Comply with BHMA A156.21.

2.11 MISCELLANEOUS DOOR HARDWARE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Ives: H. B. Ives (IVS).
   2. NT Quality Hardware; an Ingersoll-Rand Company (NTQ).
   3. Rockwood Manufacturing Company (RM).

B. Standard: Comply with the following:
   1. Auxiliary Hardware: BHMA A156.16.

C. Auxiliary Hardware: BHMA Grade 1, unless otherwise indicated.

2.12 FABRICATION

A. Manufacturer's Nameplate: Do not provide manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise approved by the Engineer.
   1. Manufacturer's identification will be permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

C. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
   1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware.

2.13 FINISHES

A. Standard: Comply with BHMA A156.18.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. BHMA Designations: Comply with base material and finish requirements indicated by the following:
   1. BHMA 630: Satin stainless steel, over stainless-steel base metal.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. FRP Doors and Frames: Comply with manufacturer’s requirements.
   1. Surface-Applied Door Hardware: Drill and tap doors and frames according to FRP manufacturer’s requirements.

3.03 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Doors and Frames."

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
   1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
   2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Key Control System: Place keys on markers and hooks in key control system cabinet, as determined by final keying schedule.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

3.04 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
   1. Door Closers: Adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

3.05 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

END OF SECTION

DIVISION 9 - FINISHES

SECTION 09970 - GENERAL - COATING SYSTEMS
FOR STEEL WATER STORAGE TANKS

PART 1 – GENERAL

1.01 SUMMARY

A. This Section includes general specifications for surface preparation and field application of coating systems for steel storage tanks.

1.02 SUBMITTALS

A. Product Data: For each product indicated for the exterior, interior wet, and interior dry surfaces.
   1. Letter from the coating manufacturer indicating it meets the requirements of the specifications and the intended use.
   2. Material Safety Data Sheet (MSDS) for each product.
   3. Product Data Sheets for each product
   4. Compliance certification with NSF/ANSI Standard 61 for Drinking Water System Components if designated for use in contact with potable water.

B. Samples: Manufacturer's charts showing the full range of colors available for each type of finish-coat material indicated. If color is indicated within the specifications, a color card or chip shall suffice.

C. Drawdowns: For exterior finish colors submit 3 drawdowns of each product and color combination. Drawdowns shall be applied using a 4 mil WFT drawdown bar on plain white coated cards size 3-7/8" x 6" from Sample-Ease, Byko, or Leneta. Label each card with the following:

   1. Job name.

   2. Date.

   3. Product name.

   4. Product number.

   5. Color number as stated in the color schedule.

   6. Name, address, and phone number of the supplying facility.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and protect products in accordance with Section 01600 and

manufacturer's instructions.

B. Deliver products to site in sealed original labeled containers; inspect to verify acceptance.

C. Container labeling to include manufacturer's name, type of paint, brand name, color designation, and instruction for mixing and/or reducing.

D. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.04 REFERENCES

A. American Water Works Association Standards
   1. D100-11 Welded Carbon Steel Tanks for Water Storage
   2. D102-11 Standard for Painting Steel Water Storage Tanks

B. SSPC

C. ANSI/NSF International Standard 61 Drinking Water System Components

D. Manufacturer's published product data.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. In other articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
   1. Products: Subject to compliance with requirements, provide the product specified.

B. Products of the following manufacturers are acceptable:
   1. Tnemec Company, Inc. (Tnemec).

2.02 MATERIALS, GENERAL

A. All materials shall be brought to the project site in the original sealed and labeled containers of the paint manufacturer and shall be subject to inspection by the ENGINEER/CITY on the job. Colors, where not specified, shall be selected by the ENGINEER/CITY.

B. The CONTRACTOR shall submit to the ENGINEER/CITY, immediately upon completion of the job, certification from the paint manufacturer indicating that the quantity of each coating purchased was sufficient to properly coat all surfaces.

PART 3 – EXECUTION

3.01 INSPECTION

A. Verify that surfaces base conditions are ready to receive work as instructed by product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement or work.
   1. Report all conditions that may potentially affect proper application.
   2. Do not commence until such defects have been corrected.

C. Correct defects and deficiencies in surfaces which may adversely affect work of this Section

D. Beginning of installation means acceptance of existing surfaces and/or base.

E. Notify Engineer about anticipated problems before using coatings specified over substrates primed by others.

3.03 PROTECTION

A. Protect elements surrounding work of this Section from damage or disfiguration.

B. Repair damage to other surfaces caused by work of this Section.

C. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces.

D. Remove empty paint containers from site.

3.04 PREPARATION AND APPLICATION

A. Do not apply coatings over dirt, rust, scale, grease, moisture, scuffed surfaces or conditions detrimental to forming a durable coating film.

B. Scheduling Coating: Apply first coat to surfaces that have been cleaned, pretreated or otherwise prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.
   1. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer.
   2. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until coating has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure and application of another coat does not cause undercoat to lift or lose adhesion.
   3. Give special attention to edges, corners, crevices, welds, exposed fasteners and similar surfaces to ensure that they receive a dry film thickness equivalent to that of flat surfaces.

C. Application Procedures: Apply coatings by brush, roller, spray or other applicators according to manufacturer's written instructions.
   1. Brush Application: Use brush best suited for material applied and of appropriate size for the surface or item being coated.
      a) Apply primers and first coats by brush unless manufacturer's written instructions permit using roller or mechanical applicators.
      b) Brush out and work brush coats into surfaces in an even film.
      c) Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections. Neatly draw glass lines and color breaks.
   2. Rollers: Use rollers of carpet, velvet black or high-pile sheep's wool as recommended by manufacturer for the material and texture required.
   3. Spray Equipment: Use mechanical methods to apply coating if permitted by manufacturer's written instructions and governing regulations.
      a) Use spray equipment with orifice size recommended by manufacturer for material and texture required.
      b) Apply each coat to provide the equivalent hiding of brush-applied coats.
      c) Do not double back with spray equipment building-up film thickness of two coats in one pass, unless recommended by manufacturer.

D. Minimum and Maximum Application Air and Surface Temperatures and cure times shall be in accordance with manufacturer's recommendations.

E. Minimum Coating Thickness: Apply each material no thinner than manufacturer's recommended spreading rate. Provide total dry film thickness of the entire system as recommended by manufacturer.

F. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or recoat work that does not comply with specified requirements.

G. Cleanup: At end of each workday, remove rubbish, empty cans, rags and other discarded materials from Project site.
   1. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping or other methods. Do not scratch or damage adjacent finished surface.

H. Protect work of other trades, whether being coated or not, against damage form coating operation. Correct damage by cleaning, repairing, replacing and recoating, as approved by the ENGINEER/OWNER and leave in an

undamaged condition.

1. After completing coating operations, remove temporary protective wrappings provided by others to protect their work.
2. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surface. Comply with procedures specified in PDCA P1.

I. APPLICATION OF PAINT

1. The painter shall apply each coating in accordance with these specifications and the paint manufacturer's recommendations. If material has thickened or must be diluted for application by spray gun, the coating shall be built up to the specified thickness by application of an additional coat(s) of paint.
2. All paint shall be applied in strict accordance with the manufacturers printed data sheet and container label outlining recommended minimum and maximum surface and air temperatures required for application. Paint shall not be applied to wet or damp surfaces, and shall not be applied in rain, snow, fog or mist, or when the relative humidity exceeds 85%.
3. No paint shall be applied when it is expected that the relative humidity will exceed 85% and/or the air temperature will drop below recommended levels within 12 hours after paint application.
4. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, painting shall be delayed until certain that the surfaces are dry. Further, the day's painting should be completed well in advance of the probable time of day when condensation will occur in order to permit the film an appropriate drying time prior to the formation of moisture on the surface.
5. DRY FILM THICKNESS: Dry film thickness shall be measured in accordance with current SSPC PA2, "Dry Paint Thickness with Magnetic Gauges."

3.05 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. Remove covers and access panels on electrical components and paint separately.

B. Prime and paint insulated and exposed pipes, conduit, boxes, hangers, brackets, collars and supports except where items are prefinished.

C. Replace identification markings on electrical equipment when painted accidentally.

D. Paint exposed conduit and electrical equipment occurring in finished areas with color to match adjacent surfaces.

E. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.

F. Replace electrical plates, hardware, light fixture trim and fittings removed prior to finishing.

3.06 CLEANING

A. As work proceeds, promptly remove paint where spilled, splashed or spattered.

B. During progress of work, maintain premises free of unnecessary accumulation of tools, equipment, surplus materials and debris.

C. Collect cotton waste, cloths and material which may constitute fire hazard; place in closed metal containers and remove daily from site.

D. Upon completion of work, leave premises neat and clean, to satisfaction of Engineer.

3.07 PAYMENT

A. The CONTRACTOR shall submit to the ENGINEER, immediately upon completion of the job and before final payment, certification from the manufacturer indicating that the quantity of each coating purchased was sufficient to properly coat all surfaces. Such certification shall make reference to the square footage figures provided to the manufacturer and the ENGINEER by the CONTRACTOR.

END OF SECTION

DIVISION 9 - FINISHES

SECTION 09974 - COATING SYSTEM FOR PIPES, VALVES AND MISCELLANEOUS METALS WITHIN STEEL WATER STORAGE TANKS

PART 1 – GENERAL

1.01 SUMMARY

A. This Section includes specifications for surface preparation and field application of coating systems for the surfaces of pipes (including, but not limited to, the riser pipe), valves, and miscellaneous metals within a steel water storage tank, but not in contact with potable water.

1.02 RELATED SECTIONS

A. Section 01300 – Submittals
B. Section 01400 – Quality Control
C. Section 09970 – General - Coating Systems for Steel Water Storage Tanks

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. In other articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
   1. Products: Subject to compliance with requirements, provide the product specified.

B. Products of the following manufacturers are acceptable:
   1. Tnemec Company, Inc. (Tnemec).

2.02 MATERIALS, GENERAL

A. Coating, Color, and Required Dry Film Thickness:
   1. Manufacturer and Product:
      a. Field Prime Coat:
         1. Tnemec Series N69 HB Epoxoline II 4.0 – 6.0 mils
      b. Field Finish Coat:
         1. Tnemec Series N69 HB Epoxoline II 4.0 – 6.0 mils

B. Thinners: Only thinners recommended by the manufacturer of the paint system shall be used.

C. All coating materials shall be supplied by the same manufacturer for all coats.

PART 3 – EXECUTION

3.01 INSPECTION

A. Verify that surfaces base conditions are ready to receive work as instructed by product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement or work.
   1. Report all conditions that may potentially affect proper application.
   2. Do not commence until such defects have been corrected.

C. Correct defects and deficiencies in surfaces which may adversely affect work of this Section

D. Measure moisture content of surfaces using electronic moisture meter; do not apply finishes unless moisture content of surfaces is below manufacturer recommended maximums.

E. Beginning of installation means acceptance of existing surfaces and/or base.

3.02 PREPARATION

A. Surface Preparation
   1. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
      a. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.
   2. Remove all oil, grease, dust, dirt and foreign matter from the entire surface.
   3. Weld slag, weld spatter, rough edges and sharp edges of weld seams shall be ground smooth.
   4. All areas shall be abrasive blast cleaned to a COMMERCIAL finish in accordance with the recommended methods outlined in the SSPC Society of Protective Coating's Specification SP-6.

B. Material Preparation:
   1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.

2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.
3. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat. The colors shall be per the recommendation of the manufacturer.

3.03 PROTECTION

A. Protect elements surrounding work of this Section from damage or disfiguration.

B. Repair damage to other surfaces caused by work of this Section.

C. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces.

D. Remove empty paint containers from site.

3.04 APPLICATION

A. The application of the coating system for piping, valves, and miscellaneous metals shall be in accordance with Section 09970 unless otherwise indicated in this section.

END OF SECTION

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SECTION 13200

WATER STORAGE SYSTEM

PART 1 - GENERAL

1.1 DESCRIPTION:

A. Work of this section is subject to requirements of the Contract Documents including the General Conditions and Special Provisions and applicable portions of Division 1 - General Requirements.

B. The Work consists of providing all labor, materials and equipment necessary for the design, fabrication, delivery, erection, painting, and testing of one all-welded steel, single pedestal spheroidal elevated water storage tank with a capacity of either 1.25 MG or 1.0 MG, depending on the selected bid option, including the design and construction of the foundation and accessories, as shown on the drawings and as specified herein. Included with the elevated tank shall be cleaning and painting, testing, sterilization, and accessories as specified.

C. Related Work: The work also includes all equipment, materials, and labor necessary for the installation of connecting water main.

D. The tank and support structure shall be of the single pedestal spheroidal style. The tank and support structure shall be of all welded steel design.

The tank shall consist of a dome roof, toroidal upper shell, conical lower shell and spherical bottom diaphragm plate or conical bottom plate. The support structure shall be a butt-welded single pedestal consisting of a cylindrical shaft and a conical base “bell”.

The supporting structure shall be a butt-welded single pedestal having a minimum shaft diameter of 10 feet. The pedestal shall be dry. Transition sections between the tank and shaft, and between the shaft and “bell” shall be smooth, doubly curved, continuous “knuckle” sections. Discontinuous transitions and intersections through compression rings are not acceptable for these transition sections.

To ensure an aesthetically pleasing tank the design of the cone and ball plate(s) shall minimize the number and total length of visible weld seams (shop and field). A scaled plate layout sketch must be provided with the bid, or be cause for rejection, noting that the use of

any ball plate (excluding roof closure plates) with widths and/or lengths equal to or less than 72” is unacceptable. In addition, both knuckles on the lower and upper shaft junctions shall be double curvature pressed formed with a maximum of eight vertical weld joints.

Design calculations, proving compliance with the requirements set forth within these specifications, shall be furnished by the tank contractor to the Engineer.

1.2 STANDARD SPECIFICATIONS

The latest edition of the following standards and specifications shall be used with regard to materials, design, construction, inspection, and testing to the extent specified herein.

ACI 301	Specifications for Structural Concrete for Buildings
ACI 318	Building Code Requirements for Reinforced Concrete
ACI 318R	Commentary on Building Code Requirements for Reinforced Concrete
AWWA D100	Standard for Welded Steel Tanks for Water Storage
AWWA D102	Standard for Painting Steel Water Storage Tanks
AWWA C652	Disinfection of Water Storage Facilities
ASCE 7	Minimum Design Loads for Buildings and Other Structures
NSF 61	Drinking Water System Components
OSHA	Occupational Safety and Health Standards
SSPC-PA1	Steel Structures Painting Council Paint Application Specification

1.4 QUALITY ASSURANCE:

A. The materials, design, fabrication and erection of the elevated tank foundation and related appurtenances shall conform to current AWWA Standard for Welded Steel Tanks for Water Storage, "AWWA D100", of the American Water Works Association.

1.5 SUBMITTALS:

A. Bid Sketches: Each bidder will submit with its proposal/bid a sketch of the tank showing major dimensions and plate thicknesses upon which his bid is based and a sketch of the foundation showing preliminary dimensions and approximate quantities of concrete and reinforcing steel. **Failure to provide either of these sketches shall be cause for rejection of the bid.**

B. Drawings: Prior to construction, the Contractor shall furnish detailed drawings of the tank, support structure, and foundation sealed by a Professional Engineer licensed in the State of Illinois. These construction drawings shall show applicable design and construction standards, materials of construction, design loads and allowable soil bearing or pile capacity. The construction drawings shall be submitted to and reviewed by the Engineer prior to the start of construction.

C. Design Calculations: The Contractor shall furnish detailed design calculations of the design of the elevated water storage tank and foundation. Calculations shall be submitted to and approved by the Engineer prior to the start of construction.

D. A summary of the design for the foundation, support structure and the tank shall be provided by the Contractor prior to construction. The design summary shall show applicable design and construction standards, materials of construction, design loads and results showing conformance with the specifications. The design shall be sealed by a Professional Engineer licensed in the State of Illinois.

E. Welder's certifications shall be submitted by the Contractor to the Engineer in accordance with AWWA D100.

F. The Contractor shall provide an operating and maintenance manual containing operating instructions, maintenance instructions, as-built construction drawings, cleaning and painting instructions, a gage table and catalog cuts of equipment supplied.

G. Mill or Shop Inspection: Inspection or mill test report may be required for major components per Section 11.1 and 11.1.1 of AWWA D100.

H. Inspection Report may be required per Section 11.2.1 of AWWA D100.

I. Product Data for Coating Systems: For each product indicated for the exterior, interior wet, and interior dry surfaces.
   1. Letter from the coating manufacturer indicating it meets the requirements of the specifications and the intended use.
   2. Material Safety Data Sheet (MSDS) for each product.
   3. Product Data Sheets for each product
   4. Compliance certification with NSF/ANSI Standard 61 for Drinking Water System Components if designated for use in contact with potable water.

J. Samples for Paint Products: Manufacturer's charts showing the full

range of colors available for each type of finish-coat material indicated. If color is indicated within the specifications, a color card or chip shall suffice.

1.6 EXPERIENCE:

A. Bids will only be accepted from experienced Contractors who have successfully completed, with in-house capabilities, at least ten (10) new spheroidal single pedestal elevated tanks of equal or greater capacity in the last five years. Each bidder shall provide a list of at such projects stating location, completion date, contact names and telephone numbers. Subcontracting of the tank's engineering design scope and/or plate fabrication is not allowed and must be performed by the tank vendor with in-house resources. A letter shall accompany his bid listing 10 such examples, including contact names and phone numbers.

The spheroidal single pedestal style tank and foundation design, welded steel tank fabrication and construction shall be performed by the Contractor's own direct hire employees and shall not be subcontracted in any way. The tank's foundation installed by the Contractor or a qualified local foundation subcontractor, however, the installation of the tank's foundation must be supervised by the Contractor.

1.7 WELDER QUALIFICATIONS:

A. All welders shall be qualified by ASME Section IX requirements in all positions.

1.8 WELDING SUPERVISION:

A. The Tank Contractor shall employ the services of a welding supervisor independent of the elevated tank erection foreman's jurisdiction.

1.9 INSPECTION:

A. Inspection will be in strict accordance with Section 11 of AWWA D100, except that the Contractor will be responsible for all cost of inspections.

1.10 PRECONSTRUCTION MEETING:

A. After award of the Contract, a preconstruction meeting shall be held with representatives of the Owner, Engineer and the Contractor including the superintendent actually assigned to this project. This

meeting will be held prior to the start of construction. The project will be reviewed at this time. At this meeting, the Contractor shall furnish to the Engineer and Owner his proposed schedule of improvements including estimated time of completion for the various work items.

1.11 TESTING, DISINFECTING AND SAMPLING:

A. Sufficient cure, per the manufacturer's recommendations, of the final coat on the interior wet surface shall be allowed before the elevated tank is sterilized and filled with water.

B. After the structure is completed, the Owner, free of charge to the Contractor, will furnish, pump and dispose of sufficient water for testing and sterilization. While under test, the Contractor shall chlorinate the elevated tank in accordance with AWWA C652 (Method 3). Any leaks, which are disclosed by this test, shall be repaired by gouging out defective areas and rewelding.

C. No repair work shall be done on any joint unless the water in the water tower is at least 2 feet below the point being repaired. Any paint damaged by repairs shall be properly restored.

D. The Contractor shall be responsible for the disinfection, bacteriological sampling and testing to the elevated tank upon completion of painting.

E. Elevated tank disinfection shall comply with Disinfection of Water Storage Facilities, AWWA C652 and the current Illinois Environmental Protection Agency (IEPA) Technical Policy Statements and guidelines.

F. The Contractor shall provide to the Owner required documentation, test results, etc., required by the IEPA for placing the elevated tank in service. All sampling and testing shall be done in a manner approved by the IEPA. The cost of this work shall be considered incidental to the cost of the Elevated Tank, unless otherwise noted.

1.12 Concrete Testing

A. Compression strength tests of the concrete used in the Elevated Tank foundation shall be required. The compression strength specimens shall be molded and tested in accordance with AASHTO T 22, except that 6 inch by 12 inch cylindrical specimens may be used. The specimens shall be cured by methods approved by the Engineer. The strength of the concrete will be determined by testing

3 test specimens prepared at the site of the work for each pour. The test specimens shall be made from concrete taken from the mixtures in actual use.

B. The Contractor shall furnish the concrete used in making the test specimens.

1.13 GUARANTEE:

A. The Contractor shall guarantee his work for a period of one year from the date of completion and acceptance of his work, to the extent that he will repair any defects, of which he is notified during that period, which may appear because of faulty design, workmanship, or material furnished under the specifications. This shall be accomplished at an anniversary inspection with the Owner, Engineer, and Contractor. The cost to disinfect the tank as part of this inspection shall be considered incidental to the contract.

PART 2 - PRODUCTS

2.1 GENERAL:

A. Furnish an elevated water storage tank as shown on the drawings and as specified in this section. The design, materials, fabrication, construction, testing and inspection of the tank, support structure and foundation shall comply with AWWA D100, except as modified herein. Tank capacity, head range, height to TCL and top of foundation elevation shall be as shown on the drawings and below:

1. Tank net capacity of either 1.25 MG or 1.0 MG, depending on the selected bid option.
2. Head range as per standard manufacturers specifications and as approved by Owner. (Maximum range as noted on drawings.)
3. Height to the Top Capacity Line, above the top of the foundation is 165 feet.

The tank shall be single pedestal spheroid.

2.2 DESIGN CRITERIA:

A. Dead load shall be the estimated weight of all permanent construction and fittings. The unit weight of steel shall be considered as 490 pounds per cubic foot and the unit weight of concrete shall be taken as 144 pounds per cubic foot.

B. Water load shall be the weight of all the liquid when the tank is filled

to the overflow. The unit weight of water shall be 62.4 pounds per cubic foot.

C. Snow Load: Snow Load shall be a minimum of 25 pounds per square foot in accordance with AWWA D100 Section 3.1.3.

D. Seismic Design: Horizontal and vertical seismic loads shall be based on AWWA D100 for Category IV (essential facility) structures, using tank center coordinates of 41-48-08.58N NAD 83 latitude and 88-20-30.48W longitude. These coordinates shall be confirmed by the tank designer prior to beginning design. The Site Class shall be determined based on the review of Soil Boring information provided in Appendix E.

E. Live Load: The minimum roof design live load shall be 15 pounds per square foot.

D. Wind loads shall be based on AWWA D100 for a basic wind speed, V, of 120 mph and Exposure Category C in accordance with ASCE 7 for Category IV (essential facility) structures.

K. The structural effects of the applied loads shall be considered with the loads defined according to ASCE 7. Load combinations used for allowable stress design and strength design shall conform to AWWA D100.

L. The thickness of the plates need not be increased for corrosion allowance.

M. Soil Conditions: Refer to soils report in Appendix A and AWWA D100, Paragraph 12.3.2.

N. The Contractor shall be responsible for complying with the requirements of the Determination of No Hazard to Air Navigation issued by the FAA and provided in Appendix G.

O. The design for all sections of the steel tank shall be per the classes of materials and unit tension/compression stresses specified in AWWA D100. A design per Section 14 of AWWA D100 shall not be permitted.

P. Shells designed by Method 2 or Method 3 of Sec. 3.4.3 of AWWA D100 shall be measured in accordance with Sec. 11.4.3.2.2 of AWWA D100. Documentation of the measurements and a certificate of compliance shall be provided.

Q. All openings in the support structure shall be properly reinforced. Loads imposed by openings in the base of the support structure shall be accommodated in the foundation design.

R. The overturning moment used in designing the support structure and foundation shall include the moment due to eccentricity of the gravity loads caused by deflection of the structure under wind or seismic conditions (i.e. P-Delta effect).

S. Unless otherwise noted, at junctions in plates where meridional forces are discontinuous such as cone to cylinder junctions, a tension or compression ring may be required to resist the radial forces generated. In these regions, the allowable stresses shall not exceed those specified in AWWA D100.

T. No corrosion allowance is required unless specified here within.

U. The concrete foundation(s) shall be designed by the Contractor using the information given in the geotechnical report.

V. Earth cover shall be a minimum of 5.5 feet over top of pipe in accordance with AWWA D100. Any pipe passing through the foundation which does not meet this minimum cover requirement, shall be properly insulated until such minimum cover is achieved.

2.3 APPURTENANCES:

A. ACCESSORY DOOR: One 36 inches x 80 inches access door located in the supporting bell, flush mounted to the foundation, complete with a drip cover, suitable door lever with lock set and separate keyed deadbolt. The door shall be fabricated from steel plate with adequate stiffening and specifically designed for use with the tank. A step over threshold is not acceptable.

Door shall be thoroughly cleaned, phosphated and finished with one coat of baked-on rust inhibiting prime paint in accordance with ASTM B117 and ASTM D1735. Provide three (3) full mortise, 5 knuckle hinges,4 1/2 inches by 4 1/2 inches minimum. Hinges shall be steel, phosphated and primed coated for finish painting. Provide a complete and functional door lockset and tumbler-type lock, keyed to the owner’s existing system. Door painting shall conform to the tank exterior paint system.

B. PIPING AND PRESSURE RELIEF

1. A 16-inch diameter inlet/outlet pipe shall be provided from the bottom of the tank to a flanged connection at the base of the support structure. The inlet/outlet pipe shall be steel with welded connections and have a thickness not less than 1/4 inch. The inlet/outlet pipe shall have an expansion joint above the base bend. This inlet/outlet pipe extending a minimum of 3 feet outside the foundation wall shall be included as part of the foundation. Provide taps as shown on the drawings. Riser pipe will be insulated to protect against freezing to -25 degrees F. Please note, the insulation for the riser pipe shall be put on after the riser pipe has received its final coat of paint and after the Riser pipe has been tested for leaks. Provide 2-inch minimum molded rigid foam polyisocyanurate insulation complete with vapor barrier on inlet/outlet pipe. Securely fasten the insulation to the pipe using aluminum banding. Aluminum jacketing is required over the insulation. The aluminum jacket shall have a smooth finish, minimum thickness of 0.016-inch, heat laminated moisture barrier backing. Laps and joints shall be sealed with contact type adhesive over the insulation within the dry area of the tank

2. A 3-inch diameter non-freeze drain valve (Babco or equal) shall penetrate the tank at the low point of the upper tank floor and connect to the overflow pipe. A NSF approved flexible pipe shall be used to connect the drain valve to the overflow pipe.

3. The condensate ceiling shall be equipped with a drain pipe to grade. The condensate ceiling drain pipe shall be connected to the overflow pipe. Condensate ceiling location and elevation shall be as shown on the drawings. Condensate ceiling location and elevation shall be as shown on the drawings. Flame resistant insulation is required on the support structure walls below the condensate ceiling, and on the underneath side of the steel condensate ceiling.

4. The inlet/outlet pipe shall extend a minimum of six inches above the bottom of the valve pit floor or be equipped with a removable silt stop.

5. A 10-inch diameter overflow pipe equipped with an anti-vortex entrance detail shall be provided. The overflow shall be designed to accommodate the maximum inlet rate specified in item 4. The overflow pipe shall be steel with welded connections. The overflow shall extend down the inside of the access tube and support structure and

discharge at a point approximately two feet above finish grade onto a splash block. The end of the overflow shall be covered with No. 4 mesh non-corrodible screen. A weighted flap gate detail shall be provided as detailed in the engineering drawings. Screen cover shall be designed to release or open in the event the screen becomes plugged.

6. A minimum of one aluminum pressure-vacuum vent near the center of the roof shall be provided. The vent(s) shall be sized to handle pressure differential caused by water entering or leaving the tank at a maximum rate. The maximum inlet rate is _2,000__ gpm, the maximum withdrawal rate is _4,500____ gpm. The open area of the overflow shall not be considered as a venting area. The vent shall have No. 4 mesh non-corrodible screens and shall be designed to relieve any pressure or vacuum in the event the screen frosts over or is otherwise clogged. The vent shall be easily dismantled to remove the screens for cleaning. The vent(s) shall be self-correcting. The pressure-vacuum vent may be mounted on the exhaust hatch.

   The vent shall prevent the entrance of surface water and rainwater, shall exclude birds and animals, and should exclude insects and dust, as much as this function can be made compatible with effective venting.

C. ACCESS LADDERS, & PLATFORMS:

1. Provide a ladder system which extends from grade to the upper shaft platform. This ladder shall be equipped with a cable safety device system. Ladders shall be provided in bell, pedestal, access tube and tank and vault.

2. Provide a ladder on the interior of the access tube from the upper shaft platform to the tank roof. This ladder shall be equipped with ladder and cable safety device system.

3. Provide a ladder from the upper shaft platform to the tank bottom manhole.

4. Handholds shall be provided near the hatch that allows entrance to the water storage area from the access tube.

5. Fall Prevention: Ladders will be equipped with a safety device meeting OSHA standards and shall be OSHA approved. It shall be a Saf-T-Climb fall prevention system as manufactured by the Norton Company, Safety Products

Division, P.O. Box 7500, Cerritos, CA. Contractor shall furnish 2 Harnesses and 2 Saf-T-Lok Sleeves & 2 safety lanyards as part of this system.

6. A steel condensate ceiling with drain shall be supplied, located at the junction of the pedestal shaft and base bell. The condensate ceiling shall be equipped with a drain pipe connected to the overflow pipe.

7. An upper shaft platform shall be supplied, located at the top of the support structure.

8. Provide an access tube located on the vertical centerline of the tank. The access tube shall have a minimum diameter of 48 inches and shall provide access from the upper shaft platform to the tank roof. The opening shall be 30-inch for a 48-inch access tube.

D. MANHOLES, HATCHES, & VENTS

1. At the top of the support structure, one 24-inch diameter painters access manhole shall be provided giving access to the exterior painters rails. There shall be a platform inside the pedestal at this point.

2. Two 30-inch diameter hinged rain proof hatches shall be supplied. One shall be at the top of the access tube with spring assist, chain, hook and inside handle. The other shall be adjacent to the access tube for entry into the tank and shall have a handle and hasp. The hatch openings shall have a curb four inches high and the cover shall have a downward overlap of two inches.

3. One 30-inch diameter flanged exhaust hatch shall be supplied, located adjacent to the access tube and so constructed that an exhaust fan may be connected for ventilation during painting.

4. One 30-inch diameter tank bottom manhole shall be provided in the tank bottom with access by ladder from the upper platform.

5. Two 30-inch diameter manholes shall be supplied. One shall be in the condensate ceiling with the other in the upper platform.

E. PAINTERS RAILS

1. Provide painters rails as shown on the drawings and specified herein:

   a. Interior Painters Rails. On tanks with a capacity greater than one million gallons, a rail shall be attached to the underside of the roof at the roof-to-shell junction. Given the capacity of either 1.25 MG or 1.0 MG, depending on the selected bid option, interior painter rails are required.

   b. Exterior Painters Rails. A minimum of two rails shall be located near the top of the support structure and be accessible from the upper shaft platform via the painter's access manhole.

F. SLAB ON GRADE

1. Provide a 6-inch concrete slab at grade in the base of the support structure. The slab shall be placed over compacted structural backfill and shall be reinforced. Provide 1/2-inch expansion material at the slab to foundation intersection and at floor penetrations. Provide saw-cut control joints at 18 foot maximum spacing. The slab shall be sloped towards the floor drain within the valve pit. The slab shall be constructed in accordance with the latest edition of ACI 301.

   Epoxy floor coating shall be provided for the slab on grade. The Contractor shall provide submittals to the Village for selection. The floor coating shall provide a slip resistant texture.

G. ELECTRICAL

1. Interior and exterior lighting and electrical shall be as noted on the drawings. Interior waterproof light sockets with rigid conduit, wiring and switch shall be provided inside the support structure and access tube. The total number and location of lights shall be as shown in the drawings. All wiring shall be in conduit. The conduit and wiring shall terminate with a junction box in the base of the support structure. Duplex outlets shall be installed as shown in the drawings.

2. Double obstruction light, enclosed in aviation red obstruction light globes, complete with photo-electric cell, conduit and wire to a junction box in the base of the tank, as approved by the Federal Aviation Authority. The Contractor shall install all

conduit and wiring from the light to the electrical service panel.

3. Exterior lighting above the access door(s) for added security, and exterior lighting around the base of the support structure to illuminate the tank and/or support structure for aesthetic effect shall be provided.

4. Exterior lighting at the north entrance gate to fully light the roadway pavement and gate latch shall be provided.

5. Wash down transformer on a transformer pad elevated 6-inches above the slab on grade as shown in the plans or as specified by the Engineer.

H. GALVANIC CORROSION PROTECTION

1. Dissimilar metals inside the tank and below the TCL shall be electrically isolated from carbon steel tank components to which they attach. Painting of the dissimilar metals does not eliminate the requirement for isolation.

I. MISCELLANEOUS ACCESSORIES AND APPURTENANCES:

1. Splash Pad - The Contractor shall furnish and install a concrete splash pad as detailed on the plans. It shall be a minimum of 6 feet long x 6 feet wide x 6 inches thick with 6 x 6 x 10 gauge welded wire mesh, with smooth finish and uniform color and texture, at the location shown on the drawings.

2. Copper Clad Grounding rods, 5/8" dia. x 8' long, set with the top end 12" below finish grade with a 3/4" C-1-#2/0 bare copper wire connected from the ground rod and bonded to the tank steel support base.

3. Grading and restoration of the site shall be provided by the Contractor and will be covered elsewhere in the specifications.

4. Three 3/4 inch diameter corporation stops and one hose bib shall be furnished and installed as shown on drawings or as directed by the Engineer. Provide one pressure gauge at the location indicated.

5. Provide a 42-inch high circular roof handrail, 20 feet in

diameter, to encompass all centrally located roof appurtenances. The roof handrail shall be 42 inches high and shall include a top rail, intermediate rail and toe board. The handrail must be constructed to meet all OSHA requirements.

2.4 CONCRETE FOUNDATION:

A. The foundation is included in the Water Storage System Improvements and shall be designed by the Tank Contractor for the soil bearing value shown and specified based upon the recommendations in the soil report and sound engineering judgement. Appropriate adjustments to the construction schedule and price will be negotiated if, during excavation, soil conditions are encountered which differ significantly from those given in the soil report.

B. The design of the foundation shall conform to ACI 318 except as modified herein.

C. The foundation design shall be by the Contractor and shall conform to the recommendations given in the geotechnical report. The foundation depth shall be as required for the extreme frost penetration shown in AWWA D100.

D. Earth cover shall be a minimum of 5.5 feet over top of pipe in accordance with AWWA D100. Any pipe passing through the foundation which does not meet this minimum cover requirement shall be properly insulated until such minimum cover is achieved.

E. Unless modified by the Geotechnical Engineer, the foundation shall be sized to provide a safety factor of 3.0 against the ultimate soil bearing capacity in accordance with AWWA D100. For driven pile the safety factor shall be at least 2.0. Safety factors may be reduced to 2.25 and 1.5 respectively when direct vertical loads are combined with wind or seismic.

F. The foundation shall be sized such that there is a minimum safety factor of 1.5 against overturning for wind or seismic events using service load combinations.

G. Foundation piling, if required, shall conform to the design and detailing requirements of International Building Code (IBC) Section 1810, including the supplemental design and detailing requirements based on the assigned Seismic Design Category (SDC).

H. A 3-inch diameter PVC (SDR 26) conduit (carrier pipe for a future 1-inch PEX water service line) shall be furnished and installed under the slab floor to the valve pit and through the foundation as shown on the drawings. The minimum depth of the conduit shall be 5.5-feet.

I. A total of eight 6-inch diameter PVC (SDR 26) conduits shall be furnished and installed under and through the slab floor to the interior of the bell house and through the foundation as shown on drawings. The minimum depth of the conduits shall be 24-inches so as to not interfere with the copper grounding mat.

J. PVC (SDR 26) conduits (for electrical and future service) shall be furnished and installed under the slab floor and through the foundation as shown on the drawings.

K. A 2.5-inch diameter PVC (SDR 26) conduit (floor drain line) shall be furnished and installed under the slab floor and through the foundation as shown on the drawings. The pipe shall discharge to grade and shall include a concrete headwall and rodent screen. The floor drain pipe shall include a check valve, accessible for maintenance.

L. The Contractor shall extend the 16-inch riser pipe (Ductile Iron Pipe, Class 54) through and 5 feet beyond the edge of the foundation ring wall and connect to the Water Main(s) included as part of the contract and covered in another section of the specifications. Piping to 5 feet beyond the foundation ring wall is incidental to the Foundation.

M. The Contractor shall furnish the necessary anchor bolts for installation in the foundation. The design of the concrete foundation, the specifications for the cement and aggregate, and the mixing of the aggregate shall be in accordance with the latest revision of Standard No. 318 of the American Concrete Institute. The concrete shall develop a minimum compressive strength of 3500 pounds per square inch at 28 days, (Illinois Department of Transportation Class SI concrete), and shall be certified as sulfate resistant. Reinforcement shall comply with the latest revision of ASTM A615 Grade 60 billet steel bars for concrete reinforcement. All reinforcement bars shall be epoxy coated.

N. The interior of the support structure base shall be finished with a six (6) inch crushed CA-6 stone prior to pouring the concrete slab. All excavated areas under the crushed stone or gravel floor shall be backfilled with suitable material and compacted to 95 percent maximum dry density.

O. All concrete work shall comply with ACI 301.

PART 3 - EXECUTION

3.1 FOUNDATION EXCAVATION:

A. Description: This work shall include the furnishing of all labor, materials, tools, equipment and machinery necessary for clearing and removing from the site of the work, whether in streets, alleys, right-of-way, easements or public places, all obstructions, trees, brush, stumps, weeds and debris and all earth, rock and other materials to be excavated, including the removal of existing structures, either above or in any way interfere with the new construction and the satisfactory disposal of all excess and unsuitable materials not needed or which cannot be used for backfilling. This work shall include the furnishing, putting in place and maintaining of all sheeting, shoring and bracing necessary to support the sides of the excavation and to protect the work and adjacent property, and to support all adjacent structures proposed or existing above and below ground, and includes all pumping, dewatering and draining necessary to keep the excavation free from seepage water, water from sewers, drains, creeks, wetlands and other sources, and to provide for the uninterrupted flow of sewers and surface waters during the progress of the construction. This work shall also include the removing after completion of the work, of all sheeting, shoring and bracing not necessary to support the sides of the excavation, performing all backfilling, tamping, compacting, flushing and refilling, after settlement, of all excavated areas; and the restoring of streets, alleys, rights of way and other lands, either private or public, damaged or occupied by the Contractor in the performance of the contract to a satisfactory condition as directed by the Engineer.

B. General Excavation: In general, excavation shall be made in open cut from the surface of the ground and shall be made no larger than necessary to permit proper construction of the work in accordance with the plans and specifications. Only an amount of excavation approved by the Engineer shall be opened up in advance of the work of actual construction. The walls of excavations shall be cut and maintained as nearly vertical as practicable, except as hereinafter provided. The entire foundation area in the bottom of all excavations shall be firm, stable and of uniform density, as nearly as practicable, and unless necessary, materials shall not be disturbed below grade.

1. Foundation material other than solid rock or other hard

materials shall be finished off smooth, level and true to grade. When the foundation material is solid rock or other hard material, it shall be freed of loose material, cleaned and cut out either entirely level, or when and as approved by the Engineer, shall be stepped or serrated. The final cleaning off and preparing of the foundation area shall be done immediately prior to the placing of concrete, or other material or structures.

C. Sheeting, Shoring, Bracing and Sheet Piling: The sides of all excavations shall be sufficiently sheeted, shored and braced so as to prevent slides, cave-ins, settlement or movement of the banks and to maintain the excavation clear of obstructions that will in any way hinder or delay the progress of the work. In wet, saturated or flowing ground, where it is necessary to install tight sheeting or cofferdams, wood or steel sheet piling of approved design and type shall be used. All sheeting, shoring and bracing shall have sufficient strength and rigidity to withstand the pressures exerted and maintain the walls of the excavation properly in place and protect all persons or property from injury or damage.

1. When excavations are made adjacent to proposed or existing buildings or other structures, or in paved streets or alleys, particular care shall be taken to adequately sheet, shore and brace the sides of the excavation to prevent any undermining of or settlement beneath the structures or pavement, when necessary, and shall be done in an approved manner. The foundation material under any pavement or proposed structure or property, either private or public, and so as to avoid cave-ins or sliding of banks. If for any reason, the Contractor, with the approval of the Engineer, leaves in place any sheeting, shoring or bracing, no payment will be allowed for such material left in place. All holes or voids left by the removal of sheeting, shoring, or bracing shall be satisfactorily filled and compacted.

D. Pumping, Dewatering, and Draining: The Contractor shall remove immediately any surface or seepage water or water from sewers, drains, creeks or other sources, which may accumulate during the excavation and construction work, by doing the necessary pumping, dewatering or draining by ditch or other means. The Contractor shall have available at all times sufficient equipment in proper working order for doing the work herein required.

1. All water removed from excavations shall be disposed of in an approved manner so as not to create unsanitary conditions,

nor to cause injury to persons or damage to the work in progress or to other property, either public or private, nor to interfere unduly with the use of streets, alleys, or of private drives or entrances.

2. Sufficient means shall be in place to prevent sediment from leaving the excavation site at all times. Routine maintenance of erosion control measures shall be performed or provided immediately per the direction of the Engineer.

3. All dewatering shall be considered incidental to the project.

E. Disposal of Excavated Materials: Excavated materials so far as needed and of a suitable character, shall be piled adjacent to the work to be used for backfilling as required. Excavated materials unsuitable for backfilling, or in excess of that required for backfilling, shall be disposed of in an approved manner at locations designated or approved by the Engineer. Desirable topsoil, sod, etc., shall be carefully piled separately from other excavated materials so that it can be replaced to its original position when required. Excavated materials shall be handled at all times in such a manner as to cause a minimum of inconvenience to public travel and to permit safe and convenient access to private and public property adjacent to or along the line of work.

F. Backfill: Excavations shall be backfilled only with materials approved by the Engineer. All backfill material shall be placed in a compact manner by compacting in a manner approved by the Engineer. When being placed in layers and tamped, the material shall be moistened, when required by the Engineer, in order that satisfactory compaction may be obtained. Backfill shall be brought up evenly in uniform layers as nearly as practicable, over or about the structure, and, in such a manner as to avoid any damage to the structure or undue eccentric loading. The placing of backfill material shall not begin until approval for doing so has been given by the Engineer but backfilling about structures or portions of structures shall be done immediately when so ordered by the Engineer. Unless otherwise required or shown on the plans, backfilling shall be brought up to an elevation slightly above the original ground level to allow for subsequent settlement. The top surface or slopes of all backfill shall be neatly graded off in a workmanlike manner and where select top soil, sod or other material is removed and piled separately, such material shall be carefully replaced in a manner satisfactory to the Engineer. The top 12 inches of backfill material shall be of as good quality as the original soil which was removed.

G. Compaction: All backfill soil around the footing should be placed in layers not to exceed 8 inches in thickness, and each layer should be compacted to at least 95 percent of standard Proctor dry density, ASTM D-698.

1. The water content of the fill soil may require adjustment in accordance with the Proctor test curves to achieve the required compaction.

2. Fill under all pavement and building areas (proposed or existing) shall be constructed to obtain 95 percent of standard Proctor dry density, ASTM D-698.

3. Fill under all turf and planting areas shall be constructed to obtain 85 percent to 90 percent of standard Proctor dry density, ASTM D-698.

H. A designated concrete washout area shall be installed by the contractor and shall be incidental to the contract.

3.2 INSTALLATION OF DRILLED PIERS:

A. Installation of drilled piers, with or without under reams (bells), by means of power driven rotary bucket or auger-type drilling rigs, or by other methods as approved by the Designer shall be done in compliance with the Specifications, Plans, and the Tank Contractors Specifications and Drawings.

B. Work includes furnishing all supervision, labor, materials, equipment, safety devices, and services necessary for and reasonably incidental thereto for completion of all work including the following:

1. Laying out and excavating the drilled piers to prescribed tolerances.

2. Dewatering and casing the drilled pier excavations.

3. Furnishing and placing reinforcing steel and concrete.

4. Providing reasonable notification and assistance to the Inspector.

5. Removing and disposing of excavated material.

C. The Contractor shall employ only workmen who are competent to perform the work assigned to them and, in the case of skilled labor,

who are adequately trained and experienced in their respective trades and perform satisfactory work.

D. Drilled Pier Installation: Drilled piers shall be at least as large as shown on the contract drawings.

1. Tolerances: Drilled piers shall conform to the following tolerances:

a. The maximum lateral deviation from the design location for the top of any drilled pier shall be 2 inches for piers up to 18 inches in diameter and 4 inches for piers greater than 18 inches in diameter.

b. The top of each drilled pier shall be within + 1/2 inch of the elevation shown on the contract drawings.

c. No drilled pier shall be out-of-plumb more than 1 percent of its length.

d. The final bearing surface shall not be sloped by more than 5 degrees.

2. If any of the above tolerances are exceeded, the Contractor shall provide, at his own expense, additional construction, including the cost of engineering and inspection, as required by the Designer to correct the intolerance.

E. Excavation: Drilled piers shall be excavated from the working grade shown on the contract drawings, by equipment of adequate size and of first-class, well-maintained condition. After the drilled pier shaft has been excavated to the minimum specified depth and prior to any required under reaming (belling), the excavation shall be inspected in accordance with section 3.1 of this General Specification. If unsuitable material is present at the minimum specified depth, the drilled pier excavation shall be extended to such other depths as approved by the Designer. Underreaming may be performed by machine or by hand provided all safety provisions of this specification are met, in either case the bottom of the Excavation shall behand cleaned. Deviations from the anteroom (bell) configuration shown on the contract drawings may be made only with the prior written approval of the Designer. Rock excavations, when required, shall be performed by drilling, chipping, or coring.

1. Blasting shall not be performed unless approved by the Owner.

F. Protective Casing: Protective casing, when installed to prevent caving or to seal off a water bearing strata, shall be at least as large in inside diameter as the nominal shaft size and of sufficient wall thickness to resist crushing by hydrostatic and earth pressures. Any casing found to be crushed or deformed shall be removed and replaced by suitable casing of heavier weight. Protective casing shall be provided for the protection of personnel entering the drilled pier excavation and shall be withdrawn prior to concrete placement. This Protective Casing shall extend to the top of the underream (bell) section.

G. Dewatering: Infiltration of ground water from any source shall be maintained at a rate less than 1/4 inch rise in the shaft per hour. Any water above an average depth of 2 inches above the bottom of the excavation shall be pumped or removed before placement of concrete will be permitted.

1. If the steel casing cannot cut off infiltration of ground water, then a dewatering system or other construction method approved by the Designer shall be employed.

H. Reinforcing Steel: Reinforcing steel shall be accurately placed and shall conform to the dimensions shown on the contract drawings. Adequate provision shall be made to ensure that the reinforcing steel will remain in place throughout placement of concrete and that the specified concrete cover for the reinforcing steel is attained and maintained. The use of precast concrete spacer blocks for this purpose is recommended.

I. Concrete: All concrete shall have a strength and slump as indicated in the Specification and as shown on the Drawings.

1. Promptly after the drilled pier excavation has been approved, concrete shall be placed in a manner that will not cause segregation of the particles or permit infiltration of water or any other occurrence which would tend to decrease the strength of the concrete or the capacity of the finished pier. Concrete may be placed in a dry hole by dumping in free drop from the surface, provided a hopper or other approved device is used to force concrete to drop straight down without hitting the sides of the hole or the reinforcement before striking the bottom. If battered caissons are used, the concrete shall be placed with an "elephant's trunk" or tremie pipe that extends to the bottom of the drilled pier excavation.

2. If dewatering, as defined in this specification, cannot be maintained, then concrete shall be placed by tremie or other method as approved by the Designer.

3. Concrete shall be placed continuously for the entire depth of the drilled pier. If concrete placement is interrupted for one or more hours, the concrete surface shall be leveled. Before the remainder of the concrete is placed, all laitence shall be cleaned from the concrete surface with the surface being roughed and slushed with an approved grout.

4. Concrete placed in the upper 10 feet of all drilled piers shall be consolidated by vibration.

J. Removal of Casing: An initial jerk of 2 to 4 inches will be allowed to start the lift; thereafter, while being removed, the casing must be kept plumb and must be pulled with a smooth, vertical motion without jerks. Vibration of the casing during pulling is approved. A positive head of not less than 3 feet of concrete above the pressure at the bottom of the casing from the outside water table shall be established before the casing is lifted, and shall be maintained as the casing is pulled.

1. Where cutoff elevation is below ground level, the Foundation Contractor will be required to maintain protective casing to the ground surface if needed to prevent detrimental caving or intrusion of soil into the freshly placed concrete. The protective casing shall remain in place until the concrete has set sufficiently to preclude soil intrusion.

K. Clean Up: The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish occasioned by his work. Clean spoil or non-deleterious material may be dumped or spread on the project if so directed by the Engineer. The Contractor shall remove all his equipment, surplus materials and building debris at the completion of the work.

L. Testing and Inspection:

1. Drilled Pier Excavations: All drilled pier excavations shall be inspected by the Geotechnical Engineer at the time of drilling to provide assurance that the proper bearing stratum has been reached; and prior to placement of concrete, to provide assurance that the excavation is in suitable condition for concreting. Sufficient time, equipment, and personnel shall be supplied by the Contractor to permit proper inspection of

all drilled pier excavations.

2. Concrete Testing: Concrete tests shall be performed in accordance with the Project Specifications at the intervals defined below:

   a. At least one test for each day concrete is placed.

   b. At least one test for each caisson.

   c. Three tests up to 100 yards with one additional test for each succeeding 50 yards.

3. Safety Precautions: No person shall enter a drilled pier excavation for the purpose of inspection, excavation, cleaning or similar work unless protective casing is provided and the provisions of the Federal Occupational Safety and Health Standards are followed.

4. Records: The Contractor shall keep a log of each pier showing the following as a minimum:

   a. Pier number,

   b. Depth drilled through overburden,

   c. Depth drilled in bearing stratum,

   d. Elevation of ground surface,

   e. Top elevation of concrete,

   f. Top elevation and length of casing,

   g. Diameter of shaft,

   h. Diameter and type of bell.

5. The Construction Observer will confer with the Foundation Contractors representative at the end of each day's work, and if the Construction Observer is in agreement with the logs, both parties will sign the Foundation Contractor's logs of work completed on that day. One copy of the logs shall be sent to the Contractor.

M. Basis of Payment: Payment for any and all work performed under

this section will be included in foundation design and construction.

3.3 PAINTING OF ELEVATED TANK:

A. General: Provide the material and workmanship necessary to produce a durable and lasting first-class paint job. Painting shall be done at such times as approved by the Engineer and Owner. All painting shall be done strictly in accordance with the paint manufacturer's instructions and shall be performed in accordance with the "Society of Protective Coatings" and AWWA D102 and shall meet NSF Standard 61.

B. Quality of Paint: The paints and the paint products specified are standards of quality. The products of other manufacturers comparable in quality and type to those specified will be acceptable if said paints are offered by the contractor with satisfactory data on past performance on water storage tanks, composition, directions for use and other information required in writing at time of bidding, and if written approval is given by the Engineer. All coatings shall be supplied by the same manufacturer.

1. All materials shall be brought to the job site in the original sealed and labeled containers of the paint manufacturer and shall be subject to inspection by the Engineer and Owner. Colors, where not specified, shall be selected by the Owner.

2. Application of the Paint: The painter shall apply each coating at the rate and in the manner specified by the manufacturer. If material has thickened or must be diluted for application by spray gun, the coating shall be built up to the same film thickness achieved with undiluted material. Deficiencies in film thickness shall be corrected by the application of an additional coat(s) of paint.

3. No paint shall be applied when the surrounding air temperature, as measured in the shade is below 40 degrees F. No paint shall be applied when the temperature of the surface to be painted is below 35 degrees F. (40 degrees F. for Urethane clear coat). Paint shall not be applied to wet or damp surfaces, and shall not be applied in rain, snow, fog or mist, or when the relative humidity exceeds 85 percent. Follow manufacturer's recommendations for specific paint system used.

4. No paint shall be applied when it is expected that the relative humidity will exceed 85 percent or that the air temperature will

drop below 40 degrees F. within 18 hours after the application of the paint. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, painting shall be delayed until mid-morning to be certain that the surfaces are dry. Further, the day's painting should be completed well in advance of the probable appreciable drying time prior to the formation of moisture. Follow manufacturer's recommendations for specific system used.

C. After erection and before painting, remove slag, weld metal splatter and sharp edges by chipping or grinding. All surfaces that have been welded, abraded or otherwise damaged, shall be cleaned and primed in the field in accordance with the paint system requirements.

D. All areas blasted in the field shall be coated before any rusting occurs.

E. Sterilization and Filling of the Elevated Tank: Adequate ventilation which will effectively remove solvents shall be provided for proper drying of paints on interior Elevated Tank surfaces. A minimum of 7 days following the application of the final coat on the interior surface shall be allowed before the elevated tank is sterilized or filled with water.

E. Certification: The Contractor shall submit to the Engineer, immediately upon completion of the job and before final payment, certification from the manufacturer indicating that the quantity of each coating purchased as sufficient to properly coat all surfaces. Such certification shall make reference to the square footage figures provided to the manufacturer and the Engineer by the Contractor.

F. Containment will be required during painting operations. Painting overspray and blasting residual control is the responsibility of the Contractor. The Contractor shall be responsible for any damages that may occur on or off-site due to paint overspray or blasting residual. The Contractor shall control the overspray and blasting residual while still meeting the completion deadline.

3.4 EXTERIOR COATING SYSTEM:

A. Shop Painting:

1. Shop Surface Preparation: Remove all oil and grease from the surface prior to blast cleaning. The surface shall be abrasive blast cleaned to a COMMERCIAL finish in accordance with the recommended methods outlined in the

Steel Structures Painting Council Specification SSPC SP-6/NACE No. 3. A surface profile of 1.5 mils is required.

2. Shop Prime Coat: Immediately after abrasive blasting and before any rusting occurs (within 12 hours maximum), apply one coat of TNEMEC Series 94-H_2O to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 – 3.5 mils.

B. Field Painting:

1. Field Surface Preparation for Blast Cleaning: After erection and prior to field touch-up priming, all surfaces shall be cleaned to remove all surface contamination including oil, grease, dust, dirt and foreign matter from the entire surface. Weld slag, weld spatter, rough edges and sharp edges of weld seams shall be ground smooth. Chip or grind as required to remove all slag, weld metal splatter and sharp edges.

2. Field Blast Cleaning: All rusted, abraded and unpainted areas shall be abrasive blast cleaned to a COMMERCIAL finish in accordance with the recommended methods outlined in the SSPC SP-6/NACE No. 3. All shop primed areas shall be brush blasted to SSPC SP-7/NACE No. 4.

3. Field Touch-Up: Spot prime with TNEMEC Series 91-H_2O to a DFT range of 2.5 to 3.5 mils.

4. Field Prime Coat: Immediately after blasting and before any rusting occurs (within 12 hours maximum), apply one coat of TNEMEC Series 91-H_2O to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 – 3.5 mils.

5. Field Intermediate Coat: Apply one complete coat of TNEMEC Series 73-color* Endura-Shield at a dry film thickness of 2.0 – 3.0 mils.
The color lab of Tnemec Company, Inc.* ***will* *select this color.*

6. Field Finish Coat: Apply one complete coat of TNEMEC Series V700 HydroFlon at a dry film thickness of 2.0 – 3.0 mils.

7. Lettering/Logo Painting: Two coats of TNEMEC Series V700 HyrdroFlon shall be used for the lettering/logo. The Series V700 shall be applied at a dry film thickness of 2.0 mils per

coat.

3.5 INTERIOR (WET) COATING SYSTEM:

A. Shop Painting:

1. Shop Surface Preparation: Remove all oil and grease from the surface prior to blast cleaning. The surface shall be abrasive blast cleaned to a NEAR-WHITE finish in accordance with the recommended methods outlined in the SSPC SP-10/NACE No. 2. A blast profile of 1.5 mils is required.

2. Shop Prime Coat: Immediately after abrasive blasting and before any rusting occurs (within 12 hours maximum), apply one coat TNEMEC Series 94-H_2O to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 – 3.5 mils.

B. Field Painting:

1. Field Surface Preparation: After erection and prior to field touch-up priming, all surfaces shall be spot cleaned as required to remove all surface contamination including oil, grease, dust, dirt and foreign matter from the entire surface. Weld slag, weld spatter, rough edges and sharp edges of weld seams shall be ground smooth.

2. Field Blast Cleaning: All rusted, abraded and unpainted areas shall be abrasive blast cleaned to a NEAR-WHITE finish in accordance with the recommended methods outlined in the SSPC SP-10/NACE No. 2. A blast profile of 1.5 mils is required. All shop primed areas shall be brush blasted to SSPC SP-7/NACE No. 4.

3. Field Prime Coat: Immediately after abrasive blasting and before any rusting occurs (within 12 hours maximum), apply one coat of TNEMEC Series 91-H_2O to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 – 3.5 mils.

4. Field Stripe Coat: After the primer has cured in accordance with the manufacturer’s recommendations, apply one stripe coat, by brush or roller only, of TNEMEC N140-39BL Pota-Pox Plus to all weld seams, angles, and sharp edges at a dry film thickness of 2.0 to 3.0 mils.

5. Field Finish Coat: Apply one complete coat of TNEMEC FC22 Tank White Epoxoline at a dry film thickness of 25.0 – 30.0 mils.

6. Interior immersion surfaces will be holiday tested per NACE SP0188.

3.6 INTERIOR (DRY) COATING SYSTEM:

A. Shop Painting:

1. Shop Surface Preparation: Remove all oil and grease from the surface prior to blast cleaning. The surface shall be abrasive blast cleaned to a COMMERCIAL finish in accordance with the recommended methods outlined in the SSPC SP-6/NACE No. 3. A blast profile of 1.5 mils is required.

2. Shop Prime Coat: Immediately after abrasive blasting and before any rusting occurs (within 12 hours maximum), apply one coat of TNEMEC Series 94-H_2O to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 – 3.5 mils.

B. Field Painting:

1. Field Surface Preparation for Blast Cleaning: After erection and prior to field touch-up priming, all surfaces shall be spot cleaned as required to remove all surface contamination oil, grease, dust, dirt and foreign matter from the entire surface. Weld slag, weld spatter, rough edges and sharp edges of weld seams shall be ground smooth.

2. Field Blast Cleaning: All rusted, abraded and unpainted areas shall be abrasive blast cleaned to a COMMERCIAL finish in accordance with the recommended methods outlined in the SSPC SP-6/NACE No. 3. A blast profile of 1.5 mils is required. All shop primed areas shall be brush blasted to SSPC SP-7/NACE No. 4

3. Field Prime Coat: Immediately after blasting and before any rusting occurs (within 12 hours maximum), apply one coat of TNEMEC Series 91-H_2O to all bare steel surfaces. This coating shall be applied to a dry film thickness of 2.5 – 3.5 mils.

4. Field Intermediate Coat: Apply one complete coat of TNEMEC N140-1255 Chicago Beige Pota-Pox Plus at a dry film thickness of 3.0 – 4.0 mils.

5. Field Finish Coat: Apply one complete coat of TNEMEC N140-15BL Tank White Pota-Pox Plus applied at a dry film thickness of 3.0 – 4.0 mils.

3.7 FULL TANK CONTAINMENT

A. A summary of the minimum requirements for the tank containment is as follows:

The CONTRACTOR shall completely enclose the tank container and structure with fire-retardant 100% impervious screening to contain any blasting debris and/or paint overspray. The debris must be contained within 30 feet of the base of the tank. Areas of the roof within the surrounding screen shall be contained with pie shape screens with side curtains so that blasting debris falls within the surrounding screen. The enclosure shall be designed to be raised and lowered within fifteen (15) minutes to prevent storm damage to the enclosure, the tank, personnel, and surrounding property. The enclosure shall be designed not to impose excessive loading on the tank and tank appurtenances. The CONTRACTOR shall submit two (2) copies of the proposed method of containment, outlining and detailing the type of system that will be employed including the major components and equipment, and indicating how blasting debris and/or paint overspray will be contained on the project site, with the bid form for review by the ENGINEER and VILLAGE.

3.8 COOPERATION WITH OTHER CONTRACTORS

A. The Contractor shall cooperate with other contractors work on any portion of this project. The Contractor shall schedule his construction to minimize conflicts in common work areas and to maintain continuity in construction and traffic management. The Contractor shall cooperate with other contractors in the phasing and performance of his work so as not to delay, interrupt or hinder the progress or completion of the work being performed by other contractors.

B. The Contractor will be given the names of other contractors who will work on the project. It is the Contractor's responsibility to contact each contractor and coordinate the sequence of work with them. No additional compensation will be allowed for compliance with the above requirements nor any delays or inconveniences resulting from the activities of other contractors

3.9 PROJECT PLAQUE

A. Contractor shall furnish and mount one Project Plaque. The Contractor shall provide a suitable outside mounting panel on elevated tank for project plaque. The exact location of the plaque shall be determined by the Owner. Plaque shall be bronzed cast as manufactured by WAGNER FOUNDRY, INC/BRONZE MEMORIAL COMPANY,1838 N. ELSTON AVE., CHICAGO, IL 60622 (773/276-7907) or equal. The plaque shall be 18 inches high by 24 inched wide with No. 1 single line polished border, raised classic style letters, with belt polished face, dark leatherette texture background and four corner rosette mounting bolts.

