



EST. 1960

Willowbrook

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Willowbrook, IL 60527-5549

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Mayor

Frank A. Trilla

Village Clerk

Leroy R. Hansen

Village Trustees

Sue Berglund

Umberto Davi

Terrence Kelly

Michael Mistele

Gayle Neal

Paul Oggerino

Village Administrator

Tim Halik

Chief of Police

Mark Shelton

AGENDA

REGULAR MEETING OF THE MUNICIPAL SERVICES COMMITTEE TO BE HELD ON MONDAY, OCTOBER 12, 2015, AT 6:00 P.M. AT THE VILLAGE POLICE STATION BUILDING, 7760 QUINCY STREET, IN THE VILLAGE OF WILLOWBROOK, DUPAGE COUNTY, ILLINOIS.

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF MINUTES:
 - a) September 14, 2015 Regular Meeting of the Municipal Services Committee
4. DISCUSSION – Moratorium on the Unregulated Private Use of Unmanned Aerial Systems (UAS)
5. DISCUSSION – Preliminary Specifications and Bid Documents – 3 MG Standpipe Painting and Rehabilitation Project
6. REPORT – Municipal Services Department:
 - a) September 2015 Monthly Permit Activity Report
 - b) August 2015 Water System Pumpage Report
 - c) September Monthly Mosquito Abatement Report
7. VISITOR'S BUSINESS
(Public comment is limited to three minutes per person)
8. COMMUNICATIONS
9. ADJOURNMENT



Proud Member of the
Illinois Route 66 Scenic Byway

MINUTES OF THE REGULAR MEETING OF THE MUNICIPAL SERVICES
COMMITTEE OF THE VILLAGE OF WILLOWBROOK HELD ON
MONDAY, SEPTEMBER 14, 2015 AT THE WILLOWBROOK POLICE
STATION BUILDING, 7760 QUINCY STREET, IN THE VILLAGE OF
WILLOWBROOK, DUPAGE COUNTY, ILLINOIS

1. CALL TO ORDER

Chairman Mistele called the meeting to order at 6:00 PM.

2. ROLL CALL

Those present at roll call were Chairman Michael Mistele, Trustee Paul Oggerino, Village Administrator Tim Halik, and Administrative Intern Tiffany Kolodziej.

3. APPROVAL OF MINUTES

- a) After review of the draft minutes from the August 10, 2015 Regular Meeting of the Municipal Services Committee, Chairman Mistele made a motion to approve the minutes as presented. Trustee Oggerino seconded the motion. Motion carried.

4. REPORT – 67th Street Water Tank Re-Coating Project – Change Order #1

Administrator Halik reminded the committee that at its regular meeting on May 26, 2015, the Village Board awarded a contract to Era Valdivia Contractors, Inc. to complete a complete blasting and re-coating, both interior and exterior, of the Village's 67th Street 500,000 gallon spheroid water tank. Halik advised that seven public bids were received for this project. Era Valdivia submitted the low bid in the amount of \$358,600. Work commenced in early August and, since that time, has been substantially completed. Halik advised that one change order extra was required to complete the project. However, the single change order includes six different items for a total cost increase to the contract of \$9,600. Halik reviewed each of the six individual items and explained the need to complete the extra work. Chairman Mistele was surprised that the engineer's bid specification did not include the use of a zinc-based primer to guard against deterioration of the underlying steel. He agreed that an upgrade to a zinc-based primer was prudent. The Committee agreed with the various change order items. Halik advised that Board approval of this item was included on the Consent Agenda for this evening's Board meeting.

5. REPORT – 2015 MFT Road Maintenance Program – Payout #1

Administrator Halik reminded the Committee that at its regular meeting on May 26, 2015, the Village Board approved a contract with K-Five Construction Corporation to complete the 2015 Motor Fuel Tax Roadway Maintenance Program. This year's MFT Roadway Maintenance Program included the resurfacing of .51 miles of roadways, Waterford Drive, replacement of both defective concrete curb & gutter and defective concrete sidewalks along the street to be repaved, along with full-depth patching on various streets throughout the Village. Halik advised that after all required paperwork, insurance and bond certificates were submitted, a notice to proceed with the project was issued by the Village and the work commenced. Halik shared that the project is now 100% complete and the contractor has requested a partial payout in the amount of \$173,006.85. The retainage amount of \$9,105.62 will be released once the Village receives final approval from IDOT. Halik also called attention to the fact that the

project cost was greater than \$30,000 below the original estimated contract amount due to the final quantities of materials used. Halik said that this will assist us in building an adequate reserve amount in the fund for next year's STP grant project. Chairman Mistele asked that Administrator Halik mention this during the Administrator's Report during the Board meeting. The Committee recommended approval of the partial payout request.

6. DISCUSSION – Fall Brush Collection Program: October 12th thru 16th, 2015

Administrator Halik advised the Committee that this past Spring, the Village's EAB abatement tree contractor, Pessina Tree Service, completed the Village-wide brush collection program. The program included curb-side collection of piled brush throughout town. Afterwards, the resulting chips were ground to a usable mulch and made available to residents. Halik advised that the Fall program will also consist of a curb-side chipping program, with the resulting chips hauled away. Staff has solicited proposals from two landscape maintenance contractors, with Pessina Tree Service, LLC continuing to offer the low proposal of \$118.75/hour/crew to perform this program. Therefore, the estimated cost of the Spring program would be \$9,500, consisting of two crews working 40 hours each. Halik shared that Pessina has worked in the Village during the last two years in completing our Emerald Ash Borer abatement program. Their quality of work is acceptable, and they have been responsive to resident concerns. They have also recently completed the Spring brush collection program. The Committee recommended acceptance of the proposal from Pessina and recommended staff ensure the residents receive ample advanced notice of the Fall collection.

7. DISCUSSION - Architectural Services Agreement, Police Station Building Renovation - Williams Architects

Administrator Halik advised the Committee that Phase II of the Village Master Facilities Plan includes the renovation of the 7760 Quincy Street building to serve entirely as the Village police station. This project will also include a sally port addition on the south side of the existing building, along with site alteration work. The civil engineering portion of the Phase II work is intended to be completed by Christopher B. Burke Engineering, Ltd. The remainder of the work will be completed by the project architect, Williams Architects. Halik shared that a proposal for architectural services to complete the Phase II work was submitted by Williams Architects. The proposal was reviewed by Chairman Mistele, Administrator Halik, and Attorney Tom Bastian. A full itemization of services is included within the agreement, but generally includes: 1) Basic Service: The preparation of full project construction documents, based upon the conceptual design approved by the Village Board on February 23, 2015, 2) The preparation of all documents necessary to complete the public bidding of the project, 3) Attendance at meetings between the Village, civil engineer and others to coordinate the civil plan into the bidding documents, 4) Construction administration of the project once the Board awards a contract to the lowest qualified bidder, and 5) Interior Design Services, which will be an additional charge of \$22,000. Halik advised that the Williams Architect proposal includes the completion of the first four items for a fee of 8.5% of the final construction cost of the project. At an estimated \$2 M project cost, and excluding site work from the fee calculation, the fee would calculate to \$153,000. As mentioned earlier, Interior Design Work, which is deemed necessary to the project, would be completed by Williams for an additional fee of \$22,000. Therefore, the overall architectural fee for this project would be \$175,000, which is 8.75% of the project construction budget. Funds for this item would be expended from the FY 2015/16 L.A.F.E.R. Fund budget, which were obtained from the bond sale which occurred in April of this year. Chairman Mistele advised that there are several remaining issues to be corrected in the contract before it is signed. He also inquired about the early demolition bid and questioned whether there would be added fees to complete an early demo package. Halik responded that he would confirm the estimated fee amount with Williams, if there were added fees. The Committee recommended approval of the contract as noted.