The plaque wording shall include the Owner's name, project title, date and names of the Owner's officials, Engineers and Contractor. Exact wording and layout will be provided by the Engineer. A proof-rubbing shall be submitted to the Engineer for approval before casting the plaque. The entire plaque shall have a spray-on protective lacquer finish (two coats).

This item will not be paid for separately and is considered incidental.

4.0 WELDING

A. All welding shall comply with AWWA D100.

B. All welding procedures, welders and welding operators shall be qualified in accordance with ASME Section IX for the processes and positions utilized.

C. To minimize corrosion and rust staining on the underside of the roof, the roof plate laps and rafter-to-roof plate seams shall be seal welded. The minimum thickness for seal welded roof plates shall be 1/4 inch.

D. The edges or surfaces of the pieces to be joined by welding shall be prepared by flame cutting, plasma arc cutting, arc gouging, machining, shearing, grinding or chipping and shall be cleaned of detrimental oil, grease, scale and rust. The edges of the pieces may have a protective coating applied to them which need not be removed before they are welded unless specifically prohibited by the welding procedures.

E. Field and shop welding may be done by the shielded metal arc welding process, the gas metal arc welding process, the flux core arc welding process and the submerged arc welding process.

F. Plates and component members of the tank shall be assembled and welded following erection methods which result in a minimum of distortion from weld shrinkage. Surfaces to be welded shall be free from loose scale, slag, heavy rust, grease, paint and other foreign material.

G. In order to assist in the maximization of the paint's lifecycle, all external plate welds on the tank shall be ground to a NACE-D profile. Plate welds internal to the tank, in contact with water, shall be ground to NACE-C, with non-water contact welds in the upper tank being prepared to NACE-D. Welds on the interior dry support column can remain in an as-welded condition but must have a profile adequate for the specified paint system. Engineer/Owner reserves the right to provide third-party inspection to ensure compliance to this requirement.

H. All welded joints on the tank interior including the underside of roof lap joints and structural framing shall be seal welded as a minimum.

I. Welds attaching components to the interior of the supporting pedestal which are subjected to condensation shall be seal welded as a minimum. The underside of the condensate ceiling shall be seal welded as a minimum.

J. Inspection and testing shall be in accordance with AWWA D100. Shop subassembly welds that require radiographic inspection shall be inspected in the shop or field. If radiographic inspection is performed in the shop, radiographs shall be provided to the Engineer prior to their delivery to the jobsite.

4.1 SETTLEMENT MONITORING

K. Settlement monitoring is required during tank filling and hydrostatic testing activities to confirm settlement is within tolerances of the design. The method for settlement monitoring shall be submitted by the Contractor for review and shall be subject to approval by the Owner and Engineer.

L. Settlement shall be monitored for a minimum of one year following the completion of construction. If settlement continues after one year, then additional settlement monitoring may be required at the discretion of the Owner and Engineer."

M. This work shall be considered incidental to the cost of constructing the tank."

END OF SECTION 13200

SECTION 16010

BASIC ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

A. SECTION INCLUDES

1. Basic Electrical Requirements are specifically applicable to Division 16 Sections, in addition to Division 1 - General Requirements.

2. This Section is hereby made a part of all other sections of Division 16 as fully as if repeated in each therein.

B. DESCRIPTION

1. Apparatus, appliance, material or work not shown on drawings, but mentioned in the specifications, or vice versa, or any incidental accessories necessary to make the work complete and ready for operation, even though not specified or shown on the drawings, shall be furnished and installed without additional expense to the Owner.

2. Should there be any discrepancies or a question of intent, refer the matter to the Owner for a decision before ordering any equipment, materials or before starting any related work.

3. Furnish, erect, install, connect, clean, adjust, test and condition all manufactured articles, materials and equipment, and place in service in accordance with the manufacturer's directions and recommendations except as otherwise noted.

C. QUALITY ASSURANCE

1. Carefully examine the contract documents, visit the site, and thoroughly become familiar with the local conditions relating to the work. Failure to do so will not relieve the contractor of the obligations of the contract.

2. Materials and installation shall conform to the applicable Codes and Standards.

3. After all equipment, devices and raceways are installed and wires and cables are in place and connected to devices and equipment, test the system for continuity, proper phase rotation, short circuit, improper grounds, and other defects. If defective condition is present, make all

necessary corrections and retest for compliance. Test systems for proper operation and demonstrate to the Owner.

4. Codes and Standards:

   a. Materials and installation shall comply with codes, laws and ordinances of Federal, State, and local governing bodies having jurisdiction.

   b. In every installation where regulations of electric utility and telephone companies apply, conformance with their regulations is mandatory and any costs involved shall be included in the Contract, with the exception of extra facility and other charges which are directly paid by the Owner.

   c. In case of differences between building codes, State and Federal laws, local ordinances and utility company regulations and the Contract Documents, the most stringent shall govern.

   d. Should work be performed which does not comply with the requirements of the applicable building codes, State and Federal laws, local ordinances, industry standards and utility company regulations, changes for compliance shall be done at no addition cost to the Owner.

   e. Secure and pay for all permits, governmental fees, taxes and licenses necessary for the proper execution and completion of Division 16 work.

   f. Notify the Owner of any materials or apparatus believed to be inadequate, unsuitable, in violation of laws, ordinances, rules or regulations of authorities having jurisdiction.

D. SUBMITTALS

1. Progress Schedule: Submit schedules in accordance with the General Conditions and Division 1.

2. Shop Drawings: Submit in accordance with the General Conditions and Division 1. Refer to individual Sections of Division 16 for supplementary requirements.

3. Substitutions: Refer to the General Conditions and Division 1.

   a. Submit design data such as, but not limited to, photometric lighting calculations, short circuit calculations, etc. for any substituted materials.

4. Maintenance Manuals: Submit copies of maintenance manuals in hard bound covers containing approved shop drawings, manufacturers' repair manuals, guarantees, operating instructions, wiring diagrams and parts lists.

5. As soon as practical after award of contract and before any material for equipment is purchased, the Contractor shall submit for review, as required under General Conditions, the number of copies of all shop drawings. The list of required shop drawings and catalog cuts, etc., will be included at the end of this section of the specification. Shop drawings shall include manufacturer names, catalog numbers, cuts, diagrams and other such descriptive data as may be required to identify and approve the equipment. A complete list in one category of all shop drawings, catalog cuts, material lists, etc., shall be submitted by this Contractor at one time.

6. Any listed materials, fixtures, apparatus, or equipment that is not in accordance with specification requirements can and will be rejected for use in this installation and construction.

7. Any materials, fixtures, apparatus or equipment not in accordance with Contract Documents shall be removed by the Contractor and replaced with specified equipment at the direction of the Owner and without recourse for additional compensation.

8. The following is a list of items requiring submittal:

   Item

   Panelboards

9. Instruction Manuals: Submit a minimum of two (2) complete bound sets of instruction manuals.

10. Field Record Drawings: Submit field record drawings for the work in accordance with the General Conditions.

E. GUARANTEE

1. Electrical work shall be guaranteed for materials and labor for a period of one (1) year in accordance with the General Conditions and Division 1.

2. Manufacturers' equipment guarantees or warranties for periods of more than one year shall be included in the Maintenance Manuals.

F. ALTERNATES

1. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.

2. Coordinate related work and modify surrounding work as required.

3. Shop drawings shall include alternate work and shall reflect changes necessitated to other work.

G. REGULATORY REQUIREMENTS

1. Conform to applicable local building codes for City of Warenville, Illinois.

2. Electrical: Conform to NFPA 70.

3. Obtain permits and request inspections from authority having jurisdiction.

H. PROJECT/SITE CONDITIONS

1. Install Work in locations shown on Drawings, unless prevented by Project conditions.

2. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, include changes to Work specified in other Sections. Obtain permission of Owner before proceeding.

I. DEFINITIONS

1. Factory-Wired Panel Means: Provided as part of equipment package; including starters, disconnects (except for disconnects indicated on Electrical Drawings on line side of FWP), control transformers, integral control devices and pre-wired controls; ready for final control and power connections.

2. Provide Means: Furnish and install.

3. Basic Electrical Requirements Means: Applies to all Sections of Division 16.

J. DESIGN REQUIREMENTS

1. Electrical Design: Based on specified or scheduled equipment manufacturers.

a. Conduit, Disconnects, Breakers, Fuses and Wire Sizes: Selected on basis of scheduled or specified equipment.

b. Increased current requirements requiring larger wire, additional wires, larger conduit, starters, breakers or switches to accommodate alternate or substitute manufacturer's equipment: Provided by Contractor furnishing equipment.

PART 2 - PRODUCTS

A. MATERIALS AND EQUIPMENT

1. Materials and equipment shall be new, UL or CSA labeled and shall bear the manufacturer's name, model number and other identification markings.

2. Materials and equipment shall be the standard product of a manufacturer regularly engaged in the production of the required type of material or equipment for at least five years and shall be the manufacturer's latest design with published properties.

3. Equipment and materials of the same general type shall be of the same manufacturer throughout the project to provide uniform appearance, operation and maintenance.

4. Equipment and materials shall be without blemish or defect and shall not be used for temporary light or power purposes, including lamps, without the Owner's written authorization.

5. Where two or more makes or kinds of material or equipment is specified, indicate which choice will be used. This information shall be included with the list of manufacturers for equipment and materials submitted to the Owner as specified under "Submittals".

B. MANUFACTURER'S NAMEPLATES

1. Each major electrical component such as switchgear, switchboards, transformers, motor control centers, panelboards, circuit breakers, disconnect switches, etc. shall have the manufacturer's name and address, catalog number, and rating on a plate or label located inside the cover or in any other inconspicuous but readily accessible location

PART 3 - EXECUTION

A. DELIVERY AND STORAGE

1. Receive, handle, and store electrical items and materials at the project site. Materials and electrical items shall be so placed that they are protected from theft, damage and deterioration.

B. INSTALLATION

1. The drawings for work under Division 16 are diagrammatic and are intended to convey the scope of work and indicate the general arrangement of conduit, boxes, equipment, fixtures and other work included in the contract.

2. Location of items required by the drawings or specifications not definitely fixed by dimensions are approximate only and exact locations necessary to secure the best conditions and results shall be determined at the site and shall be subject to approval.

3. Follow drawings in laying out work, check drawings of other trades to verify spaces in which work will be installed, and maintain maximum headroom and space conditions at all points.

   a. Where headroom or space conditions appear inadequate, the Owner shall be notified before proceeding with installation.

   b. Minor conduit rerouting and changes shall be made at no additional cost to the Owner.

4. Perform all work with skilled mechanics of the particular trade involved in a neat and workmanlike manner.

5. Perform all work in cooperation with other trades and schedules.

6. Furnish other trades advance information on locations and sizes of frames, boxes, sleeves and openings needed for the work, and also furnish information and shop drawings necessary to permit trades affected to install their work properly and without delay.

7. Where there is evidence that work of one trade will interfere with the work of other trades, all trades shall assist in working out space allocations to make satisfactory adjustments and shall be prepared to submit and revise coordinated shop drawings.

8. Without additional cost to the Owner, make minor modifications in the work as required by structural interferences, by interferences with work of other trades or for proper execution of the work.

9. Work installed before coordinating with other trades so as to cause interference with the work of such other trades shall be changed to

correct such condition without additional cost to the Owner and as directed by the Architect.

10. Minor changes in the locations of equipment shall be made prior to rough-in at the direction of the Owner and at no additional cost to the Owner.

11. Electrical Contractor shall cooperate with other trades and coordinate work so that conflicts with other work are eliminated.

12. Equipment shall be installed with adequate space allowed for removal, repair or changes to equipment. Ready accessibility to removable parts of equipment and to wiring shall be provided without moving other equipment which is to be installed or which is in place. Electrical Contractor shall verify measurements. Discrepancies shall be brought to the Architect's attention for interpretation.

13. Determine temporary openings in buildings that will be required for the admission of apparatus furnished under this Division, and notify the Owner accordingly. In the event of failure to give sufficient notice in time to arrange for these openings during construction, assume all costs of providing such openings thereafter.

14. Location of electrical panelboards, cabinets, equipment, etc. is approximate and exact locations shall be determined at the project.

15. Electrical Contractor shall refer to Contract Documents for details, reflected ceiling plans, and large scale drawings.

16. Order of Priorities:
    a. Recessed lighting fixtures.
    b. Ductwork.
    c. Plumbing waste lines, downspouts, and vents.
    d. Heating lines.
    e. Plumbing water lines.
    f. Electrical conduit.
    g. Control air lines or conduit.

A. COOPERATION

1. Where jurisdictional rules require the assistance of electrical mechanics in the moving and setting of electrically powered equipment, provide such assistance.

2. Where work covered by this Section connects to equipment furnished under other Sections, verify electrical work involved in the field and make proper connection to such equipment.

B. EXCAVATING AND BACKFILLING

1. Excavating, bracing and shoring, testing, disposition of excess excavated material, provision of borrow, and placing of backfill shall be in accordance with Attachment B – Special Provisions.

C. IDENTIFICATION OF ELECTRICAL ITEMS

1. Provide permanent identification markings and nameplates for wiring and each item of electrical apparatus and associated controlled equipment, with the same inscriptions as shown on the Drawings, or as directed, clearly and neatly applied.

2. Provide the following identification markings on each circuit breaker, disconnect switch, contactor, motor starter, etc.
   a. Feeder name, number, voltage.
   b. Items of equipment controlled.

3. Provide feeder name, number, and voltage identification markings on each motor and other utilization equipment, except lighting fixtures.

4. Provide the following alkyd paint stenciled inscription markings on the outside face and on the inside face of each feeder splice box, feeder junction box, and feeder pull box cover plate:
   a. Designation shown on the drawings.
   b. Feeder name, number, voltage.

5. Apply engraved plastic laminate nameplates with non-corroding type screw fasteners or rivets to all motor starters, disconnect switches, relays, remote control panels, push button stations, panelboards, switchgears, transformers, and other electrical apparatus. Nameplates shall be white with black core, 1-1/4" x 3" minimum, 3/16" high lettering.

6. Provide a typewritten directory of circuits in panelboards and provide panel identification in black alkyd paint stenciled inscriptions on the inside of the door, directly above the center line of directory frame, or on vertical and horizontal center line of doors without directory frames.

7. Embossed self-adhering plastic tape labels will not be accepted.

8. Each wire and each cable shall be labeled at terminals and at all accessible points in equipment, panelboards, manholes, handholes, and pull boxes. Labels shall be self-sticking wire markers.

9. Identify underground systems using underground warning tape. Install one tape per trench at 12" below finished grade.

10. For exterior installations, conduits, except branch lighting circuit conduits, shall be tagged at the ends and in intermediate boxes, chambers, manholes, handholes, and other enclosures in accordance with the same inscriptions as shown on the Drawings.

11. Conduit tags shall be made of brass or stainless steel, 1/32" thick and 3/4" wide, embossed with the designations shown on the Drawings, in 5/16" high letters and numbers. Tags shall be fastened to conduits with No. 14 AWG bare copper wire, except that where this method is not practicable, they shall be fastened to the adjacent masonry by means of expansion bolts.

12. Phase identification letters; in readily visible locations, shall be stamped into the main bus bars of switchboards and panelboards.

D. EQUIPMENT NOISE LIMITATION

1. Noise levels of electrical devices and equipment shall be within acceptable limits as established by NEMA or other valid noise rating agencies. Noise levels shall be subject to the Owner's acceptance, based on practical and reasonable considerations of occupancy requirements.

2. Check and tighten the fastenings of sheet metal plates, covers, doors, and trims to prevent vibration and chatter under normal conditions of use.

3. When located in rooms other than high-noise-level equipment rooms, the enclosures of solenoid-operated switching devices and other noise-producing devices shall have anti-vibration mountings and non-combustible sound-absorbing linings.

4. Remove and replace any individual electrical item or device that is found to produce a sound energy output exceeding that of other identical devices installed at the project.

E. TRANSMISSION OF VIBRATION

1. Electrical equipment, conduit, and fittings shall not be mounted to, or supported by, elements subject to vibration except by methods which will prevent transmission thereof. Where flexible lengths of conduit are utilized as a means of isolating equipment and conduit systems

vibration, care shall be exercised to assure continuity of ground throughout.

F. MOUNTING HEIGHTS

1. Mounting heights of electrical items shall be as listed below, unless otherwise indicated. Dimensions are above finished floor, unless otherwise indicated. In areas where code requires different mounting heights, as in hazardous areas, comply with code requirements.

2. Panelboards: 6'-0" to center line of highest handle, or per code.

G. PROTECTION

1. Protect conduit and wireway openings against the entrance of foreign matter by means of plugs or caps. Cover fixtures, materials, equipment and devices furnished or installed under this section or otherwise protect against damage, both before and after installation. Fixtures, materials, equipment, or devices damaged prior to final acceptance of the work shall be restored to their original condition or replaced.

2. Equipment shall be inherently safe and moving parts shall be covered with guards.

H. TESTING

1. General: Furnish meters, instruments, cable connections, equipment or apparatus necessary for making all tests.

2. Insulation Tests:

a. After being pulled in place and before being connected, test all service and feeder cables with 1000 volt, 60 Hz insulation tester for one minute to determine that conductor insulation resistance to ground is not less than that recommended by the manufacturer. Test all branch circuit conductors for lighting, receptacle and miscellaneous loads prior to connection of loads. Tests shall not register less than one megohm to ground during an insulation test as described above for service and feeder cables. Remove, replace and retest all cable failing insulation test.

b. The insulation test shall be performed before the installation of TVSS devices.

c. Measure insulation resistance of electrical wiring with a self-contained instrument such as a direct-indicating ohmmeter of the generator, battery or electronic type.

d. When using any type of d-c voltage source, it is essential that the output voltage is steady to prevent fluctuation in charging current. Where protective resistors are used in test instruments, take into account their effect on the magnitude of the voltage applied to the insulation under test. Properly maintain the instrument used in insulation resistant testing. Make periodic checks to insure that rated voltage is delivered and that the instrument is in calibration.

e. Unless otherwise specified, the insulation resistance shall be approximately one megohm for each 1000 volts of operating voltage with a minimum value of one megohm.

3. Test all motors under load, with ammeter readings taken in each phase and the RPM of motors recorded at the time. Test all motors for correct direction of rotation.

4. Documentation: Keep records of all tests, in tabulated, permanent, reproducible form, completely indexed and explained, indicating the specific test performed, environmental conditions such as temperature and humidity, date of performance, results obtained, corrective actions taken (if any), final results, and comments if required. Copies of all tests shall be delivered to the Owner prior to the final project review.

I. TEMPORARY UTILITIES AND HEAT

1. Contractor's attention is directed to Division 1, which sets forth respective responsibilities of all concerned with furnishing temporary water, electricity and heat for use during construction of the Project.

J. EXECUTION, CORRELATION AND INTENT OF DOCUMENTS

1. In the event that conflicts, if any, cannot be settled promptly and amicable between the affected trades, work shall proceed in a workmanlike manner, and Owner shall decide which work is to be relocated and his judgment shall be final and binding on this Contractor.

K. INSTRUCTIONS AND ADJUSTMENTS

1. Contractor shall instruct the Owner's staff in the efficient operation of the installation. Contractor shall provide eight (8) man hours of instruction time.

2. The primary adjustments of the system(s) shall be accomplished by the Contractor at the time of completion of the installation.

L. OPENINGS, SLEEVES AND CHASES

1. Electrical Contractor Provides:

a. All opening and hole information through floors, walls, and roofs for his work; including all pipe and conduit, inserts, hangers, and plates; and all flashing and sealant for those openings and holes.

b. Exact information to other Contractors as to size, depth, and location of such openings before construction is in place; and delivery and setting in place of all boxes, sleeves, inserts, and forms for his work in time for installation in all locations.

c. All cutting, patching and restoration to accommodate Electrical Contractor's failure to provide specified data in time for openings to be left or to accommodate boxes, sleeves, inserts or forms after construction has been completed by other Contractors.

d. Skilled craftsman to cut, patch, rebuild, restore, replace, refinish and repaint new construction cut, disturbed, or marred by him to original or new condition; for installation of new, exposed, concealed, underground, or underfloor work of all kinds; for admission of new work and equipment; for installation of new equipment and new work in new construction; for complete restoration of pipe, duct, or equipment covering disturbed or marred by his personnel.

e. Cutting:
   1. Use core drill or radial saw with approved methods.
   2. Cutting of lintels, structural steel, or reinforcement not permitted.

M. PATCHING AND REPAIR

1. Where this contractor has removed equipment, devices, fittings, conduits, raceways, etc., he shall patch existing construction and finishes to match existing or as directed by the Architect/Engineer.

END OF SECTION

SECTION 16100

BASIC ELECTRICAL MATERIALS & METHODS

PART 1 - GENERAL

A. RELATED DOCUMENTS

1. The General Provisions of the Contract, including Conditions of the Contract and Division 1 of the Specifications, apply to the work in this Section.

2. This Section is hereby made a part of all other sections of Division 16 as fully as if repeated in each therein.

B. DESCRIPTION

1. Provide items, articles, materials, operations and methods required by the drawings and specifications including labor, equipment, supplies and incidentals necessary for completion of the work in Division 16.

2. The following is an index of the items listed in this section:
   a. Raceways
   b. Wires and Cables
   c. Boxes
   d. Wiring Devices
   f. Supporting Devices
   g. Fire and Smoke Penetration Sealant
   h. Corrosion Prevention
   i. Panelboards
   j. Grounding
   k. Vibration Isolation

A. REGULATORY REQUIREMENTS

1. NFPA 70, National Electrical Code (NEC).

2. National Electrical Contractor's Association, NECA: Comply with specified portions of NECA, Standard of Installation.

3. National Electrical Manufacturer's Association, NEMA:

   a. Enclosures: Publication 250.
      1. Type 1: Indoor use, atmospheric conditions normal.
      2. Type 3R: Outdoor use, for protection against wind blown dust and rain, sleet, and external ice formation.

3. Type 4: Indoor and outdoor use, for protection against wind blown dust and rain, splashing water and hose directed water.

b. PB.1: Panelboards.

c. PB.1.1: Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.

d. PB2: Deadfront Distribution switchboards.

e. PB 2.1: Instructions for Safe handling, Installation and Maintenance of Deadfront Distribution switchboards, rated 600 V or less.

f. WD 6: Wiring device configurations.

g. RN-1: Polyvinyl-Chloride Externally Coated Galvanized Rigid Steel Conduit and Electrical Metallic Tubing.

4. Underwriter's Laboratories, UL:

a. All basic materials listed and labeled by UL.

b. UL 879: Wireways, Auxiliary Gutters & Associated Fittings.

c. UL 467: Grounding and Bonding equipment.

d. UL 489: Molded Case Circuit Breaker Switches & Enclosures.

e. UL 857: Safety Standard.

f. UL 891: Deadfront Electrical switchboards.

g. UL 651: Rigid Non-Metallic Conduit.

5. American National Standards Institute, ANSI:

a. ANSI C80.1: Specification for Rigid Steel conduit, Zinc Coated.

b. ANSI C80.3: Specification for Electrical Metallic Tubing, Zinc Coated.

c. ANSI FB 1: Fittings & Supports for Conduit and Cable Assemblies.

6. Institute of Electrical and Electronic Engineers, IEEE: Comply with specified IEEE Standards for electrical grounding.

7. Occupational Safety and Health Administration: Comply with Federal standards for workplace safety.

PART 2 - PRODUCTS

A. RACEWAYS

1. Conduit:

a. Provide complete metal raceway systems and enclosures for all wiring throughout the extent of the systems specified.

b. Conduits shall be 1/2" minimum size, unless indicated otherwise.

c. Electrical metallic tubing (EMT) "thinwall" conduit shall be 2" and smaller, unless otherwise indicated. EMT shall be hot-dipped galvanized or electro-galvanized steel.

d. Intermediate grade conduit (IMC) and galvanized rigid steel (GRS) shall be hot-dipped galvanized or electro-galvanized steel.

e. Conduits 2-1/2" and larger may, at the contractor's option, be Allied Tube and Conduit "KWIK-Couple."

f. Steel conduit manufacturers: Allied, LTV Steel and Wheatland. Conduit that shows corrosion within the 1-year guarantee period shall be replaced.

g. IMC and GRS conduit runs shall be made up with threaded joints and fittings.

h. EMT connectors and couplings shall be compression.

i. Conduit and EMT fittings shall be made of steel or malleable iron.

j. Indenter type fittings or die-cast fittings of pot metal shall not be accepted.

k. Box connectors shall be the insulated throat type for 1" trade size, and smaller for all low voltage wiring.

1. Manufacturers Conduit Fittings:
   a) Appleton
   b) Crouse-Hinds

c) OZ/Gedney
d) Raco
e) Steel City
f) T & B

l. Flexible metallic tubing (FMT) shall be listed for use in air-handling plenums and be limited to 3/8" trade size. Flexible metallic tube fittings shall be used with FMT.

1. Manufacturers FMT:
   a) Anamet Electrical
   b) Electri- Flex Company

2. Manufacturers FMT-Fittings:
   a) Liquid Tight Connector Co.

m. Flexible metal conduit (FMC) shall be UL listed and limited to 1/2" through 4" trade size. Flexible metal conduit connectors shall be of malleable iron or steel construction and shall be U.L. 514 listed as a grounding means.

1. Manufacturers FMC:
   a) Anamet Electrical
   b) Electri-Flex Co.
   c) International Metal Hose Co.

2. Manufacturers FMC Connectors:
   a) Appleton Electric Co.
   b) Crouse-Hinds/Cooper Ind.
   c) Hubbell Elec. Prod./RACO
   d) O-Z/Gedney
   e) Thomas & Betts Corp.

n. Liquid tight flexible metal conduit (LFMC) shall be UL 360 listed and limited to 1/2" through 4" trade size. LFMC shall have an oil and moisture proof PVC jacket extruded onto an interlocked galvanized steel core. LFMC connectors shall be of malleable iron or steel construction and shall be UL 514 listed as a grounding means. Connectors 1" trade size and smaller shall be the insulated throat type.

1. Manufacturers LFMC:
   a) Anamet Electrical
   b) Electri-Flex Co.
   c) International Metal Hose Co.

2. Manufacturers LFMC Connectors:
   a) Appleton Electric Co.

b) Crouse-Hinds/Cooper Ind.
c) Hubbell Elec. Prod./RACO
d) O-Z/Gedney
e) Thomas & Betts Corp.

o. Bushings:
1. Manufacturers:

a)	Appleton Electric Co.	Series BU50I
b)	O.Z./Gedney	Series IBC-50
c)	Thomas & Betts	Series 1222

2. Bushings for 1/2" conduit and larger shall be steel or malleable iron body with 105 degrees C insulating ring. Insulating material shall be locked in place and non-removable.

3. Grounding bushings for conduit 1/2" and larger shall be malleable iron body with 105 degree C non-removable insulating ring and lay-in solderless lug.

4. Threaded Type - Manufacturers:

a)	Appleton Electric Co.	Model: Series GIB-L
b)	O.Z./Gedney	Model: Type BLG
c)	Thomas & Betts	Model: Series BG

5. Set Screw Type - Manufacturers:

a)	Appleton Electric Co.	Model: Series GIB-SL
b)	O.Z./Gedney	Model: Type SBLG
c)	Thomas & Betts	Model: Series BG

p. Conduit Seals: Filled with compound as recommended by manufacturer. Seals shall be:

1.	Adelet	
2.	Crouse-Hinds	Model: EYS or EZS
3.	Appleton Electric Co.	Model: ESUF or ESUM
4.	Killark	Model: EY or EYS

q. Expansion Fittings: Provide a suitable expansion fitting in each concealed or exposed electrical raceway crossing a building expansion joint. Fittings shall be complete with bonding jumper and clamps.
1. Manufacturers:
a) O.Z./Gedney
b) Crouse-Hinds
c) Appleton Electric Co.

B. WIRES AND CABLES

1. Building Wiring: 98% conductivity copper, 600 volt insulation, Type THHN/THWN.

2. Branch Circuit Wiring: Conductors smaller than No. 12 AWG not permitted, except as noted.

3. Exterior Wiring: Type THWN and/or XHHW to comply with NEC for wet location wiring.

4. Joints and Splices: UL approved.

5. Wiring for Systems Other Than Power: Conform to system manufacturer standards as to size, type and coding, subject to specified minimums.
   a. Size conduit as required by system manufacturer, but no smaller than 3/4".

6. Provide permanent plastic name tag indicating load fed.

7. Color code conductors to designate neutral conductor and phase.

C. JOINTS, TAPS AND SPLICES

1. All materials and devices for joints, taps and splices shall be rated 600V, U.L. listed and flame retardant.

2. #8 AWG and Smaller Joints in Dry or Damp Locations: Use twist-on connectors with plated steel, square wire live spring and 105 degrees C thermoplastic or PVC shell.
   a. Manufacturers:

1.	Buchanan	Model: B-Cap
2.	Ideal	Model: Wing Nut
3.	3M	Model: Ranger
4.	T & B	Model: Marrettes

3. #8 AWG and Smaller Joints in Wet or Submersible Locations: Use twist-on connectors filled with waterproof/corrosion proof sealant, plated steel, square wire live spring and 105 degrees C thermoplastic shell.
   a. Manufacturers:
      1. Buchanan
      2. Ideal
      3. King Safety Products

4. #6 Awg and Larger Joints Above Grade, Dry Locations Only: Use self-insulated, conductor insulation piercing, bolted connector, dual rated for copper and aluminum wire, field modifiable for use as a tap splice.

a. Manufacturers:

1.	Blackburn	Model: Talon
2.	Burndy	Model: BIPC
3.	ILSCO	Model: KUP-L-TAP

5. #6 AWG and Larger Taps Below Grade, Damp and Wet Locations: Use parallel tap compression connector with manufacturer recommended insulation cover, high conductivity aluminum with corrosion resistant finish, minimum 600V, 90 degrees C. Connector shall be filled with antioxidant joint compound. Dual rated for both bare copper and aluminum wire.

a. Manufacturers:

1.	Burndy	Model: H-Crimpit
2.	Panduit	Model: H Type
3.	T & B	Model: HT Series

6. #6 AWG and Larger Splices Below Grade, Damp and Wet Locations: Use two-way splice connector and heat-shrinkable insulators internally coated with moisture resistant sealant. Connector shall be made of high conductivity aluminum with corrosion resistant finish, minimum 600V, 90 degrees C dual rated for both bare copper and aluminum wire. Connector shall be factory pre-filled with antioxidant joint compound.

a. Manufacturers:

1.	Burndy	Model: Hylink
2.	Panduit	Model: SA Type
3.	T & B	Model: 60500 Series

D. BOXES

1. Manufacturers:
   a. Appleton Electric Co.
   b. Crouse-Hinds.
   c. Harvey Hubbell, Inc.
   d. Hoffman Engineering Co.
   e. Lew Electric Fitting Co.
   f. O.Z./Gedney Co.
   g. Thomas & Betts Co., Inc.

2. General: Boxes in plenums shall be in accordance with applicable code.

3. Outlet Boxes: Hot dipped galvanized, 1.25 oz. per sq. ft. Handy boxes, sectional and switch boxes shall not be accepted.
   a. Interior Boxes: Pressed (drawn) sheet steel, 4" square by 1-1/2" or 2-1/2" deep, with knockouts for conduit; attached lugs for location.

b. Exterior Boxes: Galvanized malleable iron, deep type, corrosion- proof fasteners, water tight, gasketed, with threaded hubs.

c. Ceiling Boxes: 4" octagon boxes for 1 fixture; including fixture studs and maximum 2 connecting conduits.

d. Flush Mounted in Walls:
   1. Boxes with matching plaster cover for single or two gang outlets.
   2. Two-gang box or larger for conductors, conductor joints, conduit terminations and wiring devices.

e. Surface Mounted: 4" square with raised metal cover.

4. Pull Boxes and Junction Boxes: NEC metal construction with screw-on or hinged cover.
   a. Flush Mounted Pull Boxes: Overlapping covers with flush- head cover retaining screws; prime coated.

5. Conduit Bodies:
   a. Galvanized cast-metal of type, shape and size to fit each location.
   b. Constructed with threaded conduit ends, gasketed, removable cover and corrosion-resistant screws.

6. Bushings, Knockout Closures and Locknuts: Corrosion-resistant punched-steel box knockout closures, conduit locknuts and insulated metallic conduit bushings, type and size to suit each use.

E. WIRING DEVICES

1. Wall Switches: 120/277 volt, rated at 20 amps. Color ivory or selected by Architect.
   a. Manufacturers:
      1. Arrow Hart — Model: 1991
      2. Hubbell, Inc. — Model: CS1221
      3. P & S — Model: 20AC1

2. Receptacles: 125 volt, rated at 20 amps, NEMA5-20. Color ivory or selected by Architect.
   a. Receptacles Manufacturers:
      1. Arrow Hart — Model: 5352
      2. Hubbell, Inc. — Model: CR5362
      3. P & S — Model: 5352

   b. Ground Fault Circuit Interrupter Manufacturers:
      1. Arrow Hart — Model: GF5342

2. Hubbell, Inc. Model: GF5362
3. P & S Model: 2091-S

3. Plate Covers:
   a. Manufacturers:
      1. Arrow Hart
      2. Hubbell, Inc.
      3. Mulberry Metal Products, Inc.
      4. P & S

   b. Materials: Type 302/304, 0.035" thick, satin finish with smooth rolled outer edge.

   c. Flush Mounting Plates: Beveled type with smooth rolled outer edge.

   d. Surface Box Plates: Beveled, steel, pressure formed for smooth edge to fit box.

   e. Wet Location Plates/Enclosures: Hinged outlet cover/enclosure clearly marked "Suitable For Wet Locations While In Use" as per NEC 410-57(b) and "UL Listed". There must be a gasket between the enclosure and the mounting surface, and between the hinged cover and mounting plate/base to assure proper seal.
      a. Manufacturers: Tay Mac Specification Grade or Architect/Engineer approved equivalent.

F. SUPPORTING DEVICES

1. Locations:
   a. Anchor bolts, sleeves, inserts, hangers and supports required for the Electrical work shall be furnished and installed under Division 16.
   b. Coordinate with other trades the locations of anchors, sleeves, inserts and supports and insure that they are properly installed.
   c. Openings and sleeves shall be set true to line, level, plumb and position and shall be so maintained during construction. Where sleeves and openings are provided in poured concrete, inspect same during and after concrete is poured to insure proper position and correct any deviation.

2. Hangers and Supports:
   a. Provide hangers, angles, channels, and other supports required by field conditions to install items of electrical equipment. Design of supports and methods of fastening to building structure shall be acceptable to the Architect/ Engineer. Provide spring hangers for vertical raceway supports.

b. Use of powder-actuated fasteners and devices is permitted with the following requirements:
    1. Fasteners shall be applied with low velocity tool.
    2. Load capacity per fastener (9/64" shank diameter):
        a) For 1" penetration in concrete, 125 lbs. per fastener.
        b) For 1-3/4" penetration in concrete, 225 lbs. per fastener.
    3. Fasteners shall be located in thickest part of slab.
    4. Devices shall comply with OSHA requirements.
c. Use of lead shield expansion anchors is not permitted.
d. No electrical items shall rest on, or depend for support on, suspended ceiling media (tiles, lath, plaster, splines, etc.)
e. In suspended ceilings, support conduits directly from structural slabs, decks (or framing members.) Do not support conduits on ceiling suspension members.
f. Provide weight-distribution facilities, where required so as not to exceed the load-bearing capabilities of floors or walls that bear the weight of, or support, electrical items.
g. For point-of-attachment weight of 100 lbs. or less, fasten items as follows:
    1. On wood, use wood screws.
    2. On concrete and solid masonry that is already in place, use self-drilling concrete anchors or expansion bolt and couplings.
    3. On hollow construction, use toggle bolts.
    4. On solid metal, use machine screws in tapped holes, or welded studs.
    5. On structural steel, use beam clamps.
h. For point-of-attachment weights from 100 lbs. to 300 lbs. provide supports as follows:
    1. At cast-in-place concrete slabs, use concrete inserts in bottom of slab, with 1/8" slip-through steel rods set transverse to the reinforcing steel.
    2. At concrete slab already in place, use 16" x 8" x 1/2" steel plates at top of slab, with through bolts welded in place. The plates shall be chased in and grouted flush, where no fill is to be applied.
i. For point-of-attachment weights over 300 lbs., provide supports as follows:
    1. At cast-in-place concrete slabs, use 16" x 8" x 1/2" steel plate, with through bolts welded in place. Top of plate shall be 1-1/2" below top of slab, or on top of slab where a fill slab is to be installed.
j. Hangers and supports shall be hot dipped galvanized, unless noted otherwise.
k. Equipment shall not be held in place by its own dead weight. Provide base anchor fasteners in each case.

l. Trapeze type hangers may be used where several conduits are to be installed at the same elevation. The spacing of such trapeze hangers shall be in accordance with the NEC for the smallest conduit in the run.

m. Vertical conduits shall be supported by heavy wrought iron clamps or collars anchored to construction at each floor.

3. Sleeves and Openings:

a. Provide sleeves for conduit where they pass through walls or floors.

b. Sleeves shall be not less than 1" larger than outside dimension of raceways.

c. Floor sleeves shall be galvanized steel pipe stubbed 3" above floor. Unused sleeves shall be capped.

d. Provide 3" high concrete curbs around openings through floors.

e. Sleeves through equipment room walls and floors, sound rooms, private offices, classrooms and similar quiet areas shall have the net openings packed with glass fiber insulation and both ends of sleeve caulked with waterproof mastic to prevent noise, dirt, air, fire, smoke and water transmission. Match the fire rating of the surrounding construction. The utility companies shall pack the inside of their sleeves.

f. Where conduits pass through floors or exterior walls, caulk sleeves with oakum and lead wool at both ends to insure waterproofing around pipe.

g. Where conduits pass through foundation walls, provide entrance seals, Link Seal wall sleeve type "WS" and seal type "LS", O.Z./Gedney type WSK or CSM as applicable. For sealing of wires provide O.Z./Gedney type CSB unless noted otherwise.

h. Where conduits penetrate the roof, provide a pipe/conduit flashing system consisting of, but not limited to, a galvanized steel roof curb with integral base and continuously welded seams, rigid fiberglass insulation, wood nailer and pre-punched plastic curb cover with sealing ring and collard opening. Provide an EPDM molded rubber cap to accommodate the size and number of conduits. Seal each nipple to the conduit with the stainless steel adjustable band clamps provided.

1. Manufacturers:

a) The Pate Company

b) Thycurb

c) Roof Products & Systems Corp.

4. Inserts:

a. Manufacturers:

1. Barrett

2. Crawford

3. Elecn

4. Unistrut

5. Grinnel

b. Inserts for suspended items in poured concrete construction shall be malleable-iron concrete inserts, adjustable type with insert nut.

c. Inserts for surface mounted items shall be suitable for the composition of the slab, wall, or structure on which installation is to be made.

G. FIRE AND SMOKE PENETRATION SEALANT

1. NEC 300-21; UL rated flexible sealant.

H. CORROSION PREVENTION

1. Protect all metallic materials against corrosion.
   a. All equipment enclosures given rust-inhibiting treatment and standard finish by manufacturer.
   b. Ferrous Metal Parts: Hot dip galvanized, ASTM A123 or ASTM A153.
      1. Includes anchors, bolts, braces, boxes, bodies, clamps, fittings, guards, nuts, pins, rods, shims, thimbles, washers, and miscellaneous parts; other than stainless steel or non-ferrous materials.
2. Isolation of Dissimilar Metals: Separate dissimilar metals with NEC approved material.

I. PANEL BOARDS
1. Manufacturers:
   a. Cutler-Hammer
   b. Siemens I-T-E
   c. Square D Co.
   d. Allen Bradley
2. Refer to NEMA PB.1
3. Panelboards:
   a. Solid neutral design with sequence style bussing and full capacity neutral, composed of an assembly of bolt-in-place molded case automatic circuit breakers with thermal and magnetic trip and trip-free position separate from either ON or OFF positions.
   b. Provide common simultaneous trip for multipole breakers.
   c. Panelboards which accommodate tandem (half-size) circuit breakers are NOT acceptable.
   d. Provide interrupting ratings of 22,000 AIC at 240 volts, unless noted otherwise on Panel Schedules.
   e. All circuit breakers shall be fully rated to match the short circuit ratings of the panelboard.

4. Ground Bus: Included in panelboards by manufacturer and sized as required by code. Insulated bus shall be supplied where noted on Panel Schedules.

J. GROUNDING

1. Match power supply wiring materials and size in accordance with NEC.
2. Grounding Wire: 600 volt, green insulation, stranded copper conductors, in conduit sized in accordance with code.
3. Ground Rods:
   a. Copper clad steel, to meet or exceed U.L. spec. no. 467, 3/4" diameter by 10 ft long, or as indicated on plans.

K. VIBRATION ISOLATION

1. Manufacturers:
   a. Barry Division of Barry Wright Corp.
   b. Consolidated Kinetics Corp.
   c. Mason Industries
2. Vibration producing equipment shall have spring elements in the hanger rods or isolation pads under the equipment.
3. Conduit connections to vibration producing equipment shall be made with flexible conduit.

PART 3 - EXECUTION

A. INTERFERENCES
1. Coordinate work of this Division with other Divisions so that interference between piping, equipment, structural and electrical work will be avoided.
2. In case interference develops, Architect/Engineer will decide which equipment will be relocated; regardless of which apparatus was installed first.
3. Provide UL approved expansion fittings where materials cross building expansion joints.

B. RACEWAYS

1. Unless noted otherwise, provide raceways for the following locations:
   a. Above-Grade Interior Locations: Rigid galvanized steel.
   b. Exterior Exposed Locations: Rigid galvanized steel.
   c. Underground/Underfloor/In Slab: Rigid galvanized steel and water-tight fittings.
   d. Install liquid-tight flexible conduit where subjected to one or more of following conditions:
      1. Exterior location.
      2. Moist or humid atmosphere where condensate can be expected to accumulate.

2. Installation of Conduit:
   a. Install conduit and tubing products indicated, in accordance with manufacturer's written instructions and the requirements of the NEC and NECA, Standard of Installation.
   b. Joints in conduit run underground, exposed out-of-doors, or in slabs on grade shall be made watertight with copper based anti-corrosive conductive compound.
   c. Conceal conduit in all areas excluding mechanical, electrical, and other unfinished rooms, connections to motors, and connections to surface cabinets.
   d. All surface mounted conduits and tubing shall be securely supported within 1'-6" of each outlet, junction box, cabinet or fitting.
   e. Attach conduit with clamps.
   f. Flexible conduits shall not be secured to boxes, cabinets, enclosures or wireways by means of concentric or eccentric knockouts unless the conduit is securely fastened in place by an approved means within 12" of the connector.
   g. Exposed conduit in unfinished areas, damp and wet locations, or in areas subject to corrosive agents, shall be supported every five (5) feet so that there is at least 1/4" air space between it and the wall or supporting surface.
   h. Coordinate installation of conduit in partition work.
   i. Install conduit free from dents and bruises.
   j. Plug conduit ends to prevent entry of dirt or moisture.
   k. Clean out conduit before installation of conductors.
   l. Alter conduit routing to avoid structural obstructions, minimize cross-over; and where possible, install raceways above water and steam piping.
   m. Allow minimum 6" clearance at steam pipes and heat sources.
   n. Where portions of the conduit system are exposed to widely different temperatures, install conduit seals to prevent the circulation of air from a warmer to a colder section.
   o. Route all exposed conduits parallel or perpendicular to building lines.
   p. Seal opening around conduit with oakum, silicone sealant or fiberglass where conduits leave heated area and enter unheated area or non-fire rated partitions or ceilings.
   q. Where rigid conduit or intermediate metal conduit is installed in cabinet, junction box, pull box, or outlet box, protect conductors with nylon insulated metallic bushing with locknut on inside of enclosure or insulating plastic bushing with locknut on both sides of enclosure. In damp or wet locations, utilize sealing locknuts.
   r. Fire rated walls, partitions, floors, ceilings, penetrations: Sealed in accordance with NEC 300-21.

s. Roof Penetrations: Provide a manufactured pipe flashing system installed as per the manufacturer=s recommendations for a complete weathertight/watertight installation.

t. Where roof curbs are installed by other divisions, route and coordinate conduit within curb to avoid roof penetrations.

C. WIRES AND CABLES

1. Make conductor length for parallel feeders identical.
2. Lace or clip groups of feeder conductors at pull boxes.
3. Conductor size indicated on Drawings indicates amperage requirements using copper conductors.
4. Install wire and cable only in code conforming raceway.
5. Pulling: Use wire pulling lubricant for pulling #4 AWG and larger wire. Do not use pulling means, including fish tape, cable or rope which can damage raceway.
6. Splicing: Splice only in accessible junction or outlet boxes.
   a. Install splices and taps which have equivalent-or-better mechanical strength and insulation as conductor.
   b. Use splice and tap connectors compatible with conductor material.
   c. #8 and smaller joints: Use connectors specified with PVC or thermoplastic shell.
   d. #6 and larger joints: Prepare wires and cables in accordance with the manufacturer's recommended materials and procedures.
   e. Connectors which utilize torque to secure the connection shall be installed with a torque wrench to the value recommended by the manufacturer.
   f. Compression connectors shall be installed with full cycle circumferential compression tools and precision dies. Utilize wire preparation materials and techniques as directed by the connector/tool manufacturer.
   g. Joints, taps and splices in damp, wet or corrosive locations shall be insulated watertight with materials compatible with the conductor insulation, conductor/connector material and the environment in accordance with the manufacturers recommendations.
7. Prior to energizing, check for continuity of circuits, and for short circuits.
8. Subsequent to wire and cable hook-ups, energize panel and demonstrate functioning in accordance with specifications.
9. Arrange feeders so that loads are balanced within $\pm$ 10% on all three phases.
10. Phase Identification: Branch circuit conductors shall be color-coded to differentiate the phases, the same color being assigned to the same phase throughout the job. Phase indication shall be as allowed by code.

D. BOXES

1. Provide knockout closures to cap unused knockout holes where blanks have been removed.
2. Support all boxes independently of conduit.
3. Outlet Boxes:
   a. Flush mount outlet boxes in areas other than mechanical rooms, electrical rooms, and above removable ceilings.
   b. Do not install boxes back-to-back in same wall.
   c. Masonry Walls:
      1. Adjust position of outlets in finished masonry walls to suit masonry course lines.
      2. Coordinate cutting of masonry walls to achieve neat openings for boxes.
      3. Locate boxes in masonry walls so that only corner need be cut from masonry units.
   d. Do not use sectional or handy boxes.
   e. Adjust outlet mounting height to agree with specified location for equipment served.
4. Pull Boxes and Junction boxes: Locate pull boxes and junction boxes above removable ceilings or in electrical rooms, utility rooms, or storage areas.

E. SUPPORTING DEVICES

1. Installation: Maintain headroom, neat mechanical appearance, and support equipment loads specified.

F. FIRE AND SMOKE PENETRATION SEALANTS

1. Fire rated walls, partitions, floors, ceilings, penetrations: Sealed in accordance with NEC 300-21.

G. CORROSION PREVENTION

1. Protect all materials against corrosion; and isolate dissimilar materials.

END OF SECTION

DIVISION 16 - ELECTRICAL
SECTION 16111 - CONDUIT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. The General Provisions and Supplementary Conditions of the Contract of the Specifications, apply to the work in this Section.

B. This Section is hereby made a part of all other sections of Division 16 as fully as if repeated in each therein.

1.02 SECTION INCLUDES

A. Metal conduit.

B. Flexible metal conduit.

C. Liquid tight flexible metal conduit.

D. Nonmetal conduit.

1.03 REFERENCES

A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.

B. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.

C. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.

D. Local Electrical Code.

E. NECA "Standard of Installation."

F. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.

G. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.

1.04 SUBMITTALS

A. Submit under provisions of Division 1 General Requirements and Section 16010.

B. Product Data: Provide for metallic conduit, flexible metal conduit, liquid tight

flexible metal conduit, metallic tubing, nonmetallic conduit, fittings, and conduit bodies.

C. Project Record Documents: Accurately record actual routing of conduits 1-1/4 inches and larger.

1.05 QUALIFICATIONS AND REQUIREMENTS

A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum three years' experience.

B. Conform to requirements of local electrical code.

C. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

1.06 COORDINATION

A. Coordinate under provisions of Division 1 General Requirements and Section 16010.

B. Design Requirements: Conduit Size per local electrical code.

C. Field Measurements: Verify that field measurements are as shown on Drawings.

D. Field Locations: Verify routing and termination locations of conduit prior to rough-in.

E. Where conduit routing is shown on Drawings, it is in approximate locations unless dimensioned. Include conduit lengths within 10 ft. of length where shown.

F. Where conduit destination is indicated and routing is not shown on Drawings, determine exact routing and lengths required.

1.09 DELIVERY, STORAGE, PROTECTION, AND HANDLING

A. Accept Products and inspect for damage.

B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

C. Protect PVC conduit from sunlight.

D. Conduit that shows corrosion within the guarantee period shall be replaced.

PART 2 - PRODUCTS

2.01 METAL CONDUIT

A. Manufacturers:

1. Allied.
2. LTV/Republic.
3. Steelduct.
4. Wheatland.

B. Rigid Steel Conduit: ANSI C80.1; hot dipped or electro-galvanized steel.

C. Intermediate Metal Conduit (IMC): Rigid steel.

2.02 FLEXIBLE METAL CONDUIT

A. Description: Interlocked galvanized steel construction.

B. Fittings: ANSI/NEMA FB 1; steel or malleable iron.

C. Minimum Size: 1/2 inch (13 mm), unless otherwise specified.

2.03 LIQUID TIGHT FLEXIBLE METAL CONDUIT

A. Manufacturers:

1. Anaconda.
2. American Brass.
3. Electri-Flex Company.

B. Description: Interlocked galvanized steel construction with UL PVC jacket.

C. Fittings: ANSI/NEMA FB 1; steel or malleable iron.

2.04 ELECTRICAL METALLIC TUBING (EMT)

A. Manufacturers:

1. Allied.
2. LTV/Republic.
3. Steelduct.
4. Wheatland.

B. Description: ANSI C80.3; hot dipped or electro-galvanized tubing.

2.05 NONMETALLIC CONDUIT

A. Manufacturers:

1. Carlon.
2. Sedco.

B. Description: NEMA TC 2; Schedule 40 PVC, type EB for concrete encasement.

C. Fittings and Conduit Bodies: NEMA TC 3; material to match conduit.

PART 3 - EXECUTION

3.01 CONDUIT SCHEDULE

A. Underground Installations more than five feet from foundation wall: Rigid steel conduit with treaded fittings.

B. Installations in or under concrete slab, or underground within five feet of foundation wall: Rigid steel conduit with threaded fittings.

C. Exposed Outdoor Locations: Rigid steel with steel threaded fittings.

D. Wet Interior Locations: Rigid steel with steel threaded fittings

E. Inside the dry riser of the elevated water storage tank: This areas is to be considered a wet location and all electrical devices shall be Nema 3R or 4X using Rigid steel with steel threaded fittings

F. Concealed dry interior locations: Intermediate metal conduit with compression fittings.

G. Exposed Dry Interior Locations: Intermediate metal conduit with compression fittings.

3.02 CONDUIT REQUIREMENTS

A. Minimum Size: 3/4 inch except conduits to switches and receptacles having 5 or less #12 conductors shall be ½" C unless noted otherwise. All low voltage or SCADA to be min. 3/4".

B. Conduit installed below grade at exterior locations may be Schedule 40 PVC when encased within a 2 inch concrete enclosure.

C. Flexible conduit connections to recessed lighting fixtures shall be made with UL approved flexible steel conduit, except where UL listed liquid tight flexible conduit is required by code, such as in air plenums, etc.

D. Final connections to motors shall be made through UL listed liquid tight flexible steel conduits, 1/2 inch minimum size unless otherwise indicated.

E. Flexible connections, where required, shall be made with flexible metallic tubing 1/2 inch minimum size or sized in accordance with code, except in areas where such connections will be exposed to oil, grease, water, or where installed out of doors. In those areas of adverse exposure, flexible connections shall be made with UL listed liquid tight flexible steel conduit. Grounding conductors with green colored insulation shall be extended through all flexible connections including fixture "whips", and fastened to terminals within the first junction boxes on either side of the flexible length.

3.03 INSTALLATION - CONDUIT

C. Install conduit in accordance with NECA "Standard of Installation." Install nonmetallic conduit in accordance with manufacturer's instructions.

D. Arrange conduit to maintain headroom and present neat appearance.

E. Route conduit parallel and perpendicular to walls and ceilings.

F. Route conduit in and under slab from point-to-point. Do not cross conduits in slab.

G. Maintain adequate clearance, minimum of 12 inches, between conduit and any other piping, and surfaces with temperatures exceeding 104 degrees F (40 degrees C).

H. Cut conduit square using saw or pipe cutter; de-burr cut ends.

I. Install no more than equivalent of three 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one-shot bender to fabricate bends in metal conduit larger than 2 inch (50 mm) size, or provide factory elbows.

J. Provide suitable pull string in each empty conduit except sleeves and nipples.

K. Ground and bond conduit under provisions of Section 16170.

L. Where exposed conduit runs are shown or required, they shall be run parallel to building construction and shall be suitably supported at required intervals.

M. Conduit stub ups and stub downs, and conduits run to and from cabinets shall be run neatly, in accurate manner, and shall emerge from the floors and ceilings at right angles thereto.

N. Exposed conduit installed on or adjacent to ducts or piping shall be run from ceiling or wall junction boxes in such manner as to retain accessibility to junction box covers and to permit future removal, replacement or maintenance of that other equipment.

O. Non-metallic conduit direction changes shall be made by use of large radius bends, sweeps, or offsets.

P. Steel conduit sections of the same size as the non-- metallic conduit shall be used to terminate non-metallic conduit runs in hand holes, power pits, building line, changes above or below grade, etc. Length of steel conduit sections shall extend a minimum of 5 feet from outside face of handhold, or power pit, building line, etc.

3.04 INSTALLATION - FITTINGS

A. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.

B. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.

C. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.

D. Provide conduit seals for conduits and ducts entering/exiting hazardous locations.

E. Provide suitable fittings to accommodate expansion and deflection where conduit crosses expansion joints and in each uninterrupted run of horizontal or vertical conduit in excess of 100 feet. Fittings shall be complete with bonding jumpers and clamps.

F. Use suitable caps to protect installed conduit from entrance of dirt or moisture.

G. Double locknuts shall be used at termination of IMC and HWG conduit in knock-out openings.

H. Ends of conduits shall be equipped with insulating bushings for 1 inch and smaller and insulated metallic bushings for 1-1/4 inches and larger. Ends of conduit shall be temporarily capped prior to installation and during construction to exclude foreign material.

I. Joints in conduit run underground or in slabs on ground shall be made watertight with copper base anti-corrosive conductive compound.

J. No running threads shall be cut or used.

K. Transitions between non-metallic and steel conduit shall be made by means of conduit manufacturer's standard adapters.

3.05 INSTALLATION - SUPPORTS

A. Arrange supports to prevent misalignment during wiring installation.

B. Conduit embedded in underground concrete shall be adequately supported to prevent movement during concrete placement. Compact gravel fill and soil below underground conduit or support conduit with suitable separators and chairs prior to placing concrete.

C. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.

D. Group related conduits; support using conduit rack. Construct rack using steel channel.

E. Fasten conduit supports to building structure and surfaces under provisions of Section 16190. Do not fasten conduits or electrical devices and enclosures to ladders, ladder supports, water piping or hand rails.

F. Do not support conduit with wire or perforated pipe straps. Remove all temporary supports.

G. Bring conduit to shoulder of fittings; fasten securely.

H. Conduit risers shall be rigidly supported on the building structure, using appropriate supports only.

I. Conduit embedded in concrete structure shall have a minimum cover of 1 inch to parallel concrete surface. Parallel conduit runs within concrete shall have not less than 4 inches clear space between conduits, or spacing equal to 2 outside diameters, whichever is greater.

J. Conduit embedded in concrete shall be located by the trades concerned, between the bottom and top reinforcement. Conduit parallel to reinforcing steel shall not be supported by or tied directly to the steel. It shall be supported on bar chairs or support bars provided solely for that purpose.

K. Conduits and other electrical items shall be separately supported directly to structural elements. Do not use piping, ducts, or other mechanical or process system components to support conduit.

L. Exposed conduits run on surfaces shall be supported according to code and

within 3 feet of each outlet, junction box, or cabinet, by galvanized malleable conduit clamps and clamp backs. Suspended conduits shall be supported every 5 feet by conduit hangers and round rods, or where 2 or more conduits are run parallel, by trapeze hangers suitably braced to prevent swaying.

M. Screws for exposed work shall be stainless steel.

N. All trenching, coring, backfilling and compacting for the electrical installation is by the electrical contractor. All excess debris from trenching and coring shall be removed from the site by the electrical contractor.

O. All underground site work conduit shall be minimum 36” below finished grade or below frost line whichever is deepest. Unless noted otherwise, underground conduits shall be concrete encased PVC Schedule 40. Galvanized rigid steel conduits will be used under concrete areas and thru footing, foundation, etc.

3.06 INTERFACE WITH OTHER PRODUCTS

A. Install conduit to preserve fire resistance rating of partitions and other elements, using materials and methods under the provisions of Section 07270.

B. Coordinate conduit with cathode system manufacturer.

END OF SECTION

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DIVISION 16 - ELECTRICAL

SECTION 16123 - BUILDING WIRE AND CABLE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Building wire and cable.

B. Underground feeder and branch circuit cable.

C. Wiring connectors and connections.

1.02 REFERENCES

A. ANSI/NFPA 70 - National Electrical Code.

1.03 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Provide for each cable assembly type.

C. Test Reports: Indicate procedures and values obtained.

D. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency specified under Regulatory Requirements.

1.04 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.05 FIELD SAMPLES

A. If requested, provide under provisions of Section 01400.

B. Select each length to include complete set of manufacturer markings.

C. Attach tag indicating cable size and application information.

1.06 PROJECT CONDITIONS

A. Verify that field measurements are as shown on Drawings.

B. Conductor sizes are based on copper.

C. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required meeting Project Conditions.

D. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

1.07 COORDINATION

A. Coordinate Work under provisions of Section 01041.

B. Determine required separation between cable and other work.

C. Determine cable routing to avoid interference with other work.

PART 2 PRODUCTS

2.01 BUILDING WIRE

A. Description: Single conductor insulated wire.

B. Conductor: Copper.

C. Insulation Voltage Rating: 600 volts.

D. Insulation:
1. Feeders and Branch Circuits: ANSI/NFPA 70, XHHW.
2. All other locations: ANSI/NFPA 70, THHN.

2.02 CABLE

A. Description: Multiple conductor insulated wire with insulated flexible cord outer jacket.

B. Conductor: Copper.

C. Insulation Voltage Rating: 600 volts.

D. Insulation: ANSI/NFPA 70, Type as required for oil-resistant wet or submerged application.

2.03 WIRING CONNECTORS

A. Split Bolt Connectors
   1. Thomas & Betts.
   2. Burndy.

B. Solderless Pressure Connectors
   1. Thomas & Betts.
   2. Burndy.

C. Compression Connectors
   1. Thomas & Betts.
   2. Burndy.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that interior of structure has been protected from weather
.

B. Verify that mechanical or other trades' work likely to damage wire and cable has been completed.

3.02 PREPARATION

A. Completely and thoroughly swab raceway before installing wire.

3.03 WIRING METHODS

A. All Locations: Use only building wire, Type THHN/THWN insulation, in raceway.

3.04 INSTALLATION

A. Install products in accordance with manufacturer’s instructions.

B. Minimum wire 10 AWG.

C. Use stranded conductors for all circuits.

D. Use 8 AWG conductors for 20 ampere, 120 volt branch circuits longer than 100 feet.

E. All circuits shall have dedicated neutrals.

F. All raceways shall have a grounding conductor.

G. Pull all conductors into raceway at same time.

H. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
I. Use suitable cable fittings and connectors

J. Neatly train and lace wiring inside boxes, equipment, and panel boards.

K. Clean conductor surfaces before installing lugs and connectors.

L. Make splices, taps, and terminations to carry full amp capacity of conductors with no perceptible temperature rise.

M. Use suitable reducing connectors or mechanical connector adaptors for connecting dissimilar metals to copper conductors.

N. Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.

O. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.

3.05 INTERFACE WITH OTHER PRODUCTS

A. Identify wire and cable under provisions of Section 16195.

B. Identify each conductor with its circuit number or other designation indicated on Drawings.

3.06 FIELD QUALITY CONTROL

A. Perform field inspection and testing under provisions of Section 01400.

B. Inspect wire and cable for physical damage and proper connection.

C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.

D. Verify continuity of each branch circuit conductor.

END OF SECTION

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DIVISION 16 - ELECTRICAL
SECTION 16130 - BOXES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wall and ceiling outlet boxes.

B. Pull and junction boxes.

1.02 REFERENCES

A. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.

B. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers, and Box Supports.

C. ANSI/NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports.

D. ANSI/NFPA 70 - National Electrical Code.

E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.03 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 01700.

B. Accurately record actual locations and mounting heights of outlet, pull, and junction boxes.

1.04 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

1.05 PROJECT CONDITIONS

A. Verify field measurements are as shown on Drawings.

B. Verify locations of boxes and outlets prior to rough-in.

C. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

PART 2 PRODUCTS

2.01 OUTLET BOXES

A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
   1. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; include 1/2 inch (13 mm) male fixture studs where required.
   2. Concrete Ceiling Boxes: Concrete type.

B. Nonmetallic Outlet Boxes: ANSI/NEMA OS 2.

C. Cast Boxes: NEMA FB 1, Type FD, cast iron alloy. Provide gasketed cover by box manufacturer. Provide threaded hubs.

2.02 PULL AND JUNCTION BOXES

A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.

B. Surface-Mounted Cast Metal Box: NEMA 250, Type 4 flat-flanged, surface-mounted junction box.
   1. Material: Galvanized cast iron.
   2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

C. In-Ground Cast Metal Box: NEMA 250, Type 6, outside flanged, recessed cover box for flush mounting.
   1. Material: Galvanized cast iron.
   2. Cover: Nonskid cover with neoprene gasket and stainless steel cover screws.
   3. Cover Legend: ELECTRIC.

D. Surface-Mounted Non-Metallic Box: NEMA 250, Type 4X flat-flanged, surface-mounted junction box.
   1. Material: fiberglass reinforced polyester.
   2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install electrical boxes as shown on Drawings or required by code, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.

B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.

C. Install pull boxes and junction boxes in accessible areas only.

D. Inaccessible Areas: Install outlet and junction boxes no more than 6 inches from access panel or from removable luminaire.

E. Install boxes to preserve fire resistance rating of partitions and other elements.

F. Align adjacent wall-mounted outlet boxes for switches, thermostats, and similar devices with each other.

G. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.

I. Use stamped steel bridges to fasten flush mounting outlet box between studs.

J. Install flush mounting box without damaging wall insulation or reducing its effectiveness.

K. Use adjustable steel channel fasteners for hung ceiling outlet box.

L. Do not fasten boxes to ceiling support wires.

M. Support boxes independently of conduit, except cast box that is connected to two rigid metal conduits both supported within 12 inches of box.

O. Use gang box where more than one device is mounted together. Do not use sectional box.

P. Use gang box with plaster ring for single device outlets.

Q. Use cast outlet box in exterior locations and wet locations.

R. Use cast floor boxes for installations in slab on grade; formed steel boxes are acceptable for other installations.

S. Set floor boxes level.

T. Large Pull Boxes: Boxes larger than 100 cubic inches in volume or 12 inches in any dimension.
   1. Interior Dry Locations: Use hinged enclosure under provisions of Section 16170.
   2. Other Locations: Use surface-mounted cast metal or non-metallic box.

3.02 INTERFACE WITH OTHER PRODUCTS

A. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.

B. Coordinate mounting heights and locations of outlets mounted above counters, benches and backsplashes.

C. Position outlet boxes to locate luminaires as shown on plan.

3.03 ADJUSTING

A. Adjust flush-mounting outlets to make front flush with finished wall material.

B. Install knockout closure in unused box opening.

END OF SECTION

DIVISION 16 - ELECTRICAL

SECTION 16141 - WIRING DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wall switches.

B. Receptacles.

C. Device plates and decorative box covers.

1.02 REFERENCES

A. NEMA WD 1 - General Purpose Wiring Devices.

B. NEMA WD 6 - Wiring Device Configurations.

1.03 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

C. Manufacturer's Instructions:
   1. Indicate application conditions and limitations of use stipulated by product testing agency specified under regulatory requirements.
   2. Include instructions for storage, handling, protection, examination, preparation, operation and installation of product.

1.04 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 PRODUCTS

2.01 WALL SWITCHES

A. Manufacturers:
   1. Hubbell.
   2. Pass & Seymour.

3. Leviton.
4. Cooper Wiring Devices

B. Description: NEMA WD 1, heavy-duty, AC only, specification grade, 20A, 10-277V, back and side wired, general-use snap switch.

C. Device Body: Plastic with toggle handle, ivory, or color to match existing.

2.02 RECEPTACLES

A. Manufacturers:
1. Hubbell.
2. Pass & Seymour.
3. Substitutions: Under provisions of Section 01600.

B. Description: NEMA WD 1; heavy-duty, specification grade, 20A, 120V, NEMA 5-20R, back and side wired, general-use receptacle. Receptacles shall be constructed to include a grounding pole from which a wired connection to ground shall be provided.

C. Device Body: Plastic, ivory or color to match existing

D. Configuration: NEMA WD 6; type as specified and indicated.

E. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.

2.03 WALL PLATES

A. Match switch and receptacle manufacturer. Provide matching cover plates for switches and receptacles within same area, unless otherwise specified.

B. Weatherproof Cover Plate: Gasketed cast metal with hinged gasketed device cover as per NEC 410-57(b).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify conditions under provisions of Section 01040.

B. Verify outlet boxes are installed at proper height.

C. Verify wall openings are neatly cut and will be completely covered by wall plates.

D. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.02 PREPARATION

A. Provide extension rings to bring outlet boxes flush with finished surface.

B. Clean debris from outlet boxes.

3.03 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install devices plumb and level.

D. Install receptacles with grounding pole on bottom.

C. Install switches with OFF position down.

E. Connect wiring device grounding terminal to separate green branch circuit equipment grounding conductor.

F. Install plates on switch, receptacle, and blank outlets.

G. Connect wiring devices by wrapping conductor around screw terminal.

H. Use jumbo size plates for outlets installed in masonry walls.

I. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

3.04 INTERFACE WITH OTHER PRODUCTS

A. Coordinate locations of outlet boxes provided under Section 16130 to obtain mounting heights specified and indicated on Drawings.

B. Install wall switch 48 inches above finished floor.

C. Install convenience receptacles 18 inches above finished floor.

3.05 FIELD QUALITY CONTROL

A. Inspect each wiring device for defects.

B. Operate each wall switch with circuit energized and verify proper operation.

C. Verify that each receptacle device is energized.

D. Test each receptacle device for proper polarity.

E. Test each GFCI receptacle device for proper operation.

3.06 ADJUSTING

A. Adjust devices and wall plates to be flush and level.

END OF SECTION

DIVISION 16 - ELECTRICAL

SECTION 16170 - GROUNDING AND BONDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Grounding electrodes and conductors.

B. Equipment grounding conductors.

C. Bonding.

1.02 REFERENCES

A. ANSI/NFPA 70 - National Electrical Code.

1.03 GROUNDING ELECTRODE SYSTEM

A. Metal underground water pipe.

B. Rod electrode(s).

1.04 PERFORMANCE REQUIREMENTS

A. Grounding System Resistance: 5 ohms.

1.05 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Provide data for grounding electrodes and connections.

C. Test Reports: Indicate overall resistance to ground.

D. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation and installation of exothermic connectors.

1.06 PROJECT RECORD DOCUMENTS

A. Submit under provisions of Section 01700.

B. Accurately record actual locations of grounding electrodes.

1.07 REGULATORY REQUIREMENTS

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

PART 2 PRODUCTS

2.01 ROD ELECTRODE

A. Manufacturers:
   1. Weaver.
   2. Substitutions: Under provisions of Section 01600.

B. Material: Copper-clad steel.

C. Diameter: 3/4 inch.

D. Length: 10 feet.

2.02 MECHANICAL CONNECTIONS

A. Manufacturers:
   1. Weaver.
   2. Thomas & Betts
   2. Substitutions: Under provisions of Section 01600.

B. Material: Bronze.

2.03 EXOTHERMIC CONNECTIONS

A. Manufacturers:
   1. Erico Products, "Cadweld."
   2. Substitutions: Under provisions of Section 01600.

2.04 WIRE

A. Material: Stranded copper.

B. Foundation Electrodes: No. 2 AWG.

C. Grounding Electrode Conductor: Size as indicated or as per NFPA 70 requirements.

2.05 GROUNDING BUSHINGS

A. Manufacturers:
   1. Appleton GIB-50L.
   2. OZ/Gedney IBC-50L.
   3. Thomas & Betts 3870.

B. Material: Malleable iron, threaded, with insulated liner and solderless lug.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that final backfill and compaction has been completed before driving rod electrodes.

3.02 INSTALLATION

A. Install Products in accordance with manufacturer's instructions.

B. Install rod electrodes at locations indicated, minimum spacing 2-1/2 times rod length to nearest grounding electrode. Install additional rod electrodes as required to achieve specified resistance to ground.

C. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing.

D. Provide bonding to meet Regulatory Requirements.

E. Provide a separate ground conductor in each feeder and branch circuit.

F. Flexible Conduit Connections: Provide separate, insulated ground bonding-jumper conductor within each flexible conduit.

3.03 INTERFACE WITH OTHER PRODUCTS

A. Interface with site grounding system.

3.04 FIELD QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

B. Use suitable test instrument to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall-of-potential method.

END OF SECTION

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DIVISION 16 - ELECTRICAL

SECTION 16190 - SUPPORTING DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Conduit and equipment supports.

B. Fastening hardware.

1.02 COORDINATION

A. Coordinate size, shape and location of concrete pads with Section 03300 Cast-in-Place Concrete.

1.03 QUALITY ASSURANCE

A. Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.

PART 2 PRODUCTS

0.01 PRODUCT REQUIREMENTS

A. Materials and Finishes: Provide adequate corrosion resistance.

B. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products. Design of supports and methods of fastening to building structures shall be acceptable to the Architect/Engineer.

C. Anchors and Fasteners: For point of attachment weight of 100 pounds or less.

1. Concrete Structural Elements: Use precast insert system, expansion anchors, and preset inserts.
2. Steel Structural Elements: Use beam clamps.
3. Concrete Surfaces: Use self-drilling anchors and expansion anchors.
4. Hollow Masonry, Plaster, and Gypsum Board Partitions: Use toggle bolts.
5. Solid Masonry Walls: Use expansion anchors and preset inserts.
6. Sheet Metal: Use sheet metal screws.
7. Wood Elements: Use wood screws.

D. Anchors and Fasteners: For point of attachment weight of 100 pounds or more, obtain direction and approval from Architect/Engineer. All fasteners shall be galvanized stainless steel 304.

0.02 STEEL CHANNEL

A. Manufacturer:

1. B-Line.
2. Unistrut.
3. Allied.

B. Description: Galvanized steel with baked enamel finish.

0.03 VIBRATION ISOLATION

A. Suspended vibration producing equipment shall have spring elements in the hanger rods or isolation pads under the equipment.

0.04 EQUIPMENT BASES

A. Provide 6" high concrete pads for floor mounted electrical equipment. The edge of the concrete pads shall have 1/4" chamfer. The pad dimensions shall be at least one inch greater on each side than the floor dimensions of the electrical equipment.

B. Concrete pads shall include steel reinforcing and necessary bolts, anchors, etc. Where concrete pad is set directly on concrete floor, dowels in floor to tie base to floor shall be provided.

PART 3 EXECUTION

3.01 INSTALLATION

A. Fasten hanger rods, conduit clamps, and outlet and junction boxes to structure using expansion anchors; preset inserts; beam clamps; spring steel clips.

B. Use toggle bolts or hollow wall fasteners in hollow masonry, partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; and wood screws in wood construction.

C. Do not fasten supports to piping, duct work, mechanical equipment, or conduit.

D. Do not use powder-actuated anchors.

E. Do not drill structural steel members.

F. Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under all nuts.

G. In wet locations install free-standing electrical equipment on concrete pads.

H. Install surface-mounted cabinets with minimum of four anchors. Provide steel channel supports to stand cabinet one inch off wall.

I. Do not connect to ladders, water pipes or handrails.

J. If paint is compromised, all repairs/repaint shall be completed as directed by the Engineer.

END OF SECTION

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DIVISION 16 - ELECTRICAL

SECTION 16195 - ELECTRICAL IDENTIFICATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nameplates and tape labels.

B. Wire and cable markers.

C. Conduit color coding.

1.02 SUBMITTALS

A. Submit shop drawings under provisions of Section 01300.

B. Include schedule for nameplates and tape labels.

PART 2 PRODUCTS

2.01 MATERIALS

A. Nameplates: Engraved three-layer laminated plastic, black letters on a white background.
   1. Size: 1 1/4 inch by 3 inch minimum.
   2. Location: Each normal electrical distribution and control equipment enclosure: switchboards, motor control centers, panelboards, transformers, motor starters, disconnect switches, circuit breakers, contactors, relay panels, control panels, and associated apparatus. Communications control and PLC cabinets.

B. Wire and Cable Markers: Embossed adhesive tape, with 3/16" white letters on black background.

2.02 PANELBOARD DIRECTORIES

A. Provide typewritten directory of branch circuit loads at all branch circuit panelboards, including circuit number, load location, and description.

PART 3 EXECUTION

3.01 INSTALLATION

A. Degrease and clean surfaces to receive nameplates and tape labels.

B. Install nameplates and tape labels parallel to equipment lines.

C. Secure nameplates to equipment fronts using screws, rivets, or adhesive.

D. Use embossed tape only for identification of individual wall switches and receptacles, and control device stations.

3.02 WIRE IDENTIFICATION

A. Provide wire markers on each conductor in control panel gutters, pull boxes, outlet and junction boxes, and at load connection. Identify with branch circuit or feeder number for power and lighting circuits, and with control wire number as indicated on equipment manufacturer's shop drawings for control wiring.

3.03 NAMEPLATE ENGRAVING SCHEDULE

A. Provide nameplates to identify all electrical distribution and control equipment, and loads served. Letter Height: 1/8" for individual switches and loads served, 1/4" for distribution and control equipment identification.

B. Provide nameplates of minimum letter height as scheduled below.

C. Individual Circuit Breakers, Switches, and Motor Starters in panel boards and Motor Control Centers: 1/8" (3 mm); identify circuit and load served, including location.

D. Individual Circuit Breakers and Enclosed Switches: 1/8" (3 mm); identify load served.

3.04 CONDUIT COLOR CODING SCHEDULE

A. Coordinate color of paint with Section 09900 - Painting to identifying conduit by system.

END OF SECTION

DIVISION 16 - ELECTRICAL

SECTION 16440 - DISCONNECT SWITCHES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Disconnect switches.

B. Fuses.

C. Enclosures.

1.02 REFERENCES

A. ANSI/UL 198C - High-Intensity Capacity Fuses; Current Limiting Types.

B. ANSI/UL 198E - Class R Fuses.

C. FS W-F-870 - Fuseholders (For Plug and Enclosed Cartridge Fuses).

D. FS W-S-865 - Switch Box, (Enclosed), Surface-Mounted.

E. NEMA KS 1 - Enclosed Switches.

1.03 SUBMITTALS

A. Submit product data under provisions of Section 01300.

B. Include outline drawings with dimensions, and equipment ratings for voltage, capacity, horsepower, and short circuit.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - DISCONNECT SWITCHES

A. Square "D" Company.

B. Cutler-Hammer, Eaton Corp.

C. Allen-Bradley.

D. Substitutions: Under provisions of Section 01600.

2.02 DISCONNECT SWITCHES

A. Fusible Switch Assemblies: NEMA KS 1; quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse Clips: Designed to accommodate Class R fuses.

B. Nonfusible Switch Assemblies: NEMA KS 1; Type HD; quick-make, quick-break, load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position.

C. Enclosures: NEMA KS 1; aAll locations: Type #r or 4X

2.03 ACCEPTABLE MANUFACTURERS - FUSES

A. Bussman.

B. Shawmut

C. Substitutions: Under provisions of Section 01600.

2.04 FUSES

A. Fuses 600 Amperes and Less: ANSI/UL 198C, Class J; ANSI/UL 198E, Class RK1 dual element, current limiting, time delay, one-time fuse, 600 volt.

B. Interrupting Rating: 200,000 RMS amperes.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install disconnect switches where indicated on Drawings.

B. Install fuses in fusible disconnect switches.

END OF SECTION

DIVISION 16 - ELECTRICAL

SECTION 16450 - SECONDARY GROUNDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Power system grounding.

B. Electrical equipment and raceway grounding and bonding.

1.02 SYSTEM DESCRIPTION

A. Ground the electrical service system neutral at service entrance equipment to metallic water service and to supplementary grounding electrodes.

B. Ground each separately-derived system neutral to nearest effectively grounded metallic water pipe or to separate grounding electrode.

C. Bond together system neutrals, service equipment enclosures, exposed non-current carrying metal parts of electrical equipment, metal raceway systems, grounding conductor in raceways and cables, receptacle ground connectors, and plumbing systems.

1.03 SUBMITTALS

A. Submit shop drawings under provisions of Section 01300.

B. Indicate location of system grounding electrode connections, and routing of grounding electrode conductor.

PART 2 PRODUCTS

2.01 MATERIALS

A. Ground Rods: Copper-encased steel, 3/4 inch diameter, minimum length 10 feet.

PART 3 EXECUTION

3.01 INSTALLATION

A. Provide a separate, insulated equipment grounding conductor in all raceways. Terminate each end on a grounding lug, bus, or bushing.

3.02 FIELD QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

B. Measure ground resistance from system neutral connection at service entrance to convenient ground reference point using suitable ground testing equipment. Resistance shall not exceed 10 ohms.

END OF SECTION

DIVISION 16 - ELECTRICAL
SECTION 16470 - PANELBOARDS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Panelboards.

1.02 DEFINITIONS

A. Panelboard: A panelboard with thermal magnetic circuit breaker branches, bolt-on type only, designed for heavy commercial use, operating at 600 V and below, 3-phase versions, equipped as either surface or flush mounting. Panelboard shall have more than 10% of its overcurrent devices rated 30 amperes or less for which neutral connections are provided.

B. Overcurrent Protective Devices – a circuit breaker pole or single fuse. Example: a 2-pole device is considered 2 protective devices.

1.03 REFERENCES

A. ANSI 61.

B. ANSI/NEMA KS 1, Enclosed and Miscellaneous Distribution Equipment Switches (600 volts).

C. ANSI/NEMA PB 1, Panelboards.

D. ANSI/NFPA 70, National Electrical Code.

E. ASTM – American Society of Testing Materials.

F. CSA C22.2 No. 29, Panelboards and Enclosed Panelboards.

G. CSA C22.2 No. 5.1, Molded Case Circuit Breakers.

H. Federal Specification W-C-375, Rev. B, Amend. 1, Circuit Breakers, Molded Case; Branch Circuit and Service.

I. Federal Specification W-P 115, Rev. C, Panel, Power Distribution.

J. NEMA AB1, Molded Case Circuit Breakers and Molded Case Switches.

K. NEMA PB 1.1, General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.

L. UL 489, Molded-Case Circuit Breakers and Circuit-Breaker Enclosures.

M. UL 50, Enclosures for Electrical Equipment.

N. UL 67, Panelboards,

O. UL 943, Ground-Fault Circuit-Interrupters.

1.04 SUBMITTALS

A. Submit under provisions of Division 1 and Section 16010.

B. Product Data: Provide for fusible switches and circuit breakers.

C. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, short circuit ampere rating, circuit breaker and fusible switch arrangement and sizes.

D. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

E. Project Record Documents: Record actual locations of panelboards and record actual circuiting arrangements in project record documents.

F. Maintenance Data: Include spare parts listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.

1.05 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum twenty years experience.

1.06 REGULATORY REQUIREMENTS

A. Conform to requirements of NFPA 70, unless otherwise specified.

B. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

1.07 COORDINATION

A. Coordinate under provisions of Division 1 and Section 16010.

B. Field Measurements: Verify that field measurements are as shown on Drawings.

C. Field Locations: Verify locations of panelboards prior to rough-in.

1.08 DELIVERY, STORAGE, PROTECTION, AND HANDLING

A. Deliver, store, protect and handle products in accordance with recommended practices in manufacturer's Installation and Maintenance Manuals.

B. Deliver each lighting panelboard in individual shipping cases for ease of handling. Each panelboard shall be wrapped for protection.

C. Inspect and report concealed damage to carrier within specified time.

D. Store in a clean, dry space. Maintain factory protective or cover with heavy canvas or plastic to keep out dirt, water, construction debris, and traffic. (Heat enclosures to prevent condensation).

E. Handle in accordance with NEMA and manufacturer's written instructions to avoid damaging equipment, installed devices and finish.

1.09 OPERATION AND MAINTENANCE DATA

A. Manufacturer shall provide copies of installation, operation and maintenance procedures to Owner in accordance with general requirements of Division 1 and Division 16.

B. Submit operation and maintenance data based on factory and field testing, operation and maintenance of specified product.

1.10 FIELD MEASUREMENTS

A. Make all necessary field measurements to verify that equipment shall fit in allocated space in full compliance with minimum required clearances specified in National Electrical Code.

1.11 EXTRA MATERIALS

A. Submit extra materials under provisions of sections 01730 and 16010.

B. Furnish two of each panelboard key.

PART 2 PRODUCTS

2.01 PANELBOARDS

A. Phase sequence and balance.

1. Phase sequence: A-B(-C), left to right.
2. Load balance: Distribute loads for maximum 10 percent difference.

B. Each panelboard, and associated fused switches and circuit breakers, shall be of the same manufacturer.

C. Each panelboard lock shall be operable by the same key.

D. Panelboard Manufacturers:
1. Square D
2. GE
3. Cutler-Hammer/Westinghouse

E. Fused Switch and Circuit Breaker Manufacturers: Matching the panel board manufacturer

F. Minimum Short Circuit Rating: Fully rated, 22,000 amperes RMS symmetrical for 240 volt panelboards; 22,000 amperes RMS symmetrical for 480 volt panelboards, or as indicated, or as required to be greater than the available short circuit current.

G. Enclosure

1. Boxes shall be a nominal 20 inches wide and 6 inches deep with wire bending space per local electrical code.
2. Fronts shall be reinforced steel with concealed hinges and concealed trim adjusting screws. Trim clamps are unacceptable.
3. All door locks shall be corrosion proof Valox (or equal) with retractable latches. All door locks shall be keyed for a single key.
4. Clean Lexan (or equal) directory card holders shall be permanently mounted on front door.
5. All panelboard series ratings shall be prominently displayed on dead front shield.
6. Interiors shall permit top or bottom incoming cables.
7. Boxes shall be corrosion resistant, zinc finish galvanized. Fronts shall be powder finish painted ANSI G1 gray.

A. Bus bars

1. Bus bars shall be copper and phase sequenced, fully insulated and supported by high impact Noryl (or equal) interior base assemblies.
2. Panelboard Bus: 1000 amp per sq. in. Copper, ampere and voltage ratings as indicated. Provide copper ground bus in each panelboard. Provide insulated ground bus where identified. Provide 200% rated neutral where identified.
3. Bus bars shall be mechanically supported by zinc finished galvanized steel frames to prevent vibration and damage from short circuits.
4. Terminations shall be UL tested and listed and suitable for UL copper wire.
5. Provide [1] continuous bus bar per phase. Each bus bar shall have sequentially phased branch circuit connectors for bolt-on branch circuit breakers. Bus bars shall be rated as indicated in drawings.
6. Split solid neural bus shall be plated and located in main compartment for all incoming neutral cables to be same length.
7. Lugs shall be rated for 75 degree C terminations.
8. Main lugs for copper conductors shall be bolted lugs.
9. Lug bodies shall bolt in place.

B. Circuit Breakers

1. Molded case circuit breakers shall be bolt-on type.
2. All circuit breakers shall have thermal and magnetic type elements in each pole.
3. Two and three pole breakers shall have internal common trip crossbars for simultaneous tripping of each pole.
4. Circuit breakers shall not be restricted to any mounting location due to physical size.
5. All branch breakers 15 to 100 amperes shall be able to be mounted in any panel position for twin or double mounting without space penalty. Sum of ratings for 2 such twin mounted devices shall not exceed 180 amperes.
6. Main and sub-feed circuit breakers may be vertically or horizontally mounted.
7. Branch breaker panelboard connections shall be copper to copper.
8. All panelboard terminations shall be rated as indicated in drawings.
9. All breakers shall have an over center mechanism and be quick make and quick break.
10. All breakers shall have handle trip indication and a trip indicator in window of circuit breaker housing.
11. Breaker handle and faceplate shall indicate rated ampacity.
12. Circuit breaker escutcheon shall have standard ON/OFF markings.

13. Main breakers shall be UL listed for use with: Shunt, Under Voltage, and Ground Fault Shunt Trips; Auxiliary and Alarm Switches; and Mechanical Lug Kits. Provide these accessories as indicated on drawings.
14. Where indicated on drawings, the branch circuit breakers shall be SWD type, type HACR for air-conditioning equipment, ground fault circuit interrupter type, arc fault circuit interrupter type and shall have shunt trip accessories.

PART 3 EXECUTION

3.01 PREPARATION

A. Verify field measurements.

B. Verify that required utilities are available, in proper location and ready for use.

C. Beginning of installation means installer accepts conditions.

3.02 INSTALLATION

A. Install panelboards in accordance with NEMA and NECA standards and as instructed by manufacturer.

B. Install panelboards plumb.

C. Support free-standing panelboards with structural channel framework.

D. Height: 6 feet to top of panelboard; install panelboards taller than 6 feet with lowest operating handle not lower than 18” above finished floor per NEC.

E. Provide filler plates for unused spaces in panelboards.

F. Provide typed circuit directory for each branch circuit panelboard under the provisions of Section 16195. Revise directory to reflect circuiting changes required to balance phase loads.

G. Provide engraved plastic nameplates under the provisions of Section 16195.

H. Test each key interlock system for proper functioning.

I. Ground and bond panelboard enclosure according to Section 16170.

J. Inspect installed panelboards for anchoring, alignment, grounding and physical damage.

K. Check tightness of all accessible mechanical and electrical connections with calibrated torque wrench. Minimum acceptable values are specified in manufacturer's instructions.

3.03 ADJUSTING

A. Measure steady state load currents at each panelboard feeder; rearrange circuits in the panelboard to balance the phase loads to within 10 percent of each other. Maintain proper phasing for multi-wire branch circuits.

B. Adjust all circuit breakers, access doors, operating handles for free mechanical and/or electrical operation as described in manufacturer's instructions.

END OF SECTION

SECTION 16864

ELECTRIC SPACE HEATING UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electric unit heaters.

B. Thermostats and accessories.

1.02 REFERENCES

A. NEMA DC 3 - Low Voltage Room Thermostats.

B. NEMA DC 15 - Line Voltage Room Thermostats.

1.03 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product data: Provide unit size, finish, and performance data.

C. Submit manufacturer's installation instructions.

1.04 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Section 01700.

B. Operation data: Include instructions for safe operating procedures.

C. Maintenance data: Include instructions for replacement parts and troubleshooting diagnostics.

D. Include recommended cleaning methods, cleaning materials, and waxes for interior parts and exterior finishes.

1.05 FIELD MEASUREMENTS

A. Verify that field measurements are as instructed by manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Berko.

B. Chromalox.

2.02 ELECTRIC HORIZONTAL DISCHARGE UNIT HEATERS

A. Description: Electric unit heater for suspended mounting, with fan forced air distribution over electric resistance heating coils and horizontal discharge.

B. Input voltage: As indicated on drawings.

C. Output rating: As indicated on drawings.

D. Heating element: Enclosed copper tube, aluminum finned element of coiled nickel-chrome resistance wire centered in tubes and embedded in refractory material.

E. Input Fuses: Provide integral fuses for units rated more than 48 amperes full load.

F. Provide built-in internal factory mounted line voltage disconnect switch for each input circuit.

G. Fabrication: Fabricate cabinet of heavy welded steel.

H. Provide captive-screw held panel for electrical connection and control compartment.

I. Provide internal shroud around heating elements to assure uniform air flow and delivery temperature across heater face.

J. Provide fan blade protection using wire guard.

K. Cabinet finish: Use corrosion-resisting primer and finish with beige baked enamel.

L. Contactor: Provide contactor control for unit.

M. Thermostat: Provide built-in integral low voltage thermostat to control temperature.

N. Provide internal low voltage control transformer.

O. Operating stages: One.

P. Provide terminal blocks for power and control wiring connections.

Q. Louver: Provide discharge louver with individually adjustable blades.

2.03 ACCESSORIES

A. Room thermostat: NEMA DC 15; heating only single line break line voltage thermostat with control point reset, and thermometer.

B. Factory mounting hardware

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are ready to receive work.

B. Verify that required utilities are available, in proper location and ready for use.

C. Beginning of installation means installer accepts existing conditions.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Locate each unit in position indicated.

C. Install unit with clearance from adjacent construction, piping, ductwork and other obstructions to allow access for service and maintenance.

D. Support unit heaters from structure.

3.03 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions for Section 01400.

B. Verify operation of each electric heating unit by measuring input voltage and current simultaneously for period of ten minutes of continuous operation.

3.04 DEMONSTRATION

A. Provide systems demonstration under provisions of Section 01650.

B. Demonstrate location of circuit breakers and switches serving electric heating branch circuits, and location and setting procedures for thermostats and other heating controls.

END OF SECTION

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SECTION 16900

INSTRUMENTATION SYSTEM

PART 1 GENERAL

1.01 SECTION INCLUDES

A. The Contractor and system integrator shall furnish and install instrumentation components necessary to monitor and control equipment at the Princeton Water Tower and integrate the equipment into the supervisory control and data acquisition (SCADA) system in accordance with the plans and specifications. The instrumentation system and SCADA system will interface with various equipment components to allow for centralized monitoring and in some instances, control. It shall be the Contractor's responsibility to coordinate with the system integrator and familiarize himself with the equipment and ensure all necessary interface devices are provided with equipment supplied for the project. A list of inputs and outputs required for each device is defined within these specifications.

B. The instrumentation system improvements shall include a complete programmable controller based control system consisting of the following major components and work items:

1. Field verify if existing SCADA panel and PLC have sufficient capacity to accommodate input/output signals from existing and new equipment.
    a. Furnish, install and program new equipment inputs/outputs into the existing SCADA panel.
    b. Rework the existing SCADA panel and PLC as required to accommodate inputs/outputs from existing and new equipment.
2. After field verification of the existing SCADA panel by the systems integration, if the capacity of the existing SCADA panel and/or PLC are confirmed as insufficient by the Owner and Engineer, then furnish, install and program a new SCADA panel equipped with a PLC, UPS, power supply, and appurtenances.
    a. Transfer and program all existing equipment into the new SCADA panel. Furnish and install additional wiring, cables, conduits and appurtenances as required to make transfer to new SCADA panel.

1. b. Furnish, install and program new equipment inputs/outputs into the new SCADA panel.

C. The central computer system's existing graphical interface software shall

be programmed with cascading graphical screens to accept inputs and outputs from the Princeton Water Tower.

1.02 SUBMITTALS

A. Submit Shop Drawings and Product Data in accordance with Section 01300.
   1. Indicate necessary interface connections with devices not supplied as part of the instrumentation package.

B. Submit Operation and Maintenance Manuals in accordance with Section 01700.

1.03 QUALITY ASSURANCE

A. The complete instrumentation system shall be furnished by a single manufacturer specializing in water and wastewater control systems and shall be responsible for the complete programming, initial start up, operator training, and warranty for all components. The manufacturer shall be regularly engaged in the supply of such systems.

B. The instrumentation equipment furnished shall conform to the latest electrical and instrument standards for the devices involved. All panels shall be UL labeled in accordance with UL standards. The instrumentation supplier shall be responsible for the compatibility of all instruments supplied.

C. The equipment supplier shall be responsible for providing the logic and registers to the systems integrator for control of the Princeton Water Tower system through the SCADA system. The system integrator is then responsible for integrating the control sequence into the PLC.

1.04 WARRANTY

A. The system integrator shall provide a single source warranty for all portions of the instrumentation package. Any and all warranty work required during the warranty period shall be furnished by the system integrator at no cost to the owner. All hardware and software shall be supplied with a one year warranty commencing at the time of engineers and owners acceptance as identified in Part 3 of this specification.

PART 2 PRODUCTS

2.01 EQUIPMENT

A. The instrumentation system supplier shall be responsible for furnishing equipment specified in the following specification sections:
   1. Pressure Transducer. Section 16900
   2. Tank Mixer, 16900
   3. Programmable Logic Controller (PLC-1) Section 16901
   4. Tower Valve Pit Flood Alarm

2.02 ACCEPTABLE SYSTEM INTEGRATOR

A. TRI-R Systems Incorporated (Contact: Tim Smith, (630) 514-6785).

PART 3 EXECUTION

3.01 INSTALLATION

A. The Contractor and system integrator shall install the instrumentation system in accordance with the specifications. The Contractor shall ensure all wiring between devices is installed to meet the intent of these specifications.

3.02 DESCRIPTION OF OPERATION

A. The Contractor shall install the instrumentation system in accordance with the various specification sections defined above. The Contractor shall ensure all wiring between devices is installed to meet the intent of these specifications.

B. PLC No. 1 (furnished by system integrator)

The sequence of operation for each of the equipment components shall be:

<u>Princeton Water Tower Equipment</u>

The Princeton Water Tower shall be monitored and controlled by the WTP PLC.

The sequence of operation associated with the Princeton Water Tower PLC includes:

Pressure Transducer:
The Princeton Water Tower water level shall be monitored by a pressure transducer located in the base of the water tower. The local pressure transducer controller will display the water level in the water tower, and the water level will also be displayed on the Princeton Water Tower PLC graphic. The pressure transducer shall be provided and installed by the Water Tower Contractor and shall be a Vegabar 38 Pressure Transducer.

The pressure transducer shall be NSF-61 and ANSI-372 compliant. It shall be the responsibility of the system integrator to program Princeton Water Tower PLC.

The primary method to start or stop the wells in the Village is based on the water level in the existing Water Tower (WT), which is currently monitored and controlled by the WTP PLCs at each WTP. An operator-selectable switch is presently used in the WTP PLCs to toggle between the existing WTs and the water levels in each WT. The System Integrator shall modify the operator selectable switch at each WTP to accommodate the Princeton Wate Tower and its water level. The Systems Integrator shall make all necessary investigations regarding the existing control system, including the mode of operation and all existing I/O and alarms. The Systems Integrator shall be responsible for incorporating all existing controls and alarms into the WTP PLC and adding such programming to make the Princeton Water Tower fully functional.

Tank Mixer:
The Tank Mixer System will consist of one (1) Tank Mixer and one (1) Tank Mixer Control Panel. The Tank Mixer System will be monitored and controlled locally by the Tank Mixer Control Panel and remotely by the WTP PLC. The System Integrator will be responsible for integrating all new controls and alarms into the WTP PLC and adding the necessary programming to make the Tank Mixer System fully operational.

In the "AUTO" position, the Tank Mixer System will operate based on operator-selectable set points for the water level in the water tower. In the "HAND" position, the Tank Mixer System will turn on/off based on manual operation of the Tank Mixer Control Panel. If the low water level alarm in the water tower is activated, the WTP PLC will deactivate the Tank Mixer System. The WTP PLC will reactivate the Tank Mixer System once the water level in the water tower reaches a level greater than or equal to the operator-selectable set points. The status of the Tank Mixer System position will be displayed on the WTP PLC.

The WTP PLC will include a Tank Mixer System graphic and indicate the H/O/A status and any alarm conditions.

There shall be a High-Speed Radio mounted on the top of the tower. The model shall match the one being supplied under another contract.

There shall be a fiber optic cable between the new Princeton Water Tower and the existing water treatment plant as shown on the drawings.

Alarm conditions for the Princeton Water Tower Level Equipment include:
1. Water Tower high level alarm

2. Water Tower low level alarm
3. Entry Alarm
4. High Temperature Alarm
5. Low Temperature Alarm
6. Tank Mixer Failure Alarm
7. Pressure Transducer Failure Alarm
8. Thermostat Failure Alarm
9. WTP Communication Failure Alarm
10. Valve Pit Flood Alarm

Indicate Princeton Water Tower level, set points, low tank level, high tank level and alarm conditions on the Princeton Water Tower PLC graphic and at the existing central computer station. Provide trending of the Princeton Water Tower elevation on the Princeton Water Tower PLC graphic and at the central computer station.

3.03 PRINCETON WATER TOWER INPUT/OUTPUT (I/O) LIST

A. PLC No. 1 – Princeton Water Tower (By System Integrator)
1. Inputs from Princeton Water Tower Equipment:
Pressure Transducer Reading
Pressure Transducer Alarm
Tank Mixer Running/Off
Tank Mixer H-O-A in Auto
Tank Mixer H-O-A in Hand
Tank Mixer Failure Alarm
Door Contact Open/Close
Thermostat Reading
Thermostat Failure
Valve Pit Flood Alarm

3.04 ALARM CONFIGURATION

A. The system integrator shall be responsible to ensure the alarm signals from the PLC systems are adequately identified and programmed. The alarms from PLC 1 have been defined in the I/O list.

3.05 CENTRAL COMPUTER OPERATOR INTERFACE CONFIGURATION

A. Provide re-configuration of the operator interface at the central computer as described herein to accommodate the inputs and outputs identified as part of this project.

B. Provide revised cascading graphical screens all accessed from the plant overview graphic. The graphic shall include a basic layout of the water treatment plant and shall identify all SCADA connected PLC’s. Provide a

graphic alarm indication on the overview screen with flashing indication of the equipment/PLC location of the alarm condition. Provide a flow indication for each metered flow in GPM. Provide linking from the overview to enable selection of individual processes or PLC's. Provide linking to trending and alarm summary screens.

C. Provide a graphic display screen for each mechanical process. Each screen shall include indication of running status for each device, H-O-A status for each device, elapsed time meter reading for each device, instantaneous flow reading, instantaneous level reading, variable frequency drive speed, and alarm status. Each graphical display shall include a process schematic including major piping. Where appropriate, the set point display values shall also be represented.

D. Verify the correct function of each of the below listed capabilities with the additional equipment added as part of this project:
   1. Provide alarms set point input for all analog level sensors. All set points shall be adjustable through a password protection system.
   2. Provide an alarm summary display containing a listing of all points currently in alarm. Provide display of the last two alarms on every graphic display. Print the time and date of occurrence of any alarm, alarm acknowledgment, return to normal, alarm enable or alarm disable action.

3.06 START UP SERVICES

A. Demonstrate the Princeton Water Tower control algorithm via the PLC.
   1. Pressure Transducer
   2. Tank Mixer
   3. Thermostat
   4. Door Contacts
   5. Flood Alarm

B. Demonstrate the complete sequence of operation on a paragraph by paragraph basis.

C. Demonstrate complete operator interface configuration on a paragraph by paragraph basis.

3.07 TRAINING

A. Provide one (1) day of field instrument and programmable controller operation, maintenance and calibration training in one (1) trip.

B. Provide two days additional maintenance and training at the jobsite during the first year of operation.

C. Provide 24 hours software services to make requested field modifications or additions to the operator interface system.

3.08 PROJECT CLOSE OUT

A. Submit a Certificate of Installation Services signed by an officer of the system integrator stating that the equipment has been inspected and has been installed, calibrated, and commissioned in accordance with their recommendations.

B. Submit a Certificate of Instructional Services for each training item signed by an officer of the system integrator and countersigned by the owner's authorized agent stating that the systems integrator has provided the specified training and that the Owner acknowledges receipt of training.

C. Provide a Certificate of Post Start-up Services after each return training and maintenance call signed by an officer of the system integrator and countersigned by the Owner's authorized agent stating the equipment has been inspected, adjusted, calibrated, and is in operating condition in accordance with the specifications.

3.09 ACCEPTANCE

A. System acceptance shall be defined as that point in time when the following requirements have been fulfilled:
   1. All submittals have been approved by the Engineer.
   2. Operation and maintenance manuals have been turned over to the Owner.
   3. All punch list items have been signed off by the Engineer.
   4. The system has operated continuously without downtime for 120 hours in full automatic.
   5. All training activities have been completed.

B. The system integrator shall formally request system acceptance.

C. The warranty period shall commence upon system acceptance and, regardless of standard equipment warranties, shall extend for a minimum period of one year.

END OF SECTION

SECTION 16901

PROGRAMMABLE LOGIC CONTROLLERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. The instrumentation supplier shall furnish programmable logic controllers (PLC 1) specified herein complete with enclosures, interface hardware, all ladder programming, wiring, and necessary pilot devices to provide complete remote interface with various systems.

1.02 SUBMITTALS

A. Submit Shop Drawings and Product Data in accordance with Section 01300.
   1. Identify all hardware and software being provided, any deviations to the specifications, and include all ladder logic and I/O diagrams/terminations.

B. Upon request, the PLC system supplier shall be provided with a review copy of the related equipment submittals to ensure PLC interface compatibility with the submitted equipment. Submittal review shall take place within two weeks once the instrumentation system submittal has been completed. The PLC supplier shall indicate any I/O discrepancies and the proposed remedy. Such review will be returned to the consulting engineer.

1.03 QUALITY ASSURANCE

A. The PLC supplier shall guarantee all hardware and software to be free in material defects. All ladder logic shall be modified, if required, to the acceptance of the engineer and owner prior to acceptance.

1.04 WARRANTY

A. The PLC supplier shall warrant all hardware and software furnished. Warranty shall be for a period of one year from date of acceptance.

PART 2 PRODUCTS

2.01 PROGRAMMABLE CONTROLS

A. Provide programmable logic controllers (PLC) as required for a complete and operating system. Design the PLC to accept discrete and analog inputs, perform the logic functions specified in the sequence of operation, and output contact and analog signals to control and/or indicate process status. Provide an operator interface terminal with each PLC where specified to allow

operating personnel access to process set points, status and variable data. Provide a modular type system where required for the specified input and output requirements. The terms programmable logic controller and remote terminal unit (RTU) are used interchangeably in this specification.

1. The PLC shall consist of a base unit, a processor unit, integral power supply, and the I/O modules and communication modules as required. Provide operator interface terminal (OIT) for local display where specified and provide the required cables to connect the PLC to the OIT. The processor unit shall be an Allen Bradley Compactlogix 5069 PLC. The OIT shall be Automation Direct 7" OIT with Color Touch Screen. Include Sola 24vdc/3A power supply. Include Moxa Fiber ethernet switch 5 Port Managed Switch.

B. Provide power supply sized to accommodate full rack load capacity plus spare slots. Provide power supply rated for 120 VAC input. Provide circuit breaker for power supply. Provide power supply loading calculations for each remote terminal unit.

C. Provide microprocessor based programmable processor configured for the functions specified in the sequence of operation. Provide adequate program memory for the specified functions including 25 percent spare memory. Provide memory size and utilization documentation. Provide memory power failure protection for at least two weeks. Provide 1 ms/K memory scan time for PID control loops. Provide led indicators for **run, CPU fault, forced I/O**, and **low battery**. Provide ladder logic programming capability via at type compatible software. Provide copy of final program to the owner. Provide communications to integrate with the Village of North Aurora existing SCADA system.

D. Provide EEPROM non-volatile memory back up for each processor. Provide copy of final as built and accepted program loaded into EEPROM for each processor.

E. Provide isolated discrete inputs as scheduled capable of 100 to 120 vac. Provide 20 percent spare inputs.

F. Provide relay outputs as scheduled capable of 2.5-amp continuous current at 120 vac. Provide 20 percent spare outputs. Provide surge suppression for each output per the manufacturer's recommendation.

G. Provide analog inputs as scheduled capable of accepting 4 to 20 mADC current loop input with an input impedance not to exceed 250 ohms. Provide 20 percent spare inputs.

H. Provide analog outputs as scheduled capable of 4 to 20 mADC output into 0 to 500 ohm load. Provide 20 percent spare outputs.

I. Provide battery back up system for each remote terminal unit. Size system

to provide uninterrupted operation for a minimum of 30 minutes. Power rating shall be 1000VA.

J. The input and output list for PLC 1 are defined in the description of operation found in Section 16900 of these specifications. The system integrator shall be responsible for furnishing all I/O required for a complete system. The listed I/O does not include spares. Provide a minimum of 20 percent spare I/O of each type. The PLC definitions are described below.

2.02 PLC MOUNTING LOCATION(S)

A. PLC 1 – Princeton Water Tower Instrumentation PLC
   1. Locate in the Water Tower per the drawings.

2.03 ENCLOSURE CONFIGURATION

A. Enclosures shall be sized for the equipment specified and shall include at least 20 % additional space for future expansion or installation of Owner furnished equipment.

B. Enclosures shall conform to the following NEMA standards:
   1. Water Tower: NEMA 4X stainless steel

C. Enclosures shall have a minimum metal thickness of 14 gauge. Panels shall include a full length piano-hinged door with pad locking provisions. Doors shall be rubber gasketed.

D. Enclosures shall be sized to dissipate heat generated by equipment housed in the enclosure. Provide ventilation, forced air circulation, or air conditioning, as required, to maintain enclosure temperature below ratings of equipment housed in the enclosure. Enclosures shall be equipped with a thermostatically controlled space heater sized to maintain an internal temperature of 40 degrees Fahrenheit with a 20 MPH wind at ambient temperature of minus 30 degrees Fahrenheit.

E. Panels shall operate from 120 VAC service or, where shown, from 480 VAC three phase service with transformer. Provide power distribution panel consisting of individual circuit breakers or fusible switch with blown fuse indicator. Provide main disconnect, service receptacle disconnect, temperature control disconnect, logic disconnect, instrument disconnect, annunciator disconnect, and telemetry disconnect as applicable. Provide one 15 amp rated duplex receptacle inside panel for every four feet of panel width, dedicated to service technician use only.

F. Selector switches shall be rotary action NEMA 13 with color inserts as selected by the owner. Contact sequence and number of contact blocks shall be as required by the sequence of operation. Provide wing levers, key

locking, or spring return features as required by the sequence of operation.

G. Push buttons shall be momentary contact type NEMA 13 with color coded operators. Push buttons for normal operating functions such as start, lamp test, open, or acknowledge, shall have flush heads. Push buttons for emergency functions such as stop, reset, or close, shall have extended heads. Number of contact blocks shall be as required by the sequence of operation. Provide lock out adaptors as required by the sequence of operation.

PART 3 EXECUTION

3.01 INSTALLATION

A. The Contractor shall install PLC's in accordance with these documents. PLC's shall be furnished as complete systems with all appurtenances specified.

3.02 MANUFACTURER'S SERVICES

A. The PLC supplier shall troubleshoot and calibrate all equipment prior to operation. The supplier shall include time for fine tuning of ladder logic after operator training to incorporate changes deemed appropriate by the operation staff. All field start up, training, and calibration service shall be included at no additional cost to the owner. Specification Section 16900 specifies the field service requirements for the system integrator.

END OF SECTION

APPENDIX A – Permits

(In Progress)

APPENDIX B – LPC 663 and Geotechnical

rubino
ENGINEERING INC.

REPORT TRANSMITTAL

July 25, 2024

To: Brandon Tonarelli, PE
Assistant Public Works Director / Village Engineer
Village of North Aurora
25 E. State Street
North Aurora, Illinois 60542

Re: **Geotechnical Engineering Services Report**
Princeton Elevated Storage Tank
West of 600 Princeton Drive
North Aurora, Illinois

Rubino Report No. G24.103

Via email: btonarelli@northaurora.org

Dear Mr. Tonarelli,

Rubino Engineering, Inc. is pleased to submit our Geotechnical Engineering Services Report for the proposed Princeton Elevated Storage Tank in North Aurora, Illinois.

Report Description

Enclosed is the Geotechnical Engineering Services Report including results of field and laboratory testing, as well as recommendations for foundation design, pavement design, and general site development.

Authorization and Correspondence History

- Rubino Proposal No. Q24.223g dated May 7, 2024; Signed and authorized by Steven Bosco, Village Administrator, on May 16, 2024.

Closing

Rubino appreciates the opportunity to provide geotechnical services for this project and we look forward to continued participation during the design and in future construction phases of this project.

If you have questions pertaining to this report, or if Rubino may be of further service, please contact our office at (847) 931-1555.

Respectfully submitted,
RUBINO ENGINEERING, INC.

Michelle A. Lipinski, PE
President

michelle.lipinski@rubinoeng.com

MAL/file/ Enclosures

Geotechnical Engineering Services Report

PRINCETON ELEVATED STORAGE TANK

WEST OF 600 PRINCETON DRIVE

NORTH AURORA, ILLINOIS

RUBINO PROJECT NO. G24.103

Drilling
Laboratory Testing
Geotechnical Analysis

PREPARED BY:
David T. Lewandowski, PE

REVIEWED BY:
Aimee Ritchie, PE

rubino ENGINEERING INC.

_____

Michelle A. Lipinski, PE
President
IL No. 062-061241, Exp. 11/30/2025

PREPARED FOR:

VILLAGE OF NORTH AURORA

25 E. STATE STREET

NORTH AURORA, ILLINOIS 60542

JULY 25, 2024

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PROJECT INFORMATION

Rubino Engineering, Inc. (Rubino) understands that the Village of North Aurora is planning to construct a new 1.25 MG elevated storage tank. The proposed tank will be 165 feet in height. It will be located just west of the existing water treatment facility at 600 Princeton Drive and south of Goodwin Park.

Site Grading Plan received:

- Final outside grade adjacent to proposed tank EL. 687 feet
- Site grading including cuts and fills being less than 1 ½ feet

Structural Loads / Pavement Design Criteria received: none; however, this proposal is based on the following:

- Total weight of tank structure (full of water) not exceeding 13,000 kips
- Access Road Light Duty Pavement 18-kip ESALS: 30,000
- Access Road Heavy Duty Pavement 18-kip ESALS: 60,000
- Access Road Pavement Life Expectancy: 15 years

Foundation Design Criteria received:

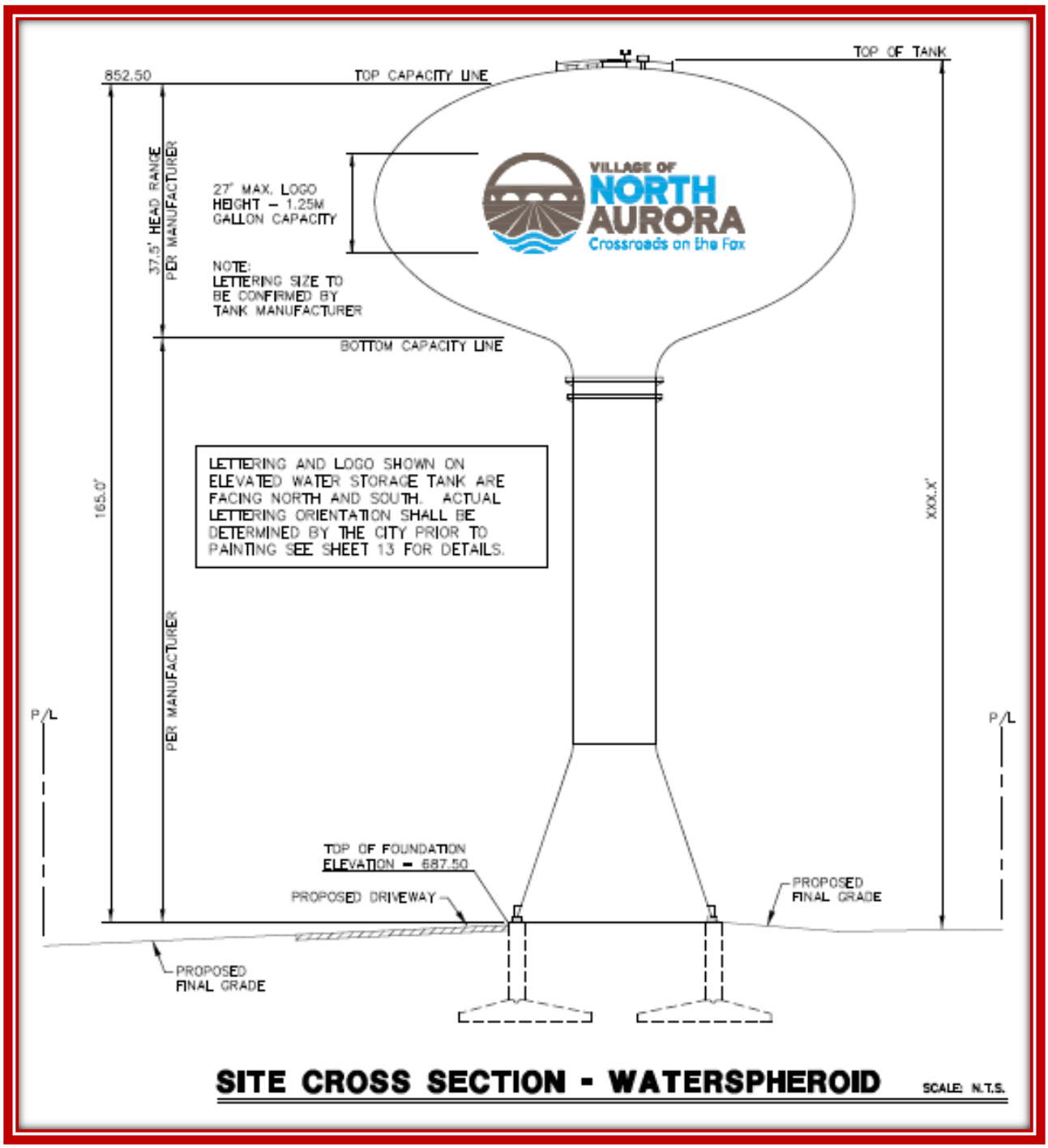
- Top of foundation EL. 687.50 feet (per plan set)
- Spread footings 6 – 7 feet below grade

Documents received:

- "CBI SUGGESTED SOIL INVESTIGATION FOR ELEVATED TANKS – 2016" included in RFP email
- "Elevated Tank Site" prepared by Village of North Aurora, included in RFP email
- "North Aurora Water Tower Geotechnical Report" prepared by TSC dated April 24, 2019
- "NO2305 Plan Set 2024-07-09" - Site Improvement Plans FOR Princeton Drive Elevated Water Storage Tank (14 pages) prepared by Engineering enterprises, Inc. dated August 2024

Project Correspondence:

- RFP Email from Brandon Tonarelli of Village of North Aurora on April 24, 2024.
- Authorization to proceed via signed proposal by Steven Bosco, Village Administrator of North Aurora, on May 16, 2024.
- Email from Kris Pung of Engineering Enterprises, Inc. (consultant to Village of North Aurora) – boring location plan
- Email from Todd Wells of Engineering Enterprises, Inc. (EEI) on June 10, 2024 – infiltration test not required
- Phone conversation with Brandon Tonarelli of the Village of North Aurora on July 16, 2024 – Rubino informed client of shallow foundation option with temporary dewatering system
- Phone conversation with Todd Wells of EEI on July 17, 2024 – Rubino informed client of shallow foundation option with temporary dewatering system
- Phone conversation with Todd Wells of EEI on July 18, 2024 – spread footing design typically at 6 to 7 feet below grade



The geotechnical recommendations presented in this report are based on the available project information and the subsurface materials described in this report. If any of the information on which this report is based is incorrect, please inform Rubino in writing so that we may amend the recommendations presented in this report (if appropriate, and if desired by the client). Rubino will not be responsible for the implementation of our recommendations if we are not notified of changes in the project.

Purpose / Scope of Services

The purpose of this study was to explore the subsurface conditions at the site in order to prepare geotechnical recommendations for foundation design, pavement design, and general site development for the proposed construction. Rubino's scope of services included the following drilling program:

Table 1: Drilling Scope

NUMBER OF BORINGS	NUMBER OF BEDROCK CORES	NUMBER OF PAVEMENT CORES	APPROXIMATE TERMINATION DEPTH (FEET BEG*)	LOCATION
1	1	---	27	Elevated Storage Tank (WTB-01)
3	---	---	15 ¾ – 17 ¾**	Elevated Storage Tank (WTB-02 – WTB-04)
2	---	---	10	Access Road (AR-01 – AR-02)
2	---	2	1	Existing Parking Lot / Access Road (C-01 – C-02)

*BEG = below existing grade
**Auger and spoon refusal depth

Representative soil samples obtained during the field exploration program were transported to the laboratory for additional classification and laboratory testing. This report briefly outlines the following:

- *Summary of client-provided project information and report basis*
- *Overview of encountered subsurface conditions*
- *Overview of field and laboratory tests performed including results*
- *Geotechnical recommendations pertaining to:*
  - *Subgrade preparation and cut / fill recommendations*
  - *Elevated water tank foundations, including suitable foundation type(s), allowable bearing pressure(s), and estimated settlement*
  - *Pavements, including subgrade pavement sections for bituminous and Portland Cement Concrete (PCC) pavements*
  - *Estimated IBV value at AB-01 and AB-02*
- *Construction considerations, including temporary excavation and construction control of water*

DRILLING, FIELD, AND LABORATORY TEST PROCEDURES

The client selected the number of borings. Rubino determined the boring / rock core depths. Rubino located the borings in the field by measuring distances from known fixed site features with the use of a hand-held GPS device. The borings were advanced utilizing 3 ¼-inch inside-diameter, hollow stem auger drilling method and soil samples were routinely obtained during the drilling process. After reaching auger and spoon refusal in boring WTB-01, rock coring was performed. An NX core barrel was used with the drill rig to advance the rock core and collect samples. The rock core samples were evaluated for Rock Quality Designation (RQD) and unconfined compressive strength.

Selected soil samples were tested in the laboratory to determine material properties for this report. Drilling, sampling, and laboratory tests were accomplished in general accordance with ASTM procedures. The following items are further described in the Appendix of this report.

- *Field Penetration Tests and Split-Barrel Sampling of Soils (ASTM D1586)*
- *Field Water Level Measurements*
- *Field Rimac Test (Unconfined Compressive Strength) on Cohesive Samples (IDOT)*
- *Laboratory Determination of Water (Moisture) Content of Soil by Mass (ASTM D2216)*
- *Laboratory Determination of Rock Quality Designation (ASTM D6032)*

The laboratory testing program was conducted in general accordance with applicable ASTM specifications. The results of these tests are to be found on the accompanying boring logs located in the Appendix.

SUMMARY OF GEOTECHNICAL CONSIDERATIONS

The main geotechnical design and construction considerations at this site are:

- In general, the **asphalt thickness** observed at the core locations was approximately 3 inches and the **subbase stone thicknesses** ranged between approximately 6 and 8 ½ inches. See the *Surface Conditions* section for more detailed information.

- **Subgrade soils** generally consisted of dark brown, brown and/or gray, silty clay and brown and gray well-graded sand and gravel soils. These soils were underlain by weathered dolomite / dolomite rock. See the *Subsurface Conditions* section for more detailed information.

- **Shallow groundwater was observed** within the borings during drilling operations. See the *Groundwater Conditions* section for more information.

- **Shallow Foundations** are a possible foundation design option at this site. See the *Shallow Foundation Recommendations* section for more detailed information.

    - A **temporary dewatering system** will likely be required to facilitate shallow foundation

construction. See the *Construction Considerations* subsection within the *Shallow Foundation Recommendations* section for more information.

- Based on the moisture contents of the subgrade soils, **undercuts may be required** to achieve a stable subgrade for the proposed access road pavement section. See *Subgrade Stability Recommendations – Access Road* section for more detailed information.

The geotechnical-related recommendations in this report are presented based on the subsurface conditions encountered and Rubino's understanding of the project. Should changes in the project criteria occur, a review must be made by Rubino to determine if modifications to our recommendations will be necessary.

SITE AND SUBSURFACE CONDITIONS

Site Location and Description

The subject site is located approximately 400 feet southwest of the intersection of Poplar Place and Princeton Drive in North Aurora, Illinois. The existing terrain is covered by grass with relatively level terrain. Overhead high-tension lines and Goodwin Park lie just to the north. An existing water treatment building lies approximately 300 feet to the east.

The midpoint of the project site has an approximate latitude and longitude of 41.8024º and -88.3418º, respectively.

Surface Conditions

Two cores were taken in the existing Goodwin Park baseball diamond parking lot and the surface conditions are as follows:

Table 2: Existing Pavement Section Summary

CORE NUMBER	TOTAL OBSERVED PAVEMENT THICKNESS	TOTAL OBSERVED BASE STONE THICKNESS
C-01	3 INCHES OF ASPHALT	6 INCHES OF SUBBASE STONE
C-02	3 INCHES OF ASPHALT	8 ½ INCHES OF SUBBASE STONE

Please note that the above referenced thicknesses are considered approximate and based on visual observations and hand measurements. Pavement and sub-base type and thickness may vary between core locations.

Subsurface Conditions

Beneath the existing topsoil, subsurface conditions generally consisted of brown, dark brown, and/or gray silty clay and brown and gray well-graded sand and gravel.

- The **topsoil** thickness ranged between approximately 12 and 14 inches
- The native **silty clay** soils were generally medium stiff to stiff in consistency
- The **granular** soils were generally medium dense to dense in apparent density

Table 3: Subsurface Conditions Summary

APPROXIMATE ELEVATION RANGE (FEET)	SOIL DESCRIPTION	SPT N-VALUES (BLOWS PER FOOT)	MOISTURE CONTENT (%)	ESTIMATED SHEAR STRENGTH
Access Road (AR-01 & AR-02)				
688 – 684 ½	Medium stiff, brown / dark brown silty CLAY, trace sand and gravel	6	24 – 30	c ≅ 750 – 900 psf
685 ½ – 678	Medium dense to dense, brown well-graded GRAVEL, with sand	15 – 44	6 – 15	$\phi \cong 32° – 40º$

Approximate Elevation Range (feet)	Soil Description	SPT N-values (blows per foot)	Moisture Content (%)	Estimated Shear Strength
Elevated Water Storage Tank (WTB-01 through WTB-04)				
687 – 683	Medium stiff to stiff, brown and gray silty CLAY, trace sand and gravel	6 – 9	20 – 28	c ≅ 750 – 1,350 psf
684 ½ – 670	Medium dense to dense, brown and gray well-graded gravelly SAND or sandy GRAVEL	14 – 40	8 – 18	$\phi \cong 32° – 40°$
Starting At ≅ 671	Greenish-gray WEATHERED DOLOMITE to DOLOMITE	50+	---	---

The native soils were visually classified as silty clay (CL), well-graded gravel (GW) and well-graded sand (SW) according to the Unified Soil Classification System (USCS). The above table is a general summary of subsurface conditions. Please refer to the boring logs for more detailed information.