8. REPORT – Municipal Services Department

- a. Administrator Halik reviewed the monthly permit activity report for the month of August 2015. The Village has taken in about \$15,000 in permit revenue for the month. Halik advised that in total for the first four months of fiscal year 2015/16, the Village has received approximately 33.5% of the anticipated FY2015/16 budgeted revenue.
- b. Administrator Halik shared the water system pumpage report for July 2015. The reports indicate that the Village pumped 32,813,000 gallons of water in the month, bringing the total amount pumped for the first three months of the fiscal year to 91,473,000 gallons. Halik stated that we have pumped about 3.5% less water this year so far as compared to the same time frame of last year. However, Halik shared that we are on track so far in reaching our estimated pumpage projection for the year of 350,000,000 gallons.
- c. Administrator Halik advised that the July 2015 monthly mosquito abatement report in the Committee's packet was for information.

9. VISITOR'S BUSINESS

(None)

10. COMMUNICATIONS

Administrator Halik advised the Committee that there was an ordinance on tonight's Board agenda, under the Consent Agenda, that will serve to provide the required one year notice to Southwest Central Dispatch of our termination of the License Agreement which allows Southwest to maintain communication equipment on the Village Hall water tower. Halik advised that in accordance with the timelines in the License Agreement, if the Village were to serve a termination notice to Southwest before the end of this year, they would need to remove the equipment from the water tower, and restore the tower to the previous condition, by February of 2017. Halik stated this timing would work well since the Village plans on painting the Village Hall tank in May of 2017.

8. ADJOURNMENT

Motion to adjourn was made by Trustee Oggerino and seconded by Chairman Mistele. The meeting was adjourned at 6:25 PM.

(Minutes transcribed by: Tim Halik, 10/8/15)

**MUNICIPAL SERVICES COMMITTEE MEETING
AGENDA ITEM SUMMARY SHEET**

AGENDA ITEM DESCRIPTION

**DISCUSSION –
Moratorium on the Unregulated Private Use of
Unmanned Aerial Systems (UAS)**

COMMITTEE REVIEW

- Finance/Administration
 Municipal Services
 Public Safety

Meeting Date:

October 12, 2015

- | | |
|---|--|
| <input type="checkbox"/> Discussion Only | <input type="checkbox"/> Approval of Staff Recommendation (for consideration by Village Board at a later date) |
| <input type="checkbox"/> Seeking Feedback | <input checked="" type="checkbox"/> Approval of Staff Recommendation (for <u>immediate</u> consideration by Village Board) |
| <input type="checkbox"/> Regular Report | <input type="checkbox"/> Report/documents requested by Committee |

BACKGROUND

The Federal Aviation Administration (FAA) reauthorization legislation, known as the FAA Modernization and Reform Act, enacted on February 14, 2012 authorized appropriations to the FAA. The legislation also seeks to improve aviation safety and capacity of the national airspace system, provide a framework for integrating new technology safely into the airspace, provide a stable funding system, and advance the implementation of the Next Generation Air Transportation System (NextGen).

The FAA's reports to Congress and other published plans developed as part of the law's statutory requirements include, among other items, the integration of civil unmanned aircraft systems (UAS, aka. "Drones") into the national airspace system, as outlined in Section 336 of Public Law 112-95. Individuals who fly drones within the scope of these parameters do not require permission to operate. However, notwithstanding these requirements, there have been reports throughout the nation of incidents where drones have interfered with commercial aircraft and have been used to violate a property owner's reasonable expectation of privacy. Current mechanical technological advancement will enable drones to be outfitted in a number ways, some of which may include for non-altruistic purposes.

On August 18, 2015, Illinois Public Act 99-0392 was passed creating the Unmanned Aerial Systems Task Force to develop rules for the use of drones. Task Force recommendations are to be forwarded to the Governor by July 1, 2016. In addition, the state has passed the Freedom from Drone Surveillance Act (725 ILCS 167/1), which provides that a law enforcement agency may not use a drone to gather information, with exceptions.

REQUEST FOR FEEDBACK

It's clear that the expanding use of these devices is quickly outpacing the laws currently in place to regulate them. In response to a growing concern among some of our elected officials, it is recommended that a moratorium on drone use in Willowbrook be considered until such time as all relevant data on the subject can be gathered, clarification can be sought as to what authority we may have to regulate use, and appropriate measures are implemented to address concerns. The attached ordinance, drafted by the Village Attorney, will establish a moratorium on the unregulated private use of drones, with exceptions, which will expire two years from the effective date of the ordinance, unless acted on sooner.

STAFF RECOMMENDATION

If the Village Board wishes to "get out in front" of this issue at this time due to concerns with private drone use in Willowbrook, and the potential conflict with flights at Midwest Helicopter, consideration of establishing a moratorium is recommended.

Drone crash into Kentucky stadium during UL-Lafayette game the latest in series of incidents; see video of the drone



A drone, center, crashed into a part of newly renovated Commonwealth Stadium before the Wildcats faced Louisiana-Lafayette in the season opener, Kentucky officials confirmed Saturday, Sept. 5, 2015. School spokesman Jay Blanton said via email that the unmanned aircraft was recovered near the suite level. He added that there were no injuries to spectators or damages to the facility, which just underwent a \$120 million renovation. (John Clay/Lexington Herald-Leader via AP)

By GARY B. GRAVES

AP Sports Writer

LEXINGTON, Ky. (AP) — University of Kentucky officials continue to investigate the crash of a student's drone into a section of Commonwealth Stadium before Saturday night's football game against the University of Louisiana at Lafayette.

The school has not released the student's name, and spokesman Jay Blanton said Sunday a decision on any discipline isn't likely before Tuesday as university police determine what violations occurred.

The subject of drone use is a moving target, so to speak, as federal and local officials examine how to regulate them with growing personal and commercial use.