Estimated shear strength of clay soils is based on empirical correlations using N-values, moisture content, and unconfined compressive strength, as applicable.

Visual observation of the rock core obtained by diamond-bit coring indicates greenish-gray weathered dolomite and dolomite. The recovery was 88 percent and the rock quality designation (RQD) value was 46%. Results of the compression tests of rock core samples indicate values ranging from 910 to 1,182 tsf.

Groundwater Conditions

Groundwater was encountered in the borings during drilling operations. The following table summarizes groundwater observations from the field:

Table 4: Groundwater Observation Summary

Boring Number	Groundwater Elevation during drilling (feet)	Groundwater Elevation upon auger removal (feet)
AR-01	≅ 682	≅ 683
AR-02	≅ 683	≅ 683
WTB-01	≅ 683 ½	≅ 676
WTB-02	≅ 681	≅ 682
WTB-03	≅ 683 ½	≅ 683
WTB-04	≅ 682	≅ 683

It should be noted that fluctuations in the groundwater level should be anticipated throughout the year depending on variations in climatological conditions and other factors not apparent at the time the borings were performed. Additionally, discontinuous zones of perched water may exist within the upper cohesive soils. The possibility of groundwater level fluctuation should be considered when developing the design and construction plans for the project.

When bidding this project, the contractor should anticipate that groundwater will be present during excavation.

Topsoil Discussion

Topsoil materials as described in this report have not been analyzed for quality according to any minimum specifications. If topsoil is to be imported to or exported from this site, Rubino recommends that it meet the minimum specifications defined in **Section 1081.05** of the *IDOT Standard Specifications for Road and Bridge Construction*, adopted by the Illinois Department of Transportation, January 1st, 2022.

Rubino has reported topsoil thicknesses at each boring based on visual observation of surficial soils. Surficial topsoil thickness was visually observed to be between approximately 12 and 14 inches.

EVALUATION AND RECOMMENDATIONS

The geotechnical-related recommendations in this report are presented based on the subsurface conditions encountered and Rubino's understanding of the project. Should changes in the project criteria occur, a review must be made by Rubino to determine if modifications to our recommendations will be necessary.

Site Preparation Recommendations

Prior to construction, the site should be stripped of existing concrete, foundations, abandoned utilities, and pavement sections including asphalt, subbase, and curbs if applicable.

Please note that clay subgrade soils are sensitive to moisture and can be easily disturbed by precipitation, groundwater, or construction equipment. Therefore, extra care should be used to avoid disturbing these soils during construction activities.

Shallow Foundation Recommendations

<u>Design – Soil Bearing Pressure</u>

The proposed elevated storage tank structure can be supported on a shallow, spread footing, mat or ringwall foundation system. Rubino recommends that the foundation system extend through

the silty clays and be supported on the medium dense to dense sand / gravel soils or compacted and documented structural fill.

Table 5: Bearing Capacity Recommendations

DESCRIPTION	PROPOSED ELEVATED STORAGE TANK RECOMMENDATIONS
Anticipated Foundation Type:	Spread Footing, Mat or Ringwall
Max Net Allowable Bearing Pressure (psf):	5,000 psf
Estimated Bearing Elevation:	EL. 681 ft.
Anticipated Bearing Soil Classification:	Brown and gray SAND / GRAVEL; DCP ≥ 7 blows / 6 in. See *Construction Considerations* section below
Coefficient of Friction Between Concrete Footing and Sand/Gravel:	0.45
Boring #'s Referenced:	WTB-01 through WTB-04

The net allowable soil bearing pressure is based on dead load plus design live load and represents the pressure that is in excess of the minimum surrounding overburden pressure at the footing base elevation.

Construction Considerations

- Based on the findings in the borings and the elevation of the foundation bearing soils, **a temporary dewatering system will likely be required to facilitate construction**. The groundwater level should be lowered and maintained a minimum two feet below the bottom of the excavation to facilitate construction. Please reference the anticipated groundwater levels on the attached boring logs and in the *Groundwater Conditions* section of this report.

- Granular soils can become very loose with the removal of overburden soil or disturbance by excavation equipment. Therefore, Rubino recommends that the sand / gravel at the bearing elevation be compacted by mechanical means prior to placing the foundation. A mud mat can be utilized during construction to create a working surface and confine the sand and gravel soils.

- In the event the foundation excavations extend below the design bearing elevation, the excavation should be widened and backfilled as described in *Appendix C: Foundation Construction Recommendations*.

- Although not observed in the borings, cobbles or boulders may be encountered which could make excavation more difficult if encountered during construction.

Design / Construction – Frost Protection

Foundations should be located at a depth of at least 3 ½ feet below the final grades to provide adequate frost protection. If the elevated water storage tank is constructed during winter months or if the footings will likely be subjected to freezing temperatures after construction is completed, then the foundations should be protected from freezing.

Design – Settlement Estimate

Based on the known subsurface conditions, laboratory testing, and past experience, Rubino anticipates that properly designed and constructed footings / mat supported on the recommended, observed and documented natural soils, or properly compacted structural fill should experience maximum total settlement of less than 1 inch and differential settlement of less than ½-inch across the plan of the proposed tank.

Seismic Site Classification

Per the Village of North Aurora website, the 2021 International Building Code (IBC) is currently in use. IBC 2021 references ASCE 7-16 which requires a site class for the calculation of earthquake design forces. This class is a function of soil type (i.e., depth of soil and strata types). Based on the depth to rock in this exploration and the estimated shear strength of the soil at the boring locations, Site Class "C" is recommended.

This site class is recommended based on Rubino's opinion and experience in the area that the consistency of the soils below the depth explored remain consistent or improve in density.

The SEAOC/OSHPD probabilistic ground motion values near latitude 41.8024° and longitude –88.3418° are shown in the table to the right.

Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	0.138	MCE_R ground motion. (for 0.2 second period)
S_1	0.066	MCE_R ground motion. (for 1.0s period)
S_{MS}	0.179	Site-modified spectral acceleration value
S_{M1}	0.1	Site-modified spectral acceleration value
S_{DS}	0.12	Numeric seismic design value at 0.2 second SA
S_{D1}	0.066	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	A	Seismic design category
F_a	1.3	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.072	MCE_G peak ground acceleration

Pavement Subgrade Preparation – Access Road

Rubino recommends that unsuitable soils or deleterious materials be removed from the construction area, as applicable. Unsuitable soils or deleterious materials can be described as, but are not limited to:

- Organic soil / topsoil / plants / trees / shrubs / grass
- Frozen soil
- Existing asphalt or concrete pavement sections
- Concrete curb & gutter

Stripping operations should extend a minimum of 5 feet beyond proposed pavement limits where property limits allow. The geotechnical engineer should be notified if there are property boundary

limitations. Stripping operations should be monitored and documented by a representative of the geotechnical engineer at the time of construction.

Prior to paving, the prepared subgrade should be proofrolled using a loaded tandem axle dump truck or similar type of pneumatic tired equipment with a minimum gross weight of 9 tons per single axle. Localized soft areas identified should be repaired prior to paving. Moisture content of the subgrade should be maintained between -2% and +3% of the optimum at the time of paving. It may require rework when the subgrade is either desiccated or wet.

Areas of low support or soft spots should be tested with either a Static Cone Penetrometer (SCP) or Dynamic Cone Penetrometer (DCP). The results of the DCP or SCP tests should be evaluated according to the *IDOT Subgrade Stability Manual, 2005* to determine the necessary depth of corrective action.

Undercuts that are performed to remove low strength and/or unsuitable soils should be backfilled with structural fill. Please see the ***Subgrade Stability Recommendations*** section below for more detailed information.

Subgrade Stability Recommendations – Access Road

The recommendations located in this report are based on the data obtained at each particular soil boring location. Soil subgrade stability may vary in the field between the borings and could be affected by the weather at the time of construction.

- The IDOT IBV Based Remedial Action chart from the *IDOT Subgrade Stability Manual*, 2005 was used for reference.
- Without Aggregate Subgrade Improvement (ASI) 12”, subgrade with an IBV value of 5 or less is a candidate for remediation.
- With Aggregate Subgrade Improvement (ASI) 12”, subgrade with an IBV value of 2 or less is a candidate for remediation.
- Subgrade with a **moisture content exceeding 25%** may be a candidate for additional remediation as determined by proofroll and penetrometer testing at the time of construction.
- Subgrade soils should be carefully evaluated by proof-rolling and subgrade stability testing at the time of construction to document the in-place consistency of these materials.

The following table summarizes the estimated IBV value at each boring location. The borings were taken along the proposed access road.

Table 6: Estimated IBV Values

LOCATION	IBV VALUE	REMEDIAL THICKNESS (UNDERCUT)	GEOTECHNICAL CONSIDERATIONS
Access Road (AR-01 & AR-02)	3 – 7	0 – 12 inches Nominal Quantity Recommended	Cohesive soils Moisture contents range from 24% - 30%

Unstable soil should be treated in accordance with Article 301.04 of the standard specifications and undercut guidelines in the *IDOT Subgrade Stability Manual, 2005*.

Pavement Subbase Stone Recommendations

The granular base course should be built at least 2 feet wider than the pavement on each side to support the tracks of the slipform paver. This extra width is structurally beneficial for wheel loads applied at pavement edge.

An IDOT CA-6 aggregate base rock (*IDOT Specifications Handbook, Sec. 1004.1*) can be used under the asphalt or concrete pavements.

Rubino recommends a drainage system be designed to keep water out of the base material since CA-6 contains fines which could become unstable when saturated. See *Appendix D – Pavement Considerations* for more information.

Pavement Recommendations

Prior to paving, the prepared subgrade should be proofrolled and documented by a representative of Rubino. Localized soft areas identified should be repaired prior to paving. Please reference the *Subgrade Stability Recommendations – Access Road* section above for subgrade preparation, stability, and pavement design recommendations.

Based on the boring information in the proposed pavement areas, Rubino believes the existing soils at this site will have a subgrade pavement bearing characteristic typical of soil with a CBR value of 3 (typical for clayey soils). Subgrade stability should be checked during construction by performing a proofroll on the soils prior to placing subbase stone. Based on this value, it is possible to use a locally typical "standard" pavement section consisting of the following:

Table 7: Recommended Pavement Section

RECOMMENDED THICKNESSES (INCHES) BASED ON A CBR OF 3		
PAVEMENT MATERIALS	**LIGHT DUTY**	**HEAVY DUTY**
Asphaltic Surface Course	1 ½	1 ½
Asphaltic Binder Course	2 ½	3 ½
Base Aggregate	8	10
Or		
Portland Cement Concrete	6	
Base Aggregate	8	
Notes: Grade subgrade soil to positively drain. Add underdrains to avoid collecting water at transitions in pavement section thickness. Place Filter Fabric placed between open-graded stone and subgrade soil		

Rigid concrete pavement is recommended where trash dumpsters or semi-trailers are to be parked on the pavement or where a considerable load is transferred from relatively small steel wheels or other point loads.

- Structural concrete pads should be at least 8-inches thick and properly reinforced.

The above pavement section is based on the information defined herein and is considered preliminary. In large areas of pavement, or where pavements are subject to significant traffic, a more detailed analysis of the subgrade and traffic conditions should be made. The results of such a study will provide information necessary to design an economical and serviceable pavement. Additional pavement considerations are located in the Appendix to this report.

Recommendations for Additional Testing

Once the structural loads, site plan and grading plans are finalized, please notify Rubino so that we can review our recommendations for the direct use of the elevated water storage tank structure and development of the site. Changes in tank location, foundation depth, and/or structural loading can affect the geotechnical recommendations for this site.

During construction, Rubino recommends that one of our representatives be onsite for typical **observations and documentation** of exposed subgrade for support of foundations and pavements, including DCP, proofrolling and penetrometer testing.

CLOSING

The recommendations submitted are based on the available subsurface information obtained by Rubino Engineering, Inc. and design details furnished by Village of North Aurora for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, Rubino should be notified immediately to determine if changes in the foundation recommendations are required. If Rubino is not retained to perform these functions, we will not be responsible for the impact of those conditions on the project.

The scope of services did not include an environmental assessment to determine the presence or absence of wetlands, or hazardous or toxic materials in the soil, bedrock, surface water, groundwater or air on, below, or around this site. Any statements in this report and/or on the boring logs regarding odors, colors, and/or unusual or suspicious items or conditions are strictly for informational purposes.

After the plans and specifications are more complete, the geotechnical engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At this time, it may be necessary to submit supplementary recommendations. This report has been prepared for the exclusive use of Village of North Aurora and their consultants for the specific application to the proposed Princeton Elevated Storage Tank in North Aurora, Illinois.

Appendix A – Drilling, Field, and Laboratory Test Procedures

ASTM D1586 Penetration Tests and Split-Barrel Sampling of Soils

During the sampling procedure, Standard Penetration Tests (SPT's) were performed at regular intervals to obtain the standard penetration (N-value) of the soil. The results of the standard penetration test are used to estimate the relative strength and compressibility of the soil profile components through empirical correlations to the soils' relative density and consistency. The split-barrel sampler obtains a soil sample for classification purposes and laboratory testing, as appropriate for the type of soil obtained.

Water Level Measurements

Water level observations were attempted during and upon completion of the drilling operation using a 100-foot tape measure. The depths of observed water levels in the boreholes are noted on the boring logs presented in the appendix of this report. In the borings where water is unable to be observed during the field activities, in relatively impervious soils, the accurate determination of the groundwater elevation may not be possible even after several days of observation. Seasonal variations, temperature and recent rainfall conditions may influence the levels of the groundwater table and volumes of water will depend on the permeability of the soils.

Rimac Unconfined Compressive Test

The Rimac test is referenced in the IDOT Geotechnical Manual. A relatively intact sample is obtained from the split spoon sampler. The sample is trimmed the required dimensions. Subsequently, the sample is placed between the platens of the Rimac tester (upright position), and a slow, continuous, uniform load is applied to the sample. The compressive strength is recorded at 15% strain or failure (< 15%). The value is considered more accurate than the Qp (pocket Penetrometer test).

Ground Surface Elevations

Rubino interpolated the ground surface elevations at the boring locations from the plan set provided by the client, therefore the boring surface elevations are considered approximate and should be verified by others prior to finalizing plans. The depths indicated on the attached boring logs are relative to the existing ground surface for each individual boring at the time of the exploration. Copies of the boring logs are located in the Appendix of this report.

ASTM D2216 Water (Moisture) Content of Soil by Mass (Laboratory)

The water content is an important index property used in expressing the phase relationship of solids, water, and air in a given volume of material and can be used to correlate soil behavior with its index properties. In fine grained cohesive soils, the behavior of a given soil type often depends on its natural water content. The water content of a cohesive soil along with its liquid and plastic limits as determined by Atterberg Limit testing are used to express the soil's relative consistency or liquidity index.

ASTM D6032 Rock Quality Designation (Laboratory)

The sum of sound rock core sample pieces over 4 inches in length are divided by the length of the core run. The RQD is a rating system to describe the quality of a rock mass. Rock that is highly weathered, soft, fractured, sheared and jointed typically results in lower RQD values than more intact rock.

Appendix B – Fill Recommendations

In general, fill materials should meet the following:

- Standard Proctor maximum dry density >100 pcf
- Free of organic or other deleterious materials
- Have a maximum particle size no greater than 3 inches
- Have a liquid limit <45 and plasticity index <25
- Testing should include areas at least 5 feet outside the parking area perimeters, if applicable
- Each lift of compacted, engineered fill should be tested and documented by a representative of the geotechnical engineer prior to placement of subsequent lifts

Suitable Soil Classifications:

CL, SC, GW, and SW will generally be suitable for use as structural fill under pavements.

Unsuitable Soil Classifications:

OL, OH, MH, ML, SM, CH and PT should be considered unsuitable.

- If a fine-grained silt or clay soil is used for fill (CL or ML), close moisture content control will be essential to achieve the recommended degree of compaction
- If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disking or scarifying

Structural fill added to the site shall be evaluated in accordance with the following table:

Material Tested	Proctor Type*-1	Min % Dry Density	Placement Moisture Content Range	Frequency of Testing*-2	Maximum Loose Lift Height
Structural Fill (Cohesive & Well-graded Granular)	Standard	98%	-2 to +3 %	1 per 2,500 yd^2 of fill placed	8 inches
Random Fill (non-load bearing)	Standard	95%	-3 to +3 %	1 per 5,000 yd^2 of fill placed	8 inches
Utility Trench Backfill	Standard	95%	-2 to +2 %	1 per 200 LF of fill placed	4 – 6 inches

*-1 The test frequency for the laboratory reference shall be one laboratory Proctor or Relative Density test for each material used on the site. If the borrow or source of fill material changes, a new reference moisture/density test should be performed.

*-2A minimum of one test per lift is recommended unless otherwise specified.

Tested fill materials that do not achieve either the required dry density or moisture content range shall be recorded, the location noted, and reported to the Contractor and Owner. A re-test of that area should be performed after the Contractor performs remedial measures. The above test frequencies should be discussed with the contractor prior to starting the work.

The geotechnical engineer of record can only certify work that was performed under their direct observation, or under the observation of a competent person under their specific direction.

Appendix C – Foundation Construction Recommendations

Rubino recommends that soils at the bottom of the footing design elevation be observed, documented, and tested by a representative of Rubino prior to concrete placement to evaluate the consistency of the soils in the field with the geotechnical report findings. The remedial procedures described in the following paragraph can be used to provide suitable foundation support where unsuitable material such as soft or loose soils, existing fill, or organic soils are encountered.

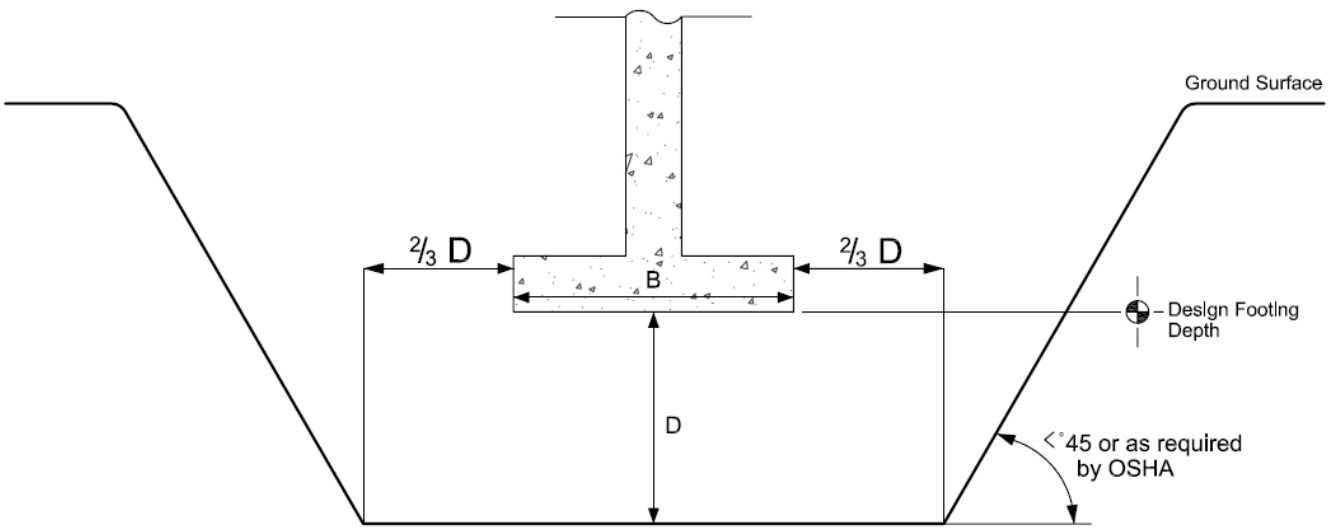
After opening, footing excavations should be observed and concrete placed as quickly as possible to avoid exposure of the footing bottoms to wetting and drying. Surface runoff water should be drained away from the excavations and not be allowed to pond. If possible, the foundation concrete should be placed during the same day the excavation is made. If it is required that footing excavations be left open for more than one day, the soils in the excavation should be protected to reduce evaporation or entry of moisture.

If unsuitable bearing soils are encountered in a footing excavation, the footing should be deepened to competent bearing soil and the footing could be lowered, or an over excavation and backfill procedure could be performed. If an over excavation and backfill procedure will be utilized, it would require widening the deepened excavation in all directions at least 8 inches beyond the edges of the footing for each 12 inches of over excavation depth (See "Over Excavation and Backfill Procedure" diagram below).

The over excavation should then be backfilled in a maximum of 8-inches thick loose lifts with suitable granular fill material, such as ¾ -inch stone with fines (CA-6), compacted to at least 98% of the maximum Standard Proctor dry density (ASTM D 698).

Another alternative is to undercut and refill the unsuitable area with flowable mortar up to the design elevation of the footings. The flowable mortar would serve as a protection to the subgrade during construction of the foundations. In this case, widening the footings is not necessary.

Over Excavation and Backfill Procedure



* Drawing not to scale

Appendix D – Pavement Considerations

Pavement Design Criteria

Pavement sections were evaluated using Pavement Assessment Software (PAS) which is based on the 1993 AASHTO Design equations; a reliability of 80%; and a 20-year 18-kip single axle load (ESAL) of 30,000 for light duty and 60,000 for drive areas.

Flexible Pavements were evaluated based on an initial serviceability of 4.2 and a terminal service of 2.0.

Rigid Pavements were evaluated based on an initial serviceability of 4.5 and a terminal service of 2.0; an unreinforced concrete mix with a 28-day modulus of rupture of 550 psi.

Pavement Drainage & Maintenance

Rubino recommends pavements be sloped to provide rapid surface drainage. Water allowed to pond on or adjacent to the pavement could saturate the subgrade and cause premature deterioration of pavements. In this case, removal and replacement may be required.

Consideration should be given to the use of an interceptor drain to remove water collecting in the granular base. The interceptor drains could be incorporated with the storm drains of other utilities located in the pavement areas.

Periodic maintenance of the pavement should be anticipated. This should include sealing of cracks and joints and maintenance of proper surface drainage to avoid ponding of water on or near the pavement area.

Asphalt Pavement Planning Guidelines	***Concrete Pavement Planning Guidelines***
The granular base course should be built at least 2 feet wider than the pavement on each side to support the tracks of the slipform paver. This extra width is structurally beneficial for wheel loads applied at pavement edge. The asphalt base course should comply with **IL-19.0L N-50** binder and be compacted to a minimum of 93.0% of the Maximum Theoretical Density as determined by ASTM D2041. Asphaltic surface mixture should comply with **IL-9.5L N-50** surface and be compacted to a minimum of 92.5% of the Maximum Theoretical Density as determined by ASTM D2041. Asphaltic concrete mix designs should be reviewed to determine if they are consistent with the recommendations given in this report.	Because the pavement at this site will be subjected to freeze-thaw cycles, Rubino recommends that an air entrainment admixture be added to the concrete mix to achieve an air content in the range of 5% to 7% to provide freeze-thaw durability in the concrete. Concrete with a 28-day specified compressive strength of 4,000 psi is typically adequate. Pavement for the dumpster area should be planned to be constructed of Portland cement concrete with load transfer device installed where construction joints are required. A thickened edge is recommended on the outside of slabs subjected to wheel loads. This thickened edge usually takes the form of an integral curb. Fill material should be compacted behind the curb or thicken edge of the outside slabs.

Pavement may be placed after the subgrade has been properly compacted, fine graded and proofrolled. The work should be done in accordance with State Department of Transportation guidelines. Pavement materials should conform to local and state guidelines, if applicable.

Appendix E – Report Limitations

Subsurface Conditions:

The subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in the appendix should be reviewed for specific information at individual boring locations. These records include soil descriptions, stratifications, penetration resistances, locations of the samples and laboratory test data as well as water level information. The stratifications shown on the boring logs represent the conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition between layers may be gradual. The samples, which were not altered by laboratory testing, will be retained for up to 60 days from the date of this report and then will be discarded.

Geotechnical Risk:

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools that geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free, and more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations, presented in the preceding section, constitute Rubino's professional estimate of the necessary measures for the proposed structure to perform according to the proposed design based on the information generated and reference during this evaluation, and Rubino's experience in working with these conditions.

Warranty:

The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

Federal Excavation Regulations:

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better ensure the safety of workmen entering trenches or excavations. This federal regulation mandates that all excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person," as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. Rubino is providing this information solely as a service to our client. Rubino is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

Appendix F – Soil Classification General Notes

DRILLING & SAMPLING SYMBOLS:

SS:	Split Spoon - 1 3/8" I.D., 2" O.D., unless otherwise noted	PS:	Piston Sample
ST:	Thin-Walled Tube - 3" O.D., Unless otherwise noted	WS:	Wash Sample
PM:	Pressuremeter	HA:	Hand Auger
RB:	Rock Bit	HS:	Hollow Stem Auger
DB:	Diamond Bit - 4", N, B	BS:	Bulk Sample

Standard "N" Penetration: Blows per foot of a 140-pound hammer falling 30 inches on a 2-inch O.D. split spoon sampler (SS), except where noted.

WATER LEVEL MEASUREMENT SYMBOLS:
Water levels indicated on the boring logs are the levels measured in the borings at the times indicated. In pervious soils, the indicated levels may reflect the location of groundwater. In low permeability soils, the accurate determination of ground water levels is not possible with only short-term observations.

DESCRIPTIVE SOIL CLASSIFICATION:
Soil Classification is based on the Unified Soil Classification System as defined in ASTM D-2487 and D-2488. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; they are described as: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are described as: clays, if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse grained soils are defined on the basis of their relative in-place density and fine-grained soils on the basis of their consistency. Example: Lean clay with sand, trace gravel, stiff (CL); silty sand, trace gravel, medium dense (SM).

CONSISTENCY OF FINE-GRAINED SOILS:

Unconfined Compressive Strength, Qu (tsf)			N-Blows/ft.			Consistency
	<	0.25	< 2			Very Soft
0.25	-	0.5	2	-	4	Soft
0.5	-	1	4	-	8	Medium Stiff
1	-	2	8	-	15	Stiff
2	-	4	15	-	30	Very Stiff
4	-	8	30	-	50	Hard
>	-	8	> 50			Very Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS

N-Blows/ft.			Relative Density
0	-	3	Very Loose
4	-	9	Loose
10	-	29	Medium Dense
30	-	49	Dense
50	-	80	Very Dense
		80+	Extremely Dense

RELATIVE PROPORTIONS OF SAND & GRAVEL

Descriptive Term	% of Dry Weight		
Trace		<	15
With	15	-	29
Modifier		>	30

RELATIVE PROPORTIONS OF FINES

Descriptive Term	% of Dry Weight		
Trace		<	5
With	5	-	12
Modifier		>	12

*Descriptive Terms apply to components also present in sample

GRAIN SIZE TERMINOLOGY

Major Component	Size Range
Boulders	Over 12 in. (300mm)
Cobbles	12 in. To 3 in. (300mm to 75mm)
Gravel	3 in. To #4 sieve (75mm to 4.75mm)
Sand	#4 to #200 sieve (4.75mm to 0.75mm)

Appendix G – Soil Classification Chart

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS: GRAPH	SYMBOLS: LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

Appendix H – Site Vicinity Map & Core/Boring Location Plan

rubino ENGINEERING INC.

425 Shepard Drive
Elgin, Illinois 60123

Project Name:	Princeton Elevated Storage Tank
Project Location:	West of 600 Princeton Drive North Aurora, Illinois
Client:	Village of North Aurora
Rubino Project # :	G24.103

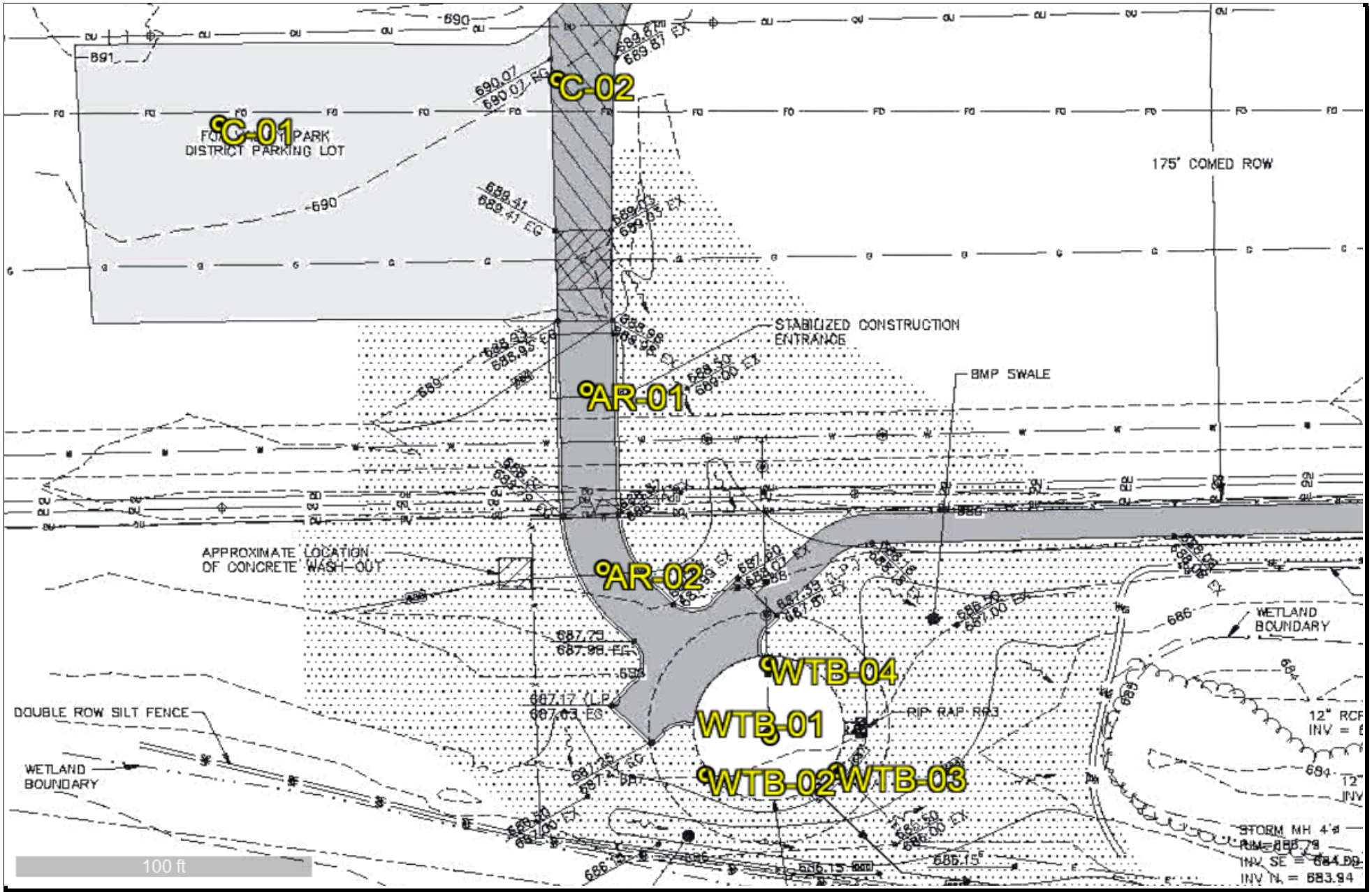
Site Vicinity Map

rubino ENGINEERING INC.

425 Shepard Drive
Elgin, Illinois 60123

Project Name:	Princeton Elevated Storage Tank
Project Location:	West of 600 Princeton Drive North Aurora, Illinois
Client:	Village of North Aurora
Rubino Project # :	G24.103

Boring Location Plan 1



rubino ENGINEERING INC.

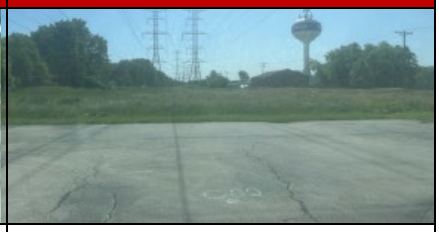
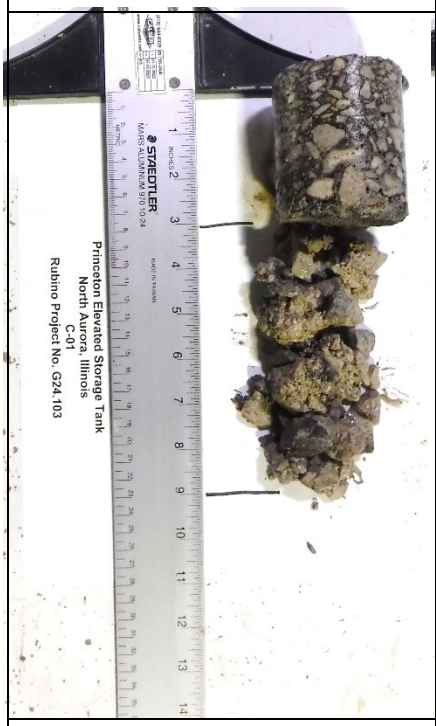
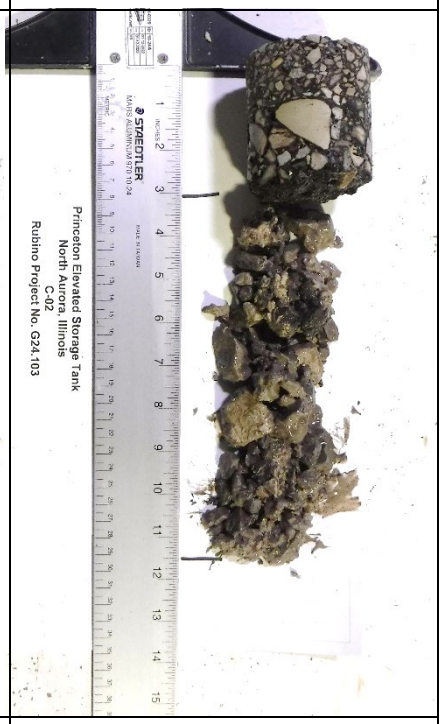
425 Shepard Drive
Elgin, Illinois 60123

Project Name:	Princeton Elevated Storage Tank
Project Location:	West of 600 Princeton Drive North Aurora, Illinois
Client:	Village of North Aurora
Rubino Project # :	G24.103

Boring Location Plan 2

Appendix I – Pavement Core Summary Table

Cores were taken in the pavement of the Goodwin Park baseball diamond parking lot in North Aurora, Illinois. The table below summarizes the thicknesses observed in the field and laboratory.

C-01 (West Side Parking Lot)	**C-02 (East Side Parking Lot)**
	
Picture Taken Facing West	Picture Taken Facing East
	
Total Thickness = 3 inches **HMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 1 ½ in.** **Subbase Stone = 6 inches**	**Total Thickness = 3 inches** **HMA Surface$_1$ = 1 ½ in.** **HMA Binder$_1$ = 1 ½ in.** **Subbase Stone = 8 ½ inches**

The referenced thicknesses are considered approximate. Commentary provided by Rubino is based on our observation in the laboratory; **Crack** = vertical through cross section; **Weathering** = rounded edges & degradation of asphalt and **Deterioration** = horizontal crack. Pavement and subbase type and thickness may vary between core locations. Any comments on the condition of the material are considered our opinion and should be verified by the design engineer.

Appendix J – Borings Logs

Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Telephone: 847-931-1555
Fax: 847-931-1560

LOG OF BORING AR-01

Sheet 1 of 1

Rubino Job No.:	G24.103	Drilling Method:	3 ¼ Hollow Stem Auger
Project:	Princeton Elevated Storage Tank	Sampling Method:	Split Spoon
Location:	West of 600 Princeton Drive	Hammer Type:	Automatic
City, State:	North Aurora, Illinois	Boring Location:	Proposed Access Road
Client:	Village of North Aurora		

WATER LEVELS***	
While Drilling	6 ft
Upon Completion	5 ft
Delay	N/A

Station: N/A
Offset: N/A

Surface Elev.: 688 ft

Elevation (feet)	Depth, (feet)	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	Classification	SPT Blows per 6-inch	Moisture, %	Additional Remarks
	0				Approximately 12 inches of TOPSOIL: dark brown silty clay with roots and organic matter				
685		Split-Spoon	1	9	Medium stiff, brown silty CLAY, trace sand and gravel	CL	3-3-3 N=6	30	Qr=1.8 B tsf
	5	Split-Spoon	2	8	Medium dense, brown well-graded GRAVEL, with sand	GW	10-10-10 N=20	6	
		Split-Spoon	3	12			8-11-11 N=22	15	
680	10	Split-Spoon	4	15			5-7-8 N=15	10	
					End of boring at approximately 10 feet below existing grade.				

STANDARD PENETRATION TEST DATA: Moisture, PL, LL (0, 25, 50); STRENGTH, tsf: Qu (Rimac), Qp/Qr (0, 2.0, 4.0)

Completion Depth:	10.0 ft
Date Boring Started:	6/12/24
Date Boring Completed:	6/12/24
Logged By:	P.P.
Drilling Contractor:	Rubino Engineering, Inc.

Sample Types: Auger Cutting, Split-Spoon, Rock Core, Pressuremeter, Shelby Tube, Grab Sample, No Recovery

Latitude: 41.802710
Longitude: -88.342021
Drill Rig: Geoprobe 3126GT
Remarks: Hole collapse at ~6 feet B.E.G
Log Entry: P. Patel
Checked By: J. Ignarski

The stratification lines represent approximate boundaries. The transition may be gradual.
***Please reference the geotechnical report text for specific groundwater / dewatering recommendations.

Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Telephone: 847-931-1555
Fax: 847-931-1560

LOG OF BORING AR-02

Rubino Job No.:	G24.103
Project:	Princeton Elevated Storage Tank
Location:	West of 600 Princeton Drive
City, State:	North Aurora, Illinois
Client:	Village of North Aurora
Drilling Method:	3 ¼ Hollow Stem Auger
Sampling Method:	Split Spoon
Hammer Type:	Automatic
Boring Location:	Proposed Access Road

WATER LEVELS***

While Drilling	6 ft
Upon Completion	6 ft
Delay	N/A

Station: N/A
Offset: N/A

Surface Elev.: 689 ft

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	Classification	SPT Blows per 6-inch	Moisture, %	STANDARD PENETRATION TEST DATA / STRENGTH, tsf	Additional Remarks
	0					Approximately 12 inches of TOPSOIL: dark brown silty clay with roots and organic matter					
				1	12	Medium stiff, dark brown silty CLAY, trace sand and gravel	CL	2-3-3 N=6	24		Qr=2.5 B tsf
685				2	15	Medium dense to dense, brown well-graded GRAVEL, with sand		11-14-15 N=29	8		
	5			3	14		GW	8-22-22 N=44	12		
680				4	3			11-18-21 N=39	11		
	10					End of boring at approximately 10 feet below existing grade.					

STANDARD PENETRATION TEST DATA: Moisture; PL; LL; 0; 25; 50
STRENGTH, tsf: Qu (Rimac); Qp/Qr; 0; 2.0; 4.0

Completion Depth:	10.0 ft
Date Boring Started:	6/12/24
Date Boring Completed:	6/12/24
Logged By:	P.P.
Drilling Contractor:	Rubino Engineering, Inc.

Sample Types:
- Auger Cutting
- Split-Spoon
- Rock Core
- Pressuremeter
- Shelby Tube
- Grab Sample
- No Recovery

Latitude: 41.802543
Longitude: -88.342002
Drill Rig: Geoprobe 3126GT
Remarks: Hole collapse at ~7 feet B.E.G
Log Entry: P. Patel
Checked By: J. Ignarski

The stratification lines represent approximate boundaries. The transition may be gradual.
***Please reference the geotechnical report text for specific groundwater / dewatering recommendations.

Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Telephone: 847-931-1555
Fax: 847-931-1560

LOG OF BORING WTB-01

Rubino Job No.:	G24.103
Project:	Princeton Elevated Storage Tank
Location:	West of 600 Princeton Drive
City, State:	North Aurora, Illinois
Client:	Village of North Aurora
Drilling Method:	3 ¼ HSA / NX Rock Core
Sampling Method:	Split Spoon
Hammer Type:	Automatic
Boring Location:	Center of Proposed Tank

WATER LEVELS***

While Drilling	3.5 ft
Upon Completion	11 ft
Delay	N/A

Station: N/A
Offset: N/A

Surface Elev.: 687 ft

Elevation (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	Classification	SPT Blows per 6-inch	Moisture, %	Additional Remarks
687	0			Approximately 14 inches of TOPSOIL: dark brown silty clay with roots and organic matter				
685		1	10	Medium stiff, brown and gray silty CLAY, trace sand and gravel	CL	4-2-4 N=6	27	Qp=1.8 tsf
		2	15	Medium dense, brown and gray well-graded sandy GRAVEL	GW	7-12-14 N=26	28 12	Qp=2.3 tsf
680	5	3	18	Medium dense to dense, brown and gray well-graded gravelly SAND *Increase in rock chips at approximately 7 feet below existing grade*		6-14-18 N=32	8	
		4	18			3-10-18 N=28	12	
675	10	5	12		SW	28-13-13 N=26	11	
		6	12	*Increase in fines at approximately 13½ feet below existing grade*		8-8-12 N=20	12	
670	15	7	6	Greenish-gray WEATHERED DOLOMITE **Auger and spoon refusal at approximately 16¾ feet below existing grade.** Boring continued with rock coring.		22-50/2-	9	>> >>
		8	105	RUN 1: 17 to 27 feet Greenish-gray DOLOMITE, poor, moderate to strong field strength, moderately fractured, slight to moderately disintegrated REC: 88% RQD: 46%		-CORE-		>> Q_u = 1182.0 tsf
665	20							>> Q_u = 901.0 tsf
660	25			End of rock core at approximately 27 feet below existing grade.				

STANDARD PENETRATION TEST DATA
Moisture ◎ PL ✚ LL
0 25 50
STRENGTH, tsf
▲ Qu (Rimac) ✳Qp/Qr
0 2.0 4.0

Completion Depth:	27.0 ft
Date Boring Started:	6/11/24
Date Boring Completed:	6/11/24
Logged By:	H.G.
Drilling Contractor:	Rubino Engineering, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Pressuremeter
Shelby Tube
Grab Sample
No Recovery

Latitude: 41.802384
Longitude: -88.341800
Drill Rig: Geoprobe 3126GT
Remarks: Hole collapse at ~12 feet B.E.G
Log Entry: P. Patel
Checked By: J. Ignarski

The stratification lines represent approximate boundaries. The transition may be gradual.
***Please reference the geotechnical report text for specific groundwater / dewatering recommendations.

Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Telephone: 847-931-1555
Fax: 847-931-1560

LOG OF BORING WTB-02

Rubino Job No.:	G24.103
Project:	Princeton Elevated Storage Tank
Location:	West of 600 Princeton Drive
City, State:	North Aurora, Illinois
Client:	Village of North Aurora
Drilling Method:	3 ¼ Hollow Stem Auger
Sampling Method:	Split Spoon
Hammer Type:	Automatic
Boring Location:	Southwest Edge of Proposed Tank

WATER LEVELS***

While Drilling	6 ft
Upon Completion	5 ft
Delay	N/A

Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	Classification	SPT Blows per 6-inch	Moisture, %	Additional Remarks
	0					**Surface Elev.:** 687 ft				
						Approximately 12 inches of TOPSOIL: dark brown silty clay with roots and organic matter				
685				1	13	Stiff, brown and gray silty CLAY, trace to with sand and gravel	CL	2-4-5 N=9	21	Qr=3.4 B tsf
	5			2	14	Medium dense, brown and gray well-graded sandy GRAVEL	GW	10-10-18 N=28	10	
680				3	13	Medium dense to dense, brown and gray well-graded gravelly SAND		6-8-12 N=20	12	
	10			4	14		SW	6-11-16 N=27	12	
675				5	17			8-15-15 N=30	10	
	15			6	9	Medium dense, brown well-graded GRAVEL	GW	20-15-8 N=23	10	
				7	1	Greenish-gray WEATHERED DOLOMITE **Auger and spoon refusal at approximately 16 feet below existing grade.** End of boring at approximately 16 feet below existing grade.		50/1--		

STANDARD PENETRATION TEST DATA
Moisture; PL; LL; 0; 25; 50
STRENGTH, tsf
Qu (Rimac); Qp/Qr; 0; 2.0; 4.0

Completion Depth:	16.1 ft
Date Boring Started:	6/12/24
Date Boring Completed:	6/12/24
Logged By:	P.P.
Drilling Contractor:	Rubino Engineering, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Pressuremeter
Shelby Tube
Grab Sample
No Recovery

Latitude: 41.802349
Longitude: -88.341879
Drill Rig: Geoprobe 3126GT
Remarks: Hole collapse at ~6 feet B.E.G
Log Entry: P. Patel
Checked By: J. Ignarski

The stratification lines represent approximate boundaries. The transition may be gradual.
***Please reference the geotechnical report text for specific groundwater / dewatering recommendations.

Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Telephone: 847-931-1555
Fax: 847-931-1560

LOG OF BORING WTB-03

Rubino Job No.:	G24.103	Drilling Method:	3 ¼ Hollow Stem Auger
Project:	Princeton Elevated Storage Tank	Sampling Method:	Split Spoon
Location:	West of 600 Princeton Drive	Hammer Type:	Automatic
City, State:	North Aurora, Illinois	Boring Location:	Southeast Edge of Proposed Tank
Client:	Village of North Aurora		

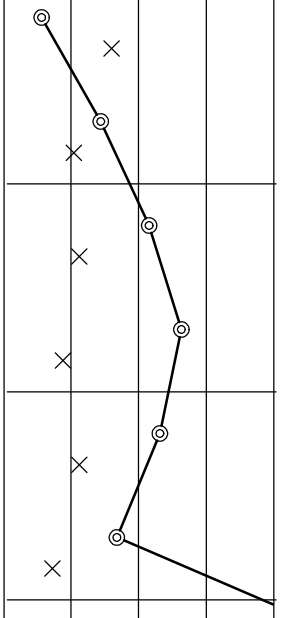
WATER LEVELS***

While Drilling	3.5 ft
Upon Completion	4 ft
Delay	N/A

Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	Classification	SPT Blows per 6-inch	Moisture, %	Additional Remarks
						Surface Elev.: 687 ft				
	0					Approximately 12 inches of TOPSOIL: dark brown silty clay with roots and organic matter				
685				1	3	Medium stiff, brown silty CLAY, trace sand and gravel	CL	3-3-4 N=7	20	
				2	9	Medium dense, brown well-graded gravelly SAND	SW	6-8-10 N=18	13	
	5									
680				3	10	Medium dense to dense, brown well-graded sandy GRAVEL		6-12-15 N=27	14	
				4	12			17-15-18 N=33	11	
	10						GW			
675				5	14			23-13-16 N=29	14	
				6	14			3-5-16 N=21	9	
	15									
				7	1	Greenish-gray WEATHERED DOLOMITE **Auger and spoon refusal at approximately 15¾ feet below existing grade.** End of boring at approximately 15¾ feet below existing grade.		50/1"--		

STANDARD PENETRATION TEST DATA
Moisture ◎ PL ✚ LL
0 25 50
STRENGTH, tsf
▲ Qu (Rimac) ✳Qp/Qr
0 2.0 4.0



Completion Depth:	15.8 ft
Date Boring Started:	6/12/24
Date Boring Completed:	6/12/24
Logged By:	P.P.
Drilling Contractor:	Rubino Engineering, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Pressuremeter
Shelby Tube
Grab Sample
No Recovery

Latitude: 41.802352
Longitude: -88.341720
Drill Rig: Geoprobe 3126GT
Remarks: Hole collapse at ~5 feet B.E.G
Log Entry: P. Patel
Checked By: J. Ignarski

The stratification lines represent approximate boundaries. The transition may be gradual.
***Please reference the geotechnical report text for specific groundwater / dewatering recommendations.

Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Telephone: 847-931-1555
Fax: 847-931-1560

LOG OF BORING WTB-04

Rubino Job No.:	G24.103
Project:	Princeton Elevated Storage Tank
Location:	West of 600 Princeton Drive
City, State:	North Aurora, Illinois
Client:	Village of North Aurora
Drilling Method:	3 ¼ Hollow Stem Auger
Sampling Method:	Split Spoon
Hammer Type:	Automatic
Boring Location:	Northern Edge of Proposed Tank

WATER LEVELS***

While Drilling	6 ft
Upon Completion	5 ft
Delay	N/A

Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	Classification	SPT Blows per 6-inch	Moisture, %	STANDARD PENETRATION TEST DATA / STRENGTH, tsf	Additional Remarks
						Surface Elev.: 688 ft					
	0					Approximately 12 inches of TOPSOIL: dark brown silty clay with organic matter					
				1	13	Stiff, brown silty CLAY, trace sand and gravel	CL	2-2-7 N=9	26		Qr=2.5 B tsf
685											
	5			2	13	Medium dense, brown well-graded gravelly SAND	SW	9-14-15 N=29	8		
				3	14	Medium dense to dense, brown well-graded sandy GRAVEL		6-14-19 N=33	14		
680											
				4	12			9-7-10 N=17	18		
	10			5	14		GW	10-7-7 N=14	12		
675											
				6	15			7-9-9 N=18	13		
	15			7	18	Dense, gray GRAVEL, with weathered dolomite chips	GW	10-12-28 N=40	14		
				8	1	Greenish-gray WEATHERED DOLOMITE		50/3"--		>>	
						Auger and spoon refusal at approximately 17 feet 11 inches below existing grade. End of boring at approximately 17 feet 11 inches below existing grade.					

Completion Depth:	17.9 ft
Date Boring Started:	6/12/24
Date Boring Completed:	6/12/24
Logged By:	P.P.
Drilling Contractor:	Rubino Engineering, Inc.

Sample Types:
- Auger Cutting
- Split-Spoon
- Rock Core
- Pressuremeter
- Shelby Tube
- Grab Sample
- No Recovery

Latitude: 41.802453
Longitude: -88.341803
Drill Rig: Geoprobe 3126GT
Remarks: Hole collapse at ~6 feet B.E.G
Log Entry: P. Patel
Checked By: J. Ignarski

The stratification lines represent approximate boundaries. The transition may be gradual.
***Please reference the geotechnical report text for specific groundwater / dewatering recommendations.

Appendix K – Rock Core Photo

rubino ENGINEERING INC.

425 Shepard Drive
Elgin, Illinois 60123

Project Name:	**Princeton Elevated Storage Tank**
Project Location:	W of 600 Princeton Drive - S of Goodwin Park North Aurora, Illinois
Client:	**Village of North Aurora**
Rubino Project # :	G24.103

WTB-01
Rock Core
RQD

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Source Site Certification by Owner or Operator for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-662

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by source site owners and operators to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(A), that soil (i) was removed from a site that is not potentially impacted property and is presumed to be uncontaminated soil and (ii) is within a pH range of 6.25 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Princeton Elevated Storage Tank Office Phone Number, if available: _____

Physical Site Location (Street, Road): Field west of 600 Princeton Drive (See attached summary report)

City: North Aurora State: IL Zip Code: 60542 County: Kane

Township: _____

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.80245 (Decimal Degrees) Longitude: - 88.3418 (-Decimal Degrees)

Identify how the lat/long data were determined:

○ GPS ⊘ Map Interpolation ○ Photo Interpolation ○ Survey ○ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): _____ Approximate End Date (mm/dd/yyyy): _____

Estimated Volume of debris (cu. Yd.): _____

II. Owner/Operator Information for Source Site

Site Owner		Site Operator	
Name:	Village of North Aurora	Name:	
Street Address:	25 E State Street	Street Address:	
PO Box:		PO Box:	
City:	North Aurora State: IL	City:	State:
Zip Code:	60542 Phone: 331.385.6432	Zip Code:	Phone:
Contact:	Brandon Tonarelli	Contact:	
Email, if available:	btonarelli@northaurora.org	Email, if available:	

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: Princeton Elevated Storage Tank Latitude: 41.80245 Longitude: -88.34180

Source Site Certification

III. Descriptions of Current and Past Uses of Source Site

Describe the current and past uses of the site and nearby properties.* Attach additional information as needed. The description must take into account, at a minimum, the following for the source site and for nearby property: (1) use of the properties for commercial or industrial purposes; (2) the use, storage or disposal of chemical or petroleum products in individual containers greater than 5 gallons or collectively more than 50 gallons; (3) the current or past presence of any storage tanks (above ground or underground); (4) any waste storage, treatment or disposal at the properties; (5) any reported releases or any environmental cleanup or removal of contaminants; (6) any environmental liens or governmental notification of environmental violations; (7) any contamination in a well that exceeds the Board's groundwater quality standards; (8) the use, storage, or disposal of transformers or capacitors manufactured before 1979; and (9) any fill dirt brought to the properties from an unknown source or site.

Number of pages attached: 94

Prior to a site investigation, an Environmental Database Review (EDR) was conducted for the project area. Based on the EDR, six (6) soil samples were collected through out the project area and were tested for pH. Refer to attached Summary Letter.

*The description must be sufficient to demonstrate that the source site is not potentially impacted property, thereby allowing the source site owner or operator to provide this certification.

IV. Soil pH Testing Results

Describe the results of soil pH testing showing that the soil pH is within the range of 6.25 to 9.0 and attach any supporting documentation.

Number of pages attached: 1

Six [6] samples were collected and tested for pH. Results were within the range of 6.25 to 9.0 . Please refer to pH Results in Appendix A.2

V. Source Site Owner, Operator or Authorized Representative's Certification Statement and Signature

In accordance with the Illinois Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I Anthony Tomaras, Rubino Engineering, Inc. (owner, operator or authorized representataive of source site) certify that this site is not a potentially impacted property and the soil is presumed to be uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. I further certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. Additionally, I certify that I am either the site owner or operator or a duly authorized representative of the site owner or site operator and am authorized to sign this form. Furthermore, I certify that all information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

○ Owner
○ Operator
☑ Owner's Duly Authorized Representative
○ Operator's Duly Authorized Representative

Anthony Tomaras, Rubino Engineering, Inc.
Printed Name

7/15/24
Date

Signature

rubino ENGINEERING INC.

ENVIRONMENTAL SUMMARY REPORT

July 15, 2024

To: Brandon Tonarelli, PE
Assistant Public Works Director /
Village Engineer
Village of North Aurora
25 E State Street
North Aurora, Illinois 60542
P: 331.385.6432

Re: **CCDD Testing Summary Report**
Proposed Elevated Storage Tank
West of 600 Princeton Drive and South
Of Goodwin Park
North Aurora, Illinois

Rubino Report No. G24.103

Via email: btonarelli@northaurora.org

Dear Mr. Tonarelli,

Rubino Engineering, Inc. (Rubino) is pleased to submit the following report to provide a summary of the CCDD testing for the above referenced project.

This report contains the following:

- *Summary of Environmental Database Review*
- *Summary of field and laboratory tests performed*
- *Summary of laboratory test results*
- *Illinois Environmental Protection Agencies LPC 662 Certificate*

ENVIROMENTAL DATABASE REVIEW

The project site is located at the grassy field west of 600 Princeton Drive in North Aurora, Illinois. A map of the project location can be found in **Appendix A.1**. Prior to a site investigation, an Environmental Database Review (EDR) was conducted and the report is included as **Appendix A.3**. After reviewing the EDR report, Rubino. did not find any records of potentially impacted properties in close proximity to the project site that posed an environmental risk.

Based on the fact there were no records of potentially impacted properties in close proximity to the project site that posed an environmental risk, it was determined the project site is not a “potentially impacted property” and therefore only pH sampling of the project site was necessary.

Certification Limits

The LPC 662 Certification Limits include the following locations in North Aurora, Illinois.

- **Grass field** west of 600 Princeton Drive water facility and south of Goodwin Park parking lot

SOIL SAMPLING

On June 11, 2024, and June 12, 2024, Rubino mobilized to the project site to collect soil samples. The sampling locations can be found in **Appendix A.1**. Six (6) soil samples were collected to an approximate depth of 10 to 16 feet below existing grade. The six (6) samples were submitted for pH testing at Rubino.

RESULTS

Lab analysis found that the soil samples were within the allowable pH range of 6.25 to 9.0.

The pH lab analysis results and complete reports can be found in **Appendix A.2**.

Based on the results of the laboratory testing performed, an **IEPA LPC #662 (CCDD) Certificate was issued** for the entire site.

CLOSING

Rubino appreciates the opportunity to provide Clean Construction Demolition Debris (CCDD) services for this project and we look forward to continued participation during the design and in future construction phases of this project.

If you have questions pertaining to this summary report, or if Rubino may be of further service, please contact our office at (847) 931-1555.

Respectfully submitted,

RUBINO ENGINEERING, INC.

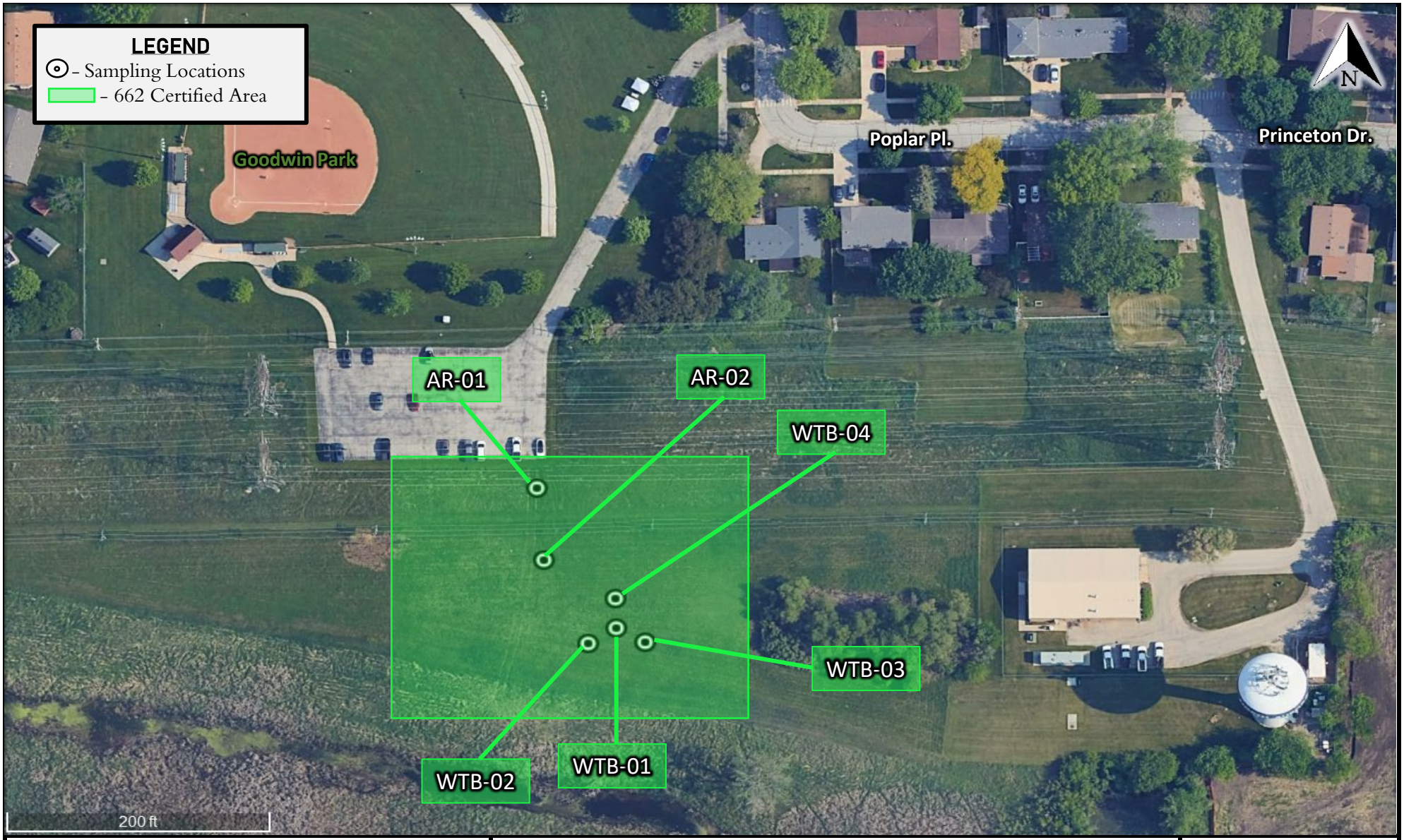
Michelle A. Lipinski, PE
President

michelle.lipinski@rubinoeng.com

MAL/file/ Enclosures

Appendix Contents

APPENDIX A.1 – SITE MAPS



rubino ENGINEERING INC.

425 Shepard Drive
Elgin, Illinois 60123

Project Name:	**Princeton Elevated Storage Tank**
Project Location:	West of 600 Princeton Drive North Aurora, Illinois
Client:	**Village of North Aurora**
Rubino Project # :	G24.103

CCDD Testing Plan

APPENDIX A.2 – pH RESULTS

rubino ENGINEERING INC.