Kentucky does not have a written policy banning the unmanned aircraft, but as the school studies the issue, Blanton said drones aren't allowed on campus and added, "it's pretty clear that they're not allowed around the stadium on game day."

The drone flew as skydivers parachuted onto the field with American flags before the Wildcats' 40-33 victory over the Ragin' Cajuns. It crashed into the southwest corner of the newly remodeled stadium at the suite level. There were no injuries or damage to the stadium.

Blanton said the school is applying for an exemption to allow limited flights for research and other allowable uses, but recommendations aren't expected until later this semester.

No one could be reached at the Federal Aviation Administration's Louisville office on Sunday, but agency for airspace around special events such as games restricts flights for three nautical miles and up to 3,000 feet. Safety guidelines for model aircraft suggested on the agency's web site include flying below 400 feet, not flying within five miles of an airport and avoiding "people or stadiums."

Helipads are considered airspace as well, and the student's drone was within a half-mile of two at nearby UK Chandler and Baptist hospitals within walking distance of the stadium. In fact, the helipad for UK Chandler could be seen just beyond where the drone hovered behind a scoreboard above the west end zone.

It was the second incident involving a drone at a sports event in the past week.

An unmanned aircraft plummeted into empty seats and caused a scare during a women's singles match Thursday night at the U.S. Open. No one was injured, but it broke into pieces as it crashed.

A high school science teacher who had been flying the drone from a park outside the tennis venue was arrested Friday on reckless endangerment and other charges, police said.

The FAA put drone and model-plane enthusiasts on notice last October that it's illegal to fly the aircraft near Major League Baseball, NFL and NCAA Division I college football games and major auto races.

The move came months after police detained people for using small drones at Carolina Panthers and University of Texas football games. This past June, police questioned a man flying a drone near a gate at Citizens Bank Park in Philadelphia during a Colorado Rockies-Philadelphia Phillies game.

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Ascension Parish resident shoots down neighbor's drone, says wife felt like it was watching her



Advocate staff photo by CHARLES CHAMPAGNE Atmosphere Aerial, professional drone video and photography company, put on a flight demonstration Saturday, Sept. 26, 2015 during the Mini Maker Faire hosted by the East Baton Rouge Library.

Owner says it was flying too high to be a problem

BY ELLYN COUVILLION

ecouvillion@theadvocate.com

An Ascension Parish man hunting squirrels on his property Monday shot down a neighbor's drone that had been flying over his home for several months, making his wife feel as though she was being watched.

Aaron Hernandez, the owner of the drone, which was outfitted with a camera, said Tuesday he was flying his \$1,200 remote-controlled quadcopter, which he

got as a Christmas present last year, at his father's home in a rural area off La. 936 early Monday evening when his neighbor shot it, disabling it at first, leaving it hovering in the sky.

Hernandez said he ran over to his neighbor's property, saying he wouldn't fly the drone again, but the neighbor, Derek Vidrine, blasted it out of the sky.

Hernandez said he had his 7-year-old niece with him at the time and the incident frightened her. He called the Sheriff's Office.

Vidrine said Hernandez has been flying the drone over his property for months.

Last week, he said, when his wife saw the drone flying above her, she rode her horse to the property line and told Hernandez to stop flying the machine over her property.

"He said, 'Call the cops.' We called the cops," Vidrine said.

The sheriff's deputy that answered the call asked Hernandez to stop flying it over the neighbor's land, Vidrine said.

"Yesterday, he did it again," Vidrine said Tuesday.

Vidrine was out hunting when he first saw the drone.

"It's squirrel season. It was right there. I shot it," Vidrine said.

"That's where we're at," he added.

The complaints were the first about drones that the Ascension Parish Sheriff's Office has received, but deputies expect to get more in the future as drones become more common, Lt. Col. Bobby Webre said.

While there aren't state laws regulating drone hobbyists, Webre said, there are FAA guidelines.

"(The FAA) seriously recommends getting permission from the property owner" if you want to fly a drone over their property, Webre said.

The FAA says to "use good common sense and respect people's reasonable expectation of privacy," he said.

Hernandez said he has enjoyed flying the drone — which he said has to be flown 200 feet or higher or else it will lose its signal and crash — to photograph the area.

The drone feeds images to his iPhone, he said, that can be viewed in real time or developed into pictures.

“For all of my neighbors, I blow the pictures up and give the pictures to them,” Hernandez said. “Do you know what it costs to pay someone to take an (aerial) picture of your house?”

He considers what happened to his drone to be a violation of federal law since the “FAA considers that an aircraft.”

Hernandez maintains no one owns the airspace and that the drone is so high up, “you can’t see people.”

Vidrine said he and his family first noticed the drone about four months ago when his wife’s aunt held a birthday party at his house for her grandchild.

“The drone was flying about 20 feet over our Slip ‘N Slide. It stayed there about an hour. We didn’t know what it was,” Vidrine said.

His wife began noticing that the drone would fly overhead when she was outdoors, he said.

“I let it slide again,” Vidrine said. “I thought maybe it was a little kid doing it.”

Then, he said, his wife, a horse owner, began noticing that the drone would fly overhead while she was outside practicing barrel racing.

“There are 25 acres out here (where the drone could go) and it would be 20 feet over her head,” Vidrine said.

At some point, Vidrine followed the drone through the woods to his property line and saw his neighbor with the control.

“I know he saw me coming. He ran inside,” Vidrine said.

Webre said the state Legislature passed two laws in recent years regulating drones, including one that allows farmers to use drones to photograph their crops, and the other restricts areas where drones can fly such as government buildings and industrial plants.

But Webre said that’s as far as the state has gone. “There’s no other state law regulating flying a hobby, recreational drone,” he said.

ORDINANCE NO. 15-O-_____

AN ORDINANCE OF THE VILLAGE OF WILLOWBROOK ESTABLISHING A
MORATORIUM ON THE UNREGULATED PRIVATE USE OF DRONES
WITHIN THE VILLAGE OF WILLOWBROOK

WHEREAS, the implementation and use of drone technology (unmanned or remote control aerial vehicles) across the United States has increased dramatically over the past several years; and

WHEREAS, it is estimated that private drone sales will exceed One Million (\$1,000,000.00) Dollars in the year 2015; and

WHEREAS, some drone models weigh more than Fifty-Five (55) pounds and can travel at speeds up to One Hundred (100) miles per hour; and

WHEREAS, the unrestricted public and private use of drone technology has outpaced federal, state and local legislation regulating the use of drones and drone technology; and

WHEREAS, there are numerous reports and complaints of drones being flown in restricted aircraft airspace; and

WHEREAS, the unregulated use of drones and drone technology has adversely impacted individuals privacy and their constitutional rights and has been a source of nuisance activity and breaches of the peace; and

WHEREAS, there currently exists within the corporate limits of the Village of Willowbrook a helicopter service business that specializes in moving and transporting heavy construction

equipment and those helicopters take-off and land from a heliport located within the Village; and

WHEREAS, municipal police departments have utilized drone technology as a means of surveillance; and

WHEREAS, the federal government and the state of Illinois have yet to adopt meaningful comprehensive legislation regulating the private use of drones and drone technology; and

WHEREAS, the corporate authority of the Village of Willowbrook has determined that it is necessary, proper and in the best interest of the health, welfare and safety of the Village of Willowbrook, its residents and visitors to establish a moratorium on the private use of drone technology, all as hereinafter set forth.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and the Board of Trustees of the Village of Willowbrook, DuPage County, Illinois as follows:

Section 1. The foregoing recitals are hereby found to be true and correct and adopted as the findings of the corporate authority of the Village of Willowbrook as if fully recited herein.