ASTM D4972-01
Standard Test Method for pH of Soils

		Date:	13-Jun-24
Project Number:	G24.103	**Performed by:**	Parth Patel
Project Name:		**Title:**	Soil Scientist
	Princeton Elevated Storage Tank	**Signature:**	Parth Patel
City, State:	North Aurora, Illinois	**Client:**	Village of North Aurora
Method Used:	ASTM D4972-01 Method A	**Client Address:**	25 E State Street
	Calcium Chloride Solution (0.01M)		North Aurora, Illinois 60542
pH Meter Mfgr:	Ohaus Corporation	**Prior Calibration:**	1/4/24 @ 10:15am
Model #	ST Series PH Analysis Pen	**Calibration:**	4/3/24 @ 1:35pm

Location	Sample Type	Mass of Soil (g)	pH in Calcium Chloride Solution	pH in Distilled Water
WTB-01	Grab	10	7.5	7.8
WTB-02	Grab	10	7.4	7.8
WTB-03	Grab	10	7.6	8.0
WTB-04	Grab	10	7.3	7.8
AR-01	Grab	10	7.6	7.9
AR-02	Grab	10	7.4	7.8

APPENDIX A.3– ERIS DATABASE REPORT

DATABASE REPORT

Project Property:	*41.80269524494249, -88.34203021733471 W* *41.80269524494249, -88.34203021733471 North Aurora IL 60542*
Project No:	
Report Type:	*Screen Report Plus*
Order No:	*24061300820*
Requested by:	*Bluff City Materials, Inc*
Date Completed:	*June 13, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:		*41.80269524494249, -88.34203021733471W* *41.80269524494249, -88.34203021733471 North Aurora IL 60542*
Project No:		
Coordinates:		
	Latitude:	*41.8026952*
	Longitude:	*-88.3420302*
	UTM Northing:	*4,628,740.48*
	UTM Easting:	*388,512.42*
	UTM Zone:	*16T*
Elevation:		*690 FT*

Order Information:

Order No:	*24061300820*
Date Requested:	*June 13, 2024*
Requested by:	*Bluff City Materials, Inc*
Report Type:	*Screen Report Plus*

Historicals/Products:

ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*

Executive Summary: Report Summary

Database	Searched	Project Property	Within 0.250mi	Total
Standard Environmental Records				
Federal				
NPL	Y	0	0	0
PROPOSED NPL	Y	0	0	0
DELETED NPL	Y	0	0	0
SEMS	Y	0	0	0
ODI	Y	0	0	0
SEMS ARCHIVE	Y	0	0	0
CERCLIS	Y	0	0	0
IODI	Y	0	0	0
CERCLIS NFRAP	Y	0	0	0
CERCLIS LIENS	Y	0	0	0
RCRA CORRACTS	Y	0	0	0
RCRA TSD	Y	0	0	0
RCRA LQG	Y	0	0	0
RCRA SQG	Y	0	**1**	**1**
RCRA VSQG	Y	0	0	0
RCRA NON GEN	Y	0	**5**	**5**
RCRA CONTROLS	Y	0	0	0
FED ENG	Y	0	0	0
FED INST	Y	0	0	0
LUCIS	Y	0	0	0
NPL IC	Y	0	0	0
ERNS 1982 TO 1986	Y	0	0	0
ERNS 1987 TO 1989	Y	0	0	0
ERNS	Y	0	0	0
FED BROWNFIELDS	Y	0	0	0
FEMA UST	Y	0	0	0

Database	Searched	Project Property	Within 0.250mi	Total
FRP	Y	0	0	0
DELISTED FRP	Y	0	0	0
HIST GAS STATIONS	Y	0	0	0
REFN	Y	0	0	0
BULK TERMINAL	Y	0	0	0
SEMS LIEN	Y	0	0	0
SUPERFUND ROD	Y	0	0	0
DOE FUSRAP	Y	0	0	0
State				
SSU	Y	0	0	0
DELISTED SSU	Y	0	0	0
SWF/LF	Y	0	0	0
SWF/LF SPECIAL	Y	0	0	0
NIPC	Y	0	0	0
CCDD	Y	0	0	0
LUST	Y	0	0	0
LUST DOCUMENT	Y	0	0	0
DELISTED LUST	Y	0	0	0
LUST TRUST	Y	0	0	0
UST	Y	0	***1***	***1***
AST	Y	0	0	0
DELISTED TANK	Y	0	0	0
ENG	Y	0	***1***	***1***
INST	Y	0	0	0
AUL	Y	0	0	0
SRP	Y	0	***1***	***1***
REM ASSESS	Y	0	***1***	***1***
BROWNFIELDS	Y	0	0	0
BROWN MBRGP	Y	0	0	0
Tribal				
INDIAN LUST	Y	0	0	0
INDIAN UST	Y	0	0	0
DELISTED INDIAN LST	Y	0	0	0
DELISTED INDIAN UST	Y	0	0	0

County ***No County databases were selected to be included in the search.***

Additional Environmental Records

Database	Searched	Project Property	Within 0.250mi	Total
Federal				
PFAS GHG	Y	0	0	0
OSC RESPONSE	Y	0	0	0
FINDS/FRS	Y	0	**10**	**10**
TRIS	Y	0	0	0
HMIRS	Y	0	0	0
NCDL	Y	0	0	0
TSCA	Y	0	0	0
HIST TSCA	Y	0	0	0
FTTS ADMIN	Y	0	0	0
FTTS INSP	Y	0	0	0
PRP	Y	0	0	0
SCRD DRYCLEANER	Y	0	0	0
ICIS	Y	0	0	0
FED DRYCLEANERS	Y	0	0	0
DELISTED FED DRY	Y	0	0	0
FUDS	Y	0	0	0
FUDS MRS	Y	0	0	0
FORMER NIKE	Y	0	0	0
PIPELINE INCIDENT	Y	0	0	0
MLTS	Y	0	0	0
HIST MLTS	Y	0	0	0
MINES	Y	0	0	0
SMCRA	Y	0	0	0
MRDS	Y	0	0	0
LM SITES	Y	0	0	0
ALT FUELS	Y	0	0	0
CONSENT DECREES	Y	0	0	0
AFS	Y	0	0	0
SSTS	Y	0	0	0
PCBT	Y	0	0	0
PCB	Y	0	0	0
State				
SPILLS	Y	0	0	0
SPILL OER	Y	0	0	0
DRYCLEANERS	Y	0	0	0
DELISTED DRYCLEANERS	Y	0	0	0
IEPA DOCS	Y	0	**4**	**4**
CDL	Y	0	0	0
TIER 2	Y	0	**3**	**3**

Database	Searched	Project Property	Within 0.250mi	Total
AIR PERMITS	Y	0	**1**	**1**
UIC	Y	0	0	0
MEDICAL WASTE	Y	0	0	0
COMPOST	Y	0	0	0

Tribal ***No Tribal additional environmental record sources available for this State.***

County ***No County additional environmental record sources available for this State.***

Total:	0	**28**	**28**

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	TIER 2	Village of North Aurora - TP06	600 Princeton Dr North Aurora IL 60542	ENE	0.11 / 565.58	1	19
1	TIER 2	Village of North Aurora - Well #4	600 Princeton Drive North Aurora IL 60542	ENE	0.11 / 565.58	1	39
2	RCRA NON GEN	ZIEGLER ENTERPIRZES	189 POPLAR PLACE # 3 NORTH AURORA IL 60542 ***EPA Handler ID:*** ILR000049213	SSE	0.14 / 735.03	-2	39
2	FINDS/FRS	ZIEGLER ENTERPIRZES	189 POPLAR PLACE # 3 NORTH AURORA IL 60542 ***Registry ID:*** 110005963074	SSE	0.14 / 735.03	-2	41
2	FINDS/FRS	TAILORED SPACES LLC DBA THE TAILORED CLOSET	189 POPLAR PL., UNIT #1 NORTH AURORA IL 60542 ***Registry ID:*** 110070315965	SSE	0.14 / 735.03	-2	42
2	IEPA DOCS	Ziegler Enterprizes	189 Poplar Pl 3 North Aurora IL 60542	SSE	0.14 / 735.03	-2	43
3	FINDS/FRS	FEDERAL EXPRESS CORP	180 POPLAR NORTH AURORA IL 60542 ***Registry ID:*** 110018195399	S	0.17 / 879.12	0	43
3	FINDS/FRS	CYBERDYNE MASONARY CORP YARD	190 POPLAR PL NORTH AURORA IL 60542 ***Registry ID:*** 110046145300	S	0.17 / 879.12	0	44
3	FINDS/FRS	BATTERY BUILDERS LLC	180 POPLAR PL UNIT B NORTH AURORA IL 60542 ***Registry ID:*** 110070159240	S	0.17 / 879.12	0	44
3	TIER 2	Battery Builders Service	180 Poplar Place North Aurora IL 60542	S	0.17 / 879.12	0	45
3	AIR PERMITS	Battery Builders LLC - 170002273625	180 Poplar Pl Unit B North Aurora IL 60542	S	0.17 / 879.12	0	51
3	IEPA DOCS	Federal Express Corp	180 Poplar North Aurora IL 60542	S	0.17 / 879.12	0	51

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
3	RCRA NON GEN	BATTERY BUILDERS LLC	180 POPLAR PL UNIT B NORTH AURORA IL 60542 ***EPA Handler ID:*** ILR000197152	S	0.17 / 879.12	0	51
4	FINDS/FRS	FOX VALLEY MACHINING CO INC	198 POPLAR PLACE NORTH AURORA IL 60542 ***Registry ID:*** 110005818589	S	0.20 / 1,068.74	5	55
4	UST	Fox Valley Machining Co., Inc.	198 Poplar Place North Aurora, IL 60542 IL ***Facility No | Facility Status:*** 2046438 | Closed ***Tank No | Status | Removed Date:*** 1 | Removed | 8/8/2017	S	0.20 / 1,068.74	5	56
4	IEPA DOCS	Fox Valley Machining Co Inc	198 Poplar St North Aurora IL 60542	S	0.20 / 1,068.74	5	57
4	RCRA SQG	BIG STICKERS & SIGNS	198 POPLAR PLACE-B NORTH AURORA IL 60542 ***EPA Handler ID:*** ILR000204016	S	0.20 / 1,068.74	5	57
4	FINDS/FRS	BIG STICKERS & SIGNS	198 POPLAR PLACE-B NORTH AURORA IL 60542 ***Registry ID:*** 110070676090	S	0.20 / 1,068.74	5	60
4	RCRA NON GEN	FOX VALLEY MACHINING CO INC	198 POPLAR PLACE NORTH AURORA IL 60542 ***EPA Handler ID:*** ILD005970157	S	0.20 / 1,068.74	5	60
5	SRP	Valley Green Golf Course	314 Kingswood Drive North Aurora IL 60542	SE	0.21 / 1,106.52	1	63
5	ENG	Valley Green Golf Course	314 Kingswood Drive North Aurora IL 60542	SE	0.21 / 1,106.52	1	63
5	REM ASSESS	Valley Green - 170002437806	314 Kingswood Dr North Aurora IL 60542	SE	0.21 / 1,106.52	1	64
5	FINDS/FRS	VALLEY GREEN REDEVELOPMENT	314 KINGSWOOD DRIVE NORTH AURORA IL 60542 ***Registry ID:*** 110071514041	SE	0.21 / 1,106.52	1	65
6	FINDS/FRS	ABELEI FLAVORS	194 ALDER DR NORTH AURORA IL 60542 ***Registry ID:*** 110070126543	SSW	0.21 / 1,106.87	6	65
6	RCRA NON GEN	ABELEI FLAVORS	194 ALDER DR NORTH AURORA IL 60542 ***EPA Handler ID:*** ILR000195735	SSW	0.21 / 1,106.87	6	66
7	RCRA NON GEN	ARARMARK SVC MASTER FACILITY	200 ALDER ST NORTH AURORA IL 60542	SSW	0.23 / 1,238.23	9	68

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			EPA Handler ID: ILD984846394				
7	FINDS/FRS	ARARMARK SVC MASTER FACILITY	200 ALDER ST NORTH AURORA IL 60542-1400 ***Registry ID:*** 110005902381	SSW	0.23 / 1,238.23	9	71
7	IEPA DOCS	Ararmark Svc Master Facility	200 Alder St North Aurora IL 60542	SSW	0.23 / 1,238.23	9	72

Executive Summary: Summary by Data Source

Standard

Federal

RCRA SQG - RCRA Small Quantity Generators List

A search of the RCRA SQG database, dated Apr 8, 2024 has found that there are 1 RCRA SQG site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BIG STICKERS & SIGNS	198 POPLAR PLACE-B NORTH AURORA IL 60542 ***EPA Handler ID**: ILR000204016*	S	0.20 / 1,068.74	4

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Apr 8, 2024 has found that there are 5 RCRA NON GEN site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BATTERY BUILDERS LLC	180 POPLAR PL UNIT B NORTH AURORA IL 60542 ***EPA Handler ID**: ILR000197152*	S	0.17 / 879.12	3
FOX VALLEY MACHINING CO INC	198 POPLAR PLACE NORTH AURORA IL 60542 ***EPA Handler ID**: ILD005970157*	S	0.20 / 1,068.74	4
ABELEI FLAVORS	194 ALDER DR NORTH AURORA IL 60542 ***EPA Handler ID**: ILR000195735*	SSW	0.21 / 1,106.87	6
ARARMARK SVC MASTER FACILITY	200 ALDER ST NORTH AURORA IL 60542 ***EPA Handler ID**: ILD984846394*	SSW	0.23 / 1,238.23	7

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ZIEGLER ENTERPIRZES	189 POPLAR PLACE # 3 NORTH AURORA IL 60542 ***EPA Handler ID**: ILR000049213*	SSE	0.14 / 735.03	2

State

UST - Underground Storage Tank Database (UST)

A search of the UST database, dated Apr 9, 2024 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Fox Valley Machining Co., Inc.	198 Poplar Place North Aurora, IL 60542 IL ***Facility No | Facility Status***: *2046438 | Closed* ***Tank No | Status | Removed Date***: *1 | Removed | 8/8/2017*	S	0.20 / 1,068.74	4

ENG - Sites with Engineering Controls

A search of the ENG database, dated Apr 15, 2024 has found that there are 1 ENG site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Valley Green Golf Course	314 Kingswood Drive North Aurora IL 60542	SE	0.21 / 1,106.52	5

SRP - Illinois Site Remediation Program Database

A search of the SRP database, dated Apr 15, 2024 has found that there are 1 SRP site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Valley Green Golf Course	314 Kingswood Drive North Aurora IL 60542	SE	0.21 / 1,106.52	5

REM ASSESS - Document Explorer Remediation and Assessment Sites

A search of the REM ASSESS database, dated Jan 23, 2024 has found that there are 1 REM ASSESS site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Valley Green - 170002437806	314 Kingswood Dr North Aurora IL 60542	SE	0.21 / 1,106.52	5

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Feb 9, 2024 has found that there are 10 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
FEDERAL EXPRESS CORP	180 POPLAR NORTH AURORA IL 60542	S	0.17 / 879.12	3

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	***Registry ID**: 110018195399*			
BATTERY BUILDERS LLC	180 POPLAR PL UNIT B NORTH AURORA IL 60542	S	0.17 / 879.12	3
	***Registry ID**: 110070159240*			
CYBERDYNE MASONARY CORP YARD	190 POPLAR PL NORTH AURORA IL 60542	S	0.17 / 879.12	3
	***Registry ID**: 110046145300*			
BIG STICKERS & SIGNS	198 POPLAR PLACE-B NORTH AURORA IL 60542	S	0.20 / 1,068.74	4
	***Registry ID**: 110070676090*			
FOX VALLEY MACHINING CO INC	198 POPLAR PLACE NORTH AURORA IL 60542	S	0.20 / 1,068.74	4
	***Registry ID**: 110005818589*			
VALLEY GREEN REDEVELOPMENT	314 KINGSWOOD DRIVE NORTH AURORA IL 60542	SE	0.21 / 1,106.52	5
	***Registry ID**: 110071514041*			
ABELEI FLAVORS	194 ALDER DR NORTH AURORA IL 60542	SSW	0.21 / 1,106.87	6
	***Registry ID**: 110070126543*			
ARARMARK SVC MASTER FACILITY	200 ALDER ST NORTH AURORA IL 60542-1400	SSW	0.23 / 1,238.23	7
	***Registry ID**: 110005902381*			

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ZIEGLER ENTERPIRZES	189 POPLAR PLACE # 3 NORTH AURORA IL 60542	SSE	0.14 / 735.03	2
	***Registry ID**: 110005963074*			
TAILORED SPACES LLC DBA THE TAILORED CLOSET	189 POPLAR PL., UNIT #1 NORTH AURORA IL 60542	SSE	0.14 / 735.03	2
	***Registry ID**: 110070315965*			

State

IEPA DOCS - IEPA Document Explorer

A search of the IEPA DOCS database, dated Jan 23, 2024 has found that there are 4 IEPA DOCS site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Federal Express Corp	180 Poplar North Aurora IL 60542	S	0.17 / 879.12	3

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Fox Valley Machining Co Inc	198 Poplar St North Aurora IL 60542	S	0.20 / 1,068.74	4
Ararmark Svc Master Facility	200 Alder St North Aurora IL 60542	SSW	0.23 / 1,238.23	7

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Ziegler Enterprizes	189 Poplar Pl 3 North Aurora IL 60542	SSE	0.14 / 735.03	2

TIER 2 - Tier 2 Report

A search of the TIER 2 database, dated May 10, 2023 has found that there are 3 TIER 2 site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Village of North Aurora - TP06	600 Princeton Dr North Aurora IL 60542	ENE	0.11 / 565.58	1
Village of North Aurora - Well #4	600 Princeton Drive North Aurora IL 60542	ENE	0.11 / 565.58	1
Battery Builders Service	180 Poplar Place North Aurora IL 60542	S	0.17 / 879.12	3

AIR PERMITS - Air Permits

A search of the AIR PERMITS database, dated Jan 23, 2024 has found that there are 1 AIR PERMITS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Battery Builders LLC - 170002273625	180 Poplar Pl Unit B North Aurora IL 60542	S	0.17 / 879.12	3

Map: 0.25 Mile Radius

Order Number: 24061300820

Address: 41.80269524494249, -88.34203021733471, North Aurora, IL

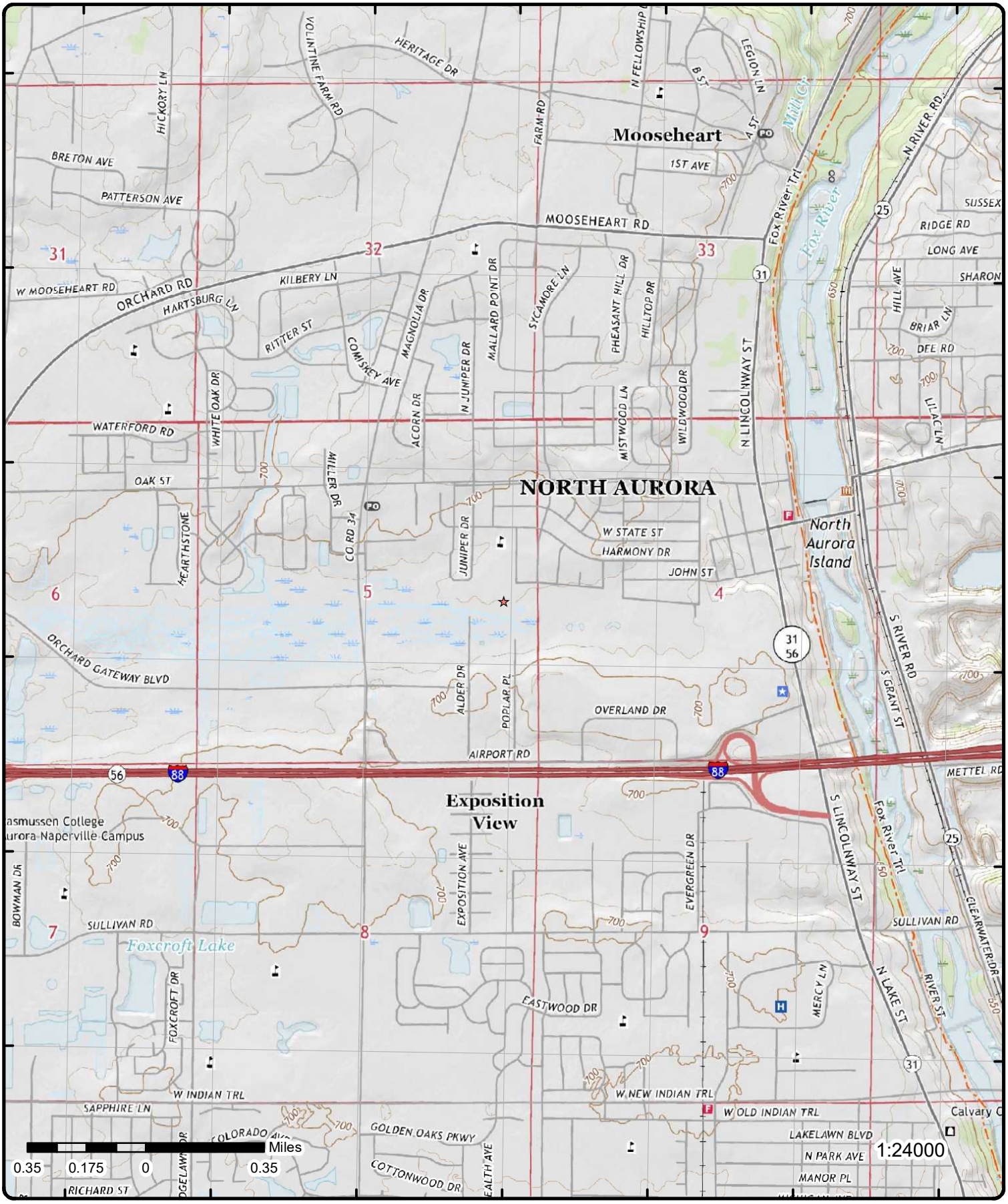
- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Aerial **Year: 2022**

Order Number: 24061300820

Address: 41.80269524494249, -88.34203021733471, North Aurora, IL

Source: ESRI World Imagery



Topographic Map

Year: 2021

Order Number: 24061300820

Address: 41.80269524494249, -88.34203021733471, IL

Quadrangle(s): Aurora North IL

Source: USGS Topographic Map

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 2	ENE	0.11 / 565.58	691.30 / 1	Village of North Aurora - TP06 600 Princeton Dr North Aurora IL 60542	TIER 2

Facility County: Kane
Report Year(s): 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008

Tier II Details

Report Year: 2015
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2013
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora

Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228x232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2013	**Chemical CAS No:**	10034965
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Solid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	MANGANESE SULFATE MONOHYDRATE
Chem Health Haz:	Delayed,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228x232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2012	**Chemical CAS No:**	14333132
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-99,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	1,000-9,999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz:	Fire, Immediate,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228x232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL

Mailing Zip Code: 60542

Report Year: 2011
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-9,999
Avg Daily Amt(lbs): 100-999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2019
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2021
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999

Facility Longitude: -88.3403
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2014
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2020
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Mark Gaffino
Owner Street: 25 East State St

Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2022
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 5,000-9,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: Hydrous Manganese Oxide
Chem Health Haz:
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2018
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora

Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2015
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2014
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2010
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-9,999

Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	100-999
Facility Longitude:	-88.3403		
Corporate Name:	Village of North Aurora		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	MANGANESE SULFATE MONOHYDRATE		
Chem Health Haz:	Delayed,		
Owner:	John Hansen		
Owner Street:	25 East State St		
Owner City:	North Aurora		
Owner State:	IL		
Owner Zip Code:	60542		
Owner Phone:	6308978228x232		
Mailing Name:	Village of North Aurora		
Mailing Street:	25 East State St		
Mailing City:	North Aurora		
Mailing State:	IL		
Mailing Zip Code:	60542		

Report Year:	2010	**Chemical CAS No:**	14333132
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-99,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	1,000-9,999
Facility Longitude:	-88.3403		
Corporate Name:	Village of North Aurora		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	PERMANGANIC ACID (HMNO4), ION(1-)		
Chem Health Haz:	Fire, Immediate,		
Owner:	John Hansen		
Owner Street:	25 East State St		
Owner City:	North Aurora		
Owner State:	IL		
Owner Zip Code:	60542		
Owner Phone:	6308978228x232		
Mailing Name:	Village of North Aurora		
Mailing Street:	25 East State St		
Mailing City:	North Aurora		
Mailing State:	IL		
Mailing Zip Code:	60542		

Report Year:	2008	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-99,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	1,000-9,999
Facility Longitude:	-88.3403		
Corporate Name:	Village of North Aurora		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]		
Chem Health Haz:	Fire,		
Owner:	John Hansen		

Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2018
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2008
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-9,999
Avg Daily Amt(lbs): 100-999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St

Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2021
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2021
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2011
LEPC: Kane
Facility Phone: 3313856296
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,

Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-99,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	1,000-9,999
Facility Longitude:	-88.3403		
Corporate Name:	Village of North Aurora		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	PERMANGANIC ACID (HMNO4), ION(1-)		
Chem Health Haz:	Fire, Immediate,		
Owner:	John Hansen		
Owner Street:	25 East State St		
Owner City:	North Aurora		
Owner State:	IL		
Owner Zip Code:	60542		
Owner Phone:	6308978228x232		
Mailing Name:	Village of North Aurora		
Mailing Street:	25 East State St		
Mailing City:	North Aurora		
Mailing State:	IL		
Mailing Zip Code:	60542		

Report Year:	2020	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-24,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	5,000-9,999
Facility Longitude:	-88.3403		
Corporate Name:	Village of North Aurora - Well #4		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]		
Chem Health Haz:	Fire,		
Owner:	Mark Gaffino		
Owner Street:	25 East State St		
Owner City:	North Aurora		
Owner State:	IL		
Owner Zip Code:	60542		
Owner Phone:	6308978228232		
Mailing Name:	Village of North Aurora		
Mailing Street:	25 East State St		
Mailing City:	North Aurora		
Mailing State:	IL		
Mailing Zip Code:	60542		

Report Year:	2017	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-24,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	5,000-9,999
Facility Longitude:	-88.3403		
Corporate Name:	Village of North Aurora - Well #4		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]		
Chem Health Haz:	Fire,		

Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2017	**Chemical CAS No:**	10034965
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Solid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora - Well #4
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	MANGANESE SULFATE MONOHYDRATE
Chem Health Haz:	Delayed,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2016	**Chemical CAS No:**	10034965
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Solid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora - Well #4
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	MANGANESE SULFATE MONOHYDRATE
Chem Health Haz:	Delayed,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228232
Mailing Name:	Village of North Aurora

Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2015
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2010
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-99,999
Avg Daily Amt(lbs): 1,000-9,999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2019
LEPC: Kane
Chemical CAS No: N/A
Chemical EHS: No

Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2017
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2013
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)

Chem Health Haz:	Fire, Immediate,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228x232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2016	**Chemical CAS No:**	14333132
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-24,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	5,000-9,999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora - Well #4
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz:	Fire, Immediate,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2012	**Chemical CAS No:**	10034965
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Solid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	1,000-9,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	100-999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	MANGANESE SULFATE MONOHYDRATE
Chem Health Haz:	Delayed,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228x232

Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2008	**Chemical CAS No:**	14333132
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-99,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	1,000-9,999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz:	Fire, Immediate,
Owner:	John Hansen
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228x232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2016	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	3313856296	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302810945	**Max Daily Amt(lbs):**	10,000-24,999
Facility Latitude:	41.8035	**Avg Daily Amt(lbs):**	5,000-9,999
Facility Longitude:	-88.3403		

Corporate Name:	Village of North Aurora - Well #4
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz:	Fire,
Owner:	Dale Berman
Owner Street:	25 East State St
Owner City:	North Aurora
Owner State:	IL
Owner Zip Code:	60542
Owner Phone:	6308978228232
Mailing Name:	Village of North Aurora
Mailing Street:	25 East State St
Mailing City:	North Aurora
Mailing State:	IL
Mailing Zip Code:	60542

Report Year:	2022	**Chemical CAS No:**	10034965

LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 1,000-4,999

Report Year: 2022
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 1,000-4,999

Report Year: 2012
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-99,999
Avg Daily Amt(lbs): 1,000-9,999

Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2019
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2014
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542

Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2009
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-9,999
Avg Daily Amt(lbs): 100-999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2020
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2018
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: MANGANESE SULFATE MONOHYDRATE
Chem Health Haz: Delayed,
Owner: Dale Berman
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542
Chemical CAS No: 10034965
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999

Report Year: 2009
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-99,999
Avg Daily Amt(lbs): 1,000-9,999

Report Year: 2009
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Corporate Name: Village of North Aurora
Chemical CAS No: 14333132
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-99,999
Avg Daily Amt(lbs): 1,000-9,999

Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: PERMANGANIC ACID (HMNO4), ION(1-)
Chem Health Haz: Fire, Immediate,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2011
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-99,999
Avg Daily Amt(lbs): 1,000-9,999
Corporate Name: Village of North Aurora
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: John Hansen
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Report Year: 2022
LEPC: Kane
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8035
Facility Longitude: -88.3403
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 10,000-24,999
Avg Daily Amt(lbs): 5,000-9,999
Corporate Name: Village of North Aurora - Well #4
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: HYPOCHLORITE SOLUTION, [CONTAINING > 7% AVAILABLE CHLORINE BY WEIGHT]
Chem Health Haz: Fire,
Owner: Mark Gaffino
Owner Street: 25 East State St
Owner City: North Aurora
Owner State: IL

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner Zip Code: 60542
Owner Phone: 6308978228232
Mailing Name: Village of North Aurora
Mailing Street: 25 East State St
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 2	ENE	0.11 / 565.58	691.30 / 1	Village of North Aurora - Well #4 600 Princeton Drive North Aurora IL 60542	TIER 2

Facility County: Kane
Report Year(s): 2005

Tier II Details

Report Year: 2005
LEPC:
Facility Phone: 3313856296
Facility Fax: 6302810945
Facility Latitude: 41.8036
Facility Longitude: -88.3402
Corporate Name:
Fire Dept:
Chemical Name: Chlorine
Chem Health Haz: Fire, Immediate, Delayed,
Owner: John Hansen
Owner Street: 25 East State
Owner City: North Aurora
Owner State: IL
Owner Zip Code: 60542
Owner Phone: 6308978228x23
Mailing Name: Village of North Aurora
Mailing Street: 25 E. State St.
Mailing City: North Aurora
Mailing State: IL
Mailing Zip Code: 60542

Chemical CAS No: 7782-50-5
Chemical EHS: Yes
Chemical Contents: Pure, Gas,
Max Daily Amt(lbs): 1,000-9,999
Avg Daily Amt(lbs): 100-999

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 4	SSE	0.14 / 735.03	688.07 / -2	ZIEGLER ENTERPIRZES 189 POPLAR PLACE # 3 NORTH AURORA IL 60542	RCRA NON GEN

EPA Handler ID: ILR000049213
Gen Status Universe: No Report
Contact Name: ENV COORDINATOR
Contact Address: US
Contact Phone No and Ext: 630-584-9000
Contact Email:
Contact Country: US
County Name: KANE
EPA Region: 05

Land Type:	Private
Receive Date:	20071101
Location Latitude:	
Location Longitude:	

Violation/Evaluation Summary

Note:	NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19980317
Handler Name:	ZIEGLER ENTERPIRZES
Source Type:	Notification
Federal Waste Generator Code:	1
Generator Code Description:	Large Quantity Generator

Waste Code Details

Hazardous Waste Code:	D002
Waste Code Description:	CORROSIVE WASTE

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20071101
Handler Name:	ZIEGLER ENTERPIRZES
Source Type:	Annual/Biennial Report update with Notification

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	PO BOX 26
Name:	ZIEGLER ENTERPRIZES	**Street 2:**	
Date Became Current:		**City:**	ST CHARLES
Date Ended Current:		**State:**	IL
Phone:	630-584-9000	**Country:**	
Source Type:	Notification	**Zip Code:**	60174

Historical Handler Details

Receive Dt: 19980317
Generator Code Description: Large Quantity Generator
Handler Name: ZIEGLER ENTERPIRZES

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	2 of 4	SSE	0.14 / 735.03	688.07 / -2	ZIEGLER ENTERPIRZES 189 POPLAR PLACE # 3 NORTH AURORA IL 60542	FINDS/FRS

Registry ID: 110005963074
FIPS Code: 17089
HUC Code: 07120007
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 01-MAR-00
Update Date: 02-DEC-14
Interest Types: STATE MASTER, UNSPECIFIED UNIVERSE **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 14
Census Block Code: 170898530043002
EPA Region Code: 05
County Name: KANE
US/Mexico Border Ind:
Latitude: 41.80046
Longitude: -88.34135
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110005963074
Data Source: Facility Registry Service - Single File
Program Acronyms:

ACES:170000340049, RCRAINFO:ILR000049213

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	3 of 4	SSE	0.14 / 735.03	688.07 / -2	TAILORED SPACES LLC DBA THE TAILORED CLOSET 189 POPLAR PL., UNIT #1 NORTH AURORA IL 60542	FINDS/FRS

Registry ID: 110070315965
FIPS Code:
HUC Code: 07120007
Site Type Name:
Location Description:
Supplemental Location:
Create Date: 27-SEP-18
Update Date:
Interest Types: OSHA ESTABLISHMENT **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes: 2541
SIC Code Descriptions: WOOD OFFICE AND STORE FIXTURES, PARTITIONS, SHELVING, AND LOCKERS **Note: Many records provided by the department have a truncated [SIC Code Descriptions] field.
NAICS Codes: 337215
NAICS Code Descriptions: SHOWCASE, PARTITION, SHELVING, AND LOCKER MANUFACTURING.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 14
Census Block Code: 170898530043002
EPA Region Code: 05
County Name:
US/Mexico Border Ind:
Latitude: 41.80046
Longitude: -88.34135
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070315965
Data Source: Facility Registry Service - Single File
Program Acronyms:

OSHA-OIS:312727100

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	4 of 4	SSE	0.14 / 735.03	688.07 / -2	Ziegler Enterprizes 189 Poplar Pl 3 North Aurora IL 60542	IEPA DOCS

Note: Documents related to facilities in Illinois can be searched on the Illinois Environmental Protection Agency (IEPA) Document Explorer: https://external.epa.illinois.gov/DocumentExplorer

IEPA Document Explorer (Map Search)

Site ID:	170000340049	**Document Indicator:**	No
System ID:	0890605039	**Latitude:**	41.79849
Interest Type:	BOL	**Longitude:**	-88.34109
Media Code:	LAND	**X:**	-88.34108999999995
Revision Date/Time:	06/30/2003	**Y:**	41.79849000000007
Collection Date:	12/30/2003		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 7	S	0.17 / 879.12	690.33 / 0	FEDERAL EXPRESS CORP 180 POPLAR NORTH AURORA IL 60542	FINDS/FRS

Registry ID:	110018195399
FIPS Code:	17089
HUC Code:	07120007
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	19-OCT-04
Update Date:	29-DEC-14
Interest Types:	STATE MASTER **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	14
Census Block Code:	170898530043002
EPA Region Code:	05
County Name:	KANE
US/Mexico Border Ind:	
Latitude:	41.80033
Longitude:	-88.34135
Reference Point:	CENTER OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	30
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110018195399

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Data Source: Facility Registry Service - Single File
Program Acronyms:

ACES:170000611764

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	2 of 7	S	0.17 / 879.12	690.33 / 0	CYBERDYNE MASONARY CORP YARD 190 POPLAR PL NORTH AURORA IL 60542	FINDS/FRS

Registry ID: 110046145300
FIPS Code: 17089
HUC Code: 07120007
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 24-JUL-12
Update Date:
Interest Types: STATE MASTER **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 14
Census Block Code: 170898530043002
EPA Region Code: 05
County Name: KANE
US/Mexico Border Ind:
Latitude: 41.798355
Longitude: -88.341323
Reference Point: ENTRANCE POINT OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 50
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110046145300
Data Source: Facility Registry Service - Single File
Program Acronyms:

ACES:170001931382

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	3 of 7	S	0.17 / 879.12	690.33 / 0	BATTERY BUILDERS LLC 180 POPLAR PL UNIT B NORTH AURORA IL 60542	FINDS/FRS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Registry ID:	110070159240
FIPS Code:	IL089
HUC Code:	07120007
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	02-FEB-18
Update Date:	
Interest Types:	AIR EMISSIONS CLASSIFICATION UNKNOWN, AIR MINOR, TRI REPORTER, UNSPECIFIED UNIVERSE **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:	9999
SIC Code Descriptions:	NONCLASSIFIABLE ESTABLISHMENTS **Note: Many records provided by the department have a truncated [SIC Code Descriptions] field.
NAICS Codes:	339999, 811310
NAICS Code Descriptions:	ALL OTHER MISCELLANEOUS MANUFACTURING., COMMERCIAL AND INDUSTRIAL MACHINERY AND EQUIPMENT (EXCEPT AUTOMOTIVE AND ELECTRONIC) REPAIR AND MAINTENANCE.
Conveyor:	EIS
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	14
Census Block Code:	170898530043002
EPA Region Code:	05
County Name:	KANE COUNTY
US/Mexico Border Ind:	
Latitude:	41.800473
Longitude:	-88.341982
Reference Point:	CENTER OF A FACILITY OR STATION
Coord Collection Method:	INTERPOLATION-PHOTO
Accuracy Value:	20
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070159240
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

AIR:IL000089060ACB, EIS:18823811, RCRAINFO:ILR000197152, TRIS:6054WBTTRY18PPL

3	***4 of 7***	***S***	***0.17 / 879.12***	***690.33 / 0***	***Battery Builders Service 180 Poplar Place North Aurora IL 60542***	***TIER 2***

Facility County:	Kane
Report Year(s):	2021, 2020, 2019, 2018

Tier II Details

Report Year:	2019	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Liquid, Solid, Gas,

Facility Fax:	6302403303	**Max Daily Amt(lbs):**	100,000-499,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	100,000-499,999
Facility Longitude:	-88.3421		
Corporate Name:	Battery Builders, LLC		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	Lead-Acid Batteries		
Chem Health Haz:			
Owner:	Battery Builders, LLC		
Owner Street:	PO Box 5005		
Owner City:	Naperville		
Owner State:	IL		
Owner Zip Code:	60567		
Owner Phone:	6308515800		
Mailing Name:	Battery Builders, LLC		
Mailing Street:	PO Box 5005		
Mailing City:	Naperville		
Mailing State:	IL		
Mailing Zip Code:	60567		

Report Year:	2021	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Liquid, Solid, Gas,
Facility Fax:	6302403303	**Max Daily Amt(lbs):**	100,000-499,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	100,000-499,999
Facility Longitude:	-88.3421		
Corporate Name:	Battery Builders, LLC		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	Lead-Acid Batteries		
Chem Health Haz:			
Owner:	Battery Builders, LLC		
Owner Street:	PO Box 5005		
Owner City:	Naperville		
Owner State:	IL		
Owner Zip Code:	60567		
Owner Phone:	6308515800		
Mailing Name:	Battery Builders, LLC		
Mailing Street:	PO Box 5005		
Mailing City:	Naperville		
Mailing State:	IL		
Mailing Zip Code:	60567		

Report Year:	2018	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Liquid, Solid, Gas,
Facility Fax:	6302403303	**Max Daily Amt(lbs):**	100,000-499,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	100,000-499,999
Facility Longitude:	-88.3421		
Corporate Name:	Battery Builders, LLC		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	Lead-Acid Batteries		
Chem Health Haz:			

Owner:	Battery Builders, LLC
Owner Street:	PO Box 5005
Owner City:	Naperville
Owner State:	IL
Owner Zip Code:	60567
Owner Phone:	6308515800
Mailing Name:	Battery Builders, LLC
Mailing Street:	PO Box 5005
Mailing City:	Naperville
Mailing State:	IL
Mailing Zip Code:	60567

Report Year:	2019	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302403303	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3421		
Corporate Name:	Battery Builders, LLC		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	Electrolyte		
Chem Health Haz:			
Owner:	Battery Builders, LLC		
Owner Street:	PO Box 5005		
Owner City:	Naperville		
Owner State:	IL		
Owner Zip Code:	60567		
Owner Phone:	6308515800		
Mailing Name:	Battery Builders, LLC		
Mailing Street:	PO Box 5005		
Mailing City:	Naperville		
Mailing State:	IL		
Mailing Zip Code:	60567		

Report Year:	2018	**Chemical CAS No:**	7439921
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Solid,
Facility Fax:	6302403303	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3421		
Corporate Name:	Battery Builders, LLC		
Fire Dept:	North Aurora-Countryside Fire Protection District		
Chemical Name:	Lead		
Chem Health Haz:			
Owner:	Battery Builders, LLC		
Owner Street:	PO Box 5005		
Owner City:	Naperville		
Owner State:	IL		
Owner Zip Code:	60567		
Owner Phone:	6308515800		
Mailing Name:	Battery Builders, LLC		

Mailing Street:	PO Box 5005
Mailing City:	Naperville
Mailing State:	IL
Mailing Zip Code:	60567

Report Year:	2019	**Chemical CAS No:**	7439921
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Solid,
Facility Fax:	6302403303	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3421		

Corporate Name:	Battery Builders, LLC
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	Lead
Chem Health Haz:	
Owner:	Battery Builders, LLC
Owner Street:	PO Box 5005
Owner City:	Naperville
Owner State:	IL
Owner Zip Code:	60567
Owner Phone:	6308515800
Mailing Name:	Battery Builders, LLC
Mailing Street:	PO Box 5005
Mailing City:	Naperville
Mailing State:	IL
Mailing Zip Code:	60567

Report Year:	2018	**Chemical CAS No:**	N/A
LEPC:	Kane	**Chemical EHS:**	No
Facility Phone:	6302403303	**Chemical Contents:**	Mixture, Liquid,
Facility Fax:	6302403303	**Max Daily Amt(lbs):**	1,000-4,999
Facility Latitude:	41.8004	**Avg Daily Amt(lbs):**	500-999
Facility Longitude:	-88.3421		

Corporate Name:	Battery Builders, LLC
Fire Dept:	North Aurora-Countryside Fire Protection District
Chemical Name:	Electrolyte
Chem Health Haz:	
Owner:	Battery Builders, LLC
Owner Street:	PO Box 5005
Owner City:	Naperville
Owner State:	IL
Owner Zip Code:	60567
Owner Phone:	6308515800
Mailing Name:	Battery Builders, LLC
Mailing Street:	PO Box 5005
Mailing City:	Naperville
Mailing State:	IL
Mailing Zip Code:	60567

Report Year:	2021	**Chemical CAS No:**	7439921
LEPC:	Kane	**Chemical EHS:**	No

Facility Phone: 6302403303
Facility Fax: 6302403303
Facility Latitude: 41.8004
Facility Longitude: -88.3421
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Battery Builders, LLC
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: Lead
Chem Health Haz:
Owner: Battery Builders, LLC
Owner Street: PO Box 5005
Owner City: Naperville
Owner State: IL
Owner Zip Code: 60567
Owner Phone: 6308515800
Mailing Name: Battery Builders, LLC
Mailing Street: PO Box 5005
Mailing City: Naperville
Mailing State: IL
Mailing Zip Code: 60567

Report Year: 2020
LEPC: Kane
Facility Phone: 6302403303
Facility Fax: 6302403303
Facility Latitude: 41.8004
Facility Longitude: -88.3421
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Battery Builders, LLC
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: Electrolyte
Chem Health Haz:
Owner: Battery Builders, LLC
Owner Street: PO Box 5005
Owner City: Naperville
Owner State: IL
Owner Zip Code: 60567
Owner Phone: 6308515800
Mailing Name: Battery Builders, LLC
Mailing Street: PO Box 5005
Mailing City: Naperville
Mailing State: IL
Mailing Zip Code: 60567

Report Year: 2020
LEPC: Kane
Facility Phone: 6302403303
Facility Fax: 6302403303
Facility Latitude: 41.8004
Facility Longitude: -88.3421
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid, Solid, Gas,
Max Daily Amt(lbs): 100,000-499,999
Avg Daily Amt(lbs): 100,000-499,999
Corporate Name: Battery Builders, LLC
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: Lead-Acid Batteries

Chem Health Haz:
Owner: Battery Builders, LLC
Owner Street: PO Box 5005
Owner City: Naperville
Owner State: IL
Owner Zip Code: 60567
Owner Phone: 6308515800
Mailing Name: Battery Builders, LLC
Mailing Street: PO Box 5005
Mailing City: Naperville
Mailing State: IL
Mailing Zip Code: 60567

Report Year: 2021
LEPC: Kane
Facility Phone: 6302403303
Facility Fax: 6302403303
Facility Latitude: 41.8004
Facility Longitude: -88.3421
Chemical CAS No: N/A
Chemical EHS: No
Chemical Contents: Mixture, Liquid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Battery Builders, LLC
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: Electrolyte
Chem Health Haz:
Owner: Battery Builders, LLC
Owner Street: PO Box 5005
Owner City: Naperville
Owner State: IL
Owner Zip Code: 60567
Owner Phone: 6308515800
Mailing Name: Battery Builders, LLC
Mailing Street: PO Box 5005
Mailing City: Naperville
Mailing State: IL
Mailing Zip Code: 60567

Report Year: 2020
LEPC: Kane
Facility Phone: 6302403303
Facility Fax: 6302403303
Facility Latitude: 41.8004
Facility Longitude: -88.3421
Chemical CAS No: 7439921
Chemical EHS: No
Chemical Contents: Mixture, Solid,
Max Daily Amt(lbs): 1,000-4,999
Avg Daily Amt(lbs): 500-999
Corporate Name: Battery Builders, LLC
Fire Dept: North Aurora-Countryside Fire Protection District
Chemical Name: Lead
Chem Health Haz:
Owner: Battery Builders, LLC
Owner Street: PO Box 5005
Owner City: Naperville
Owner State: IL
Owner Zip Code: 60567
Owner Phone: 6308515800

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Mailing Name: Battery Builders, LLC
Mailing Street: PO Box 5005
Mailing City: Naperville
Mailing State: IL
Mailing Zip Code: 60567

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	5 of 7	S	0.17 / 879.12	690.33 / 0	**Battery Builders LLC - 170002273625** **180 Poplar Pl Unit B** **North Aurora IL 60542**	AIR PERMITS

Name (Map):
Address (Map):
City (Map):
State (Map):
Postal (Map):

Name (Web): Battery Builders LLC - 170002273625
Address (Web): 180 Poplar Pl Unit B
City (Web): North Aurora
State (Web): IL
Zip (Web): 60542

Note: Documents related to facilities in Illinois can be searched on the Illinois Environmental Protection Agency (IEPA) Document Explorer: https://external.epa.illinois.gov/DocumentExplorer

Data Source: IEPA Document Explorer - Facility/Site Search (Web)

IEPA Document Explorer

Site ID: 170002273625
Program ID: 089060ACB
Category: Air Permit - Final
Category URL: https://docuware67.illinois.gov/DocuWare/PlatformRO/WebClient/3/Integration?lc=VXNlcj1kd3B1YmxpY1xuUHdkPU4xbWRhJHRyYXRvclBANTU1&p=RLV&rl=1b656d23-1604-4539-a9f5-215aaae67008&tw=Results&q=W0lFUEFJRF09IjE3MDAwMjI3MzYyNSIgQU5EIFtDQVRFR09SWV09IjAzSyI1

Originating Bureau: Bureau of Air
Document Count: 1
Total Pages: 1

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	6 of 7	S	0.17 / 879.12	690.33 / 0	**Federal Express Corp** **180 Poplar** **North Aurora IL 60542**	IEPA DOCS

Note: Documents related to facilities in Illinois can be searched on the Illinois Environmental Protection Agency (IEPA) Document Explorer: https://external.epa.illinois.gov/DocumentExplorer

IEPA Document Explorer (Map Search)

Site ID: 170000611764
System ID: 0890605023
Interest Type: BOL
Media Code: LAND
Revision Date/Time: 06/30/2003
Collection Date: 10/12/2011

Document Indicator: No
Latitude: 41.800339
Longitude: -88.342017
X: -88.34201699999994
Y: 41.800339000000065

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	7 of 7	S	0.17 / 879.12	690.33 / 0	**BATTERY BUILDERS LLC** **180 POPLAR PL UNIT B** **NORTH AURORA IL 60542**	RCRA NON GEN

EPA Handler ID: ILR000197152
Gen Status Universe: No Report
Contact Name: TIM A BAKER
Contact Address: 180 POPLAR PL UNIT B , , NORTH AURORA , IL, 60542 , US

Contact Phone No and Ext:	630-851-5800
Contact Email:	TIM@BATTERYBUILDERS.COM
Contact Country:	US
County Name:	KANE
EPA Region:	05
Land Type:	Private
Receive Date:	20221228
Location Latitude:	41.800329
Location Longitude:	-88.341396

Violation/Evaluation Summary

Note:	NO VIOLATIONS: All of the compliance records associated with this facility (EPA ID) indicate NO VIOLATIONS; Compliance Monitoring and Enforcement table dated Apr, 2024.

Evaluation Details

Evaluation Start Date:	20210610
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20180123
Handler Name:	BATTERY BUILDERS LLC
Source Type:	Notification
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator

Waste Code Details

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20210610
Handler Name: BATTERY BUILDERS LLC
Source Type: Implementer
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator

Waste Code Details

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 20210825
Handler Name: BATTERY BUILDERS LLC
Source Type: Notification
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator

Waste Code Details

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: D007
Waste Code Description: CHROMIUM

Hazardous Waste Code: D008
Waste Code Description: LEAD

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20221228
Handler Name: BATTERY BUILDERS LLC
Source Type: Deactivation
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Private
Name: BBI ACQUISITIONS HOLDINGS LLC
Date Became Current: 20171130
Date Ended Current:
Phone:
Source Type: Deactivation
Street No:
Street 1: 31W238 91ST ST
Street 2:
City: NAPERVILLE
State: IL
Country: US
Zip Code: 60564

Owner/Operator Ind: Current Owner
Type: Private
Name: BATTERY BUILDERS LLC
Date Became Current: 20171130
Date Ended Current:
Phone:
Source Type: Notification
Street No:
Street 1: 31W238 91ST ST
Street 2:
City: NAPERVILLE
State: IL
Country: US
Zip Code: 60564

Owner/Operator Ind: Current Operator
Type: Private
Name: BATTERY BUILDERS LLC
Date Became Current: 20171130
Date Ended Current:
Phone:
Source Type: Notification
Street No:
Street 1: 180 POPLAR PL UNIT B
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Owner/Operator Ind: Current Operator
Type: Private
Name: BATTERY BUILDERS LLC
Date Became Current: 20171130
Date Ended Current:
Phone:
Source Type: Deactivation
Street No:
Street 1: 180 POPLAR PL UNIT B
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Owner/Operator Ind: Current Owner
Type: Private
Name: BBI ACQUISITIONS HOLDINGS LLC
Street No:
Street 1: 31W238 91ST ST
Street 2:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Date Became Current:	20171130	**City:**	NAPERVILLE
Date Ended Current:		**State:**	IL
Phone:		**Country:**	US
Source Type:	Implementer	**Zip Code:**	60564
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	31W238 91ST ST
Name:	BBI ACQUISITIONS HOLDINGS LLC	**Street 2:**	
Date Became Current:	20171130	**City:**	NAPERVILLE
Date Ended Current:		**State:**	IL
Phone:		**Country:**	US
Source Type:	Notification	**Zip Code:**	60564
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Private	**Street 1:**	180 POPLAR PL UNIT B
Name:	BATTERY BUILDERS LLC	**Street 2:**	
Date Became Current:	20171130	**City:**	NORTH AURORA
Date Ended Current:		**State:**	IL
Phone:		**Country:**	US
Source Type:	Implementer	**Zip Code:**	60542

Historical Handler Details

Receive Dt:	20210825
Generator Code Description:	Small Quantity Generator
Handler Name:	BATTERY BUILDERS LLC
Receive Dt:	20210610
Generator Code Description:	Small Quantity Generator
Handler Name:	BATTERY BUILDERS LLC
Receive Dt:	20180123
Generator Code Description:	Small Quantity Generator
Handler Name:	BATTERY BUILDERS LLC

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of 6	S	0.20 / 1,068.74	695.14 / 5	FOX VALLEY MACHINING CO INC 198 POPLAR PLACE NORTH AURORA IL 60542	FINDS/FRS

Registry ID:	110005818589
FIPS Code:	17089
HUC Code:	07120007
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	01-MAR-00
Update Date:	26-JAN-12
Interest Types:	OSHA ESTABLISHMENT, STATE MASTER, UNSPECIFIED UNIVERSE **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:	
SIC Code Descriptions:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

NAICS Codes:	332710
NAICS Code Descriptions:	MACHINE SHOPS.
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	14
Census Block Code:	170898530043002
EPA Region Code:	05
County Name:	KANE
US/Mexico Border Ind:	
Latitude:	41.79978
Longitude:	-88.34134
Reference Point:	CENTER OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	30
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110005818589
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

ACES:170000213980, OSHA-OIS:340063213, OSHA-OIS:340651983, OSHA-OIS:341450815, RCRAINFO:ILD005970157

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	2 of 6	S	0.20 / 1,068.74	695.14 / 5	Fox Valley Machining Co., Inc. 198 Poplar Place North Aurora, IL 60542 IL	UST

Facility No:	2046438	**Facility Type:**	Industrial / Manufacturing
Facility Status:	Closed	**Owner Type:**	Private
Fac Details Status:	Closed	**Owner Status:**	Current Owner
Fac Type Fac Details:	Industrial / Manufacturing	**County:**	Kane
Owner Name:	Fox Valley Machining Co., Inc.		
Facility URL:	http://webapps.sfm.illinois.gov/ustsearch/Facility.aspx?ID=2046438		

Tank Information

Tank No:	1	**Capacity:**	10000
Ul No:		**Petroleum Use:**	Consumptive Use on Premises for Heating
Status:	Removed	**Product:**	Heating Oil
Removed Date:	8/8/2017	**CERCLA Substance:**	
Install Date:	12/1/1975	**Current Age:**	41
Abandoned Date:		**Abandoned Material:**	
Last Used Date:	12/31/1980	**Product Date:**	12/1/1975
Red Tag Issue Date:		**Fee Due:**	$0.00
CAS Code:		**Regulated Status:**	State
OSFM First Noti Dt:	7/28/2017		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner Summary

Owner No:	U0038831	***Owner Status:***	Current Owner
Owner Name:	Fox Valley Machining Co., Inc.	***Purchase Date:***	12/1/1975
Ownership History:	https://webapps.sfm.illinois.gov/ustsearch/Ownership.aspx?ID=2046438		

Owner Details

Owner Name:	Fox Valley Machining Co., Inc.	***Type Financial Resp:***	
Owner Status:	Current Owner	***Fin Resp Rpt Due:***	
Purchase Date:	12/1/1975		
Owner Address:	198 Poplar Place North Aurora, IL 60542		

Facility Details

MFD Forms Status:		***Green Tag Decal:***	
MFD Permit Issue Dt:		***Green Tag Issue Date:***	
MFD Permit Exp Dt:		***Green Tag Exp Date:***	
Property Parcel:		***Motor Fuel Type:***	
Pending Nov:	No		
Permit History Link:	https://webapps.sfm.illinois.gov/USTPortal/Permit/FacilityPermitList/2046438		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	3 of 6	S	0.20 / 1,068.74	695.14 / 5	Fox Valley Machining Co Inc 198 Poplar St North Aurora IL 60542	IEPA DOCS

Note: Documents related to facilities in Illinois can be searched on the Illinois Environmental Protection Agency (IEPA) Document Explorer: https://external.epa.illinois.gov/DocumentExplorer

IEPA Document Explorer (Map Search)

Site ID:	170000213980	***Document Indicator:***	No
System ID:	0890605008	***Latitude:***	41.79819
Interest Type:	BOL	***Longitude:***	-88.34146
Media Code:	LAND	***X:***	-88.34145999999998
Revision Date/Time:	06/30/2003	***Y:***	41.798190000000034
Collection Date:	12/30/2003		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	4 of 6	S	0.20 / 1,068.74	695.14 / 5	BIG STICKERS & SIGNS 198 POPLAR PLACE-B NORTH AURORA IL 60542	RCRA SQG

EPA Handler ID:	ILR000204016
Gen Status Universe:	Small Quantity Generator
Contact Name:	DON MILLER
Contact Address:	
Contact Phone No and Ext:	630-785-0537
Contact Email:	
Contact Country:	
County Name:	KANE

EPA Region:	05
Land Type:	Private
Receive Date:	20210819
Location Latitude:	41.79977
Location Longitude:	-88.341385

Violation/Evaluation Summary

Note:	NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20191230
Handler Name:	BIG STICKERS & SIGNS
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator
Source Type:	Notification

Waste Code Details

Hazardous Waste Code:	D001
Waste Code Description:	IGNITABLE WASTE

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20210819
Handler Name:	BIG STICKERS & SIGNS

Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator
Source Type: Implementer

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: BIG STICKERS & SIGNS
Date Became Current:
Date Ended Current:
Phone:
Source Type: Implementer
Street No:
Street 1: 198 POPLAR PLACE-B
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Owner/Operator Ind: Current Owner
Type: Private
Name: BIG STICKERS & SIGNS
Date Became Current:
Date Ended Current:
Phone:
Source Type: Notification
Street No:
Street 1: 198 POPLAR PLACE-B
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Owner/Operator Ind: Current Owner
Type: Private
Name: RANDY HAUSER
Date Became Current:
Date Ended Current:
Phone: 773-491-1213
Source Type: Implementer
Street No:
Street 1: 198 POPLAR PLACE-B
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Owner/Operator Ind: Current Operator
Type: Private
Name: BIG STICKERS & SIGNS
Date Became Current:
Date Ended Current:
Phone:
Source Type: Notification
Street No:
Street 1: 198 POPLAR PLACE-B
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Historical Handler Details

Receive Dt: 20191230
Generator Code Description: Small Quantity Generator
Handler Name: BIG STICKERS & SIGNS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	5 of 6	S	0.20 / 1,068.74	695.14 / 5	BIG STICKERS & SIGNS 198 POPLAR PLACE-B NORTH AURORA IL 60542	FINDS/FRS

Registry ID: 110070676090
FIPS Code: 17089
HUC Code: 07120007
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 23-JAN-20
Update Date:
Interest Types: SQG **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 14
Census Block Code: 170898530043002
EPA Region Code: 05
County Name: KANE
US/Mexico Border Ind:
Latitude: 41.79978
Longitude: -88.34134
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070676090
Data Source: Facility Registry Service - Single File
Program Acronyms:

RCRAINFO:ILR000204016

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	6 of 6	S	0.20 / 1,068.74	695.14 / 5	FOX VALLEY MACHINING CO INC 198 POPLAR PLACE NORTH AURORA IL 60542	RCRA NON GEN

EPA Handler ID: ILD005970157
Gen Status Universe: No Report
Contact Name:
Contact Address:
Contact Phone No and Ext:
Contact Email:
Contact Country:

County Name:	KANE
EPA Region:	05
Land Type:	Private
Receive Date:	20200923
Location Latitude:	
Location Longitude:	

Violation/Evaluation Summary

Note:	NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19980323
Handler Name:	FOX VALLEY MACHINING CO INC
Source Type:	Notification
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator

Hazardous Waste Handler Details

Sequence No:	2
Receive Date:	20001127
Handler Name:	FOX VALLEY MACHINING CO INC
Source Type:	Notification
Federal Waste Generator Code:	2
Generator Code Description:	Small Quantity Generator

Waste Code Details

Hazardous Waste Code:	D001
Waste Code Description:	IGNITABLE WASTE

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20200923
Handler Name:	FOX VALLEY MACHINING CO INC
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street 1:***	ADDRESS NOT REPORTED
Name:	NAME NOT REPORTED	***Street 2:***	
Date Became Current:		***City:***	CITY NOT REPORTED
Date Ended Current:		***State:***	AK
Phone:	312-555-1212	***Country:***	
Source Type:	Notification	***Zip Code:***	99998

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	198 POPLAR PLACE
Name:	FOX VALLEY MACHINING CO INC	***Street 2:***	
Date Became Current:	20001127	***City:***	NORTH AURORA
Date Ended Current:		***State:***	IL
Phone:	630-264-6640	***Country:***	
Source Type:	Notification	***Zip Code:***	60542

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	189 POPLAR PLACE
Name:	HYDROLIE ENGINEERING PROFE	***Street 2:***	
Date Became Current:		***City:***	NORTH AURORA
Date Ended Current:		***State:***	IL
Phone:	630-264-6640	***Country:***	
Source Type:	Notification	***Zip Code:***	60542

Historical Handler Details

Receive Dt:	20001127
Generator Code Description:	Small Quantity Generator
Handler Name:	FOX VALLEY MACHINING CO INC

Receive Dt:	19980323
Generator Code Description:	Small Quantity Generator
Handler Name:	FOX VALLEY MACHINING CO INC

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	1 of 4	SE	0.21 / 1,106.52	691.44 / 1	Valley Green Golf Course 314 Kingswood Drive North Aurora IL 60542	SRP

I EPA ID: 0890605087
US EPA ID:
County: Kane
Longitude: -88.335597
Latitude: 41.800936

Site Applicant / Consultant Information

RA Title: Mr.
RA First Name: Michael
RA Last Name: Yungerman
RA Address1: 10350 Bren Road West
RA Address2:
RA City: Minnetonka, MN
RA Zip: 55343
Consultant Contact: Sean Brady
RA Company: North Aurora Industrial Venture, LLC
Consultant Company: True North
Received SA Date: 10/27/2020
PM ID: Kobe Rossi
Foury Letter Date:
Active Site: No
Consultant Address1: 1000 East Warrenville Road
Consultant Address2: Suite 140
Consultant City: Naperville, IL
Consultant Zip: 60563

Letter Information

NFR Site Name: Valley Green Golf Course
NFR Letter Date: 6/18/2021
Effective: True
NFR Recorded Date: 8/2/2021
Comp Focus: Focused
RA First Name: Michael
RA Last Name: Yungerman
RA Company: North Aurora Industrial Venture, LLC
RA Address1: 10350 Bren Road West
RA Address2:
RA City: Minnetonka, MN
RA Zip: 55343
Acres: 60.0000
Ordinance: No
ELUC GW Use Restrict: No
Groundwater Use Restriction: No
Highway Authority Agreement: No
Land Use: Residential or Industrial/Commercial
Indust Commercial: No
Worker Caution: No
Slab on Grade: Yes
BCT: No
Inst Control Other: No
Building Slab: No
Asphalt Used: No
Concrete Used: No
Clean Soil Three ft: No
Clean Soil Ten ft: No
Alternate Barrier: No
Other Barrier: No
ELUC Other: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	2 of 4	SE	0.21 / 1,106.52	691.44 / 1	Valley Green Golf Course 314 Kingswood Drive North Aurora IL 60542	ENG

I EPA ID: 0890605087
US EPA ID:
County: Kane
Longitude: -88.335597
Latitude: 41.800936

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Site Applicant / Consultant Information

Active Site:	No	***Consultant Contact:***	Sean Brady
RA Title:	Mr.	***Consultant Address1:***	1000 East Warrenville Road
RA First Name:	Michael	***Consultant Address2:***	Suite 140
RA Last Name:	Yungerman	***Consultant City:***	Naperville, IL
RA Address1:	10350 Bren Road West	***Consultant Zip:***	60563
RA Address2:		***PM ID:***	Kobe Rossi
RA City:	Minnetonka, MN	***Received SA Date:***	10/27/2020
RA Zip:	55343	***Foury Letter Date:***	
RA Company:	North Aurora Industrial Venture, LLC		
Consultant Company:	True North		

Letters Information

NFR Site Name:	Valley Green Golf Course	***Indust Commercial:***	No
NFR Letter Date:	6/18/2021	***Worker Caution:***	No
Effective:	True	***Slab on Grade:***	Yes
NFR Recorded Date:	8/2/2021	***BCT:***	No
Comp Focus:	Focused	***Inst Control Other:***	No
RA First Name:	Michael	***Building Slab:***	No
RA Last Name:	Yungerman	***Asphalt Used:***	No
RA Company:	North Aurora Industrial Venture, LLC	***Concrete Used:***	No
RA Address1:	10350 Bren Road West	***Clean Soil Three ft:***	No
RA Address2:		***Clean Soil Ten ft:***	No
RA City:	Minnetonka, MN	***Alternate Barrier:***	No
RA Zip:	55343	***Other Barrier:***	No
Acres:	60.0000	***ELUC Other:***	No
Ordinance:	No		
ELUC GW Use Restrict:	No		
GW Use Restriction:	No		
Highway Authority Agreement:	No		
Land Use:	Residential or Industrial/Commercial		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	3 of 4	SE	0.21 / 1,106.52	691.44 / 1	Valley Green - 170002437806 314 Kingswood Dr North Aurora IL 60542	REM ASSESS

Name (Map):		***Name (Web):***	Valley Green - 170002437806
Addr (Map):		***Addr (Web):***	314 Kingswood Dr
City (Map):		***City (Web):***	North Aurora
State (Map):		***State (Web):***	IL
Postal (Map):		***Zip (Web):***	60542
Note:	Documents related to facilities in Illinois can be searched on the Illinois Environmental Protection Agency (IEPA) Document Explorer: https://external.epa.illinois.gov/DocumentExplorer		
Data Source:	IEPA Document Explorer - Facility/Site Search (Web)		

IEPA Document Explorer

Site ID:	170002437806	***Originating Bureau:***	Bureau of Land

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Program ID: 0890605087 **Document Count:** 14
Category: Site Remediation - Technical **Total Pages:** 1330
Category URL: https://docuware67.illinois.gov/DocuWare/PlatformRO/WebClient/3/Integration?lc=VXNlcj1kd3B1YmxpY1xuUHdkPU4xbWRhJHRyYXRvclBANTU1&p=RLV&rl=ce728c9a-11c1-4ddf-9003-314169ab1943&tw=Results&q=W0lFUEFJRF09IjE3MDAwMjQzNzgwNiIgQU5EIFtDQVRFR09SWV09IjMxQSI1

5	4 of 4	SE	0.21 / 1,106.52	691.44 / 1	VALLEY GREEN REDEVELOPMENT 314 KINGSWOOD DRIVE NORTH AURORA IL 60542	FINDS/FRS

Registry ID: 110071514041
FIPS Code:
HUC Code: 07120007
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 12-OCT-23
Update Date:
Interest Types: ICIS-NPDES NON-MAJOR, STORM WATER CONSTRUCTION **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: ICIS
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 14
Census Block Code: 170898530043000
EPA Region Code: 05
County Name:
US/Mexico Border Ind:
Latitude: 41.8014
Longitude: -88.3358
Reference Point:
Coord Collection Method: INTERPOLATION-MAP
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110071514041
Data Source: Facility Registry Service - Single File
Program Acronyms:

NPDES:ILR10ZARZ

6	1 of 2	SSW	0.21 / 1,106.87	695.81 / 6	ABELEI FLAVORS 194 ALDER DR NORTH AURORA IL 60542	FINDS/FRS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Registry ID: 110070126543
FIPS Code: 17089
HUC Code: 07120007
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 17-OCT-17
Update Date:
Interest Types: UNSPECIFIED UNIVERSE **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:
SIC Code Descriptions:
NAICS Codes:
NAICS Code Descriptions:
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 14
Census Block Code: 170898530043002
EPA Region Code: 05
County Name: KANE
US/Mexico Border Ind:
Latitude: 41.80014
Longitude: -88.34397
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070126543
Data Source: Facility Registry Service - Single File
Program Acronyms:

RCRAINFO:ILR000195735

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	2 of 2	SSW	0.21 / 1,106.87	695.81 / 6	ABELEI FLAVORS 194 ALDER DR NORTH AURORA IL 60542	RCRA NON GEN

EPA Handler ID: ILR000195735
Gen Status Universe: No Report
Contact Name:
Contact Address:
Contact Phone No and Ext:
Contact Email:
Contact Country:
County Name: KANE
EPA Region: 05
Land Type: Private

Receive Date: 20191212
Location Latitude:
Location Longitude:

Violation/Evaluation Summary

Note: NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20170828
Handler Name: ABELEI FLAVORS
Source Type: Notification
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Code: U112
Waste Code Description: ACETIC ACID, ETHYL ESTER (I) (OR) ETHYL ACETATE (I)

Hazardous Waste Code: U125
Waste Code Description: 2-FURANCARBOXALDEHYDE (I) (OR) FURFURAL (I)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20191212
Handler Name:	ABELEI FLAVORS
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	194 ALDER DR
Name:	KAREN CRISS	***Street 2:***	
Date Became Current:	20030101	***City:***	NORTH AURORA
Date Ended Current:		***State:***	IL
Phone:	630-859-1410	***Country:***	US
Source Type:	Notification	***Zip Code:***	60542

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street 1:***	194 ALDER DR
Name:	ABELEI FLAVORS	***Street 2:***	
Date Became Current:	20170828	***City:***	NORTH AURORA
Date Ended Current:		***State:***	IL
Phone:		***Country:***	US
Source Type:	Notification	***Zip Code:***	60542

Historical Handler Details

Receive Dt:	20170828
Generator Code Description:	Small Quantity Generator
Handler Name:	ABELEI FLAVORS

7	***1 of 3***	***SSW***	***0.23 / 1,238.23***	***698.99 / 9***	***ARARMARK SVC MASTER FACILITY 200 ALDER ST NORTH AURORA IL 60542***	***RCRA NON GEN***

EPA Handler ID:	ILD984846394
Gen Status Universe:	No Report
Contact Name:	ENV COORDINATOR
Contact Address:	US
Contact Phone No and Ext:	630-844-7631
Contact Email:	
Contact Country:	US
County Name:	KANE
EPA Region:	05
Land Type:	Private
Receive Date:	20071101

Location Latitude:
Location Longitude:

Violation/Evaluation Summary

Note: NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19911125
Handler Name: ARAMARK SERVICE MASTER
Source Type: Notification
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 20010917
Handler Name: ARAMARK SERVICE MASTER
Source Type: Notification
Federal Waste Generator Code: 1
Generator Code Description: Large Quantity Generator

Hazardous Waste Handler Details

Sequence No: 3
Receive Date: 20020123

Handler Name: ARAMARK SERVICE MASTER
Source Type: Notification
Federal Waste Generator Code: 2
Generator Code Description: Small Quantity Generator

Waste Code Details

Hazardous Waste Code: D001
Waste Code Description: IGNITABLE WASTE

Hazardous Waste Code: D002
Waste Code Description: CORROSIVE WASTE

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20020301
Handler Name: ARARMARK SVC MASTER FACILITY
Source Type: Annual/Biennial Report
Federal Waste Generator Code: 1
Generator Code Description: Large Quantity Generator

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20071101
Handler Name: ARARMARK SVC MASTER FACILITY
Source Type: Annual/Biennial Report update with Notification
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Private
Name: ARAMARK SERVICEMASTER
Date Became Current: 19850101
Date Ended Current:
Phone:
Source Type: Annual/Biennial Report
Street No:
Street 1: 200 ALDER ST
Street 2:
City: NORTH AURORA
State: IL
Country: US
Zip Code: 60542

Owner/Operator Ind: Current Owner
Type: Private
Name: ARAMARK MANAGEMENT SERVICES LP
Date Became Current: 20011201
Date Ended Current:
Phone: 630-271-2849
Source Type: Notification
Street No:
Street 1: 2300 WARRENVILLE RD
Street 2:
City: DOWNERS GROVE
State: IL
Country:
Zip Code: 60515

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Private	**Street 1:**	2300 WARRENVILLE RD
Name:	ARAMARK MGT SVCS	**Street 2:**	
Date Became Current:	19850101	**City:**	DOWNERS GROVE
Date Ended Current:		**State:**	IL
Phone:		**Country:**	US
Source Type:	Annual/Biennial Report	**Zip Code:**	60515

Historical Handler Details

Receive Dt:	20020301
Generator Code Description:	Large Quantity Generator
Handler Name:	ARARMARK SVC MASTER FACILITY
Receive Dt:	20020123
Generator Code Description:	Small Quantity Generator
Handler Name:	ARAMARK SERVICE MASTER
Receive Dt:	20010917
Generator Code Description:	Large Quantity Generator
Handler Name:	ARAMARK SERVICE MASTER
Receive Dt:	19911125
Generator Code Description:	Small Quantity Generator
Handler Name:	ARAMARK SERVICE MASTER

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
7	2 of 3	SSW	0.23 / 1,238.23	698.99 / 9	ARARMARK SVC MASTER FACILITY 200 ALDER ST NORTH AURORA IL 60542-1400	FINDS/FRS

Registry ID:	110005902381
FIPS Code:	17089
HUC Code:	07120007
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	01-MAR-00
Update Date:	26-JAN-12
Interest Types:	HAZARDOUS WASTE BIENNIAL REPORTER, STATE MASTER, UNSPECIFIED UNIVERSE **Note: Many records provided by the department have a truncated [Interest Types] field.
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	FRS-GEOCODE
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Congressional Dist No:	14
Census Block Code:	170898530043002
EPA Region Code:	05
County Name:	KANE
US/Mexico Border Ind:	
Latitude:	41.79765
Longitude:	-88.34392
Reference Point:	CENTER OF A FACILITY OR STATION
Coord Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value:	30
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110005902381
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

ACES:170000285910, BR:ILD984846394, RCRAINFO:ILD984846394

7	***3 of 3***	***SSW***	***0.23 / 1,238.23***	***698.99 / 9***	***Ararmark Svc Master Facility 200 Alder St North Aurora IL 60542***	***IEPA DOCS***

Note: Documents related to facilities in Illinois can be searched on the Illinois Environmental Protection Agency (IEPA) Document Explorer: https://external.epa.illinois.gov/DocumentExplorer

IEPA Document Explorer (Map Search)

Site ID:	170000285910	**Document Indicator:**	No
System ID:	0890605021	**Latitude:**	41.79751
Interest Type:	BOL	**Longitude:**	-88.34405
Media Code:	LAND	**X:**	-88.34404999999998
Revision Date/Time:	06/30/2003	**Y:**	41.797510000000045
Collection Date:	12/30/2003		

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Apr 22, 2024

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

Government Publication Date: Mar 27, 2024

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Mar 27, 2024

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Apr 8, 2024

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: Apr 8, 2024

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Apr 8, 2024

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Apr 8, 2024

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Apr 8, 2024

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Apr 8, 2024

Federal Engineering Controls-ECs: FED ENG

List of Engineering controls (ECs) made availabe by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Apr 22, 2024

Federal Institutional Controls- ICs: FED INST

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Apr 22, 2024

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: Apr 22, 2024

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Feb 20, 2024

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Feb 7, 2024

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: Jan 9, 2024

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jan 9, 2024

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Feb 28, 2024

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from the Federal Communications Commission Data hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Sep 22, 2023

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Mar 27, 2024

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Mar 27, 2024

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

State Response Action Program Database: SSU

The State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit. The State Response Action Program database made available by Illinois Environmental Protection Agency. This database is state equivalent CERCLIS.

Government Publication Date: Aug 3, 2023

Delisted State Response Action Program: DELISTED SSU

List of sites removed from the State Response Action Program database identifies the status of all sites under the responsibility of the Illinois EPA's State Sites Unit.

Government Publication Date: Aug 3, 2023

Solid Waste Landfills Subject to State Surcharge Database: SWF/LF

The Bureau of Land maintains a list of solid waste facilities and landfills throughout the state. This list made available by Illinois Environmental Protection Agency's Bureau of land.

Government Publication Date: Jul 13, 2022

Special Waste Site List: SWF/LF SPECIAL

The following landfills are those that as of January 1, 1990, accept non-hazardous special waste pursuant to the Illinois Environmental Protection Agency Non-Hazardous Special Waste Definition. List A includes landfills that may receive any non-hazardous waste. Non-Regional Pollutant Control Facilities are so noted. List B includes landfills designed to receive specific non-hazardous wastes. List B landfills are designated as a Regional Pollutant Control Facility by RPCF, or Non-regional Pollutant Control Facility by Non-RPCF.

Government Publication Date: Jan 1, 1990

Northeastern Illinois Planning Commission Historical Inventory of Solid Waste Disposal Sites in Northeastern Illinois: NIPC

Historical inventory of solid waste disposal sites in northeastern Illinois prepared by the Northeastern Illinois Planning Commission (NIPC).

Government Publication Date: Dec 1987

Clean Construction or Demolition Debris: CCDD

This is a list of CCDD Fill Operations with Approved Permits. Beginning July 1, 2008, no person can use CCDD as fill material in a current or former quarry, mine, or other excavation unless they have obtained a permit from the Illinois EPA.

Government Publication Date: Oct 3, 2023

Leaking Underground Storage Tanks (LUST): LUST

The Leaking Underground Storage Tank Incident Tracking (LIT) database identifies the status of all Illinois LUST incidents reported to the Illinois Emergency Management Agency (IEMA) and to the Illinois Environmental Protection Agency.

Government Publication Date: Apr 9, 2024

Leaking UST Document: LUST DOCUMENT

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more of the documents is in the Leaking Underground Storage Tank (LUST) category. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Jan 23, 2024

Delisted Leaking Underground Storage Tank Sites: DELISTED LUST

List of sites removed from the Leaking Underground Storage Tank Incident Tracking (LIT) database made available by the Illinois Environmental Protection Agency.

Government Publication Date: Apr 9, 2024

Underground Storage Tank Fund Payment Priority List: LUST TRUST

In case sufficient funds are not available in the Underground Storage Tank Fund, requests for payment are entered on the Payment Priority List by "queue date" order. As required by the Environmental Protection Act, the queue date is the date that a complete request for partial or final payment was received by the Agency. The queue date is "officially" confirmed at the end of the payment review process when a Final Decision Letter is sent to the site owner. The Underground Storage Tank Fund Priority list made available by Illinois Environmental Protection Agency.

Government Publication Date: Nov 01, 2016

Underground Storage Tank Database (UST): UST

This database maintained by Division of Petroleum & Chemical Safety, contains information derived from tank registration information supplied to the Office of the Illinois State Fire Marshal (OSFM) from outside sources.

Government Publication Date: Apr 9, 2024

Aboveground Storage Tanks (AST): AST

A list of aboveground storage tanks inspected by the Office of State Fire Marshal (OSFM).

Government Publication Date: Mar 15, 2024

Delisted Storage Tanks: DELISTED TANK

This database contains a list of closed storage tank sites that were removed from the illinois Department of Enivornmental Quality.

Government Publication Date: Apr 9, 2024

Sites with Engineering Controls: ENG

Sites in the Illinois Environmental Protection Agency (IEPA)'s Site Remedition Program (SRP) database with engineering controls in place.

Government Publication Date: Apr 15, 2024

Institutional Controls: INST

Sites in the Illinois Environmental Protection Agency (IEPA)'s Site Remedition Program (SRP) database with institutional controls in place.

Government Publication Date: Apr 15, 2024

Environmental Covenants Registry: AUL

According to the Illinois Environmental Protection Agency (Illinois EPA), the Illinois Uniform Environmental Covenants Act (UECA) (765 Illinois Compiled Statues (ILCS) 122 et seq.) creates an environmental covenant that is a specific recordable interest in real estate. It arises from an environmental response project that imposes activity and use limitations on a property. No environmental covenant is effective without the approval of the Illinois EPA, through the Director's signature. The UECA instrument recites the property use controls and remediation requirements imposed upon the property. Section 12(a) of the Illinois UECA requires the Illinois EPA to establish and maintain a registry that contains all environmental covenants and any amendment or termination of those covenants.

Government Publication Date: Aug 1, 2023

Illinois Site Remediation Program Database: SRP

The Site Remediation Program (SRP) database identifies the status of all voluntary remediation projects administered through the Pre-Notice Site Cleanup Program (1989 to 1995) and the Site Remediation Program (1996 to the present). This Site Remediation program database made available by Illinois Environmental Protection Agency.

Government Publication Date: Apr 15, 2024

Document Explorer Remediation and Assessment Sites: REM ASSESS

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more documents available are associated with the Federal Facilities Unit, National Priorities List Unit, Site Assessment Unit, or Voluntary Site Remediation Unit. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Jan 23, 2024

Brownfields Redevelopment Assessment Database: BROWNFIELDS

The Office of Site Evaluations Redevelopment Assessment database identifies the status of properties within the State in which the Illinois EPA's Office of Site Evaluation has conducted a Municipal Brownfields Redevelopment Grant (MBRG) project.

Government Publication Date: Nov 21, 2022

Municipal Brownfields Redevelopment Grant Program (MBRGP) project sites administered through OBA: BROWN MBRGP

The Office of Brownfields Assistance (OBA) database identifies the status of all Municipal Brownfields Redevelopment Grant Program (MBRGP) project sites administered through OBA. Office of Brownfields Assistance Database search made available by Illinois Environmental Protection Agency's Bureau of Land Data-Center.

Government Publication Date: Mar 31, 2013

Tribal

Leaking Underground Storage Tanks on Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 5, which includes Illinois, is made available by the United States Environmental Protection Agency (EPA). There are no federally recognized Tribes in Illinois, according to the U.S. Department of Interior, Bureau of Indian Affairs.

Government Publication Date: Oct 16, 2017

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 5, which includes Illinois, is made available by the United States Environmental Protection Agency (EPA). There are no federally recognized Tribes in Illinois, according to the U.S. Department of Interior, Bureau of Indian Affairs.

Government Publication Date: Oct 16, 2017

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 7, 2024

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

PFAS Greenhouse Gas Emissions Data: PFAS GHG

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO2e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

Government Publication Date: May 9, 2024

On-Scene Coordinator Response Sites: OSC RESPONSE

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

Government Publication Date: Apr 4, 2024

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 9, 2024

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

Hazardous Materials Information Reporting System: HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Nov 26, 2023

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act: TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Apr 22, 2024

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Aug 26, 2023

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Jan 20, 2024

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Jan 20, 2024

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

Government Publication Date: May 15, 2023

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: May 15, 2023

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: May 6, 2024

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: Feb 5, 2024

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into eAMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Jun 13, 2023

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Dec 12, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Apr 30, 2024

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Sep 15, 2023

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Feb 29, 2024

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: May 23, 2024

State

Spills and Incidents: SPILLS

A list of reports taken by Illinois Emergency Management Agency (IEMA) of Hazardous Material spills in Illinois.

Government Publication Date: Jan 23, 2024

Emergency Response Releases & Spills Database: SPILL OER

The Office of Emergency Response (OER) maintains the Emergency Response Releases & Spills Database.
The Emergency Operations Unit, within OER, coordinates Illinois EPA's response to environmental emergencies involving oil or hazardous materials and ensures that any environmental contamination is cleaned up. EOU works with other response agencies including the Illinois Emergency Management Agency (IEMA), which is the initial contact for responses to an emergency or disaster in Illinois.

Government Publication Date: Jan 23, 2024

Dry Cleaning Facilities: DRYCLEANERS

This list of licensed drycleaner facilities is provided by the Drycleaner Environmental Response Trust Fund of Illinois; and since July 1, 2020, is administrated by Illinois Environmental Protection Agency (IEPA).

Government Publication Date: Mar 25, 2024

Delisted Drycleaners: DELISTED DRYCLEANERS

List of sites removed from the drycleaners database made available by the Drycleaner Environmental Response Trust Fund of Illinois.

Government Publication Date: Mar 25, 2024

IEPA Document Explorer: IEPA DOCS

A list of permits and documents found in the Illinois Environmental Protection Agency (IEPA) Document Explorer. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are available in a digital format. This list includes records not otherwise categorized as LUST, Remediation, Air Permits, NPDES, or Compliance Commitment Agreements.

Government Publication Date: Jan 23, 2024

Clandestine Drug Labs: CDL

List of clandestine drug lab locations made available by the Illinois Department of Public Health. The Department maintains a list of properties from reports it receives from the Illinois State Police through the Illinois Emergency Management Agency.

Government Publication Date: Jan 4, 2023

Tier 2 Report: TIER 2

List of facilities who submit Tier II forms to the Illinois Emergency Management Agency (IEMA).

Government Publication Date: May 10, 2023

Air Permits: AIR PERMITS

A list of sites from the Illinois Environmental Protection Agency (IEPA) Document Explorer at which one or more of the documents is in the Air Permits (construction and operating) category. The IEPA Document Explorer provides online access to numerous Illinois EPA public records which are maintained in a digital format.

Government Publication Date: Jan 23, 2024

Underground Injection Control Wells: UIC

The Underground Injection Control (UIC) Program is a federal program established under the provision of the Safe Drinking Water Act of 1974. Since groundwater is a major source of drinking water in the United States, the UIC Program requirements were designed to prevent contamination of groundwater resulting from the operation of injection wells. The Underground Injection Well Inventory is provided by the Illinois Environmental Protection Agency. This inventory includes Class V Injections Wells which are utilized to inject non-hazardous waste into or above the Underground Source of Drinking Water.

Government Publication Date: Aug 1, 2019

Potentially Infectious Medical Waste Facilities: MEDICAL WASTE

Title 35 of the Illinois Administrative Code defines Potentially Infectious Medical Waste (PIMW) as waste generated in connection with the diagnosis, treatment (i.e., provision of medical services), or immunization of human beings or animals; research pertaining to the provision of medical services; or the provision or testing of biologicals. The Illinois Environmental Protection Agency's Bureau of Land is responsible for administering the PIMW program. The facilities included on this listing treat, store, transfer or dispose of PIMW.

Government Publication Date: Jun 6, 2023

Compost Facilities: COMPOST

The Illinois Environmental Protection Agency's Bureau of Land, Materials Management Unit maintains this list of composting facilities. Composting facilities provide an alternative option to managing and disposing of non-hazardous solid waste and/or landscape waste instead of the waste being landfilled. It is a natural form of recycling that turns some common kinds of household waste, like food and lawn wastes, into a dark organic material that can be used in a variety of beneficial ways.

Government Publication Date: Dec 1, 2023

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

BLUFF CITY MATERIALS, INC

2252 SOUTHWIND BLVD
BARTLETT, IL 60103

15 July 2024

Michelle Lipinski P.E.
Rubino Engineering, Inc.
425 Shepard Drive
Elgin, IL 60123
Phone: 847-931-1555 ext 12
Cell: 708-214-2425
Via Email: michelle.lipinski@rubinoeng.com

Re: Letter of Acceptance
Princeton Elevated Storage Tank Project

Dear Ms. Lipinski:

Bluff City Materials has reviewed the Rubino Engineering LPC-662 and supporting documents for the project located at the field west of 600 Princeton Dr. in North Aurora, IL. Based on the project information provided in your certification, Bluff City Materials agrees to accept the CCDD certified material at our facilities located on Lorang Rd. in Elburn, IL.

Bluff City Materials is permitted by the IEPA to accept this material and our IEPA Permit number is CCDD2011-001-DE/OP. All loads entering the facility are inspected visually, with a photo ionization detector (PID) meter, and manifested from the source location. Our facilities comply with all local zoning codes and all applicable local, state and federal rules and regulations.

Please note that the awarded contractor will need to complete the page 2 fill application form, submit this letter, and the completed application to andyp@grp7.com for project setup.

If you have any questions, please contact me at 630.497.8700 x 289.

Sincerely,

Andy Paxson
Bluff City Materials
Environmental Assessments

BLUFF CITY MATERIALS

RELIABLE

Dirt/Fill Questions? (630) 497-8700 x 3

Incoming Fill Application

Facility Applied For:

- ☐ Lyons - 4401 S. 1st Ave., Lyons, IL 60534
- ☐ Pulaski - 3741 S. Pulaski Rd., Chicago, IL 60623
- ☐ Thornton - 610 183rd St., Thornton, IL 60476
- ☐ Grand Avenue - 4613 W. Grand Ave., Chicago, IL 60639
- ☐ Bartlett - 1245 Gifford Rd., Elgin, IL 60120
- ☐ Lake in the Hills - 8813 Route 31, Lake in the Hills, IL 60156
- ☐ South Beloit - 4525 Prairie Hill Rd., South Beloit, IL 61080
- ☐ Creekside/Lorang - 2S785 Lorang Rd. Elburn, IL 60119

Project Information:

Project Address_____Project Name_____

City _____ State ____ Zip _____

Scope of Work: _____

_____

Type of Incoming Material

- ☐ *Uncontaminated Soil
- ☐ Brick/Block
- ☐ Reclaimed Asphalt Pavement
- ☐ Concrete w/o Protruding Metal
- ☐ Other: _____

Sales Tax Exempt ☐ **Yes (Attach Documentation)** ☐ **No**

Purchase Order # _____

Contract # _____

Anticipated Load Quantity _____

Misc Project Information:

General Contractor _____

Gen. Contractor Business Address _____

Gen. Contractor Phone # _____

IEPA CERTIFICATION ATTACHED* Required for Uncontaminated Soil**:**

☐ LPC-662 Form (No Known Environmental Concerns) **OR** ☐ LPC-663 Form (Potentially Impacted by Environmental Concerns)

Customer Information:

Company Name _____

Mailing Address _____

City _____ State _____ Zip _____

Phone Number _____ Fax or Email _____

Printed Name _____

Signature _____

Title _____

Today's Date _____

Email to fill@reliablematerials.com OR Fax to 630-524-9020

Revised February 2024

APPENDIX C – Cathodic Protection Specifications

CATHODIC PROTECTION SPECIFICATION

AUTOMATICALLY CONTROLLED IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM w/HORIZONTAL ANODE SYSTEM FOR THE INTERIOR OF STEEL WATER TANKS

A. SCOPE

The cathodic protection design/install constructor shall provide all engineering services, materials, equipment, labor, and supervision for the installation of an automatically controlled impressed current cathodic protection system to provide corrosion control for the interior submerged surface of the specified tank. All work furnished shall be in accordance with A.W.W.A. Standard D104, ANSI/NSF 61 and features included in this specification. The cathodic protection constructor shall be Corrpro Waterworks.

B. DESIGN

All engineering services shall be provided by a Corrosion Specialist who is accredited by the National Association of Corrosion Engineers International as a Senior Corrosion Technologist, Corrosion Specialist or Cathodic Protection Specialist. The system shall be designed by a Corrosion Specialist with experience in cathodic protection for water storage tanks. The Corrosion Specialist shall design the system to provide effective corrosion control in accordance with criteria for protection. The criteria for protection shall be based on a tank-to-water potential, IR drop free, within a range of -0.850 volts to -1.050 volts relative to a stationary copper-copper sulfate reference electrode. This potential shall be measured free of the effect of voltage gradients (IR drop).

The Corrosion Specialist shall also base system capacity and performance on:

1. Total submerged surface area of the tank. *(includes area up to high water line within tank bowl and wet risers in elevated tanks which are 30" in diameter or larger)*
2. Type of coating and condition of coating.
3. Total bare surface area to be protected will be a minimum of 25% of total surface area.
4. Minimum current density of 0.5 MA/ft.^{2} bare surface area.
5. Chemical analysis of water including resistivity expressed in ohm-cm.
6. Susceptibility of tank to icing conditions.
7. Minimum anode design life of twenty (20) years.
8. Selection, dimensions, and layout of system components specified in Section C. of this specification.

C. SYSTEM COMPONENTS

C1. *RECTIFIER*

The rectifier unit shall perform in accordance with ANSI/AWWA Standard D104 and shall include:

1. Transformer
2. Silicon rectifying elements
3. Circuit breaker(s)
4. Lightning, surge, and overload protection
5. Provision for air-cooling operation
6. Digital voltmeter(s), ammeter(s) and potential meter(s)
7. Weatherproof cabinet in accordance with NEMA 4 requirements
8. Provision to vary current output from 0% to 100% of rated capacity
9. Provisions for mounting, grounding, and locking
10. Provision for 110-120-volt, 60 H_Z, single phase A.C. power.
11. D.C. output capacity in volts and amperes in accordance with Design (Section B)
12. Number of circuits in accordance with Design (Section B)
13. Automatic controller shall adjust current output to compensate for changes in water level, temperature of water, water chemistry, and cathodic polarization, and shall include the following provisions:
    a. Utilize long-life reference electrode(s) installed within the tank
    b. Monitor the tank-to-water potential, free of IR drop
    c. Automatically adjust the tank-to-water potential, free of IR drop, to a preset value
    d. Operate within 25MV of preset value
    e. Limit current to a preset value
    f. Utilize digital potential meter(s) to display tank-to-water potential, free of IR drop

C2. *LONG LIFE REFERENCE ELECTRODE(S)*

The permanent reference electrode shall consist of a copper-copper sulfate electrode which is manufactured to remain stable (plus or minus 10MV) for minimum of ten (10) years. The reference electrode to lead wire connection shall be encapsulated to prevent water migration. The stationary reference electrode shall be positioned within the tank to provide the most representative measurements for the submerged surface area(s).

C3. *HORIZONTAL ANODE SUSPENSION SYSTEM*

The anode suspension system shall be designed to be resistant to ice damage and in accordance with ANSI/AWWA Standard D104, Section 4.2.4.1.1 Type A, Horizontal System. The anode suspension system shall consist of a minimum 5/16" polyester cord. The cord shall be secured to steel anchors welded to the side wall and/or floor of the tank bowl or to the exterior of the dry access column of spheroidal type tanks. Tanks with wet risers which are 30" diameter or larger shall incorporate an anode suspension system with the steel anchors welded to the sidewall of the riser pipe. All cord to cord connections shall be tied and taped.

C4. ***ANODE MATERIALS***

The anode materials shall be selected in accordance with Design (Section B) and shall consist of one of the following:

1. Minimum .062" diameter titanium with a mixed metal oxide coating.
2. Minimum .062” diameter platinized niobium with 25 micro-inches of platinum.

All anode to header cable connections shall be sealed to prevent water migration.

C5. ***PRESSURE ENTRANCE FITTING***

For icing tanks the pressure entrance fitting shall accommodate anode and reference electrode lead wires at the base of the tank or at the base of wet risers for elevated tanks, which are 30" diameter or larger. The fitting shall be manufactured to prevent leakage through the fitting and to prevent water migration through the wire insulation. The entrance fitting shall be sized for minimum of 1.0-inch NPT, 3000 p.s.i. steel coupling.

C6. ***WIRING***

All wiring within the tank shall be insulated to prevent copper conductor to water contact.
All wiring on the exterior of the tank shall be insulated and run in rigid conduit.

C7. ***HARDWARE***

All hardware used in conjunction with the system shall be protected against corrosion.

C8. ***ANSI/NSF 61 ANSI/NSF 372***

All materials in contact with the water or exposed to the interior of the tank shall be classified in accordance with ANSI/NSF 61 "Drinking Water System Components" and ANSI/NSF 372 “Drinking Water System Components – Lead Content.

D. SUBMITTALS

The cathodic protection constructor shall submit the following information to the purchaser for approval by the Owner or his representative.

1.) Drawings showing system design/configuration.
2.) Description of system components.
3.) Copy of ANSI/NSF 61 and ANSI/NSF 372classification for all system components located within the tank.
4.) Design calculations for required voltage, amperage & life expectancy.

E. WORKMANSHIP AND INSTALLATION

E1. *QUALIFICATIONS*

The cathodic protection constructor shall have a minimum of five (5) years experience installing and servicing the types of systems described in this specification. The system shall be installed by personnel specifically trained by the constructor to provide all workmanship required for corrosion control performance. All personnel shall be subject to Federal Substance Abuse and Testing Regulations.

E2. *PERFORMANCE*

All work shall be in accordance with the following requirements:

1. Components of the cathodic protection system shall be installed in the manner and at the locations as shown on the design drawings prepared by the Corrosion Specialist.
2. Pressure entrance fitting shall be installed in accordance with AWWA D100.
3. Welding, cutting, and coating shall be in accordance w/AWWA Standards D100, D102 & D105
4. Welding of steel coupling and anchors for horizontal anode suspension and rectifier mounting bracket shall be performed by the prime contractor prior to coating the tank. The cathodic protection constructor shall furnish drawings and materials to the prime contractor prior to coating.
5. Verification of electrical continuity of all sections of bolted or riveted tanks shall be the responsibility of the purchaser of the cathodic protection system.
6. Materials and equipment shall be inspected prior to installation. Any defective component shall be repaired or replaced.
7. Electrical work shall be in accordance with the National Electrical Code.
8. Lead wires shall be installed to prevent damage from abrasion.
9. Electrical connections within the tank shall be sealed to prevent water migration.
10. The rectifier shall be mounted at a convenient height (eye level) above grade for monitoring and service purposes.
11. A.C. power to the rectifier shall be furnished by the purchaser.
12. Disinfection of the tank shall be the responsibility of the purchaser.
13. Work provided by the constructor shall be completed in a clean and safe manner.

F. ENERGIZING THE SYSTEM

After the system is installed and the tank is filled, the cathodic protection constructor shall provide start-up service which includes energizing, testing, and adjusting the system for optimum performance of the cathodic protection system. This start-up service shall be in performed in accordance with ANSI/AWWA D104 Section 5.2 Testing. This start-up service shall be coordinated with the Owner or his representative. All tank-to-water potential measurements shall be conducted with a calibrated portable copper-copper sulfate reference electrode and a portable high impedance voltmeter. A minimum of five (5) locations shall be measured. All test data shall be reviewed and evaluated by the Corrosion Specialist. The final test and adjustment of the system shall be conducted approximately twelve (12) months after the start-up service. In addition to the start-up service, "as-built" drawings and an Owners Maintenance Manual shall be submitted to the purchaser.

G. MONITORING

The cathodic protection constructor shall furnish self-addressed report cards to be completed by the owner. Report cards received by the cathodic protection constructor during the guarantee and service period(s) shall be evaluated for system performance.

H. GUARANTEE

All workmanship, equipment, and materials furnished by the cathodic protection constructor shall be guaranteed for one (1) year.

I. SERVICE AGREEMENT

At the conclusion of the warranty period, the cathodic protection constructor shall furnish a service agreement to the owner for the type of system installed. The agreement shall include the annual service rate and a complete description of the scope of work proposed. The agreement for annual inspection and potential testing shall be in accordance with AWWA D104, Appendix C and include as a minimum:

1. One (1) annual job site visit.
2. Tank-to-water potential measurements conducted at representative locations within the tank. A minimum of five (5) locations shall be measured.
3. Measurements shall be conducted with a portable high impedance voltmeter and a calibrated copper-copper sulfate reference electrode.
4. Adjustments for optimum corrosion control shall be in accordance with criteria for protection.
5. Data recorded shall provide sufficient information to evaluate the performance for the system relating to criteria for protection.
6. In the event additional work is required, the constructor shall submit a report with recommendations for optimizing corrosion control.

Medina Waterworks Division
1055 West Smith Road
Medina, OH 44256
330.725.6681
www.corrpro.com
We Know Corrosion

Monday, July 22, 2024

INTERNAL CATHODIC PROTECTION SYSTEM

Village of North Aurora

North Aurora, IL

1,000,000/1,250,000 Gallon Sphere

Corrpro Ref. # IL-24-21

BUDGETARY ESTIMATE

Corrpro Waterworks is pleased to submit the following proposal on the above referenced project.

For this project, Corrpro Waterworks would provide all engineering design, materials, labor, equipment and supervision required for the installation of one cathodic protection (CP) system complete, consisting of an automatic rectifier energizing a horizontally suspended (ice-resistant) PERMANODE anode system. Anode material shall be titanium mixed metal oxide on a buoyant ballasted flexible suspension system. This price is based on two (2) trips to the jobsite. It is expected that the structure shall be completely drained for the initial installation visit, with both water and A.C. available at the time of the second visit for final testing.

Corrpro Waterworks fee for these described services will be the BUDGETARY amount of $34,000.00.
All CP components exposed to the tank interior are UL classified in accordance with NSF Standard 61.

This price does not include provisions for 120V/10amp/1 ph/60 Hz AC input to the rectifier. BY OTHERS
This price does not include welding of anode support rings (estimated 10). BY OTHERS
This price does not include welding of entrance penetration coupling & rectifier mounting hardware.BY OTHERS

This proposal is subject in all respects to the Corrpro Standard Terms & Conditions attached as Exhibit A & incorporated into this proposal by reference. In the event of any conflict or inconsistency between the provisions of this proposal and the Corrpro Standard Terms and Conditions, the provisions of this proposal shall prevail to the extent of such conflict or inconsistency. Our Standard Terms & Conditions are also available at www.corrpro.com/Resources/Sales-Terms-Conditions.

Corrpro Waterworks will provide detail drawings and supply the necessary materials to be installed onto the tank. This price is **based on the attached** Corrpro Waterworks specification. Estimated construction completion time is three (3) days. This quotation shall be considered part of the contract should Corrpro Waterworks be awarded this project. Corrpro Waterworks will require the plan and elevation drawings for the tank to facilitate in design preparation.

All CP system materials and labor shall be guaranteed for a period of one (1) year by Corrpro's standard warranty. This pricing shall remain valid for a period of 180 days. Invoicing shall be done on a work complete to date basis. Please note that a **five (5) week notice** will be required for scheduling.

We appreciate the opportunity to submit this proposal. Should you have any questions or require additional information, please do not hesitate to contact our office.

Respectfully submitted,
CORRPRO WATERWORKS

Greg Copen

Greg Copen
Waterworks Operations

_____
acceptance acknowledgement - please sign & return to indicate acceptance of this proposal. _____(date)

Exhibit A

CORRPRO COMPANIES, INC. STANDARD TERMS AND CONDITIONS

The following terms and conditions ("T&Cs") apply to the proposed sale of equipment, supplies, products or materials ("Goods") or the proposed furnishing of labor, with or without the supply of Goods ("Services"), by Corrpro Companies, Inc. ("Corrpro"), all as further described in Corrpro's Proposal or Invoice ("Sales Document"), to the buyer named in the Sales Document ("Buyer").

1. Scope of Agreement; Acceptance. Unless expressly provided otherwise in a master agreement signed by Buyer and an authorized representative of Corrpro prior to the date of the Sales Document, the Sales Document, these T&Cs and any other documents expressly identified in the Sales Document as a contract document shall be considered contract documents (collectively, the "Agreement"). Any terms that add to or contradict the terms of this Agreement are not valid. A definite expression of acceptance of the Sales Document or the Agreement by Buyer that contains terms that are additional to or different from the terms of the Agreement will form a contract solely on the Agreement, and the additional or different terms shall not become a part of the Agreement, whether or not they would materially alter the Agreement. Neither course of prior dealings nor usage of trade shall be relevant to supplement or explain any provision of the Agreement. The Agreement becomes a valid and binding obligation of Corrpro and Buyer on the earlier of: (a) Corrpro's receipt of this Sales Document signed by Buyer; (b) Buyer delivering a purchase order or a purchase order number to Corrpro for the Goods or Services described in the Proposal; (c) Buyer's receipt and acceptance of the Goods or Services, (d) Buyer's payment for the Goods or Services described in the Sales Document, or (e) any other written indication by Buyer of its acceptance of the Agreement.

2. Delivery; Risk of Loss. All shipping dates of Goods and performance dates of Services stated in the Sales Document are approximate and not a guarantee of a particular date of shipment or performance. Unless stated otherwise in the Agreement, delivery of the Goods shall be EXW (Incoterms 2010) at Corrpro's facility stated in the Sales Document. At Buyer's option, Corrpro will ship the Goods to Buyer at the shipping address stated in the Sales Document by any commercially reasonable means, provided that Corrpro has the option of selecting the particular route and carrier for shipment of the Goods to Buyer, unless specified by Buyer in the Sales Document. Buyer shall bear all risk of loss or damage to the Goods during transit. All freight, insurance, tariffs, freight forwarding, customs, cartage and other transportation or incidental charges shall be borne by Buyer. Corrpro reserves the right to deliver Goods or perform Services in installments, all such installments to be separately invoiced and paid for when due, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve Buyer's obligations to accept remaining deliveries.

3. Inspection and Acceptance. Immediately on Buyer's receipt of any Goods shipped or Services performed, Buyer shall inspect the same and shall notify Corrpro in writing of any claims for shortages or non-conformance (including defective and damaged Goods or Services). Buyer shall hold any non- conforming Goods for Corrpro's written instructions concerning disposition. Failure to give written notice of any non-conforming Goods or Services within ten (10) days after the earlier to occur of receipt of Goods or performance of Services, express oral or written acceptance of the Goods or Services, or payment for the Goods or Services, shall conclusively (a) establish Buyer's acceptance of the Goods or Services, (b) release Corrpro from any and all liability therefor, and (c) waive Buyer's right to seek damages or other remedies for any non-conforming Goods or Services subject to Section 8 below. Buyer shall bear the expenses of inspection under all circumstances.

4. Payment Terms. Terms of sale are net thirty (30) days from date of invoice, unless otherwise stated in the Agreement. Time is of the essence with respect to all payments. Any amount not received by Corrpro when due shall bear interest at the rate of one and one-half percent (1½%) per month (eighteen percent (18% annually), or the maximum rate of interest that applicable law allows, whichever is greater, until fully paid, including any interest due. Buyer agrees to pay all costs of collection resulting from any default by Buyer of this Agreement. Amounts due to Corrpro under this Agreement are not subject to offset, deduction or back charges by Buyer. Unless stated otherwise in the Agreement, the prices stated in the Agreement and all payments due to Corrpro from Buyer shall be in the lawful currency of the U.S. If, at any time prior to shipment or performance (either complete or partial), Buyer does not meet Corrpro's credit approval or Corrpro, in its sole discretion, deems Buyer's financial condition to be unsatisfactory, Corrpro may either (a) delay or postpone delivery of Goods or performance of Services, (b) terminate the Agreement, or (c) request payment in full or other security satisfactory to Corrpro from Buyer prior to shipment of the Goods or performance of the Services.

5. Taxes; Permits and Fees; Laws. Unless expressly stated otherwise in the Agreement, the price for the Goods furnished or Services performed by Corrpro excludes all governmental or brokerage taxes, duties, customs, fees, charges or assessments (collectively, "Taxes"). If applicable, Buyer must provide Corrpro with documentation acceptable to Corrpro of any exemptions claimed from Taxes prior to invoicing. In the event Corrpro is required to pay any Taxes not previously paid to Corrpro, Buyer shall reimburse Corrpro. Unless stated otherwise in the Agreement, Buyer shall secure and pay for all permits and fees necessary for delivery and installation of the Goods or performance of the Services. It is Buyer's duty to ascertain that the Goods or Services proposed by Corrpro are and their subsequent installation and use are in accordance with applicable laws, ordinances and building codes. Corrpro shall not be responsible for compliance of the Goods or Services to such laws, ordinances and building codes, but shall, to the extent reasonably possible, promptly notify Buyer of any discrepancies brought to Corrpro's attention.

6. Specifications. Buyer warrants that any documents, drawings, designs or specifications furnished to Corrpro by Buyer or any party acting on behalf of, or under direction of, Buyer (collectively, "Specifications") are complete, accurate and may be reasonably relied on by Corrpro. Corrpro shall have no liability for errors, omissions or inconsistencies in any Specifications. In the event the Agreement contains submittal requirements pertaining to the Goods or Services, Corrpro agrees to submit in a timely fashion to Buyer for review and approval any shop drawings, samples, product data, manufacturers' literature or similar submittals as Buyer may reasonably request. Buyer shall be responsible for review and approval of submittals with reasonable promptness to avoid causing delay.

7. Change Orders. Changes to the quantity, Specifications, scope of supply or performance, delivery schedule, period of performance, shipping instructions or any other material term of the Agreement, may only be made by Buyer and Corrpro executing a written change order ("Change Order"). Any Change Order shall state the parties' agreement on (a) change in the material term of the Agreement, and (b) an adjustment to the purchase price or the date of shipment or period of performance, as applicable. Both parties agree that, unless a Change Order is agreed in writing and signed by authorized representatives of both parties, the Agreement shall not be changed or modified in any manner. In addition, Corrpro has the right to suspend performance during the period while the change is being evaluated and negotiated. In the event Buyer has communicated proposed changes to Corrpro, Corrpro, at its sole discretion, shall either (i) accept the Change Order, (ii) reject the Change Order and continue performance under the existing Agreement, or (iii) terminate the Agreement. In the event that Corrpro elects (ii) above, Buyer shall have the option to terminate the Agreement.

8. Warranties. "Warranty Period" means (a) for Services and Goods installed as part of the Services, the one (1) year period beginning the date the applicable Services are substantially completed; and (b) for Goods not installed as part of any Services, the ninety (90) day period beginning with the date of shipment from Corrpro. The providing of warranty service does not extend or restart a new Warranty Period. Corrpro warrants that, for the duration of the Warranty Period and subject to the other limitations in this Agreement, each Service has been performed in accordance with applicable specifications and procedures for such Service, and, if applicable, Goods will be free from defect in materials and workmanship. Notwithstanding anything in this Agreement to the contrary, Corrpro's warranty liability shall in no event exceed the amount paid for the original defective Goods or Services. Any claim not received by Corrpro within the applicable Warranty Period shall be conclusively deemed waived by claimant. Corrpro has the option to verify, with its own representatives, the nature and extent of the alleged defect. Corrpro shall have no obligation to provide warranty service and shall have no liability with respect to defective Goods or Services if the Goods, materials, systems of which they are a part, or structures they are intended to protect from corrosion have: (a) been modified, altered, relocated (in the case of cathodic protection systems), used for other than intended purposes, or otherwise changed without Corrpro's written consent; (b) been damaged or abused; (c) not been operated or maintained in accordance with design specifications, instructions, operations and maintenance documents, or reasonable business practices; or (d) in the case of Goods or Services, not been paid for in full.

9. Warranty Limitations. The Goods warranty applies only to (a) Goods manufactured solely by Corrpro ("Corrpro Products"), and (b) components of cathodic protection systems installed as part of the Services. Except as stated in the preceding sentence, Corrpro does not warrant products manufactured or supplied by other parties, and Buyer shall be entitled to rely on the warranties, if any, only to the extent extended to Buyer by such other parties. Corrpro shall not be liable for any expense incurred by Buyer in order to remedy any warranted defect. Corrpro's obligation to honor its warranty on defective Services is in all cases limited to, at Corrpro's sole option: 1) re-performing such Corrpro Service(s), 2) performing additional Service(s), or 3) providing a refund or credit equivalent to the decreased value of the Service(s). Corrpro's obligation to honor its warranty on defective Corrpro Products is in all cases limited to, at Corrpro's sole option: 1) repair or replacement of the defective Corrpro Product or component thereof, or 2) providing a cash refund or credit equivalent to the decreased value of the Corrpro Products. Replaced Corrpro Products shall become the property of Corrpro, if Corrpro so elects. Corrpro shall not be liable for any expense incurred by Buyer in order to remedy any warranted defect. ALL WARRANTIES ARE IN LIEU OF AND CORRPRO DISCLAIMS ANY AND ALL OTHER WARRANTIES, CONDITIONS, AND LIABILITIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. BUYER EXPRESSLY AGREES THAT THIS WARRANTY SHALL SERVE AS BUYER'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO THE GOODS OR SERVICES. **IN NO EVENT WILL CORRPRO BE LIABLE TO BUYER, ITS AFFILIATES, SUCCESSORS, ASSIGNS OR TRANSFEREES OR TO ANY THIRD PARTY (BY VIRTUE OF CONTRACT, TORT (INCLUDING NEGLIGENCE), WARRANTY, STRICT LIABILITY OR OTHERWISE) FOR ANY LOST USE, REVENUES OR PROFITS, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE OR SPECIAL DAMAGES ARISING OUT OF OR IN ANY WAY RELATED TO THE GOODS OR SERVICES, ACTS OR OMISSIONS IN CONNECTION WITH ANY AGREEMENT RELATED TO THESE WARRANTIES, OR GOODS OR SERVICES PROVIDED BY CORRPRO UNLESS EXPRESSLY AND EXPLICITLY PROVIDED FOR IN WRITING SIGNED BY AN AUTHORIZED REPRESENTATIVE OF CORRPRO OR AS OTHERWISE REQUIRED BY LAW.** THESE WARRANTIES SHALL EXTEND ONLY TO THE FIRST PURCHASER OF GOODS OR SERVICES FROM CORRPRO AND SHALL NOT BE ASSIGNED OR TRANSFERRED. Corrpro does not warrant that the use or sale of the Goods will not infringe on any U.S. or other patents covering the product itself of the use thereof in combination with other products or the operation of any process.

10. Reliance on Buyer's Representations. Corrpro shall be entitled to rely on representations made by or on behalf of Buyer that all conditions necessary for the proper installation or performance of the Goods or Services or Corrpro Products have been satisfied, except to the extent Corrpro is specifically contracted to make such determination. Corrpro shall have no liability for any and all claims, losses, and causes of action arising out of, resulting from, or in any way attributable to failure of Buyer to satisfy such conditions, Buyer's failure to advise of existing site conditions affecting the Goods or Services (including, but not limited to, the location of subsurface or concealed structures, systems or components thereof), or the use or operations of products, materials, or systems subsequent to any transfer to any third party. Corrpro makes no representations or warranties with respect to, and disclaims liability arising out of, products or services sold by Buyer**.**

11. Technical Assistance. At Buyer's request, Corrpro may, in its discretion, furnish technical assistance and information with respect to the Goods. CORRPRO MAKES NO WARRANTIES OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, WITH RESPECT TO TECHNICAL ASSISTANCE OR INFORMATION PROVIDED BY CORRPRO OR ITS PERSONNEL. ANY SUGGESTIONS BY CORRPRO REGARDING USE, SELECTION, APPLICATION OR SUITABILITY OF THE GOODS SHALL NOT BE CONSTRUED AS AN EXPRESS WARRANTY UNLESS SPECIFICALLY DESIGNATED AS SUCH IN A WRITING SIGNED BY AN AUTHORIZED REPRESENTATIVE OF CORRPRO.

12. Confidentiality. All information, including quotations, specifications, drawings, prints, schematics, and any other engineering, technical or pricing data or information submitted by Corrpro to Buyer related to any order for Goods or Services are the confidential and proprietary information of Corrpro. Buyer and its employees, agents or other parties for whom Buyer is responsible may not disclose Corrpro's confidential and proprietary information to any third parties, or use Corrpro's confidential and proprietary information for its own account or that of any third party, except in the performance of this Agreement.

13. Force Majeure. If Corrpro is delayed at any time by the acts or omissions of Buyer, Change Orders, or any Force Majeure, then the period of performance of Services shall be extended, the delivery of Goods rescheduled and the price equitably adjusted to reflect the effects of delay on Corrpro's costs. "Force Majeure" means circumstances beyond Corrpro's reasonable control, including acts of God, acts of public enemies, wars, other hostilities, blockades, insurrections, riots, epidemics, quarantine restrictions, floods, unavailability of components or supplies, lightning, fire, storms, earthquakes, arrests, civil disturbances, acts of any governmental or local authority, and any other acts and causes not within Corrpro's control, whether foreseeable or not. If Corrpro is unable for any reason to supply the total demands for Goods specified in the Agreement, Corrpro may allocate its viable supply among any or all purchasers on such basis as Corrpro may deem fair and practical, without liability for any failure of performance which may result therefrom.

14. Default; Termination. If Buyer fails to perform any of its obligations under this Agreement, including failure to make payments as provided in this Agreement or otherwise, or if Buyer fails to give prompt assurances of future performance when requested by Corrpro, then Corrpro may, on five (5) days' written notice to Buyer, declare Buyer to be in default and Corrpro may suspend or terminate performance of its obligations under this Agreement without liability and retain all rights and remedies Corrpro may possess at law, in equity or as provided in these T&Cs. In addition to the remedies above, to the extent that (a) Corrpro declares a default under this Paragraph 14, or (b) if the Agreement is terminated for any reason other than default by Corrpro, Buyer agrees to pay Corrpro for any (i) Services performed and Goods installed or delivered to date of termination, (ii) Goods ordered which cannot be terminated, and (iii) all costs associated with demobilizing equipment and personnel. All costs recovered shall include overhead or profit on costs.

15. Hazardous Material. Corrpro is not responsible for the discovery of any hazardous material at the site where Services are to be performed. In the event Corrpro discovers hazardous material, Corrpro will promptly notify Buyer. Corrpro is not obligated to commence or continue providing Services until all hazardous material discovered at the place of performance has been removed, remediated, or determined to be harmless. If Corrpro incurs additional costs or is delayed due to the presence or remediation of hazardous material, Corrpro is entitled to an equitable adjustment in both the Agreement's price and the time for performance. In no event shall Corrpro be liable to Buyer or any third party for any hazardous material existing at the place of performance, or brought onto said premises by any third party. Hazardous material includes any substance or material identified currently or in the future as hazardous under applicable laws, or any other substance or material that may be considered hazardous or otherwise subject to statutory or regulatory requirement governing handling, disposal, or cleanup.

16. Release of Liability for Buried Pipelines. If necessary for the performance of Services, Corrpro will contact the appropriate jurisdictional authority to identify and locate any buried public utilities at least seventy-two (72) hours prior to commencing Services on site. Corrpro will also attempt to locate any buried metallic piping prior to commencing Services on the site. Buyer will provide Corrpro with accurate, dimensioned, reliable site piping and utility plans ("as-built site drawings") which depict, at a minimum, the precise location of all underground storage tanks and all below ground fuel, vent, air, water, or natural gas piping and electrical/instrumentation conduits (collectively "below-ground hazards") at least three (3) days in advance of the date Corrpro is to commence Services at the site. If Buyer fails to provide as-built site drawings, or if any as-built site drawings provided by Buyer are inaccurate or fail to identify the location of all below- ground hazards, Buyer agrees that Corrpro will not be liable to Buyer for any damages, liabilities or claims arising from damage to any below-ground hazard or a release of petroleum products or other hazardous material, in the course of Corrpro's performance of the Services, including any such damages caused by the negligence of Corrpro or its employees. In addition, Buyer will indemnify and hold Corrpro harmless from any such damages, liabilities or claims made by third parties, including governmental agencies.

17. Indemnification. TO THE FULLEST EXTENT PERMITTED BY LAW, BUYER AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS CORRPRO AND ITS DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS

FROM AND AGAINST ANY AND ALL LIABILITY, LOSSES, COSTS (INCLUDING COSTS OF LITIGATION OR OTHER DISPUTE RESOLUTION AND ATTORNEYS' FEES), CLAIMS AND CAUSES OF ACTION IN FAVOR OF ANY AND ALL PERSONS ARISING OUT OF, RESULTING FROM, OR IN ANY WAY ATTRIBUTABLE TO THE NEGLIGENT ACT OR ACTION, OMISSION OR FAILURE TO ACT ON THE PART OF BUYER OR ITS DIRECTORS, OFFICERS, EMPLOYEES, SUBCONTRACTORS, AGENTS OR ANY OTHER PARTY FOR WHOSE ACTS OR OMISSIONS ANY OF THEM MAY BE LIABLE. TO THE FULLEST EXTENT PERMITTED BY LAW, BUYER FURTHER AGREES THAT WHERE OTHER CONSULTANTS OR CONTRACTORS ARE EMPLOYED IN THE WORK, BUYER WILL NOT HOLD CORRPRO RESPONSIBLE FOR ANY LOSS, DAMAGE OR INJURY CAUSED BY ANY FAULT OR NEGLIGENCE OF SUCH OTHER CONSULTANTS OR CONTRACTORS FOR RECOVERY FROM THEM, OR ANY OF THEM, FOR ANY SUCH DAMAGE OR INJURY.

18. Insurance. Corrpro shall maintain the following insurance policies and limits: commercial general liability insurance with limits of $2,000,000 per occurrence/$4,000,000 per-project aggregate, automobile liability with combined single limits of $2,000,000 per occurrence, workers' compensation/employer's liability with limits of $1,000,000/$1,000,000/$1,000,000, contractor's pollution liability with $5,000,000 per pollution event and professional liability with $5,000,000 limits. Such insurance shall be subject to the coverage provisions, limitations of liability, and other terms and conditions contained in the applicable policies. Buyer agrees to waive any rights of subrogation against Corrpro on behalf of itself and its insurers. Upon written request Corrpro will provide to Buyer a certificate evidencing such insurance.

19. Limitation of Liability. NOTWITHSTANDING ANYTHING IN THIS AGREEMENT TO THE CONTRARY, BUYER AGREES THAT ANY RECOURSE AGAINST CORRPRO UNDER THIS AGREEMENT OR RELATED TO CORRPRO'S PROVISION OF GOODS OR SERVICES HEREUNDER, INCLUDING BUT NOT LIMITED ANY INDEMNITY OR WARRANTY OBLIGATIONS, SHALL BE STRICTLY LIMITED TO THE AMOUNT PAID TO CORRPRO UNDER THIS AGREEMENT. IN NO EVENT SHALL CORRPRO OR ITS AFFILIATES BE LIABLE TO BUYER, ITS AFFILIATES, SUCCESSORS, ASSIGNS, VENDEES OR TRANSFEREES, OR TO ANY THIRD PARTY, FOR ANY ECONOMIC LOSS, LOST PROFITS OR BUSINESS OPPORTUNITIES, PHYSICAL HARM, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES, EVEN IF CORRPRO HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING OUT OF, RESULTING FROM OR RELATING IN ANY WAY TO THIS AGREEMENT OR ACTS OR OMISSIONS OF CORRPRO IN CONNECTION THEREWITH.

20. Governing Law; Venue; Dispute Resolution. The validity, construction and interpretation of this Agreement shall be governed by the laws of the State of Texas (USA), excluding any conflicts of laws principles which would direct application of the substantive law of another jurisdiction. Any and all disputes, claims or controversies arising out of or relating to this Agreement, or the breach thereof, shall be finally settled in the district court for the Southern District of Texas or the Harris County District Court, both located in Houston, Texas. Each party agrees to personal jurisdiction in these courts. In any litigation proceeding pursuant to this Agreement, the prevailing party shall recover from the other party all reasonable attorneys' fees, and other expenses in connection with such proceeding. Neither the UNCITRAL Convention on Contracts for the International Sale of Goods nor the UNIDROIT Principals of International Commercial Contracts (last version published as of the date of this Agreement) shall apply to the validity, construction and performance of this Agreement.

21. Export Compliance. Corrpro's Goods or Services are subject to U.S. export laws, rules, treaties, regulations, and international agreements (collectively, "Export Laws"). Buyer assumes the responsibility of abiding by the Export Laws along with applicable foreign laws when transferring, selling, importing, exporting, re-exporting, deemed exporting, diverting, or otherwise disposing of Goods or Services. By purchasing the Goods or Services, Buyer represents it is not in a sanctioned country nor is Buyer an individual or an entity whose purchase of the Goods or Services is restricted by the Export Laws.