Section 2. Definitions. For purposes of this Ordinance:

"Aircraft" means any contrivance invented, used, or designed to navigate or fly in the air.

"Village airspace" means the airspace above the land, water and waterways within the jurisdiction of the Village of Willowbrook.

"Drone" means unmanned or remote controlled aerial vehicle.

"Operate" means to remotely pilot, steer, direct, fly or manage unmanned aircraft through the air. The term operate includes managing or initiating a computer system that pilots, steers, directs, flies or manages a small unmanned aircraft.

"Public aircraft" has the meaning ascribed to the term in Section 40102 of Title 49, United States Code.

"Toy aircraft" means (a) a glider or hand-tossed small unmanned aircraft that is not designed for and is incapable of sustained flight; and (b) a small unmanned aircraft that is capable of sustained flight and is controlled by means of a physical attachment such as a string or wire.

Section 3. The Village of Willowbrook hereby establishes a moratorium on the private operation of drones and small unmanned aircraft in the Village of Willowbrook. This moratorium will expire without further action by the Village Board of Trustees two years from the effective date of this Ordinance, with the following exemptions:

- a) Persons may operate toy aircraft, a registered small unmanned aircraft in any location specifically designated for such operation, or over one's own property.

b) Persons authorized to operate a small unmanned aircraft may do so pursuant to a certificate of waiver, certificate of authorization or airworthiness certification under Section 44704 of Title 49, United States Code shall be authorized to operate a small unmanned aircraft in Village airspace in accordance with the terms of such certificate of waiver, certificate of authorization or airworthiness certification.

c) Law enforcement agencies operating drones or small unmanned aircraft pursuant to the provisions of Public Act 098-0569.

Section 9. This Ordinance shall be in full force and effect upon and after its passage and approval in the manner provided by law.

PASSED and APPROVED this 12th day of October, 2015, by a roll call vote as follows:

APPROVED:

Mayor

ATTEST:

Village Clerk

ROLL CALL VOTE: AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____



**Federal Aviation
Administration**

FAA Expands Unmanned Aircraft Pathfinder Efforts

Search:

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News type: News & Updates



The Federal Aviation Administration (FAA) has entered into a Pathfinder agreement with CACI International Inc. to evaluate how the company's technology can help detect Unmanned Aircraft Systems (UAS) in the vicinity of airports.

In testimony today before the House Aviation Subcommittee (http://www.faa.gov/news/testimony/news_story.cfm?newsId=19558), FAA Deputy Administrator Mike Whitaker said that flying an unmanned aircraft near a busy airfield poses an unacceptable safety hazard. During the hearing titled, "Ensuring Aviation Safety in the Era of Unmanned Aircraft Systems," Whitaker told the congressional panel the FAA signed an agreement this week to assess the safety and security capabilities of CACI's product within a five-mile radius of airports, and the agency also will collaborate with its government partners.

A steep increase in reports of small unmanned aircraft in close proximity to runways is presenting a new challenge for the FAA. It is the agency's responsibility to identify possible gaps in safety and address them before an incident occurs.

The CACI partnership is part of the larger UAS Pathfinder Program, which the FAA announced in May 2015. Pathfinder is a framework for the agency to work closely with industry to explore the next steps in unmanned aircraft operations beyond those proposed in February in the draft small UAS rule.

"Safety is always the FAA's top priority, and we are concerned about the increasing number of instances where pilots have reported seeing unmanned aircraft flying nearby," said Whitaker. "We are looking forward to working with CACI and our interagency partners to identify and evaluate new technologies that could enhance safety for all users of the nation's airspace."

"CACI is proud to partner in the FAA's Pathfinder cooperative research and development agreement to address the escalating Unmanned Aircraft Systems safety challenges that airports are facing nationwide," said John Mengucci, CACI's Chief Operating Officer and President of U.S. Operations. "The agreement

provides a proven way to passively detect, identify, and track UAS – or aerial drones – and their ground-based operators, in order to protect airspace from inadvertent or unlawful misuse of drones near U.S. airports. This CACI-built solution will help ensure a safe, shared airspace while supporting responsible UAS users' right to operate their aircraft.”

CACI's prototype UAS sensor detection system will be evaluated at airports selected by the FAA. The agency and its federal government partners will work with the company to evaluate the effectiveness of the technology, while also ensuring that it does not interfere with the safety and security of normal airport operations.

More information on the FAA's Pathfinder Program is at http://www.faa.gov/uas/legislative_programs/pathfinders/.

Page last modified: October 07, 2015 11:17:48 AM EDT

This page was originally published at: <http://www.faa.gov/news/updates/?newsId=83927>

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equipment and those helicopters take-off and land from a heliport located within the Village; and

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APPROVED:

Mayor

ATTEST:

Village Clerk

ROLL CALL VOTE: AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

**MUNICIPAL SERVICES COMMITTEE MEETING
AGENDA ITEM SUMMARY SHEET**

AGENDA ITEM DESCRIPTION

**DISCUSSION –
Preliminary Specifications and Bid Documents –
3 MG Standpipe Painting and Rehabilitation Project**

COMMITTEE REVIEW

- Finance/Administration
 Municipal Services
 Public Safety

Meeting Date:

October 12, 2015

- Discussion Only Approval of Staff Recommendation (for consideration by Village Board at a later date)
 Seeking Feedback Approval of Staff Recommendation (for immediate consideration by Village Board)
 Regular Report Report/documents requested by Committee

BACKGROUND

On June 10, 2013, the Village Board adopted Resolution No. 13-R-30 accepting a proposal from Strand Associates to perform an engineering analysis of the protective coatings on all three (3) of the Village's above grade water tower structures. These three water tanks were last sandblasted and re-coated in 1999, 2001 and 2002 and are experiencing varying degrees of wear. Based on the results of this analysis, the following rehabilitation schedule was approved by the Village Board, pending funding considerations:

STRUCTURE	ESTIMATED COST	ACTUAL COST	RECOMMENDED COMPLETION
67th Street Tank (500,000 gallon spheroid)	\$468,000	\$368,200	FY 2015/16
Executive Tank (3,000,000 gallon standpipe)	\$946,000	-	FY 2016/17
Village Hall Tank (500,000 gallon spheroid)	\$478,000	-	FY 2017/18

REQUEST FOR FEEDBACK

The 67th Street tank rehabilitation work has been substantially completed – only landscape restoration work at the base of the tank remains. The FY 2015/16 budget also includes funding to develop design specifications and bidding documents relating to the re-coating of the 3 MG standpipe. On May 11, 2015, the Village Board accepted a proposal from CBBEL to perform this work. Attached is the completed preliminary contract document for the rehabilitation of the 3 MG standpipe to occur in FY 2016/17. The project is scheduled to be put out to public bid in January of 2016, with the project commencing after May 1, 2016 within the 2016/17 fiscal year.