22. Order of Precedence; Notice. If there is a conflict between the contract documents included in this Agreement, unless specified otherwise, the provisions of the documents will control in the following order: (a) provisions stated in the Sales Document; (b) these T&Cs; and (c) any other contract documents. All notices and communications required by this Agreement shall be delivered, in writing, to the Corrpro address stated on the Sales Document.

23. Interpretation. Corrpro and Buyer acknowledge this Agreement represents the entire agreement and understanding between the parties, incorporating all prior negotiations and understandings relating to the subject matter of this Agreement, whether written or oral. This Agreement shall be construed neither against nor in favor of either party, but shall be construed in a neutral manner. The failure of Corrpro to insist on strict performance of this Agreement shall not constitute a waiver of, or estoppel against, asserting the right to require such performance in the future, nor shall a waiver or estoppel in any one instance constitute a waiver or estoppel with respect to a later breach of a similar nature or otherwise. All rights and remedies under this Agreement are cumulative and are in addition to any other rights and remedies Corrpro may have at law or in equity. Unless the context of this Agreement clearly requires otherwise, "including" is not limiting and "or" has the inclusive meaning represented by the phrase "and/or." If any provision of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not be affected or impaired thereby. The section headings are for convenience only; they form no part of the terms and conditions and shall not affect their interpretation. This Agreement shall be binding on and inure to the benefit of the parties and their respective successors and assigns; however, Buyer may not assign this Agreement without the prior written consent of Corrpro.

CORRPRO COMPANIES, INC.
WARRANTY CERTIFICATE

This **WARRANTY CERTIFICATE** is provided to the purchaser of Corrpro's products and/or services and is subject to Corrpro's terms and conditions applicable to such sale.

WARRANTY ON CORRPRO SERVICES

Corrpro warrants that, for the duration of the Warranty Period and subject to the other limitations herein, each Corrpro Service has been performed in accordance with Corrpro's applicable specifications, procedures, and directions for such Corrpro Service. As used in this warranty, "Corrpro Service" means service provided by Corrpro, its employees, and authorized subcontractors.

WARRANTY ON CORRPRO PRODUCTS

Corrpro warrants that, for the duration of the Warranty Period and subject to the other limitations herein, Corrpro Products will be free from defect in materials and workmanship. As used in this warranty, "Corrpro Products" means only (a) products manufactured solely by Corrpro and (b) components of cathodic protection systems installed as part of Corrpro Services. Except as stated in the preceding sentence, Corrpro does not warrant products manufactured or supplied by other parties, and purchaser shall be entitled to rely on the warranties, if any, only to the extent extended to purchaser by such other parties.

WARRANTY PERIOD

"Warranty Period" means (a) for Corrpro Services and Corrpro Products installed as part of Corrpro Services, the one (1) year period beginning the date the applicable Corrpro Services are completed; and (b) for Corrpro Products not installed as part of Corrpro Services, the ninety (90) day period beginning with the date of shipment from Corrpro. The providing of Warranty Service does not extend or restart a new Warranty Period.

WARRANTY SERVICE

Claims arising out of the above warranties must be made in writing and delivered to the Corrpro location which provided the Corrpro Services or Corrpro Products, or if such location has moved, to its new location or to Corrpro's headquarters. As a condition to Corrpro's obligations herein, the claimant must provide the warranty certificate and original invoice applicable to such Corrpro Product or Corrpro Service and shall set forth the specific circumstances of the claim in reasonable detail. Any claim not made within the applicable Warranty Period shall be conclusively deemed waived by claimant.

Corrpro's obligation to honor its warranty on defective Corrpro Services is in all cases limited to, at Corrpro's sole option: 1) re-performing such Corrpro Service, 2) performing additional Corrpro Service, or 3) providing a refund or credit. Notwithstanding anything herein to the contrary, the value of the foregoing shall in no event exceed the amount paid for the original Corrpro Service.

Corrpro's obligation to honor its warranty on defective Corrpro Products is in all cases limited to, at Corrpro's sole option: 1) repair or replacement of the defective Corrpro Product or component thereof, or 2) providing a cash refund or credit. Notwithstanding anything herein to the contrary, the value of the foregoing shall in no event exceed the amount paid for the original Corrpro Product. Replaced Corrpro Products shall become the property of Corrpro. Corrpro shall not be liable for any expense incurred by purchaser in order to remedy any warranted defect.

RELIANCE ON PURCHASER'S REPRESENTATIONS

Corrpro shall be entitled to rely on representations made by or on behalf of Purchaser that all conditions necessary for the proper installation or performance of Corrpro Products, systems, materials, components and Corrpro Services have been satisfied, except to the extent Corrpro is specifically contracted to make such determination. Corrpro shall have no liability for any and all claims, losses, and causes of action arising out of, resulting from, or in any way attributable to failure of Purchaser to satisfy such conditions, Purchaser's failure to advise of existing site conditions affecting the work (including, but not limited to, the location of subsurface or concealed structures, systems or components thereof), or the use or operations of products, materials, or systems subsequent to any transfer to any third party. Corrpro makes no representations or warranties with respect to, and disclaims liability arising out of, products or services sold by purchaser.

DAMAGE AND SUBSEQUENT EVENTS

Corrpro shall have no obligation to provide warranty service and shall have no liability with respect to defective Corrpro Services or Corrpro Products if the Corrpro Products, materials, systems of which they are a part, or structures they are intended to protect from corrosion have: 1) been modified, altered, relocated (in the case of cathodic protection systems), used for other than intended purposes, or otherwise changed without Corrpro's written consent; 2) been damaged or abused; 3) not been operated or maintained in accordance with design specifications, instructions, operations and maintenance documents, or reasonable business practices; or 4) in the case of Corrpro Products or Corrpro Services, not been paid for in full.

NO RELIANCE ON OTHER STATEMENTS

This warranty is the sole warranty offered by Corrpro. No statement or affirmation by or on behalf of Corrpro by words or actions other than as set forth herein shall constitute a warranty, and Purchaser shall not be entitled to rely on any oral or written statement including those of any employee, agent, or representative of Corrpro as being part of the terms and conditions of this warranty or of doing business unless such statement is in writing signed by a vice president of Corrpro.

RISK ALLOCATION

Corrpro does not represent, warrant, or otherwise guarantee that any product, material, or system sold is failure proof. Corrpro does not insure results and the prices charged reflect that an allocation of risk is being made. It is the responsibility of purchaser to maintain such insurance as is required under the circumstances.

LIMITATION OF LIABILITY/SOLE REMEDY

THE WARRANTIES PROVIDED ABOVE ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, CONDITIONS, AND LIABILITIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. PURCHASER AND SELLER EXPRESSLY AGREE THAT THIS WARRANTY SHALL SERVE AS PURCHASER'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO PRODUCTS AND SERVICES PROVIDED BY CORRPRO, ITS EMPLOYEES OR AUTHORIZED SUBCONTRACTORS. IN NO EVENT WILL CORRPRO BE LIABLE TO PURCHASER, ITS AFFILIATES, SUCCESSORS, ASSIGNS OR TRANSFEREES OR TO ANY THIRD PARTY (BY VIRTUE OF CONTRACT, TORT (INCLUDING NEGLIGENCE), WARRANTY, STRICT LIABILITY OR OTHERWISE) FOR ANY INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE OR, EXCEPT AS PROVIDED HEREIN, SPECIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS OR OPPORTUNITIES) ARISING OUT OF OR IN ANY WAY RELATED TO THE PRODUCTS OR SERVICES SUPPLIED, ACTS OR OMISSIONS IN CONNECTION WITH ANY AGREEMENT RELATED TO THE WARRANTIES CONTAINED HEREIN, OR PRODUCTS, MATERIALS, OR SERVICES PROVIDED BY CORRPRO UNLESS EXPRESSLY AND EXPLICITLY PROVIDED FOR HEREIN OR IN WRITING SIGNED BY AN AUTHORIZED OFFICER OF CORRPRO OR AS OTHERWISE REQUIRED BY LAW. THE WARRANTY PROVIDED HEREIN SHALL EXTEND TO THE FIRST PURCHASER OF SUCH GOODS OR SERVICES FROM CORRPRO AND SHALL NOT BE ASSIGNED OR TRANSFERRED.

corrpro®
An Aegion Company

CATHODIC PROTECTION SPECIFICATION

AUTOMATICALLY CONTROLLED IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM w/HORIZONTAL ANODE SYSTEM FOR THE INTERIOR OF STEEL WATER TANKS

A. SCOPE

The cathodic protection design/install constructor shall provide all engineering services, materials, equipment, labor, and supervision for the installation of an automatically controlled impressed current cathodic protection system to provide corrosion control for the interior submerged surface of the specified tank. All work furnished shall be in accordance with A.W.W.A. Standard D104, ANSI/NSF 61 and features included in this specification. The cathodic protection constructor shall be Corrpro Waterworks.

B. DESIGN

All engineering services shall be provided by a Corrosion Specialist who is accredited by the National Association of Corrosion Engineers International as a Senior Corrosion Technologist, Corrosion Specialist or Cathodic Protection Specialist. The system shall be designed by a Corrosion Specialist with experience in cathodic protection for water storage tanks. The Corrosion Specialist shall design the system to provide effective corrosion control in accordance with criteria for protection. The criteria for protection shall be based on a tank-to-water potential, IR drop free, within a range of -0.850 volts to -1.050 volts relative to a stationary copper-copper sulfate reference electrode. This potential shall be measured free of the effect of voltage gradients (IR drop).

The Corrosion Specialist shall also base system capacity and performance on:

1. Total submerged surface area of the tank. *(includes area up to high water line within tank bowl and wet risers in elevated tanks which are 30" in diameter or larger)*
2. Type of coating and condition of coating.
3. Total bare surface area to be protected will be a minimum of 25% of total surface area.
4. Minimum current density of 0.5 MA/ft.^{2} bare surface area.
5. Chemical analysis of water including resistivity expressed in ohm-cm.
6. Susceptibility of tank to icing conditions.
7. Minimum anode design life of twenty (20) years.
8. Selection, dimensions, and layout of system components specified in Section C. of this specification.

C. SYSTEM COMPONENTS

C1. *RECTIFIER*

The rectifier unit shall perform in accordance with ANSI/AWWA Standard D104 and shall include:

1. Transformer
2. Silicon rectifying elements
3. Circuit breaker(s)
4. Lightning, surge, and overload protection
5. Provision for air-cooling operation
6. Digital voltmeter(s), ammeter(s) and potential meter(s)
7. Weatherproof cabinet in accordance with NEMA 4 requirements
8. Provision to vary current output from 0% to 100% of rated capacity
9. Provisions for mounting, grounding, and locking
10. Provision for 110-120-volt, 60 H_Z, single phase A.C. power.
11. D.C. output capacity in volts and amperes in accordance with Design (Section B)
12. Number of circuits in accordance with Design (Section B)
13. Automatic controller shall adjust current output to compensate for changes in water level, temperature of water, water chemistry, and cathodic polarization, and shall include the following provisions:
    a. Utilize long-life reference electrode(s) installed within the tank
    b. Monitor the tank-to-water potential, free of IR drop
    c. Automatically adjust the tank-to-water potential, free of IR drop, to a preset value
    d. Operate within 25MV of preset value
    e. Limit current to a preset value
    f. Utilize digital potential meter(s) to display tank-to-water potential, free of IR drop

C2. *LONG LIFE REFERENCE ELECTRODE(S)*

The permanent reference electrode shall consist of a copper-copper sulfate electrode which is manufactured to remain stable (plus or minus 10MV) for minimum of ten (10) years. The reference electrode to lead wire connection shall be encapsulated to prevent water migration. The stationary reference electrode shall be positioned within the tank to provide the most representative measurements for the submerged surface area(s).

C3. *HORIZONTAL ANODE SUSPENSION SYSTEM*

The anode suspension system shall be designed to be resistant to ice damage and in accordance with ANSI/AWWA Standard D104, Section 4.2.4.1.1 Type A, Horizontal System. The anode suspension system shall consist of a minimum 5/16" polyester cord. The cord shall be secured to steel anchors welded to the side wall and/or floor of the tank bowl or to the exterior of the dry access column of spheroidal type tanks. Tanks with wet risers which are 30" diameter or larger shall incorporate an anode suspension system with the steel anchors welded to the sidewall of the riser pipe. All cord to cord connections shall be tied and taped.

C4. ***ANODE MATERIALS***

The anode materials shall be selected in accordance with Design (Section B) and shall consist of one of the following:

1. Minimum .062" diameter titanium with a mixed metal oxide coating.
2. Minimum .062” diameter platinized niobium with 25 micro-inches of platinum.

All anode to header cable connections shall be sealed to prevent water migration.

C5. ***PRESSURE ENTRANCE FITTING***

For icing tanks the pressure entrance fitting shall accommodate anode and reference electrode lead wires at the base of the tank or at the base of wet risers for elevated tanks, which are 30" diameter or larger. The fitting shall be manufactured to prevent leakage through the fitting and to prevent water migration through the wire insulation. The entrance fitting shall be sized for minimum of 1.0-inch NPT, 3000 p.s.i. steel coupling.

C6. ***WIRING***

All wiring within the tank shall be insulated to prevent copper conductor to water contact.
All wiring on the exterior of the tank shall be insulated and run in rigid conduit.

C7. ***HARDWARE***

All hardware used in conjunction with the system shall be protected against corrosion.

C8. ***ANSI/NSF 61***

All materials in contact with the water or exposed to the interior of the tank shall be classified in accordance with ANSI/NSF 61 "Drinking Water System Components".

D. SUBMITTALS

The cathodic protection constructor shall submit the following information to the purchaser for approval by the Owner or his representative.

1.) Drawings showing system design/configuration.
2.) Description of system components.
3.) Copy of ANSI/NSF 61 classification for all system components located within the tank.
4.) Design calculations for required voltage, amperage & life expectancy.

E. WORKMANSHIP AND INSTALLATION

E1. *QUALIFICATIONS*

The cathodic protection constructor shall have a minimum of five (5) years experience installing and servicing the types of systems described in this specification. The system shall be installed by personnel specifically trained by the constructor to provide all workmanship required for corrosion control performance. All personnel shall be subject to Federal Substance Abuse and Testing Regulations.

E2. *PERFORMANCE*

All work shall be in accordance with the following requirements:

1. Components of the cathodic protection system shall be installed in the manner and at the locations as shown on the design drawings prepared by the Corrosion Specialist.
2. Pressure entrance fitting shall be installed in accordance with AWWA D100.
3. Welding, cutting, and coating shall be in accordance w/AWWA Standards D100, D102 & D105
4. Welding of steel coupling and anchors for horizontal anode suspension and rectifier mounting bracket shall be performed by the prime contractor prior to coating the tank. The cathodic protection constructor shall furnish drawings and materials to the prime contractor prior to coating.
5. Verification of electrical continuity of all sections of bolted or riveted tanks shall be the responsibility of the purchaser of the cathodic protection system.
6. Materials and equipment shall be inspected prior to installation. Any defective component shall be repaired or replaced.
7. Electrical work shall be in accordance with the National Electrical Code.
8. Lead wires shall be installed to prevent damage from abrasion.
9. Electrical connections within the tank shall be sealed to prevent water migration.
10. The rectifier shall be mounted at a convenient height (eye level) above grade for monitoring and service purposes.
11. A.C. power to the rectifier shall be furnished by the purchaser.
12. Disinfection of the tank shall be the responsibility of the purchaser.
13. Work provided by the constructor shall be completed in a clean and safe manner.

F. ENERGIZING THE SYSTEM

After the system is installed and the tank is filled, the cathodic protection constructor shall provide start-up service which includes energizing, testing, and adjusting the system for optimum performance of the cathodic protection system. This start-up service shall be in performed in accordance with ANSI/AWWA D104 Section 5.2 Testing. This start-up service shall be coordinated with the Owner or his representative. All tank-to-water potential measurements shall be conducted with a calibrated portable copper-copper sulfate reference electrode and a portable high impedance voltmeter. A minimum of five (5) locations shall be measured. All test data shall be reviewed and evaluated by the Corrosion Specialist. The final test and adjustment of the system shall be conducted approximately twelve (12) months after the start-up service. In addition to the start-up service, "as-built" drawings and an Owners Maintenance Manual shall be submitted to the purchaser.

G. MONITORING

The cathodic protection constructor shall furnish self-addressed report cards to be completed by the owner. Report cards received by the cathodic protection constructor during the guarantee and service period(s) shall be evaluated for system performance.

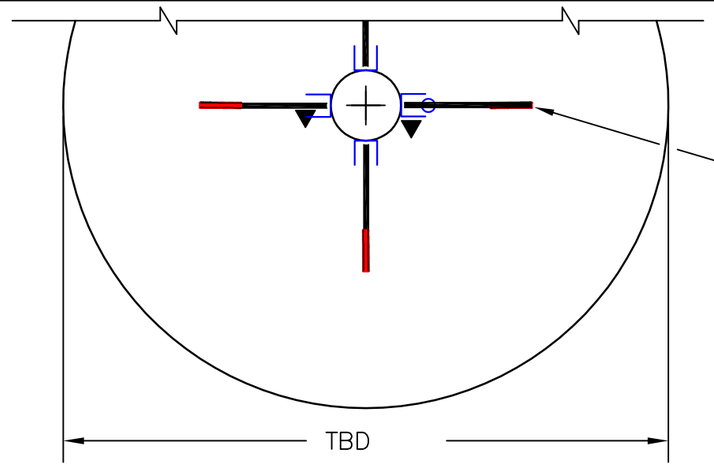
H. GUARANTEE

All workmanship, equipment, and materials furnished by the cathodic protection constructor shall be guaranteed for one (1) year.

I. SERVICE AGREEMENT

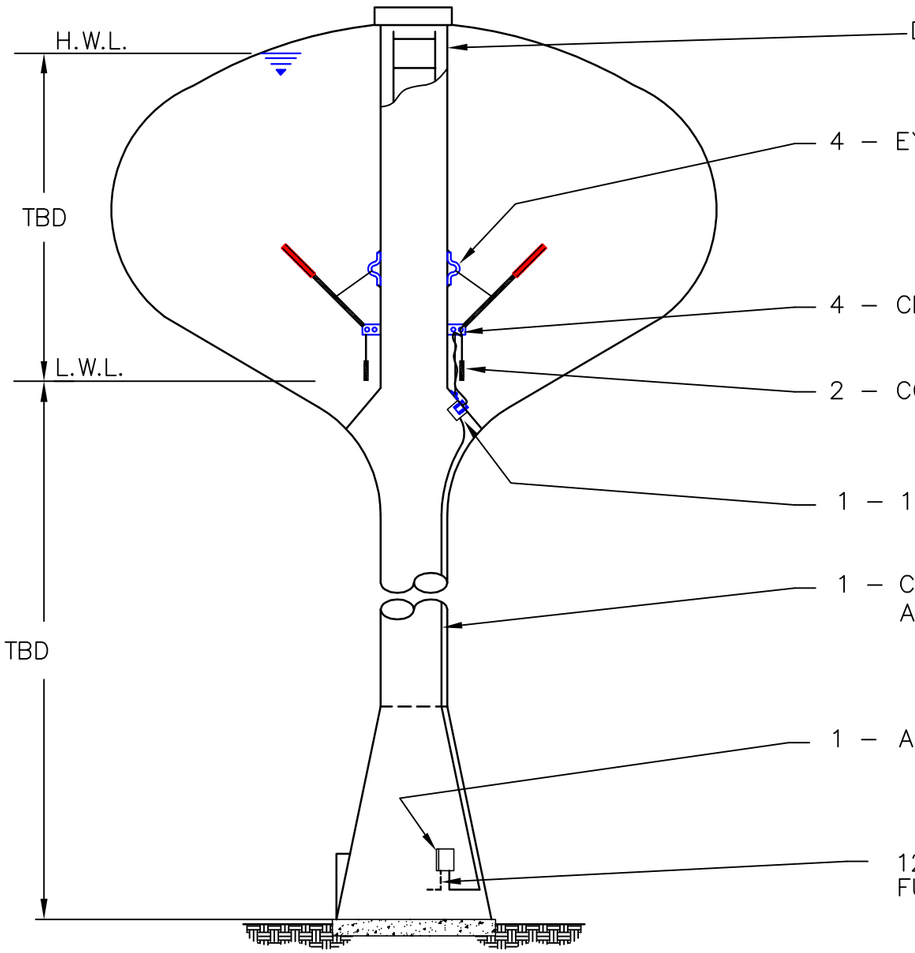
At the conclusion of the warranty period, the cathodic protection constructor shall furnish a service agreement to the owner for the type of system installed. The agreement shall include the annual service rate and a complete description of the scope of work proposed. The agreement for annual inspection and potential testing shall be in accordance with AWWA D104, Appendix C and include as a minimum:

1. One (1) annual job site visit.
2. Tank-to-water potential measurements conducted at representative locations within the tank. A minimum of five (5) locations shall be measured.
3. Measurements shall be conducted with a portable high impedance voltmeter and a calibrated copper-copper sulfate reference electrode.
4. Adjustments for optimum corrosion control shall be in accordance with criteria for protection.
5. Data recorded shall provide sufficient information to evaluate the performance for the system relating to criteria for protection.
6. In the event additional work is required, the constructor shall submit a report with recommendations for optimizing corrosion control.



4 – TITANIUM MIXED METAL OXIDE ANODE ASSEMBLIES

NOTE:
MODIFICATIONS MAY BE PERFORMED TO MEET FIELD CONDITIONS



DRY ACCESS TUBE

4 – EYERINGS

4 – CLEVIS BRACKETS

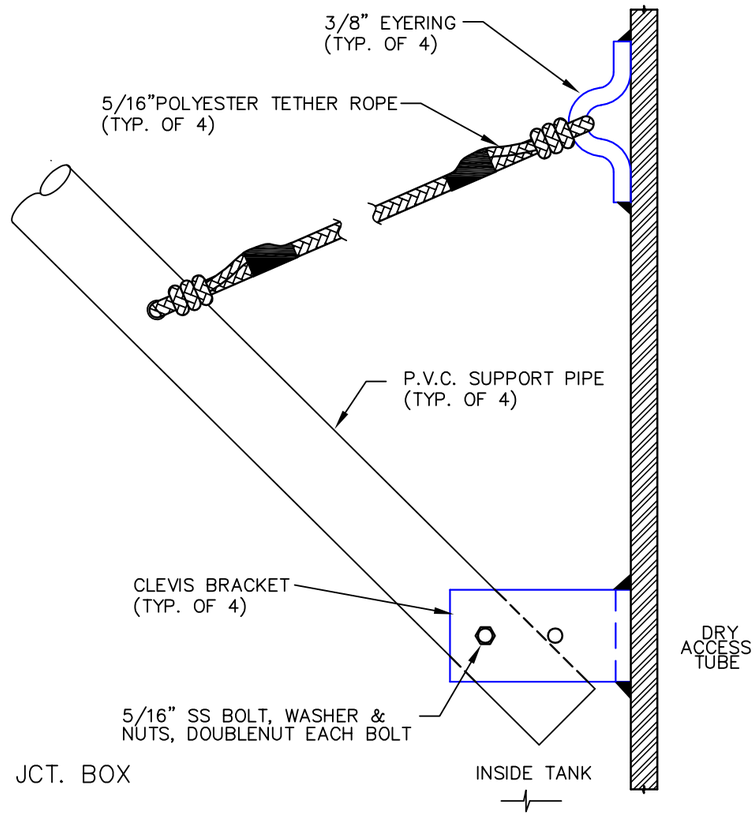
2 – CORRPRO IHRP–801–CT PERMACELLS

1 – 1" WIRE PRESSURE ENTRANCE FITTING WITH P.V.C. JCT. BOX

1 – CONDUIT CONTAINING 2 – #12 AWG THHN WIRES AND 1 – #18 AWG TW 3/C COMMUNICATION CABLE

1 – AUTOMATICALLY CONTROLLED T.A.S.C. RECTIFIER

120/60/1ø A.C. POWER SUPPLY TO RECTIFIER FURNISHED & INSTALLED BY OTHERS



SIDE VIEW

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PHILADELPHIA • SAN FRANCISCO

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1055 W. SMITH RD MEDINA, OH 330.725.6681

NO.	DATE	BY	REVISION
			CORRPRO SYSTEM NO. TBD

REFERENCE DRAWINGS

TYPICAL LAYOUT

CATHODIC PROTECTION SYSTEM
ELEVATED WATERSPHERE

TYPICAL LAYOUT DRAWING

DRAWN BY	G.C.
DESIGNED BY	CORRPRO
DATE	2022
SCALE	NONE
SHEET	1 OF 1
DWG. No.	TYP4PVC

TASC Automatic Air Cooled

Cathodic Protection Rectifier

ENERGY & MINING

Description

The Corrpro T.A.S.C. series rectifier is specifically designed to provide accurate, economical corrosion control for the submerged surfaces of steel water storage tanks and water / wastewater treatment units. The T.A.S.C. VIII is designed by NACE accredited cathodic protection engineers for optimum performance in accordance with ANSI/AWWA D104, Type A, IR Drop Free control standards. The T.A.S.C. rectifier automatically monitors and adjusts the DC output required for optimum corrosion control. The T.A.S.C. rectifier control unit is equipped with an automatic potential limit, which is adjusted to maintain AWWA D104-97 and NACE criteria for optimum cathodic protection corrosion control while preventing over or under protection of the coated surface. Superior design, engineering and operation provide owner/operators with long life, low maintenance performance. The standard digital display meters facilitate ease of monitoring, with performance indicator lights on the front cabinet available as an optional extra feature. Each T.A.S.C. rectifier is both factory and job site tested to insure quality workmanship and performance.

Features

- Totally Automatic Control.
- Eliminates “IR” Drop Error.
- Controls from 0 to 100% of Rated Output.
- Automatic Current Limiting.
- Soft-Start Circuitry To Avoid High Initial Power-On Inrush Currents.
- Anti-spike technology for prevention of voltage/current overshooting after release of interruption.
- Full-wave silicon rectification.
- High energy AC input surge protection.
- High energy DC output surge protection
- Secondary AC surge protection.
- Plug In Automatic Control Circuit Board.
- Switch for Automatic/Manual Operation.
- High Intensity LED Digital Meters.
- Transformer constructed to Class “H” (180°C/356°F) temperature requirements with a minimum efficiency of 95%.
- All brass/copper hardware finished in electroless nickel plate for superior corrosion prevention.
- Wall or pole mounting.
- One year warranty, from date of purchase against defective components, and faulty workmanship.
- Full complement of options to tailor the rectifier to the specific installation requirements.
- Control indicator LEDs.

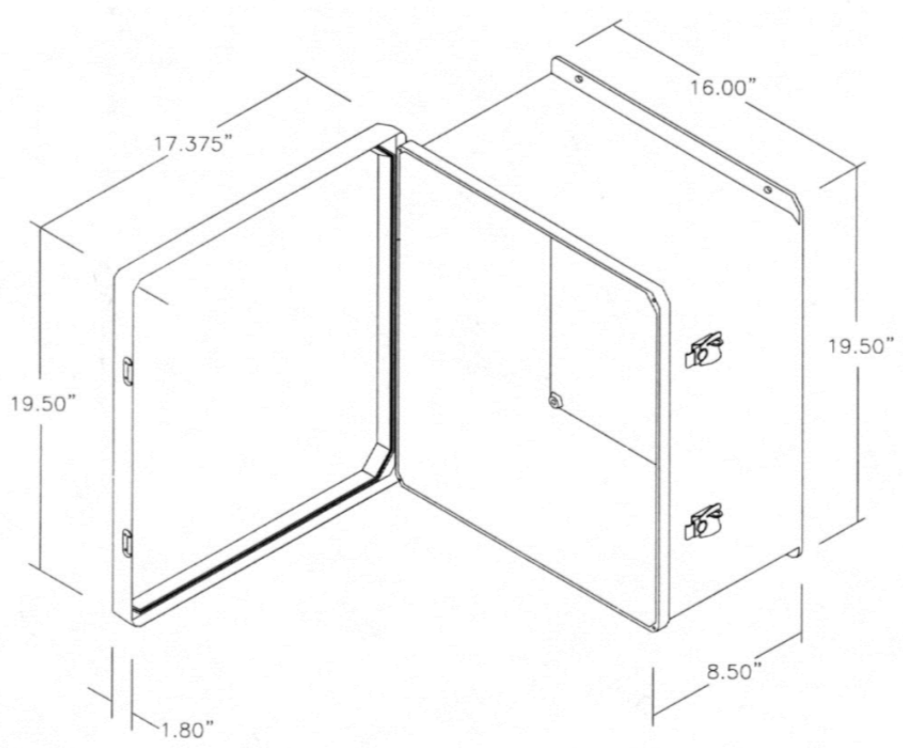
Specifications

- Single phase inputs: 115, 208, 230, 460 VAC., 60 Cycle
- Magnetic trip input circuit breakers and secondary fuses for full overload &short circuit protection
- Standard 25-steps of tap adjustment.
- Output voltage range 20 or 30 volts DC.
- Output current range 5, 8 or 16 amperes DC.
- Special output or input ratings available on request.
- Metering:2%meters, temperature compensated.
- Cooling by natural air convection.
- Operating ambient: -40° to +45°C (-40° to 113°F).
- NEMA4X Enclosure.
- Stainless steel hardware.
- ”Dead-front” aluminum front panel.

TASC Automatic Air Cooled

Cathodic Protection Rectifier

Enclosure Dimensions



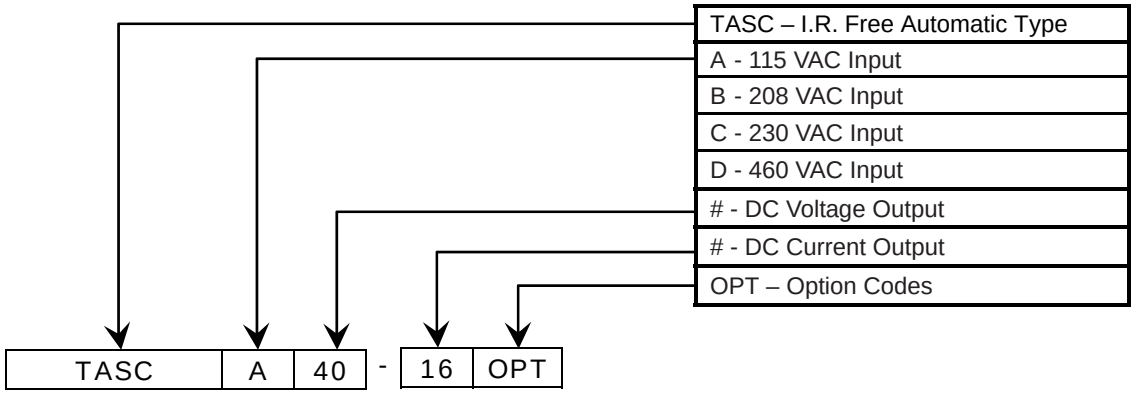
MOUNTING DIMENSIONS:
(CENTER TO CENTER)

WIDTH – 12.00"
HEIGHT – 18.75"
HOLE SIZE – 0.34" (11/32)

OVERALL CLEARANCE DIMENSIONS:

WIDTH – 18.00"
HEIGHT – 19.50"

Ordering Guide

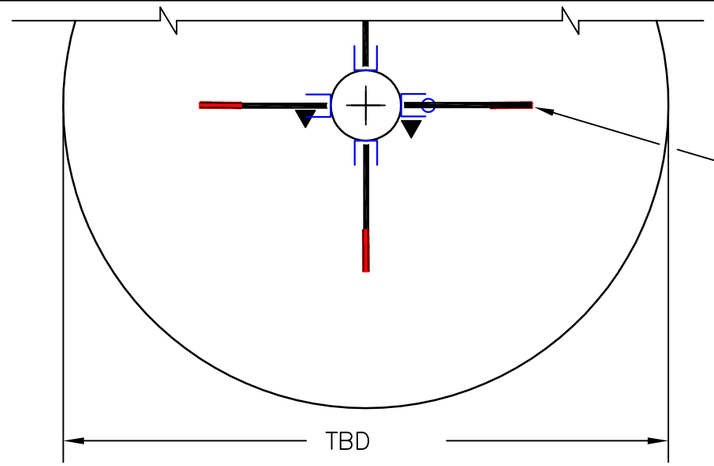


Option Code Summary

C - Secondary Anode Circuit
J - Potential Monitor Alarm
R - Non Standard Enclosure Finish
Z - Unlisted Option (Customer Defined)

corrpro®

Corrpro Rectifier Division
10848 – 214 Street, Edmonton, Alberta, Canada, T5S 2A7
Tel: 780-447-4565 Fax: 780-447-4248
E-mail: quotes@corrpro.ca
http://www.corrpro.ca



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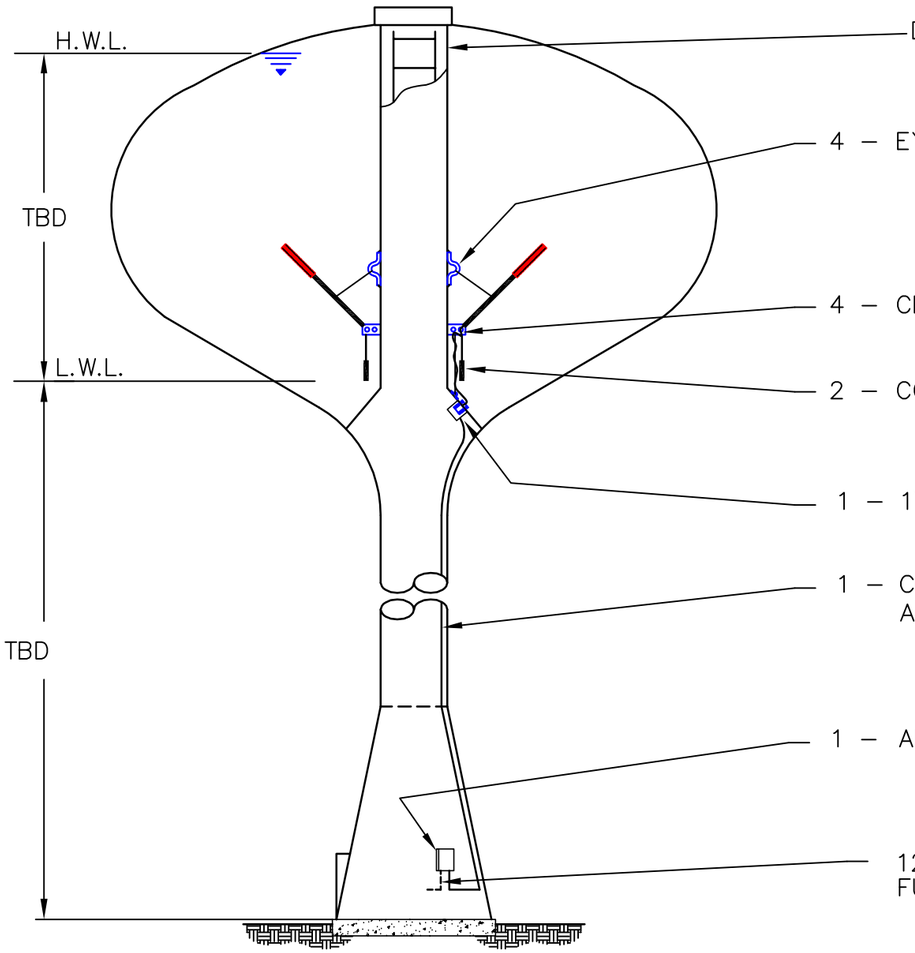

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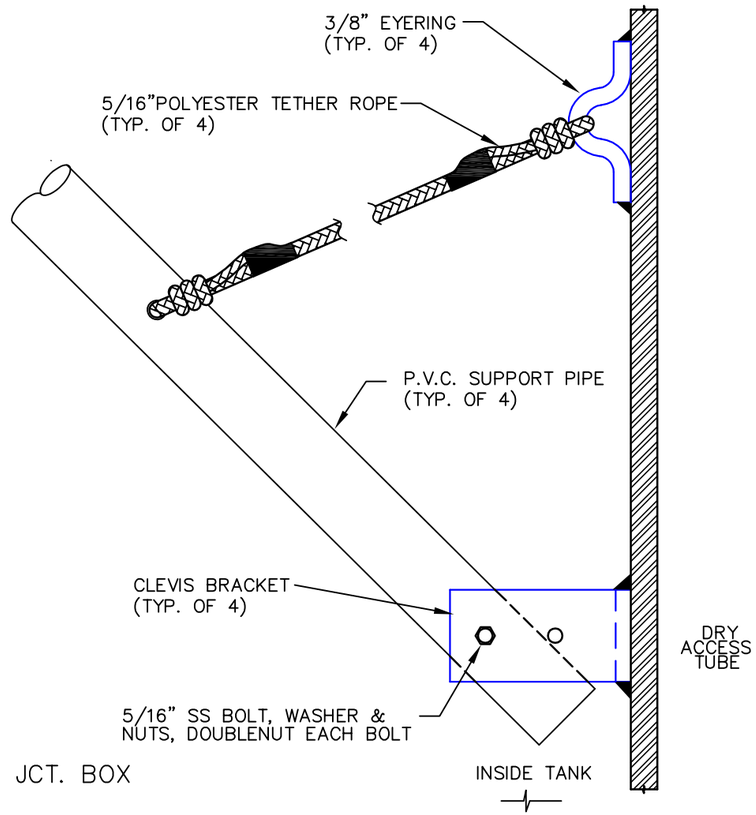

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NO.	DATE	BY	REVISION
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CATHODIC PROTECTION SYSTEM
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SCALE	NONE
SHEET	1 OF 1
DWG. No.	TYP4PVC

APPENDIX D – Mixing System Specifications

PART 1 GENERAL

1.01 EQUIPMENT OVERVIEW

A. These specifications provide the requirements to furnish and place into operation a potable tank mixer at 600 Princeton Drive, North Aurora, IL 60542

1.02 REFERENCES

A. Occupational Safety and Health Administration, OSHA
B. Department of Transportation, DOT
C. NSF / ANSI Standard 61
D. Underwriters Laboratories Inc., UL 508

1.03 QUALITY ASSURANCE

A. Continuous Operation Equipment. The mixer shall operate continuously, all day and all night, using 120 VAC as the power source.

B. No Visual Defects. The mixer shall have no visual defects, and shall have high quality welds, assembly, and corrosion resistant finish.

C. Qualified US Manufacturer. The manufacturer of the mixer shall have extensive experience in the production of such equipment, and the equipment shall be manufactured in the continental United States.

D. Factory Startup Services. Delivery, placement and startup services are included in the bid. For factory delivery and placement, services shall be performed by full-time factory employees experienced in the operation of this equipment and who have completed OSHA safety trainings applicable to this type of placement.

E. Warranty. The mixer shall be warranted to be free of defects in materials and workmanship for a period of 5 years. This equipment warranty would run directly from the manufacturer of the equipment to the owner. The equipment warranty would not be part of the contract or any required bond.

1.04 SUBMITTALS

A. The awarded Bidder shall provide an electronic copy of the following documents to the Engineer for review and approval. Upon acceptance of these documents by the Engineer, the Bidder will be issued a Notice to Proceed and may then proceed to place the equipment.

1. Manufacturer Qualification Document

2. List of Supplied Equipment
3. Manufacturer Product Sheets
4. Electric Power Source Requirements
5. NSF / ANSI Standard 61 Documentation
6. Warranty Statement
7. Operation Manuals

1.05 FIELD SERVICES

A. Placement and startup. Startup shall be performed by the equipment manufacturer's full time factory employees trained in the operation of the mixer who have completed OSHA safety trainings applicable to this type of equipment placement and startup.

PART 2 PRODUCT SPECIFICATIONS

2.01 MANUFACTURER

A. Specified Equipment. The mixer shall be manufactured by Ixom Watercare, Inc. of Dickinson, ND, or be a pre-approved alternative.

2.02 PERFORMANCE AND FEATURES

A. Complete Water Circulation Required. To meet the project objectives, the tank or reservoir circulation shall be achieved by a single or multiple submerged units within the reservoir capable of providing long distance circulation of water. The mixer shall have a direct measurable flow rate where suction shall enter specified mixer's intake positioned within 2 inches of reservoir floor and discharging water vertically in a sheet flow pattern to induce a large volume, low velocity flow to reach the tank or reservoir water surface. The mixer must be placement flexible in design to allow best hydraulic positioning for tank or reservoir conditions to prevent hydraulic short circuiting within tank or reservoir. Suction not within 2 inches of tank or reservoir floor is not allowed.

B. Number of units required. To meet the project objectives, the following number of mixers are required.

Qty	Model	Tank or Reservoir
1	GridBee GS potable tank mixer	Princeton Drive Elevated Water Storage Tank, 600 Princeton Drive, North Aurora, IL 60542

D. Complete Mix: The mixer manufacturer guarantees that the subject tank will be completely mixed by the mixer. In continuous operation of the mixer:
(1) at least once per 24 hours all water temperatures within the tank shall converge to within 0.8 degrees C, and

(2) at least once per 72 hours all chlorine concentrations within the tank shall converge to within 0.18 mg/l.

E. Fit Through Small Hatch Opening. The mixer shall be capable of fitting through a clear, unobstructed opening of 12" diameter without requiring disassembly or assembly.

F. Continuous Operation With 120VAC, 20 Amp Power Source. The mixer shall operate continuously during day and night while connected to electric grid power.

G. Stainless Steel Construction. The mixer shall be constructed primarily of Type 316 stainless steel metal for strength and superior corrosion resistance.

H. Motor. The mixer shall be mechanically operated by a submersible motor that meets the following criteria.

1. Direct Drive, with no gearbox and no lubrication maintenance required.

2. Designed for submersible operation. Mixer design shall include flow sleeve or housing around motor to provide water flow past motor per submersible motor design criteria to lower the total motor temperature and increase winding life.

3. Designed for Continuous Operation without overheating or compromising motor life expectancy. Constant, full speed operation, variable frequency drive or other method of speed reduction not required and not allowed.

4. 120 VAC, 20 Amp power source shall be supplied by others and not the mixer manufacturer.

I. Exposed Rotating Protection. The mixer shall not have any rotating equipment openly exposed. Rotating shafts, impellers, and motors shall not be openly exposed, and in the event of any part of the mixer exterior contacting the floor or cord, it shall not cause damage to either.

J. Low Elevation Intake: The mixer shall be supplied with an intake capable of being positioned at the lowest elevation of the tank or reservoir floor. The intake level shall bring water into the mixer at horizontal layer within 2 inches of the tank or reservoir floor to prevent hydraulic short circuiting of inflow water through the tank.

K. Restraint System. The mixer shall not require any brackets, penetrations, rope, ties, or fixed connections to the tank or reservoir columns, walls, or floor below the overflow elevation. The mixer shall allow for placement and servicing without requiring tank or reservoir to be drained. The mixer shall not require the use of a diver or diving team to enter the tank or reservoir to complete placement or service of the specified equipment.

L. Functional for All Water Levels. The mixer shall function properly and not be negatively impacted by fluctuating water levels down to 24 inches of water depth. Devices requiring more than 24 inches of water depth to properly function without damage not allowed.

M. SCADA and Controls. The mixer shall have the option to add an Electric Control Box including a motor current indicator in a 4-20mA analog output and remote on/off control via 24VDC relay.

N. Chlorine Boost Connection: The mixer shall be supplied with a connection point for injection of sodium hypochlorite. The connection point shall be compatible with a ½” (1.3 cm) diameter hose and be rated for contact with 12.5% Sodium Hypochlorite solution.

O. The complete mixer shall be NSF / ANSI Standard 61 and NSF / ANSI Standard 372 listed for safe contact with potable water. The mixer shall be NSF / ANSI Standard 61 listed to be safely in contact with a potable water volume as low as

5,000 gallons. Penetration Sealant shall be NSF / ANSI Standard 61 and NSF / ANSI Standard 372 listed for safe contact with potable water.

P. Maintenance Requirements. The mixer shall operate normally with the following maintenance features.

1. No scheduled lubrication is required of any system components including motor.
2. No spare parts shall be required to be kept on hand.

Q. Equipment Support. The mixer manufacturer shall offer full factory support with the following staff and support services.

1. Customer Service, Application Engineering, and Equipment Engineering staff available by email or toll free phone.

2. Field personnel for placing and servicing the specified mixer.

3. Public website with detailed information available describing the mixer for this project and related applications of this equipment into potable water tanks and reservoirs.

4. Service plans for preventative maintenance and continued technology improvements for the specified mixer.

PART 3 EXECUTION

3.01a FACTORY PLACEMENT

For Factory Placement, Startup, and Service, include the information below:

A. Factory Personnel. The placement and startup shall be performed by full time factory employees trained in the operation of the mixer.

B. Safety. Placement and service personnel shall have received job-specific safety training on (a) Working over Water, (b) Boating Safety, (c) Disinfecting Procedures, (d) Confined Space Entry, (e) Fall Protection, (f) Self Rescue, and (g) DOT Compliance.

C. Safety Equipment. Placement and service personnel shall be equipped with job-specific safety equipment to complete the placement and startup of specified mixer following all OSHA safety regulations. Safety equipment shall include confined space, fall protection, rescue, decontamination, and communication tools such as (air monitor, ventilation fan, tri-pod, winches, FBH’s, retractables, ropes, lanyards, descenders, radios, hard hats, step pools, disinfectant sprayer, etc.)

Technical Data Sheet

GS-12

120VAC Single Phase

Technology Description- GridBee® electric submersible water circulation equipment, designed for continuous operation. Constructed with T316 stainless steel shell and safe materials for contact with potable drinking water. Designed to be placed into service through roof hatch without tank entry.

Materials of Construction - T316 stainless steel shell and hardware construction. UHMW-PE end plates for worry-free safe contact with all tank surfaces. See certifications section below.

75 ft (22 m) or 150 ft (44 m) of T316 stainless steel retrieval chain included for machine installation and retrieval without requiring tank entry.

Minimum Access Opening - Machine can be placed through 12 inch (30 cm) diameter opening.

Minimum Water Depth - The mixer requires at least 2 feet (0.6meters) of water above the discharge slots to prevent pump cavitation and motor damage. Shut the mixer off if water surface is less than 2ft from the mixer slots.

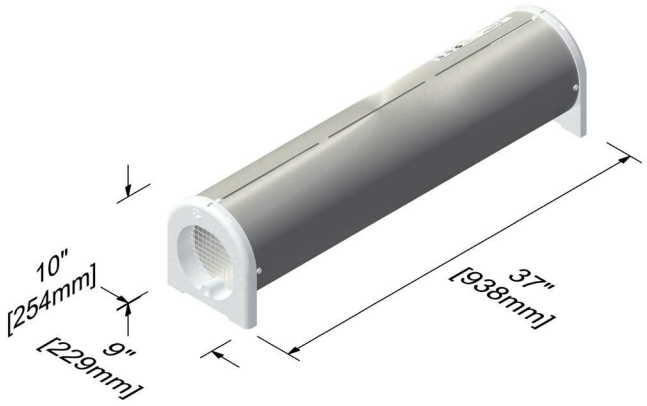

Figure 1: *GS-12*

Intake - Intake draws water in a horizontal layer within 2 inches (5.08 cm) of the tank or reservoir floor. Chlorine boost connection point on machine via 3/8" NPT female thread for adapting to 1/2" (13mm) hose for fast chlorine dispersion during in-reservoir boosting.

Electrical Requirements - 120VAC motor requires 120VAC/1PH power source outlet ***(minimum 20 Amp service)***. The GS-12 draws approximately 9.8 Amps @ 120VAC / 60Hz. Nominal power consumption of 1120 Watts.

Motor - 1/2 HP stainless steel submersible, designed for continuous operation, low power requirement, direct drive, no gearbox and no lubrication schedule required. Automatic reset, on-winding thermal overload protection and surge arresters built in. Mounted in flow sleeve for superior cooling and long motor life in submerged temperatures up to 122 F. See certifications section below. 120VAC/1PH standard, other voltages available as special order.

Wiring - Includes either 75 ft (22 m) or 150 ft (44m) of 10AWG submersible power cable to terminate within junction box at top of tank. Junction box included.

Sealed Penetration Fitting - T316 stainless steel tank fitting and cord grip included for sealed cord entry through tank roof. Not designed as a submersible penetration.

Optional Accessories - (1) Portable Chlorine Boost Hose and Boost Pump System, (2) Dual Injection Kit, (3) Control and SCADA Panel

Shipping Size / Weight

- ☐ **75 ft unit -** Box 1 of 2: 44x16x12 in. / 88 lbs, Box 2: of 2: 17x13x8 in. / 25 lbs: Total shipment weight: 123 lbs
- ☐ **150 ft unit -** Box 1 of 2: 44x16x12 in. / 127 lbs, Box 2: of 2: 17x13x8 in. / 41 lbs: Total shipment weight: 168 lbs

Certifications - Ixom's potable water products are certified to NSF/ANSI/CAN 61-G & 372 for lead-free content. Learn more at: www.ixomwatercare.com/std61

Maintenance / Warranty - Limited maintenance. Limited 5-year parts and labor warranty. See Warranty Statement for details.

Patent Pending

Subject to change without notice.

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IXOM WATERCARE

GridBee GS-12

120V Single Phase
Operation & Maintenance Manual

O&M_GS12_120V_1PH_10025_20240801

Table of Contents

GridBee GS-12

120V Single Phase
Operation & Maintenance Manual

Safety

IMPORTANT

YOU MUST COMPLETELY READ AND FULLY UNDERSTAND THESE INSTRUCTIONS BEFORE INSTALLING, OPERATING, OR SERVICING THIS UNIT.

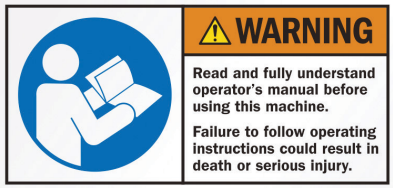
Be sure you have read all installation, operation, maintenance and safety instructions before you install, service or begin to operate this unit.

Accidents occur every year because of careless use of industrial equipment. You can avoid hazards by following these safety instructions, and applying some ordinary common sense when operating or servicing this unit.

Keep in mind that ***full operator attention and alertness*** are required when operating or servicing this unit.

USE COMMON SENSE!! Most accidents can be avoided by using ***common sense and concentration*** on the job being done.

Carefully read safety information when you see any safety symbols.



Safety

IMPORTANT

YOU MUST COMPLETELY READ AND FULLY UNDERSTAND THESE INSTRUCTIONS BEFORE INSTALLING, OPERATING, OR SERVICING THIS UNIT.

Identify all possible hazards. Determine what safeguards are needed and implement them. **Only you, the user,** understand your product and system characteristics fully. ***The ultimate responsibility for safety is with you. Your safety ultimately rests in your hands.*** Do your part and you will enjoy safe, trouble free operation for years to come. This instruction manual is not intended to include a comprehensive listing of all details for all procedures required for placement, operation and maintenance. If you have a question about a procedure or are uncertain about any detail, **Do Not Proceed.** Please contact Ixom Watercare Customer Service at **866-437-8076** to speak to a representative.

IMPORTANT!!!

Follow all federal and state laws in regards to safety regulations of working at heights, confined spaces, rescue, etc. as required by the U.S. Department of Labor, Occupational Safety and Health Administration. Use necessary PPE when placing and servicing this unit.

ELECTRICAL HAZARD

WARNING: THIS EQUIPMENT CONTAINS HIGH VOLTAGE! ELECTRICAL SHOCK CAN CAUSE SERIOUS OR FATAL INJURY. ONLY QUALIFIED PERSONNEL SHOULD ATTEMPT PLACEMENT, OPERATION AND MAINTENANCE OF ELECTRICAL EQUIPMENT. REMOVE ALL SOURCES OF ELECTRICAL POWER BEFORE PERFORMING ANY SERVICE WORK TO THE MACHINE. USE PROPER LOCKOUT TAGOUT (LOTO) PROCEDURES TO ENSURE A SAFE WORK ENVIRONMENT.

Crush Hazard

WARNING: DO NOT REMOVE ANY FLOAT ASSEMBLY BOLTS OR PINS WHILE EQUIPMENT IS FLOATING IN WATER. EQUIPMENT MUST BE SECURELY SUPPORTED BEFORE PERFORMING SERVICE.

Rotating Hazard

CAUTION: KEEP BODY APPENANDAGES OR LOOSE CLOTHING AWAY FROM EQUIPMENT WHILE OPERATING. ENSURE EQUIPMENT IS OFF BEFORE ATTEMPTING SERVICE.

Entanglement Hazard

WARNING: ENSURE THAT PERSONNEL ARE CLEAR OF THE ELECTRIC CORD AND CHAIN TO AVOID ENTANGLEMENT.

Thin Ice Hazard

WARNING: ICE SURROUNDING MACHINE MAY NOT SUPPORT WEIGHT, KEEP CLEAR OF THIN ICE.

Laceration Hazard

CAUTION: EDGES MAY BE SHARP AND CAUSE LACERATION IF PROPER CARE IS NOT USED.

Safety

Protect Yourself

It is important that you comply with all relative OSHA and local regulations while installing and performing any maintenance to the mixer circulation equipment.

Key OSHA Compliance Standards that must be followed (and not limited to) are:

- **1910.146 Permit-required confined spaces**
- **1910.147 Lockout/Tagout**
- **1926.500 Fall Protection**

Fall Protection Tips

- Identify all potential tripping and fall hazards before work starts.
- Look for fall hazards such as unprotected floor openings/edges, shafts, open hatches, stairwells, and roof openings/edges.
- Inspect fall protection and rescue equipment for defects before use.
- Select, wear, and use fall protection and rescue equipment appropriate for the task.
- Secure and stabilize all ladders before climbing.
- Never stand on the top rung/step of a ladder.
- Use handrails when you go up or down stairs.
- Practice good housekeeping. Keep cords, welding leads and air hoses out of walkways or adjacent work areas.

Refer to 29 CFR 1926.500 for complete regulations set by OSHA. Refer to your state's regulations if your state established and operates their own safety and health programs approved by OSHA.

Lockout Tagout

When the On/Off switch is in the "ON" position, the mixer may start up at any time if not already operating. The mixer's On/Off switch can be locked out by placing a pad lock thru the door latch of the controller after the switch has been turned to the "OFF" position. The On/Off switch is to be used as the emergency stop.

Permit-Required Confined Spaces

A confined space has limited openings for entry or exit, is large enough for entering and working, and is not designed for continuous worker occupancy. Confined spaces include underground reservoirs, ground storage tanks, elevated tanks, silos, manholes, and pipelines.

Confined Space Tips

- Do not enter permit-required confined spaces without being trained and without having a permit to enter.
- Review, understand and follow employer's procedures before entering permit-required confined spaces and know how and when to exit.
- Before entry, identify any physical hazards.
- Before and during entry, test and monitor for oxygen content, flammability, toxicity or explosive hazards as necessary.
- Use fall protection, rescue, air monitoring, ventilation, lighting and communication equipment according to entry procedures.
- Maintain contact at all times with a trained attendant either visually, via phone, or by two-way radio. This monitoring system enables the attendant and entry supervisor to order you to evacuate and to alert appropriately trained rescue personnel to rescue entrants when needed.

Refer to 29 CFR 1910.146 for complete regulations set by OSHA. Refer to your state's regulations if your state established and operates their own safety and health programs approved by OSHA.

Package Contents

GS Series

GS Core Unit
75’ or 150’ Electric Cord
(Not Pictured)

Cord Fixture

Chain Grab Tools

Lexel
Sealant Tube

Kellem Grip
Cord Strain Relief

1 5/16” Hole Saw

75’ or 150’
Stainless Steel
Chain

Top of Tank
Junction Box

Cord Seal

GS Series Requirements - 120V

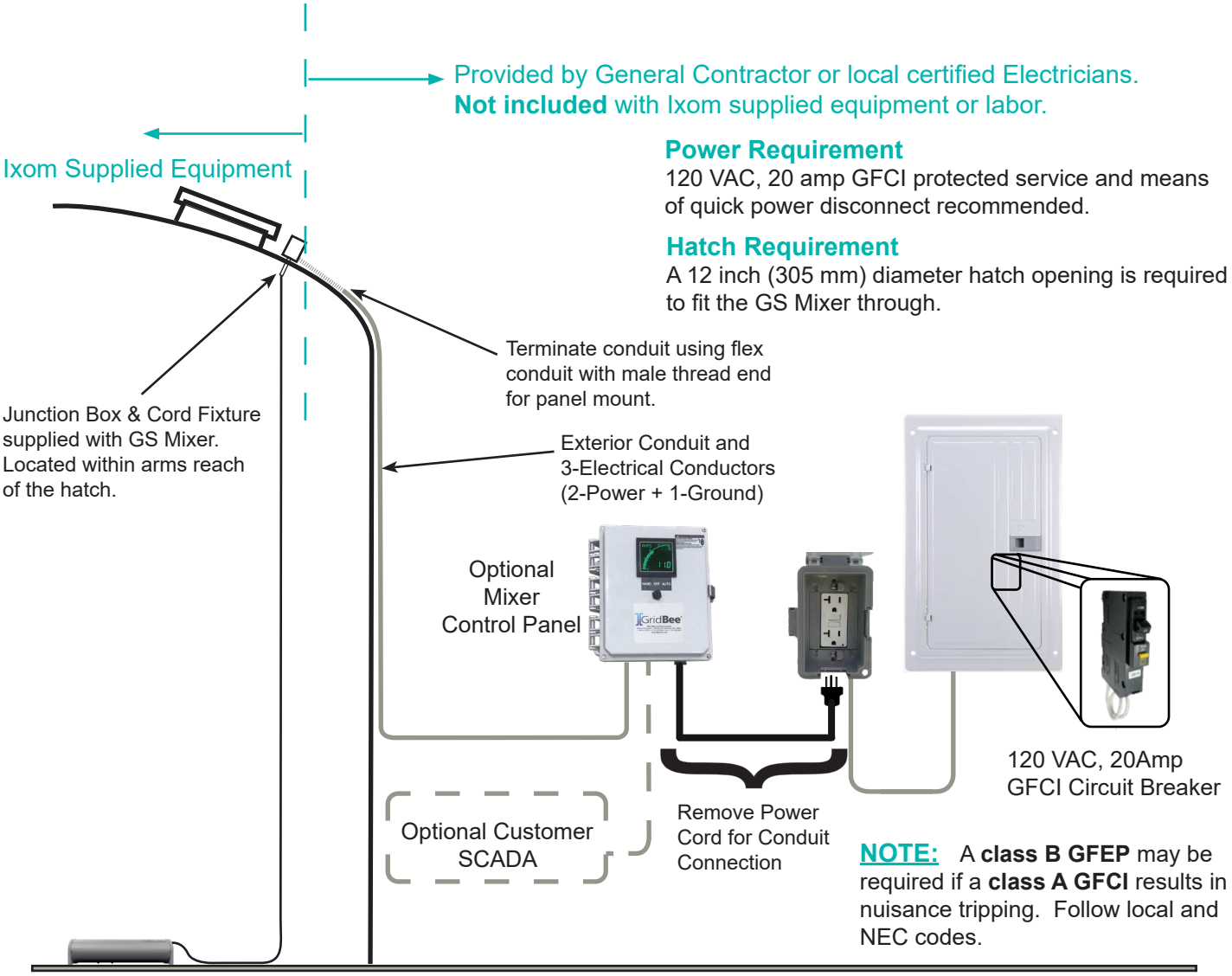


Figure 1: *Typical GS Placement*

RATING					FULL LOAD		MAXIMUM LOAD		WINDING (1) RES. IN OHMS	EFFICIENCY %		POWER FACTOR %		LOCKED ROTOR AMPS	KVA CODE
HP	KW	VOLTS	HZ	S.F.	(2) AMPS	WATTS	(2) AMPS	WATTS	M=MAIN RES. S=START RES.	F.L.	S.F.	F.L.	S.F.		
1/2	0.37	115	60	1.6	7.9	910	9.8	1120	1.4-2.0	42	54	99	99	28	H

(1) Main winding - yellow to black, Start winding - yellow to red
(2) Y = Yellow lead (White) - line amps, B = Black lead - main winding amps, R = Red lead - start or auxiliary winding amps

Service Entrance to Motor - Maximum Length In Feet Based on Service Factor Amps, and 5% Voltage Drop															
Motor Rating			60° C and 75° C Insulation - AWG Copper Wire Size												
Volts	HP	kW	14	12	10	8	6	4	3	2	1	0	00	000	0000
115	1/2	0.37	100	160	250	390	620	960	1190	1460	1780	2160	2630	3140	3770

Top of Tank Junction Box

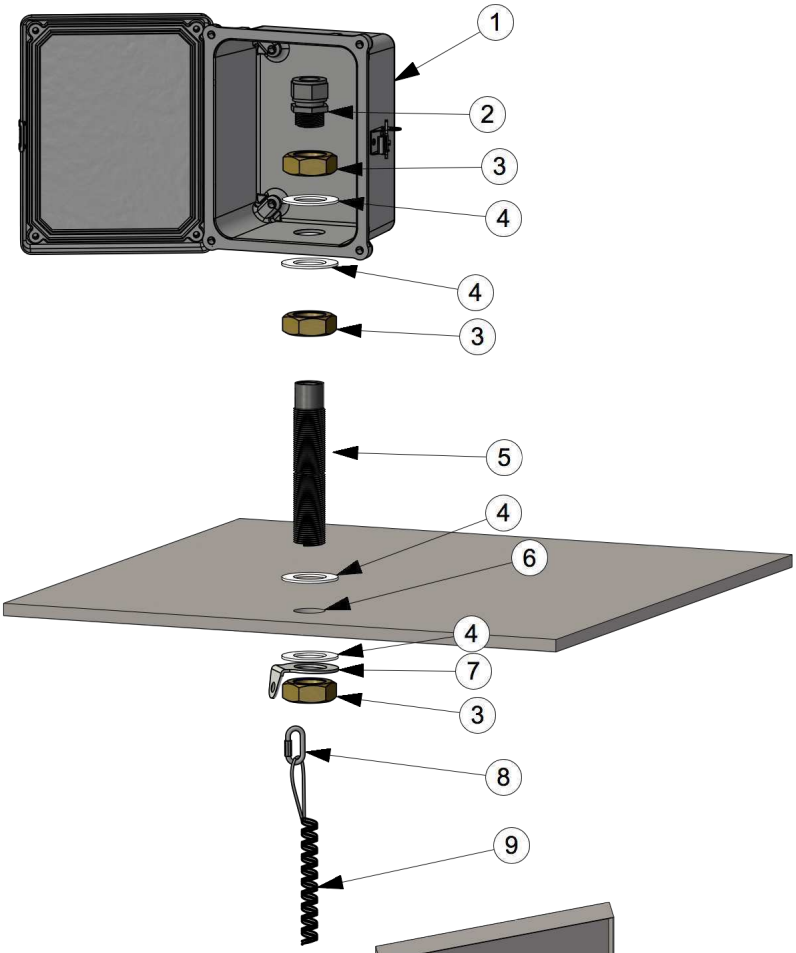
Steel Roof

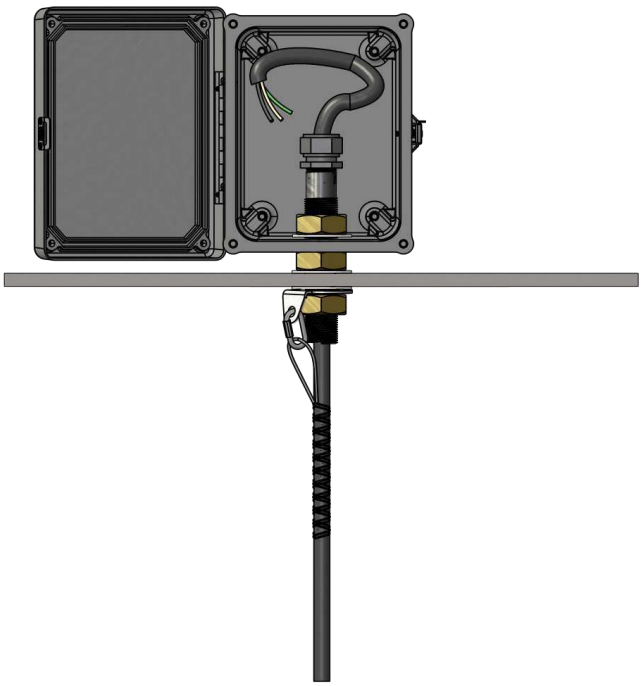
GS Series

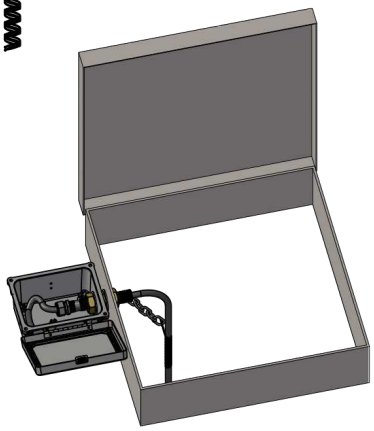
General Notes:

1. Top of tank junction box.
2. Cord seal fitting.
3. Brass nut.
4. Plastic seal washer with Lexel.
5. Tank penetration fitting.
6. A 1-5/16” dia. hole to be drilled into tank roof. Sealed with Lexel to protect from corrosion.
7. Strain Relief Washer.
8. Quick link for connecting retrieval chain and kellem grip to strain relief washer.
9. Kellem grip to support cable weight and to provide strain relief.