STAFF RECOMMENDATION

Although there may be minor changes made to the draft, staff recommends approval of the attached contract document.

CONTRACT DOCUMENTS
FOR
3 MG STANDPIPE PAINTING AND REHABILITATION PROJECT
FOR
WILLOWBROOK, IL

BID SUBMITTED BY

COMPANY NAME

STREET ADDRESS

DATE

CBBEL PROJECT NO. 15-0278.00000

FOR BID

BID DUE _____ **(BEFORE** _____ **A.M. LOCAL TIME)**

PRELIMINARY
FOR REVIEW

PROJECT SPECIFICATIONS AND INFORMATION

FOR

3 MG STANDPIPE PAINTING AND REHABILITATION PROJECT

FOR

WILLOWBROOK, IL

OWNER: VILLAGE OF WILLOWBROOK
835 MIDWAY DRIVE
WILLOWBROOK, IL 60527

CONSULTANT: CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 WEST HIGGINS ROAD
SUITE 600
ROSEMONT, IL 60018
(847) 823-0500

CONTRACT DOCUMENTS CONSISTING
OF

BIDDING REQUIREMENTS
CONTRACTUAL DOCUMENTS
TECHNICAL SPECIFICATIONS

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ADVERTISEMENT FOR BIDS

SECTION 00 11 13

The Village of Willowbrook, DuPage County, Illinois will receive sealed proposals for the following improvements at the Village Hall, 835 Midway Drive, Willowbrook, IL 60527 until _____.

VILLAGE OF WILLOWBROOK, IL
3 MG STANDPIPE PAINTING AND REHABILITATION PROJECT

Proposals will be publicly read aloud in the Village Hall at _____. No bid shall be withdrawn after the opening of the proposals without the consent of the Mayor and Board of Trustees for a period of forty-five days after the scheduled time of closing bids.

This project generally consists of painting work required for surface preparation and painting of existing potable water storage tanks, miscellaneous welding and tank maintenance repairs.

A pre-bid meeting will be held at the 3 Million Gallon Standpipe site. The purpose of the pre-bid meeting is to allow Bidders to inspect the facility scheduled for improvements. The address of the 3 MG Standpipe is 727 75th Street.

All proposals shall be sealed in an envelope, addressed to the Village of Willowbrook, attention Village Clerk. The name, address and phone number of the bidder and the name of the project shall also appear on the outside of the envelope. Proposals must be submitted on the forms provided by the Engineer.

The Contract Documents may be examined at the following locations:

**Christopher B. Burke Engineering, Ltd., 9575 W. Higgins Road, Suite 600, Rosemont, IL 60018
Village of Willowbrook, 835 Midway Drive, Willowbrook, IL 60527**

The Contract Documents for the proposed improvements may be obtained at the office of the Engineer, Christopher B. Burke Engineering, Ltd., 9575 W. Higgins Road, Suite 600, Rosemont, Illinois 60018, telephone: 847-823-0500, upon payment of a non-refundable fee of fifty dollars (\$50.00) for each set of Contract Documents payable to Christopher B. Burke Engineering, Ltd.

A certified check/bank draft drawn on a solvent bank, payable without condition to the Village of Willowbrook, or a bid bond in an amount not less than ten percent (10%) of the bid shall be submitted with each proposal as a guarantee that, if the proposal is accepted, a contract will be entered into and the performance of the contract is properly secured.

A Performance Bond and Payment Bond, each in a sum equal to one hundred percent (100%) of the amount of the bid with sureties to be approved by the Mayor and Board of Trustees, must be furnished by the successful bidder. All bids or proposals shall contain an offer to furnish bonds upon acceptance of such bid or proposal.

Contractors and Subcontractors shall conform to the "Public Works Preference Project" Act, (30 ILCS 560/1, et Seq.)

Contractors shall be required to pay not less than the prevailing wage rates on the Project as established by the United States Department of Labor and the State of Illinois Department of Labor. Copies of these wage rates are incorporated in the Contract Documents.

Bids will only be received from qualified contractors. The right is reserved to reject any or all proposals, to waive technicalities, to postpone the bid opening, or to advertise for new proposals, if in the judgment of the Mayor and Board of Trustees their best interests will be promoted thereby.

Mayor and Board of Trustees
Village of Willowbrook

END OF SECTION

INSTRUCTIONS TO BIDDERS

SECTION 00 21 13

00100 GENERAL

To demonstrate qualification for performing the Work of this Contract, Bidders may be requested to submit written evidence of financial position, previous experience, and/or current commitments.

Escalation of Contract price will not be allowed. All prices quoted must represent the entire cost in accordance with the Contract Document and no subsequent claim will be recognized for any increase in wage scales, material prices, cost indexes, or other rates affecting the construction industry or this project.

Bidders are required to attend the pre-bid meeting as described herein.

Project documents may be examined at the Owner's Office during normal office hours.

Project documents may be obtained at the offices of Christopher B. Burke Engineering, Ltd., 9575 W. Higgins Rd., Suite 600, Rosemont, IL 60018 during normal working hours.

Do not separate this Document. Bid Proposals must be submitted in the form of the completely bound Contract Documents.

00101 BID DUE DATE, TIME AND PLACE

Signed bids, under seal, executed and dated for furnishing all services, labor, equipment, materials, and performing all Work necessary for the **3 MG Standpipe** located at **727 75th Street, Willowbrook**, all in accordance with the Contract Documents, will be received from Pre-Qualified Contractors by the Owner located at the **Village Hall, 835 Midway Drive, Willowbrook, IL 60527** on or before _____ local time on the _____ day of _____.

Bids will be opened publicly and read aloud at the above address at _____ local time. No immediate decision shall be rendered concerning the proposals submitted.

If only one bid has been received on the day of the bid opening, this bid may not be opened, but instead be presented to the **Board of Trustees** at its next regular council meeting for consideration.

Bid offers submitted after the above bid opening due time will be returned to the Bidder unopened.

00102 SUBMISSION OF BID

Bidders shall submit **one (1) copy** of their proposal, together with Bid Security, affidavit of non-collusion and all other documents bound herewith, including all Addenda issued, in sealed envelope addressed as follows:

**Village of Willowbrook
835 Midway Drive
Willowbrook, IL 60527**

Subject: **Proposal for the 3 MG Standpipe Painting and Rehabilitation Project**

In addition the sealed envelope submitted by the Bidder shall include the following information on the envelope face: Bidders name and address, and the date and hour of bid opening as designated herein.

Where proposals are sent by mail, special messenger, courier service, etc. the Bidder shall be responsible for the delivery of the Bid as designated herein prior to the designated date and hour for the opening of the Bids. If delivery is delayed beyond the date and hour set for the bid opening, proposals thus delayed will not be considered and will be returned unopened to respective bidders.

INSTRUCTIONS TO BIDDERS

00103 PROJECT DESCRIPTION & SCHEDULE

The Project in general consists of the painting of the interior and exterior of the standpipe and the rehabilitation and maintenance work related to the 3 MG Standpipe.

The location of the project site is **727 75th Street, Willowbrook, Illinois.**

Access to the project site during construction activities will be allowed by the Owner during normal working hours; Monday through Friday, 7:00 a.m. to 7:00 p.m. **(or as otherwise directed by the Owner).**

Security Precautions. Contractor shall be responsible for any and all security precautions which may be required during the course of the Work.

Working Hours. The Owner will admit Contractors to the job site during working hours from 7:00 AM to 7:00 PM weekdays. Saturday and Sunday construction activities will not be allowed.

Project Schedule. Time is of the essence for the completion of the Work of this Contract. The Work of these Contract Documents is required to be completed within 180 calendar days. The successful Bidder shall submit in writing, a construction schedule showing sequence of operations for review by the Owner prior to commencement of Work.

00104 LICENSE OR ROYALTY FEES.

If the Project is designed to require or permit use of processes, articles, apparatus or equipment for which licenses, or royalty fees will be charged, fees shall be paid directly by Contractor to patentee, licensee or owner of such processes, and fees shall be included in bid.

00105 EXAMINATION BY BIDDER

The Bidder shall, before submitting his/her proposal, carefully examine the Contract Documents, proposal, and bond and insurance requirements. The Bidder shall inspect in detail the site of the proposed Work and familiarize themselves with the detailed requirements of all Work including the demolition Work, together with work to be performed by others, and with all the local conditions affecting the Contract under which he/she will be obligated to operate in performing the Work. By submission of a bid it is understood that the Bidder has satisfied this mandatory requirement. If his Bid is acceptable, the Bidder shall be responsible for, and the **Owner** will make no allowance for, any errors in his/her proposal resulting from his/her failure or neglect to comply with these instructions.

A pre-bid meeting will be held on at local time, with all prospective bidders for the purposes of clarification, questions, site inspection, etc. Bidders will be responsible for signing an attendance register. Meeting will be held at the site located at 727 75th Street, Willowbrook, Illinois. No other individual information session will be held by the Owner relating to this bid.

00106 TANK EVALUATION REPORT

A tank inspection has previously been made and the results are available for inspection by prospective Bidders, but are not a part nor do they constitute a portion of these Contract Documents whether attached or not. The Owner nor the Owner's Consultant assumes any responsibility whatever with respect to the sufficiency or accuracy of these investigations, nor of their interpretation, and there is no guarantee, either expressed or implied, that the conditions indicated are representative of those existing, or that unforeseen developments may not occur.

INSTRUCTIONS TO BIDDERS

00107 INTERPRETATION OF CONTRACT DOCUMENTS

Questions regarding documents, discrepancies, omissions, or intent of the Specifications or Drawings shall be submitted in writing to Owner at least ten (10) days prior to opening of Bids to provide time for issuing and forwarding an Addendum. Any interpretation of the Contract Documents will be made only by Addendum duly issued or delivered by the Owner to each person receiving a set of Contract Documents. The Owner will not be responsible for any other explanations or interpretations of the Contract Documents. Failure on the part of the prospective Bidder to receive a written interpretation prior to the time of bid opening will not be grounds for withdrawal of his/her proposal. The Bidder shall acknowledge receipt of each Addendum issued in the space so provided in the Bid Form. Oral explanations will not be binding.

Direct questions to Mr. Gerry Hennelly, at (847) 823-0500.

00108 APPROXIMATE QUANTITIES

On all items on which bids are to be received on a unit price basis the quantities stated in the Bid will not be used in establishing final payment due Contractor. The quantities stated, on which unit prices are invited, are approximate only. Bids will be compared on the basis of number of units stated in the Bidding Schedule. Payment on the Contract on unit price items will be based on the actual number of units installed (or otherwise performed) in the completed Work.

00109 PREPARATION OF PROPOSAL

The Bidder shall prepare his/her proposal on the attached Bid Form. Unless otherwise stated, all blank spaces of the Bid Form must be correctly filled in. Entries must be stated for each and every item, either typed in or written in ink. Only Bids which are made out on the Bid Form included in this Document will be considered. Amounts are to be shown in both words and figures. In case of discrepancy between words and figures the words shall prevail, unless it clearly appears in Owner's opinion that the words rather than the figures are in error. If any portion of the Bid is required to be given in unit prices and totals, and a discrepancy exists between the unit prices and totals, the unit prices shall prevail, unless it clearly appears in Owner's opinion that the unit prices rather than the totals are in error. If a discrepancy exists between the total base bid and the true sum of the individual bid items, the true sum shall prevail. A bid will be rejected if it does not contain a price for each and every item named in the Bidding Schedule. Bidders are warned against making any erasures or alterations of any kind, and bids which contain omissions, erasures, conditions, alterations, or additions not called for may be rejected.

00110 SIGNING OF BID

If the Bidder is a corporation, the legal name of the corporation shall be set forth together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If the Bidder is a co-partnership, the true name of the firm shall be set forth together with the signatures of all the partners. If the Bidder is an individual, his/her signature shall be inscribed. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a power of attorney must be on file with the Owner prior to bid opening or submitting bids; otherwise the Bid may be regarded as irregular and may be rejected.

00111 BID SECURITY

Each Bid shall be accompanied by a bid bond, cashier's check or certified check drawn on a solvent bank in the State of Illinois payable without condition to the Owner in an amount not less than ten percent (10%) of the Bidder's highest aggregate bid amount whether it be for the Base Bid or the Alternative Bid(s) (when Alternatives are requested), as a guarantee that the Bidder will within fifteen (15) days after the date of the award of a contract execute an agreement and file bond and insurance as required by the Contract Documents if his/her Bid is accepted. Bid not accompanied by a bid security will not be considered.