NOT DESIGNED AS A SUBMERSIBLE PENETRATION.







Alternative Method:
Penetration through hatch neck

IMPORTANT NOTE:
Ensure penetration and junction box does not interfere with the hatch lid.

Top of Tank Junction Box

Concrete Roof

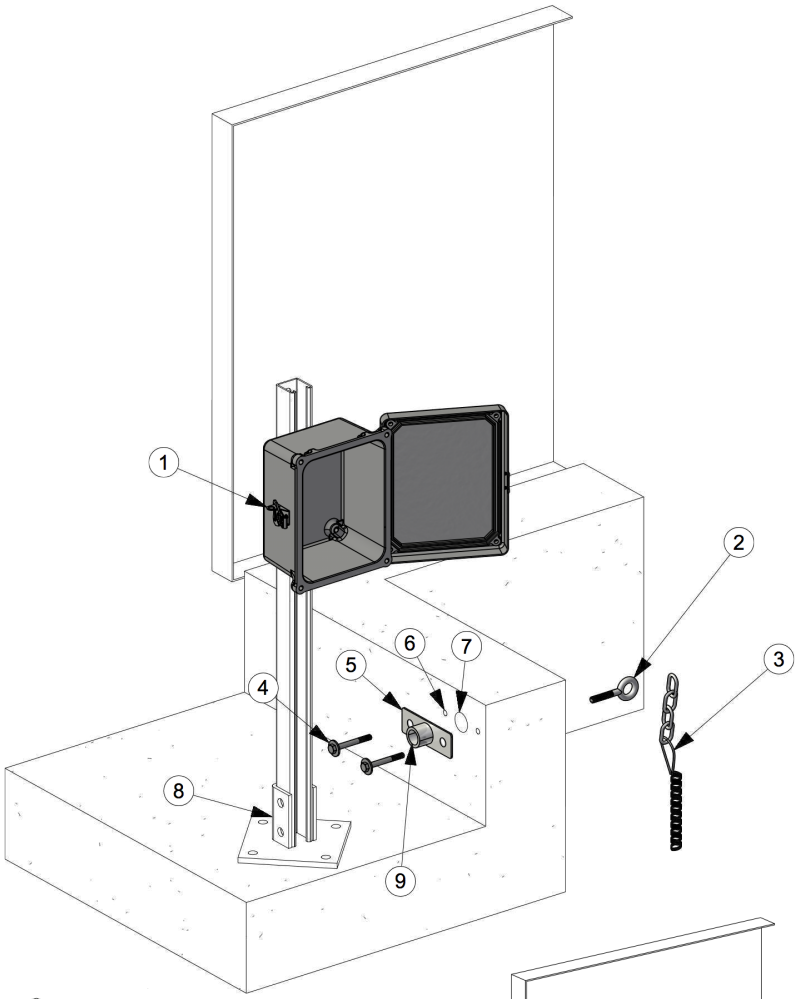
GS Series

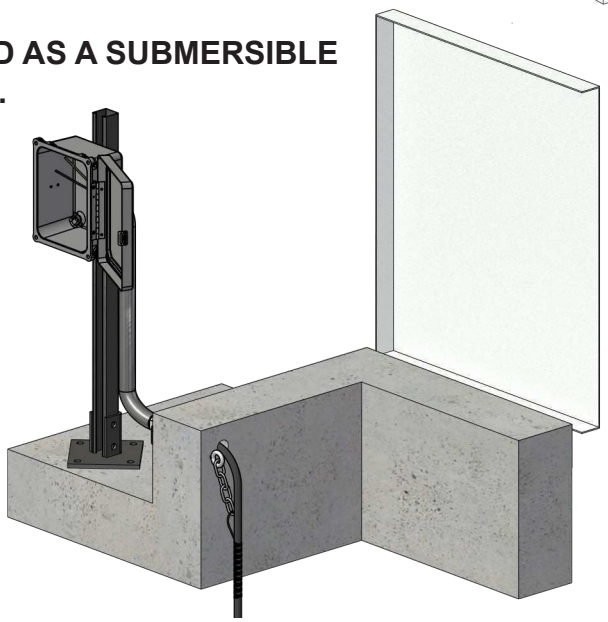
General Notes:

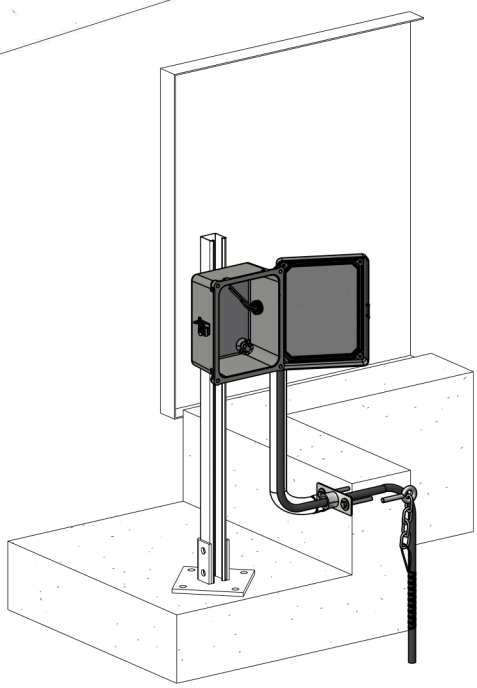
1. Top of tank junction box.
2. Eye-bolt, epoxied into hatch neck, for retrieval chain and kellem grip.*
3. Kellem grip.
4. Bolts, epoxied into hatch neck to secure concrete penetration fitting.
5. Concrete penetration fitting.*
6. Small bores drilled into hatch neck the length of the bolts, 1/2” dia. typical, filled with concrete epoxy. Follow concrete epoxy manufacture’s preparation and installation guidelines.
7. A 3/4” dia. minimum to 1-1/4” dia maximum hole drilled through hatch neck for electrical cord.
8. Junction box mounted to existing or new structure. Structure not included.
9. 3/4” NPT electrical conduit connection: conduit to juction box not included.

***Not included in standard contents Contact Ixom for exchange.**

NOT DESIGNED AS A SUBMERSIBLE PENETRATION.







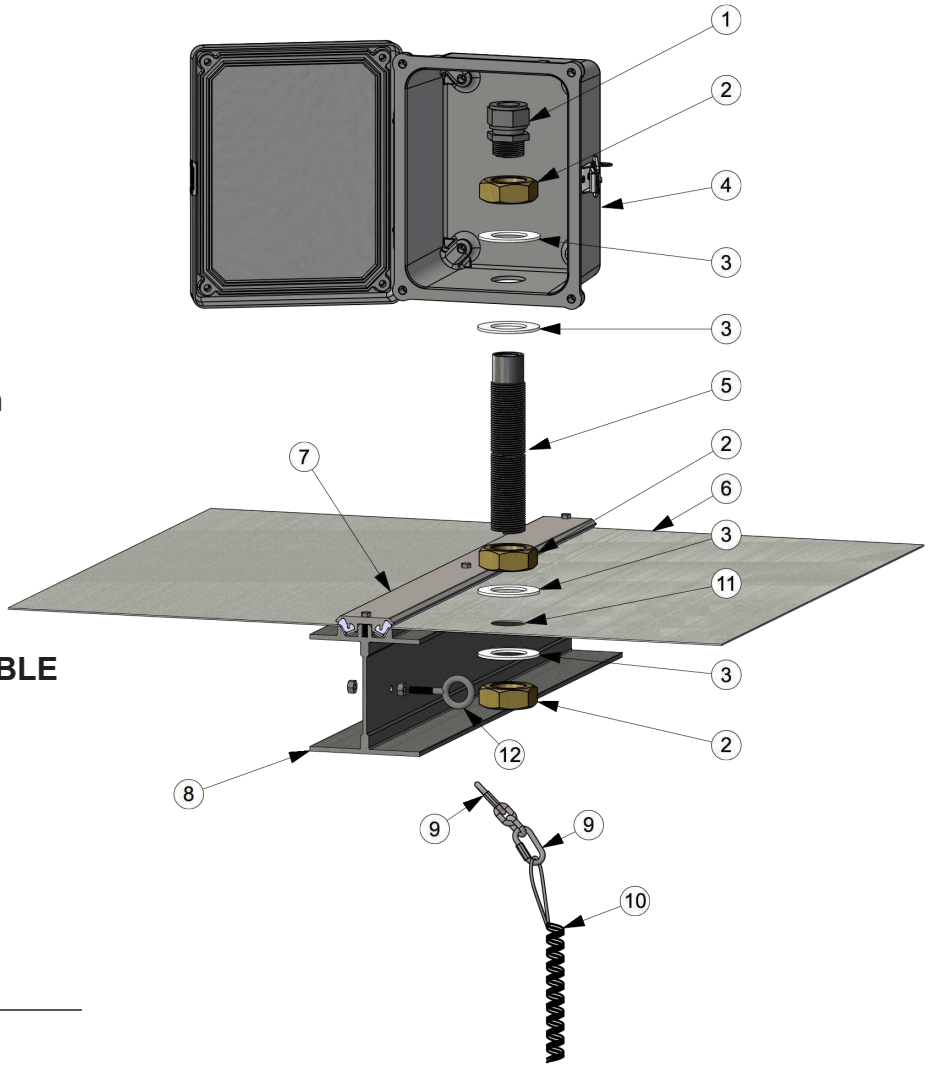
Top of Tank Junction Box

Aluminum Geodesic Dome Roof

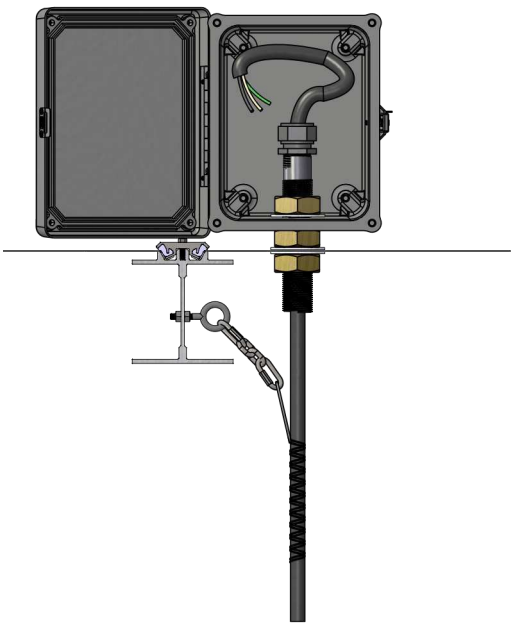
GS Series

General Notes:

1. Cord seal fitting.
2. Brass nut.
3. Plastic seal washer with Lexel.
4. Top of tank junction box.
5. Penetration fixture.
6. Aluminum geodesic dome panel.
7. Aluminum geodesic dome batten bar.
8. Support I-beam.
9. Quick link.
10. Kellem grip.
11. A 1-5/16” dia. hole drilled through panel and sealed with Lexel. Locate penetration within arms reach of an access point.
12. Eyebolt drilled through support I-beam to support kellem grip and retrieval chain. Eyebolt not included.



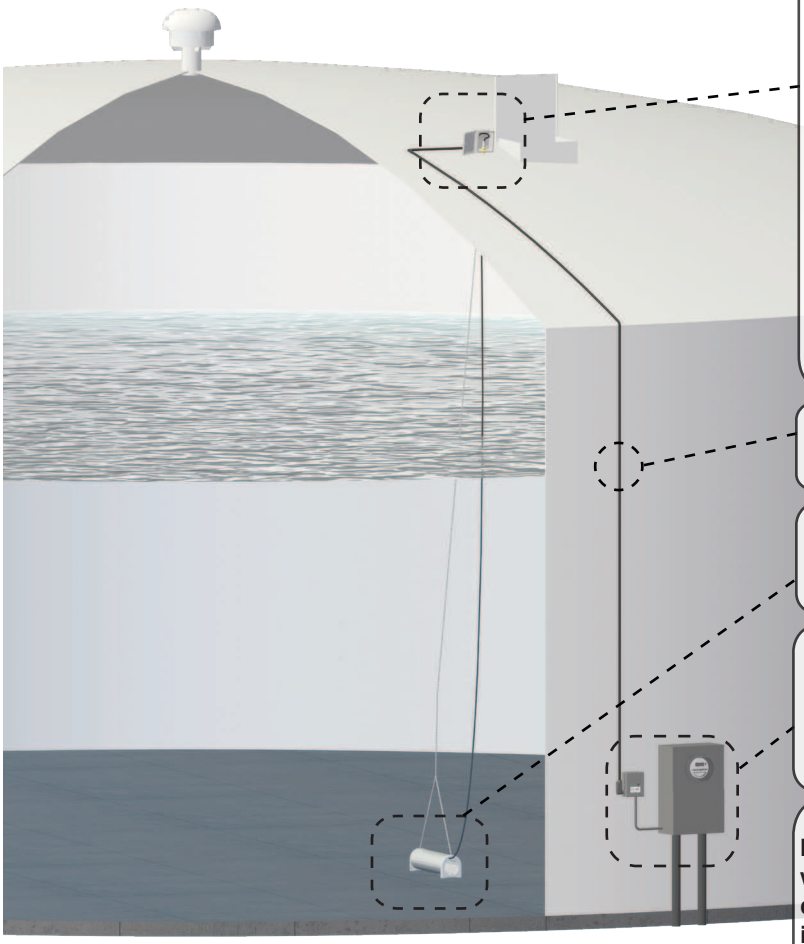
NOT DESIGNED AS A SUBMERSIBLE PENETRATION.

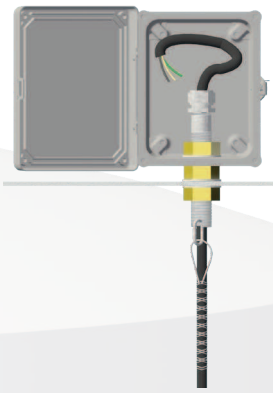


Floor Configuration

GS Series - Single Phase

Details listed on this page include items provided by Others, not Ixom. Please refer to your projects Scope of Work for more details. Ixom does not provide any electric work.





Junction box & roof mount cable fixture supplied with GS mixer and located within arms reach of the hatch.

Chain and cable attached to quick link Cord ran through cord seal.

Terminate conduit using flex conduit with male thread end for panel mount, by Others.

Exterior Conduit and 3-Conductor Power Cable (1-Power, 1-Neutral + 1-Ground), by Others.

GS mixer resting on tank floor under hatch. Retrieval chain attached to mixer. Slots aligned parallel with line extending from center of tank to tank wall.

Locate power source receptacle and flex conduit termination at customer preferred location of mixer control panel, by Others.

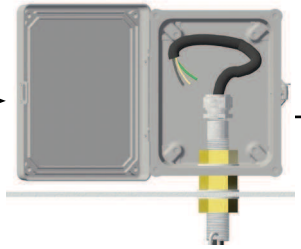
Terminate conduit using flex conduit with male thread end for panel mount, by Others.

IMPORTANT

It is important to disinfect all components in contact with potable water. There may be additional decontamination procedures required, so it is important to understand what procedures are acceptable. Decontamination should be performed right before the unit is lowered through the hatch. The mixer should be immersed in water shortly after having been decontaminated to prevent corrosion caused by contact with chlorine or alternate disinfectant.

GFCI Protected Source Power

Optional Mixer Control Panel



Junction Box & Tank Penetration

GS Mixer

Suspended Configuration

GS Series - Single Phase

Suspended Configuration

The suspended configuration is primarily used on tanks without a flat bottom. This method of installation is different with aluminum roofs or geodesic domed roofs.

Installation Procedures

Step 1:

Attach the retrieval chain to the GS mixer at the pre-located quick link. Tighten the quick link with a wrench/pliers. Plan out a safe procedure and hoist the GS Mixer to the top of the tank near the hatch opening. Use the chain and submersible cable attached to the GS Mixer for lifting and supporting the weight. Keep clear of chain and electric cord to avoid entanglement.

Step 2:

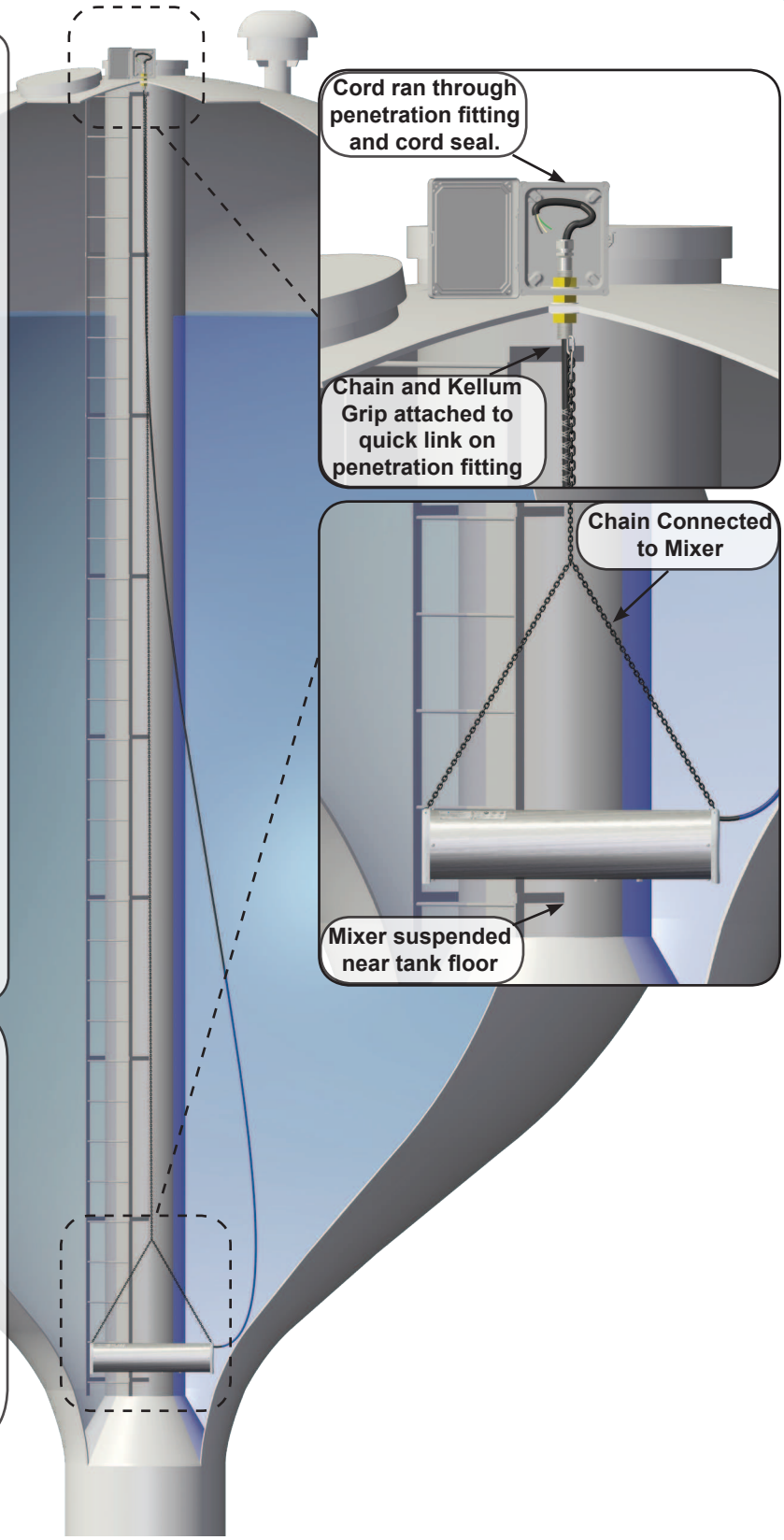
Tie off the tail end of the retrieval chain and electric cord strain relief to the quick link at the bottom of the tank penetration fitting.

Step 3:

Pull the retrieval chain up until it is taught, then mark off the desired distance the GS Mixer is to be suspended above the floor, placing the quick link that desired distance down the retrieval chain below the tank penetration fitting.

Step 4:

Slowly pull up the GS Mixer and connect the quick link to the tank penetration fitting.



IMPORTANT

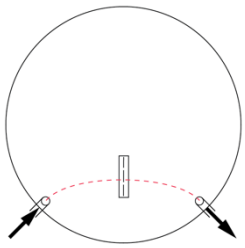
It is important to disinfect all components in contact with potable water. A common practice is to use a minimum 200ppm chlorine or alternate disinfectant solution in water to spray all components that will contact the drinking water. There may be additional decontamination procedures required, so it is important to understand what procedures are acceptable. Decontamination should be performed right before the unit is lowered through the hatch. The mixer should be immersed in water shortly after having been decontaminated to prevent corrosion caused by contact with chlorine or alternate disinfectant.

Mixer Placement Guidelines

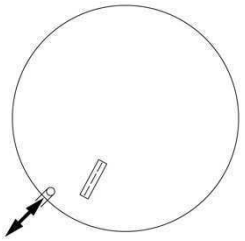
GS Series Mixers

In many cases, mixer deployment just below the main access hatch is sufficient. However, consider the below recommendations, where practical, for guidelines of mixer placement.

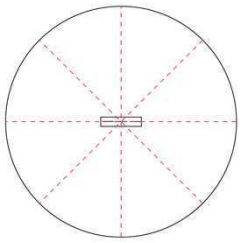
Short circuit path:
Ideally, the mixer should be placed in the short circuit path between the inlet and outlet of the tank. This provides the mixer the best opportunity to blend all incoming water with the tank volume prior to water exiting the outlet.



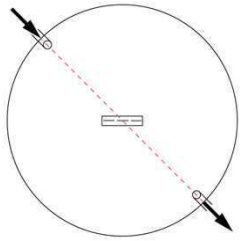
Common Inlet / Outlet:
The mixer should be favored toward a common inlet / outlet pipe to prevent short circuiting. This provides the mixer the best opportunity to blend all incoming water with the tank volume prior to water exiting the tank. However, the mixer should stay clear at least 10-15ft away from a common inlet/outlet pipe.



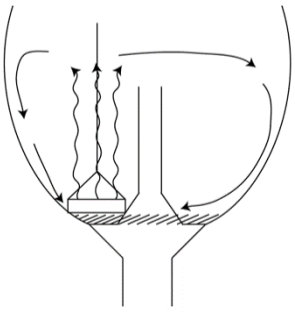
Radial Orientation:
It is best to orientate the mixer so the discharge slots are radial with the tank. This is most critical if the mixer is placed near a sidewall of the tank.

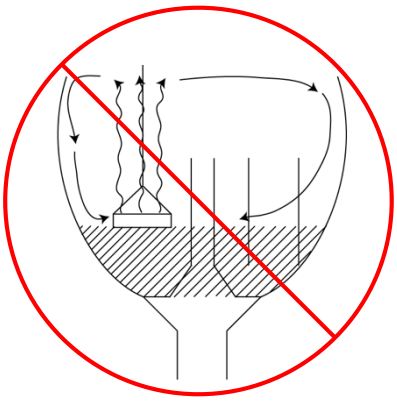


Center Tank Placement:
A mixer is often positioned at the tank center when a separate inlet and outlet are positioned at or approximately 180° apart. It is most critical for the mixer to be along a short circuit path.



Mixer Elevation:
The mixer should be located in the lowest elevation of the tank, and resting or supported in a horizontal position with discharge slots pointed vertical. Water below the mixer will not be circulated.





GS Series Final Checklist

Installation Checks

Before starting the GS Series mixer a few checklist items are recommended to confirm the installation is correct.

Installation Checks	Check
Is the mixer placed correctly with slots facing up? (Placement)	
Is the mixer retrieval chain connected securely? (Placement)	
Is the kellum grip supporting the weight of the cord/hose? (Placement)	
Is the cord/hose ran through the cord seal in the top of tank junction box? (Placement)	
Is the Tank Penetration fitting sealed with Lexel? (Top of Tank Junction Box)	
Are the top of tank junction box splices correct and each splice individually sealed to protect from corrosion? (Top of tank Junction Box) **(Not applicable for GS-12-Air)**	
Is the field wiring correct? (Requirements)	
Is the mixer submerged with at least 2' (0.75m) of water above the discharge slots?	

Pre Operation Checks	Reading	
Continuity Check	Line to Neutral:	
	Line to Ground:	
	Neutral to Ground:	
Source Voltage Reading		

Operation Checks

The following checklist items are recommended to confirm proper operation.

Operation Check (While Mixer is Running)	Reading / Observation
Source Voltage Reading	
Amperage Reading Normal Operating Range: (7.5 amps to 10.0 amps)	
Flow Check Auditory	
Flow Check Visual	

GS Series

(For Optional Mixer Control Panel)

⚠WARNING

ELECTRIC SHOCK HAZARD.

This equipment is to be serviced by trained personnel only.

Voltage (Ṽ)

To measure the voltage follow these steps.

1. Set the voltmeter on Volts AC.
2. Place the positive probe on the black wire and the negative probe on the white wire on the top of the contactor (source side).
3. Record the reading.

Amperage (Ã)

To Measure the Amperage follow these steps.

1. Use a clamp type ammeter, set to Amps AC.
2. Clamp around the black wire on the bottom of the contactor (load side). Marked Load 1 (L1).
3. Record the reading with mixer turned on.

Ohms (Ω)

To Measure the Ohms follow these steps.

1. Turn off the circuit breaker feeding the control panel and follow lock out tag out procedures.
2. Measure the Voltage to confirm that the power is removed.
3. Disconnect the black and white wires from the bottom of the contactor (load side). Marked Load 1 (L1) and Neutral (N).
4. Set the Voltmeter to Ohms.
5. Place the positive probe on the black wire and the negative probe on the white wire that were disconnected.
6. Record the reading.

Depending on the length and gauge of wires to the mixer the ohms should be approximately:
1-4 Ohms, 120V and 6-10 Ohms, 230V.

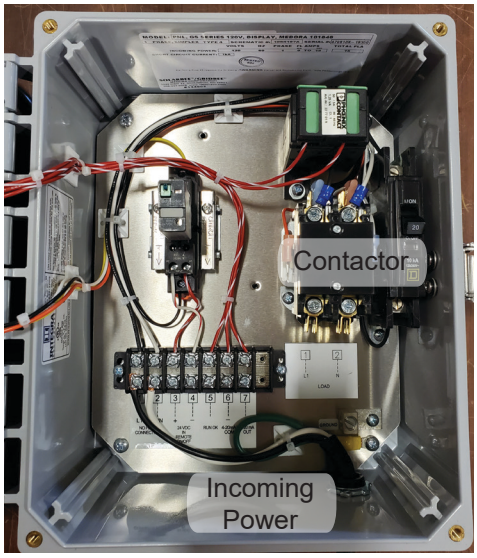


Figure 1: *SCADA Control Panel*

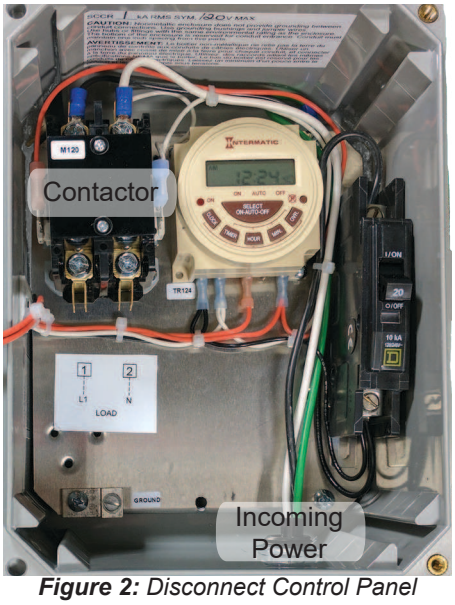


Figure 2: *Disconnect Control Panel*

Troubleshooting Information	
Serial Number	
Location Name	
Tank Name	
Distributor Name (if applicable)	
Voltage Reading	
Amperage Reading	
Ohm Reading	

Problem	Possible Cause
Mixer Intermittently Tripping Circuit Breaker	Multiple GFCI on Circuit Source Power Fluctuation
Mixer Quickly Tripping Circuit Breaker	Short to Ground Locked Rotor on Motor
Mixer Not Operating but Circuit Breaker not tripped	Loose or Loss of Connection
Mixer Making Loud Noise	Motor Bearing Failure Impeller Misalignment

GS Series

GS Mixer End Plate Removal and Impeller Visual

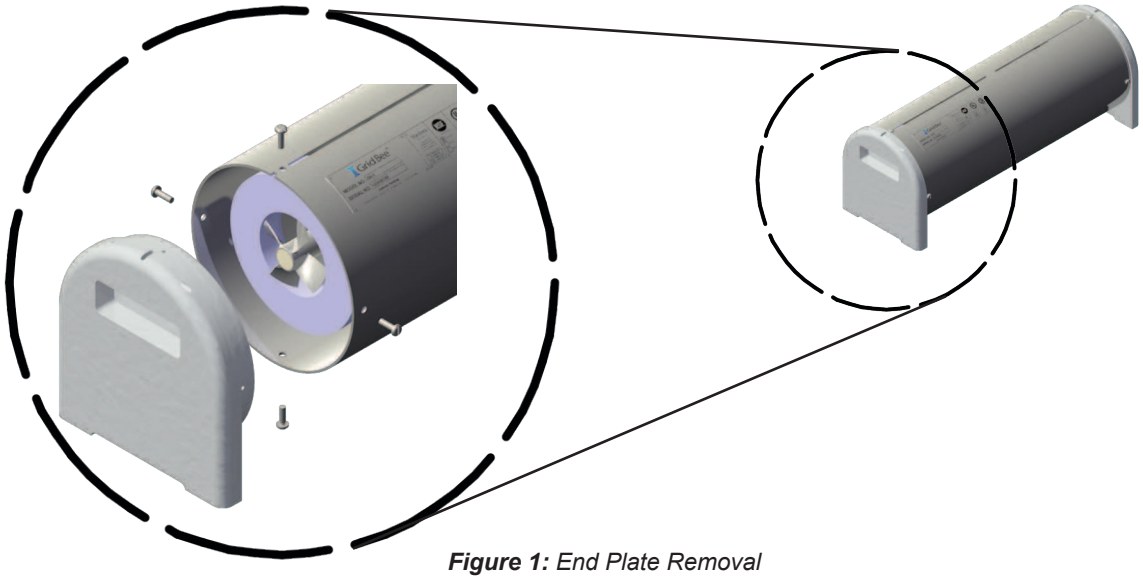


Figure 1: *End Plate Removal*

Step 1

Isolate power to the GS mixer to prevent it from turning on during inspection. The mixer must be off to perform this inspection safely.

Step 2

Remove white end plate on the end of GS Mixer. The side that should be removed is the side without the screen on it. You will find four (4) screws that will need to be removed in order for the end plate to become free from the mixer. **(See Figure 1)**

Step 3

Visually inspect the impeller for debris or build up. You should be able to move the impeller freely with no resistance. **(See Figure 2)**

Step 4

Remove any debris if necessary.

Step 5

Place the white end plate back on the GS Mixer, ensuring to line up the notch on the top side of the mixer. The four screws that were removed in Step 2 should be put back in place at this point as well.

Tools Needed

1. Electric Drill
2. #3 Phillips drill bit

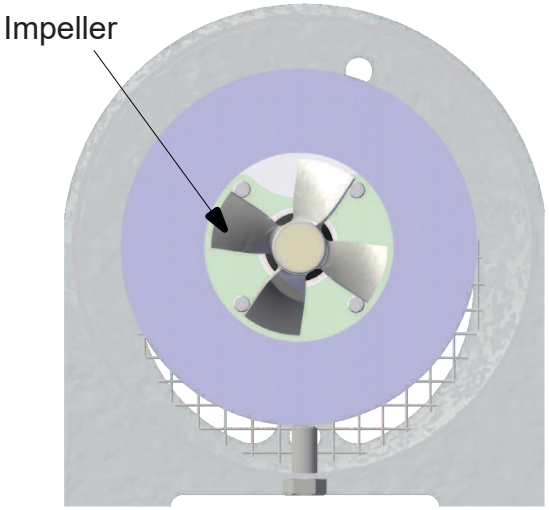


Figure 2: *Impeller View*

Technical Data Sheet

GS-12

120VAC Single Phase

Technology Description- GridBee® electric submersible water circulation equipment, designed for continuous operation. Constructed with T316 stainless steel shell and safe materials for contact with potable drinking water. Designed to be placed into service through roof hatch without tank entry.

Materials of Construction - T316 stainless steel shell and hardware construction. UHMW-PE end plates for worry-free safe contact with all tank surfaces. See certifications section below.

75 ft (22 m) or 150 ft (44 m) of T316 stainless steel retrieval chain included for machine installation and retrieval without requiring tank entry.

Minimum Access Opening - Machine can be placed through 12 inch (30 cm) diameter opening.

Minimum Water Depth - The mixer requires at least 2 feet (0.6meters) of water above the discharge slots to prevent pump cavitation and motor damage. Shut the mixer off if water surface is less than 2ft from the mixer slots.

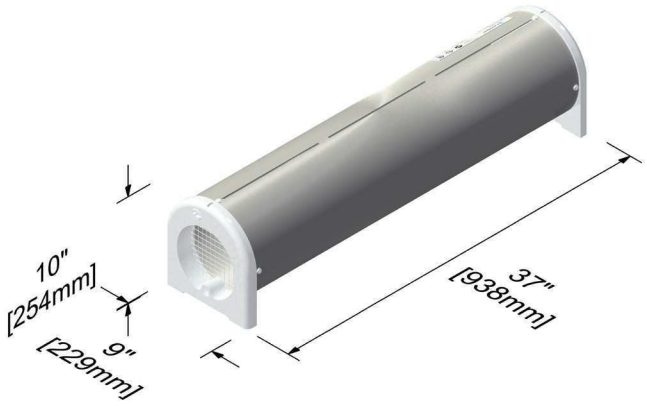


Figure 1: *GS-12*

Intake - Intake draws water in a horizontal layer within 2 inches (5.08 cm) of the tank or reservoir floor. Chlorine boost connection point on machine via 3/8" NPT female thread for adapting to 1/2" (13mm) hose for fast chlorine dispersion during in-reservoir boosting.

Electrical Requirements - 120VAC motor requires 120VAC/1PH power source outlet ***(minimum 20 Amp service)***. The GS-12 draws approximately 9.8 Amps @ 120VAC / 60Hz. Nominal power consumption of 1120 Watts.

Motor - 1/2 HP stainless steel submersible, designed for continuous operation, low power requirement, direct drive, no gearbox and no lubrication schedule required. Automatic reset, on-winding thermal overload protection and surge arresters built in. Mounted in flow sleeve for superior cooling and long motor life in submerged temperatures up to 122 F. See certifications section below. 120VAC/1PH standard, other voltages available as special order.

Wiring - Includes either 75 ft (22 m) or 150 ft (44m) of 10AWG submersible power cable to terminate within junction box at top of tank. Junction box included.

Sealed Penetration Fitting - T316 stainless steel tank fitting and cord grip included for sealed cord entry through tank roof. Not designed as a submersible penetration.

Optional Accessories - (1) Portable Chlorine Boost Hose and Boost Pump System, (2) Dual Injection Kit, (3) Control and SCADA Panel

Shipping Size / Weight

- ☐ **75 ft unit -** Box 1 of 2: 44x16x12 in. / 88 lbs, Box 2: of 2: 17x13x8 in. / 25 lbs: Total shipment weight: 123 lbs
- ☐ **150 ft unit -** Box 1 of 2: 44x16x12 in. / 127 lbs, Box 2: of 2: 17x13x8 in. / 41 lbs: Total shipment weight: 168 lbs

Certifications - Ixom's potable water products are certified to NSF/ANSI/CAN 61-G & 372 for lead-free content. Learn more at: www.ixomwatercare.com/std61

Maintenance / Warranty - Limited maintenance. Limited 5-year parts and labor warranty. See Warranty Statement for details.

Patent Pending

Subject to change without notice.

GridBee GS Submersible Mixer

Limited Replacement Warranty

GridBee GS Mixers. The GridBee Series GS mixers are warranted to be free of defective parts, materials, and workmanship for a period of five years from the date of purchase. This warranty is valid only for use of the equipment in accordance with the owner's manual and any initial and ongoing factory recommendations. This warranty is limited to the repair or replacement of defective components only and does not apply to normal wear and tear. If the factory's service crews performed the original on-site placement and startup, then this warranty also includes labor. Where labor is included, in lieu of sending a factory service crew to the site for minor repairs, Ixom may choose to send the replacement parts to the owner postage-paid and may pay the owner a reasonable labor allowance, as determined solely by Ixom, to install the parts. There is no liability for consequential damages of any type. The warranty that is submitted and provided with the purchased equipment is the valid warranty.

GridBee control panels, cold weather hose kits, air compressors and any optional accessories. These items are considered "buyout" items for Ixom, and as such include a warranty against defects in material and workmanship for one year from the date of purchase. This warranty covers parts only, not labor. Parts that are determined by Ixom to be defective in material or workmanship under normal use during the one year warranty period will be repaired or replaced. Shipping charges are the responsibility of the customer.

Terms applicable to all equipment. This Limited Replacement Warranty is subject to the terms of Ixom's General Terms and Conditions of Sale. In the event of any inconsistency between the terms of this Limited Replacement Warranty and Ixom's General Terms and Conditions of Sale, the terms of this Limited Replacement Warranty shall prevail to the extent of that inconsistency.

Brochure

Protect Your Investment With The Ixom Service Program

Comprehensive Damage Repair

Damage which occurs to your Ixom manufactured equipment in the normal course of operation will be repaired or replaced including supply and installation of structural repairs and replacement parts in accordance with Ixom's standard terms & conditions.

Trained & Experienced Service Technicians

The Ixom Service Program allows our customers to take advantage of our highly trained service technicians. We have the equipment, experience and training to ensure the machines are well maintained while following OSHA regulations. Our dedication to safety and high level of training has earned us the prestigious SHARP recognition award time and time again. We have the means to safely service the equipment whether in municipal water tanks, lakes, reservoirs, or wastewater ponds & basins.

Guaranteed Annual Onsite Maintenance

Ixom service personnel will perform a minimum of one (1) onsite equipment inspection & maintenance per yearly term of the service contract including mechanical, structural, and electronic components of Ixom manufactured equipment.

On-Site Crew Response for Critical Application and Operational Service Issues

If service issues arise, the customer may be asked to perform a basic machine inspection and discuss results with Ixom's Customer Service Department. In some cases, the customer may be asked to perform minor tasks (i.e., cleaning, basic troubleshooting, and replacing minor parts). If replacement parts are needed, the factory will ship them out at no cost. For more serious application and service issues, Ixom will dispatch service personnel to resolve the issues onsite.

Removal, Storage, and Redeployment of Equipment

For situations when Ixom equipment needs to be removed, stored, and redeployed, services can be offered at a discounted rate.

Access to On-Staff Water Quality Experts

Ixom employs many experts in the water quality field including specialized areas such as limnology, hydrology, wastewater, biology, and engineering. Our water quality personnel are available for data analysis and troubleshooting when you need it.

Contact us for a quote!

Call +1 866-437-8076 or email us at watercare@ixom.com

IXOM
WATERCARE

Nationwide Installation & Service

EVERYONE DESERVES GREAT CUSTOMER SUPPORT

Ixom Watercare earns customer trust with unparalleled service start to finish. Every department in Ixom is dedicated to the support of our Customers and the improvement of water quality. Complete life cycle support is much, much more than a returned phone call or an email. It centers around direct access and communication to those who can help when help is needed from the beginning of a project throughout the life of the equipment.

ABOUT IXOM

Ixom combines innovative water quality solutions with top notch manufacturing and nationwide in-field service capabilities to create trusted, full circle support our Customers depend on.

We design and manufacture many trusted brands including GridBee®, SolarBee®, MIEX®, and ResidualHQ© for use across the water quality spectrum. This includes solutions for Water Treatment, Distribution Treatment, Wastewater Treatment and Lakes & Source Water Reservoirs.

Ixom has thousands of installations and is an industry-leader solving water quality problems across the United States, Canada and the world.

Contact us today to discuss your water quality and service needs.

ixomwatercare.com

866-437-8076 • watercare@ixom.com

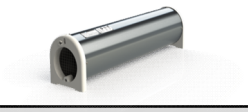
IXOM Watercare Inc.
3225 Hwy 22, Dickinson ND 58601
866-437-8076 • watercare@ixom.com

GridBee®

Budget Estimate - (Bid Specs Vary, Do Not Use for Bid Pricing)

GS-12 / GS-9 Electric Potable Water Tank Mixers

Last Updated: October 1, 2024 - Note: International Pricing Will Vary



Performance guaranteed or your money back! GS Mixers are the most effective and competitively priced mixers on the market with the lowest life cycle cost and the best warranty. Specifications can be found at www.ixomwatercare.com/equipment/gs-series-submersible-mixers

Installing a GS mixer is well within the capabilities of most cities and contractors. GS mixers are usually installed directly under the hatch with no need to center it in tank. A GS Series Electric Mixer Training Video is available at: www.ixomwatercare.com/video/1802/gs-11-minute-installation-training

Description	GS-12	GS-9
GS Submersible Electric Mixer: with 75 ft of in-tank submersible electrical cable	**$14,885**	**$10,725**
GS Submersible Electric Mixer: with 150 ft of in-tank submersible electrical cable	**$15,304**	**$11,245**
Freight cost for each basic system:	**$200**	**$180**
Horsepower, Voltage, Phase: GS Mixers are available on request at the same price: 240vAC 1PH and 460vAC 3PH	0.50 hp, 120vAC, 1PH Other voltage / ph available	
Mixer length x diameter, inches: 12" or larger hatch size required, no need to enter or drain the tank	36" x 10"	24" x 10"
Weight: submersible mixer only	75 lbs	65 lbs
Maximum recommended tank volumes for moderate conditions:* * The GS-12 is recommended for higher turnover rate, or ice issues, or areas with high heat.	8 MG (million gallons)	3 MG (million gallons)

Options	
100322 Chemical injection interior hose: per 100 ft:	**$325**
100321 Chemical injection hose penetration thru fitting: for steel tanks:	**$598**
100324 Chemical injection exterior hose kit: includes 50 ft SS braided hose & valve termination:	**$943**
Additional - Chemical injection exterior hose: price per ft:	**$9 per ft**

102423 Control Box (120v): UL listed, NEMA 4, 120vAC/1ph, with SCADA monitoring, HOA switch, indicator light, locking latch	**$2,103** Shipped with mixer for electrical contractor installation
102424 Control Box (240v): UL listed, NEMA 4, 240vAC/1ph, with SCADA monitoring, HOA switch, indicator light, locking latch	**$2,148** Shipped with mixer for electrical contractor installation
100264 Control Box (120v): UL listed, NEMA 4X, 120vAC/1ph, with timer but No SCADA, on/off switch, indicator light, locking latch	**$1,126** Shipped with mixer for electrical contractor installation
Factory Delivery & Placement: Installing the above mixer is within the scope of work that most cities/contractors can perform	**$18,000** Varies with tank height and tank construction
DBS - Portable Disinfectant Boost System: An electric or engine-driven air compressor (4 cfm @ 60 psi) is required to operate the air-powered diaphragm pump; air compressor is not included	**$11,791** **+ $500 Freight** 
CFD Modeling: The factory has some CFD Models for GS-9 and GS-12 mixers available for various tanks sizes and tank styles.	If you require a specific CFD Model, please contact us for pricing.

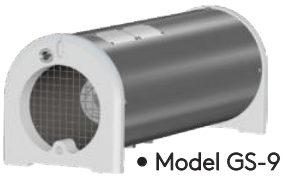
Brochure

IXOM WATERCARE

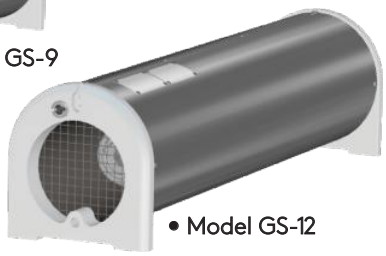
GridBee® GS Series Submersible Mixers

Effective. Efficient. Affordable.

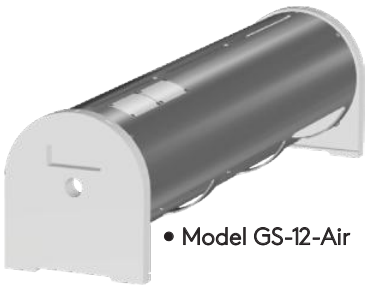
Reliable 24-hour active mixing with the lowest life-cycle cost. The benefits are immediate!



• Model GS-9



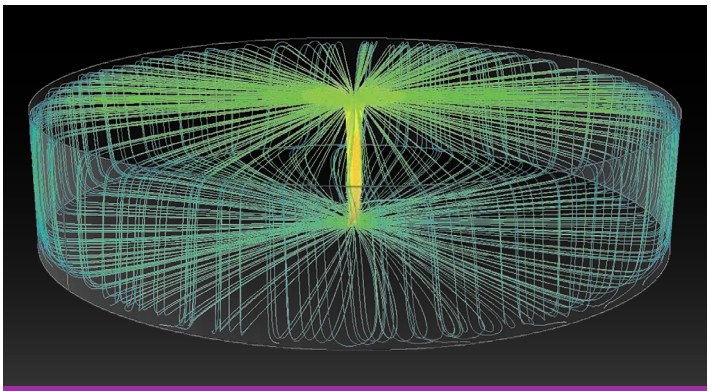
• Model GS-12



• Model GS-12-Air

Benefits

- Prevents stagnation, thermal stratification & short-circuiting.
- Provides uniform water age & equal distribution of disinfectant.
- Minimize chemical disinfectant usage & disinfection by-products.
- Increases contact time (baffle factor) in clearwells.
- Reduces nitrification in chloraminated systems.
- Eliminate energy intensive & costly deep-cycling and/or flushing of tanks.
- Reduces ice buildup & tank damage in cold climates.



CFD of a GS-12 in an 8 million gallon reservoir.

NSF/ANSI Standard 61 Certified By			
	NSF	UL	CSA
GS Mixer	X		
GS Motor		X	X

NSF/ANSI Standard 372 Certified By			
	NSF	UL	CSA
GS Mixer	X		
GS Motor		X	X

Performance Guaranteed.

Features

- Engineered for easy deployment.
- No tank entry required.
- Utilizes efficient sheet mixing technology.
- 316SS Construction.
- Certified to NSF/ANSI 61 and NSF/ANSI 372.
- 120VAC 1Ph Standard.
- 240VAC 1PH or 460vAC 3PH available. (for GS-9 and GS-12 models only)
- 5-Year Warranty.
- Liquid disinfectant boosting port.

Effective mixing for any tank size, any tank build.

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Brochure

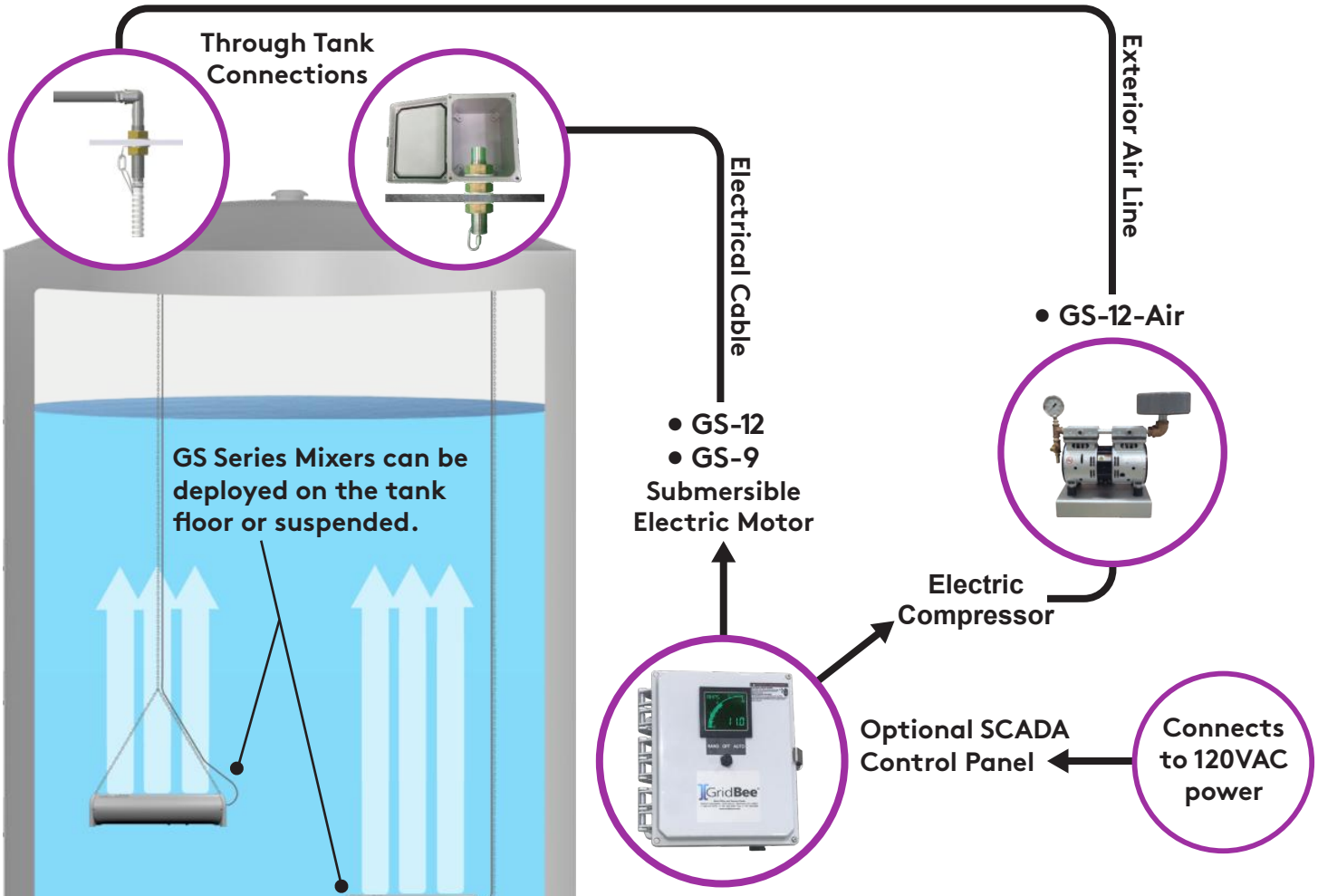
GridBee® GS Series Submersible Mixers

GridBee® GS Series Submersible Tank Mixers are easily deployed through a hatch, vent, or other tank opening twelve (12) inches or larger in diameter. The "GS" thoroughly mixes the entire tank volume from tank floor to water surface resulting in consistent disinfectant residuals, even temperature profiles and uniform water age.

Assembled Machine Dimensions

	Length	Diameter	Weight
GS-9	24 in. (61 cm)	10 in. (25 cm)	65 lbs. (29 kg)
GS-12	36 in. (91 cm)	10 in. (25 cm)	75 lbs. (34 kg)
GS-12-Air	36 in. (91 cm)	10 in. (25 cm)	50 lbs. (23 kg)

Everything you need for a fast & efficient deployment is included!



Learn more at
www.ixomwatercare.com

1856_20210709

CBI Services, LLC.
Scope Clarifications

256189

Princeton Drive Elevated Water Storage Tank

1/3/25

Project Site

- We assume that there is clear and open access around the tank for working personnel, equipment, manlifts, or automated welding machines as needed to complete the work, without electrical or overhead obstructions. We also assume a dedicated laydown area adjacent to the new tank site, without electrical or overhead obstructions, will be provided for our exclusive use during our site erection activities.
- CBIS will be traveling underneath existing overhead utility lines to access site, we request that North Aurora coordinate with COMED to insulate/"boot" overhead utility lines prior to Mobilization.
- CBIS intends to coordinate with North Aurora to utilize the adjacent baseball field parking lot (North of job site) for construction parking/traffic. CBI does not claim responsibility for any damage to these offsite roads/parking lot.
- Proposed construction traffic plan with highlighted route:

Permits and Licenses

- We will provide only those permits and licenses necessary for CBIS to operate as a contractor in the State of Illinois. All other EPA, Air Quality, and like permits and licenses are to be provided by others. CBIS will work and cooperate with site personnel to secure all site required daily work permits if required.

Labor

- Field construction of the tank will be performed by appropriately trained and competent union-affiliated craft labor. CBIS will comply to meeting the apprenticeship requirements, prevailing wage, and associated reporting. (Boilermakers National App. Program (BNAP))

Quality Assurance/Quality Control

- CBI Services, LLC's (an entity of business unit CB&I Storage Solutions, a subsidiary of McDermott International, Inc.) quality policy is to conduct its activities in accordance with the CSS Quality Management System.
- CBI's Quality Management System (CMS) is based on the ISO-9001 standard. CMS includes policies and procedures that provide the appropriate level of monitoring & control to satisfy the engineering and construction management requirements in these contract specifications. CBI Services, LLC is in compliance with ISO-9001.

Welding/QC /NDE

- Our proposal is based on CBIS providing weld procedures and welder qualifications records in accordance with ASME Section IX prior to the start of work at the site. We have not included for any on site field welder tests or tests by an offsite third party.

Safety

- CBIS maintains and follows one of the strongest corporate safety programs in our industry. CBIS's program has resulted in an outstanding safety record reflected by CBIS' 0.42 Worker's Compensation EMR. All projects are subject to a safety review during the initial planning phases and also on an ongoing basis as the project proceeds.

Hydrotest

- We have assumed others will provide clean hydrotest water (at no charge to CBIS) at the tank and at sufficient quantities to fill the completed tank within one week. CBIS will provide and install temporary gaskets and flanges and clean the tank to a broom clean condition prior to filling. CBIS will witness and check the tank when full and make any necessary repairs when tank is empty. Any pumping back into a pressurized system, or between multiple tanks, will be by others. Upon completion of test, CBIS will promptly drain the hydrotest water into piping or receptacles provided by others at the tank. Any permits for or special treatment or disposal of test water will be by others. Cleanup of sediment or residue from the hydrotest water is not included in the scope of work. CBIS will witness the hydrotest hold time and occasionally observe the fill process. CBIS does not plan to monitor the hydrotest fill and drain process on a full-time basis. CBIS will remove temporary flanges after hydrotest.

Paint

- We have included for shop and on-site metal surface preparation and paint in accordance with the specification in our proposed scope of work and pricing.

Potential Adjustments Pricing

Princeton Drive elevated water storage tank scope of work includes a great deal of site/civil work under multiple subcontracts, including extensive dewatering. Due to the scale of this scope, subcontract costs alone, are in excess of $1,000,000.00 higher in comparison to other 1.25MMG watersphereoids of record. In an effort to decrease the overall project cost to The Village of North Aurora, CBIS proposes the following value engineering activities for your consideration:

- **Foundation type:** Drilled pier / caissons with ring beam design in lieu of a deep spread footing. Switching to drilled pier leads to less dewatering cost and an improved overall design. Possibly even raise the ring beam slightly to get clear of major dewatering. While the Geotech report does not mention drilled piers we think the bearing at 20-foot depth would allow a potential better alternative.
- **Vault:** Eliminate below grade valve vault inside the base bell and utilize an enclosure above base slab instead. This change would need to be reviewed by your engineering and the consultant to ensure no impacts to your system requirements. .
- **SCADA:** North Aurora could take on this work provided they have a preferred contractor who can offer a lower price.
- **CCTV:** North Aurora could take on this work provided they have a preferred contractor who can offer a lower price.

Adjustments in Bid Form – Add or Deduct as listed.

- **Performance / Payment Bond:** Eliminate performance / payment bond requirement and make a slight adjustment to retention. We would also furnish a Parent Company Guarantee Letter at no cost ensuring faithful performance. Bonds are costly current day.
  - 1.0MMG Add to item 49 on base bid form: $222,000.00
  - 1.25MMG Add to item 55 on base bid form: $240,000.00

- **NACE-C Requirements:** deletion of requirement for interior NACE-C grinding as a deduct to the tank price. The deduct for allowing an “as welded” condition eliminates grinding all these interior seams. Recall that the interior is sweep blasted in the field per SSPC – SP7 requirements. We would change the requirement to NACE – D condition for interior – same as inside dry and exterior.
  - 1.0MMG Deduct from item 49: $102,000.00
  - 1.25MMG Deduct from item 55: $117,000.00

- **Containment:** Utilize water dampened blast in lieu of 100% full containment or drop containment altogether given only weld seams and abraded areas on exterior are sweep blasted.
  - Deduct: $240,000.00.

- **Foundation/Valve & Pipe Room/Antenna Provisions:** Utilize shallow, spread foot foundation. Utilize “valve/pipe room” in lieu of below grade vault. Includes updated roof handrails and additional antenna provisions as follows:

  - (6) 3"ø Sleeves,
  - (8) 6"ø Sleeves,
  - (2) 16"ø Cut-outs in condensate and top platform
  - (8) 4"ø Sleeves through access tube cover
  - (2) sets of support brackets 3' O.C. in bell and shaft (1EA Bracket on each side of Ladders) –
  - (6) Support brackets on roof
  - (8) J-Hooks welded to shaft under Top Platform –
  - (2) J-Hook Assembly welded at top of AT under cover –
  - Assembly based on 4EA J-Hooks welded to 1EA L3x3x1/4 J-Hook Angle Plate welded 1EA 3/8" Bent Plate Assembly Support
  - 1.25MMG Deduct from item 56: $65,600.00.