If an intended awardee fails to execute and file an agreement, bonds and insurance as required by the Contract Documents, the amount of the security submitted with his/her Bid shall be forfeited, not as a penalty, but as liquidated damages. No Bid will be considered unless accompanied by a Bid Security

INSTRUCTIONS TO BIDDERS

as a guarantee that if the Bid is accepted the Bidder will execute the Agreement and file bonds and insurance as required by the Contract Documents within 15 days from the date of the award of the Contract.

The bid security of the three (3) lowest bidders will be retained until a contract has been entered into and executed with the successful bidder and the performance and labor and material payment bonds, each in the full amount of the Contract, have been posted with the **Village of Willowbrook** and Certificates of Insurance indemnifying and adding as Additional Insureds, the **Village of Willowbrook** and Christopher B. Burke Engineering, Ltd., and their officers, employees and agents, have been delivered to and reviewed by the Engineer.

00112 RETURN OF BID SECURITIES

The bid securities of the three lowest bidders will be held until the Agreement has been executed by the successful Bidder and he/she has filed with Owner the required bonds and insurance, after which bid securities will be returned to the three lowest bidders. The bid securities of the other Bidders will be returned within 15 days after the opening of the Bids.

00113 CONSIDERATION OF PROPOSALS

No proposal will be accepted from or Contract awarded to any person, firm or corporation that is in arrears or is in default to the Owner upon any debt or contract, or that is a defaulter, as surety or otherwise, upon any obligation to the Owner, or had failed to perform faithfully any previous contract with the Owner.

The Owner reserves the right to accept or reject any or all bids, to waive any informalities in any bid, or to make awards in the best interest of the Owner. The Owner also reserves the right to award a partial amount of the Specification rather than the entire amount.

00114 BID SUBMITTAL

Any bid may be withdrawn at any time prior to the hour herein stated for the bid opening, provided that a request in writing, executed by the Bidder, or his/her duly authorized representative, for the withdrawal of such Bid is filed with Owner prior to the time specified for opening of Bids. The withdrawal of a Bid will not prejudice the right of a Bidder to file a new Bid.

No Bidder shall withdraw, cancel or modify his/her proposal for a period of forty-five (45) consecutive calendar days after the specified closing time for the receipt of proposals, nor shall the successful Bidder withdraw, cancel or modify his/her proposal after having been notified that said proposal has been accepted by the Owner.

Bidders shall guarantee their bids for a period of forty-five (45) consecutive calendar days from the date of receipt of bids.

00115 PENALTY FOR COLLUSION

If at any time it shall be found that the person, firm or corporation to whom the Contract has been awarded has, in presenting any Bid or Bids, colluded with any other party or parties, then the Contract so awarded shall be null and void, and Contractor and his/her sureties shall be liable to Owner for all loss or damage which Owner may suffer thereby, and Owner may advertise for new bids for said Work.

00116 LICENSE AND EXPERIENCE

Each Bidder shall possess state and local licenses as are required by law, and shall furnish satisfactory proof to Owner upon request that the licenses are in effect during the entire period of the Contract.

To be considered as eligible to submit a proposal, a Bidder shall have complied with all legal requirements to permit him/her to operate under applicable laws of the State of Illinois.

The Contractor bidding the project shall be actively engaged in Work of the nature of the project described and have adequate specialized workers and machines to do the Work.

INSTRUCTIONS TO BIDDERS

00117 ACCEPTANCE/REJECTION OF PROPOSALS

The Owner expects to accept one of the proposals or reject all proposals within thirty (30) days from the date of bid opening, unless the lowest responsive Bidder, upon request of the Owner, extends the time of acceptance to the Owner.

The Owner reserves the right to reject any and all proposals when such rejection is in the interest of the Owner, to reject proposal of a Bidder who has previously failed to perform properly, or complete on time, contracts of a similar nature, and to reject proposal of a Bidder who is not, in opinion of the Consultant or the Owner, in a position to satisfactorily perform the Work of the Contract. The Owner also reserves the right to waive any informalities and technicalities in bidding.

Under normal circumstance Contract will be awarded to lowest responsible Bidder, plus any accepted alternates, unless all bids are rejected. However, the Owner reserves the right to award Contract in its best interest, and therefore, reserves the right to select a Bidder other than lowest.

00118 EFFECTIVE DATE OF AWARD

If a Contract is awarded by Owner, such award shall be effective when formal notice of such award, signed by the authorized representative of Owner, has been delivered to the Intended awardee, or mailed to him/her at the main business address shown on his/her Bid by an officer or agent of Owner duly authorized to give such notice.

00119 EXECUTION OF AGREEMENT

Copies of the Agreement in the number stated in the Contract Agreement will be supplied by the Owner and shall be executed by the successful Bidder, and returned, together with the required bonds and insurance, within fifteen (15) days from and after the date of the award of the Contract. Effective date of bonds shall be the same or later than the date of the Agreement.

00120 FAILURE TO EXECUTE AGREEMENT AND FILE BOND & INSURANCE

Failure of a successful Bidder to execute the Agreement and file required bonds and insurance within the required time shall be just cause for the annulment of the award. On failure of a successful Bidder to execute the Agreement and file the required bonds and insurance within the required time, he/she shall forfeit his/her Bid Security as agreed hereinbefore. Upon annulment of an award as aforesaid, Owner may then re-award the Contract.

00121 EXCEPTIONS

Any Bidder's exceptions to these terms or conditions or deviations from the written Specifications shall be shown in writing and attached to the Bid Form. However, such exceptions may be cause for rejection of the Bid.

00122 SUBSTITUTE MATERIAL

Where in the Technical Specifications one or more certain equipment/materials, trade names or articles of certain manufacture are mentioned, it is done for the express purpose of establishing a basis of durability and efficiency and not for the purpose of limiting competition. Other names of equipment/material can be used if, in the opinion of the Engineer and the Owner, they are equal in durability and efficiency to those mentioned and of a design in harmony with the Work as outlined; and the Engineer and Owner give a written approval of a substitution. Adequacy of the proposed substituted equipment and/or materials shall be determined during the shop drawing review process. Any substituted materials and/or equipment ordered by the Contractor prior to the shop drawing review process shall be at the Contractor's own risk. Should a substitution of equipment and/or materials be desired, the Contractor shall be required to request the change in writing within ten (10) days from the Bid due date.

INSTRUCTIONS TO BIDDERS

00123 GUARANTEE

The Contractor shall furnish a satisfactory surety bond in the sum of the full amount of the Contract in dollars guaranteeing the proper completion of the Work and the maintenance of the Work during the period of one (1) year from and after the date of the completion and acceptance of the same. The maintenance, however, shall not include any damage to the Work or to any of the other obligations embraced by the Contractor which may be incurred by action beyond the control of the Contractor.

00124 PAYMENT BOND

The Contractor shall furnish a satisfactory payment bond in the full amount of the Contract guaranteeing payment of all material used and for all labor performed.

00125 PERMITS

The Contractor shall be responsible for any and all permits and permit fees as may be required to accomplish the work of this Contract. The Contractor shall be required to comply with all provisions of each of the permits issued, post the necessary bonds in the required amounts, and furnish the necessary insurance certificates.

00126 PREVAILING WAGE RATES

Not less than a prevailing wage rate shall be paid for labor on the Work to be performed under this Contract, as required by law. The rates for various phases of Work contemplated shall be in accordance with the prevailing wage scale. The Contractor shall be required to comply with all applicable federal, state and local laws pertaining to employment. Illinois workers shall be employed to perform Work in accordance with the provisions of Illinois Revised Statutes, Chapter 48, Section 2201 et seq., latest revision. The Owner may at any time inquire of the Contractor as to the rates of wages being paid employees of the Contractor, any subcontractor or material men, where upon such information shall be promptly provided to the Owner. A certified payroll shall be submitted with each pay out request.

00127 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE

Each Bidder agrees as evidenced by his/her submission of a bid to comply with all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission: and to comply with all Illinois labor laws, particularly with regard to:

- A. "Preference to Citizens Illinois on Public Works Projects Acts" (Illinois Revised Statutes, Chapter 48, Section 289 - 275).
- B. "Wages of Employees on Public Works" (Prevailing Wage Act) (Illinois Revised Statutes, Chapter 48, Section 395-1-12).

The Contractor, in performing under the Contract, shall not discriminate against any worker, employee or applicant, or any member of the public because of race, creed, color, age, sex or national origin, nor otherwise commit an unfair employment practice. The Contractor further agrees that this article will be incorporated by the Contractor in all contracts entered into with suppliers of materials or services, contractors and subcontractors and all labor organizations, furnishing skilled, unskilled and craft union skilled labor, or who may perform any such labor or services in connection with this Contract.

00128 TAXES

Federal Excise Tax does not apply to materials purchased by the **Village of Willowbrook** by virtue of its municipality status. The **Village of Willowbrook** is a not-for-profit agency which has a sales tax exemption status. Owner's Tax Exemption Number will be provided (if requested) to the successful Bidder upon execution of the Agreement.

INSTRUCTIONS TO BIDDERS

00129 LIQUIDATED DAMAGES

Time is of the essence in completion of the Work. The **Village of Willowbrook** may collect liquidated damages in the amount of \$250.00 per day should the Contractor fail to complete the authorized work within the time allowed for the Project Schedule.

00130 DEFINED TERMS

The terms "**Village of Willowbrook**", "Proposal" and "Plans" mean the same as "OWNER", "BID", and "DRAWINGS" respectively.

Where references are made to "Village" or "the Village", such references shall be understood to mean "Village of Willowbrook".

Where **Owner's Representative** is referenced, such reference shall be understood to mean the Engineer (when appointed by the Owner), and/or any other individual(s) duly authorized by the Owner to act as the representative of the Owner.

Terms used in these Instructions to Bidders are defined in the General Conditions of Construction Contract Document (Section 00 72 00) Unless otherwise stated, these General Conditions of Construction Contract Document shall apply to the Work of this Contract; and shall be incorporated into this Contract as the General Conditions of the Contract all of which are as fully a part of this Contract as if herein set out verbatim.

END OF SECTION

BID FORM

SECTION 00 41 43

TO: VILLAGE OF WILLOWBROOK
835 MIDWAY DRIVE
WILLOWBROOK, IL 60527

PROJECT: 3 MG STANDPIPE PAINTING AND REHABILITATION PROJECT

ACKNOWLEDGMENTS: The undersigned has received the Contract Documents entitled: "**3 MG STANDPIPE PAINTING AND REHABILITATION PROJECT**" and the following addenda to these documents:

Addendum No. _____	Dated _____

All provisions of the Contract Documents and the addenda have been included in the Proposal submitted by the undersigned. The undersigned has carefully examined all of the Contract Documents and the sites and submits the following Proposal:

AGREEMENT: In submitting this Proposal, the undersigned agrees and/or understands:

1. Bids are to be held for 45 days with a "Notice of Award" expected to be issued to the apparent successful bidder within 60 days after the bid opening.
2. The prices in this bid have been arrived at independently, without consultation, communication or agreement, as to any matter relating to such prices with any other bidder or with any competitor and this Bid is in all respects fair and without collusion or fraud. Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed and will not knowingly be disclosed prior to opening directly or indirectly to any other bidder or to any competitor. No attempt has been made nor will be made by the undersigned to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.
3. To enter into and execute the Contract and furnish the properly executed bonds and insurance certificates within the time and with the forms and in the amounts required by the Contract Documents if the award is made to the undersigned.
4. To accomplish the Work strictly in accordance with the Contract Documents.
5. To complete all Work within **the time periods specified and** after Notice to Proceed is received. The Bidder, in submitting a bid offer, accepts the specified Contract Time for performing the Work. Completion of Work shall be in accordance with the phased construction schedule. Contractor shall submit with the Bid a copy of the proposed construction schedule. Contractor shall comply with the applicable requirements of Section 00 72 00 regarding the construction schedule.
6. The undersigned warrants that he/she has carefully examined the sites of the Work and all Contract Documents, that he/she is fully aware and knows of the character of the material, that he/she is fully satisfied as to the conditions to be encountered overhead, on the surface and in the spaces, and of the character, quality and quantities of Work to be performed and materials to be furnished, and the requirements of the Contract Documents. Furthermore, the undersigned has based the within Contract prices on his/her own independent examination in performing the Work and has not relied upon any information furnished to him/her by the **Owner**, any agent, servant or employee of the **Owner**. The undersigned agrees to assume all risks arising from any deficiencies in the Drawings, Specifications, or other Contract Documents and will make no claim against the **Owner** because of any such alleged deficiency or alleged breach

BID FORM

of warranty by the **Owner**. The undersigned further assumes all risks of any unforeseen conditions to be incurred in performing the Work, either overhead, on the surface, or in spaces, and has taken these risks into consideration in preparing his/her Bid. The undersigned further warrants that he/she will perform such additional and/or corrective Work as may be required in order to insure that the Work performs its intended function satisfactorily, for the prices set forth in his/her proposal and at no additional cost to the **Owner**.

7. Before submitting this Proposal, the undersigned confirms that he/she has available the equipment, forces and materials necessary to perform the Work and made all necessary arrangements to insure that such equipment and materials be delivered to the site at such time as will enable him/her to perform all obligations of the Contract within the Construction Time herein stated. Furthermore, the undersigned also confirms that he/she has contacted the manufacturers and/or suppliers of the equipment and materials necessary to perform the Work and made all necessary arrangements to insure that such equipment and materials be delivered to the site at such time as will enable him/her to perform all obligations of the Contract within the Construction Time herein stated.
8. Accompanying this proposal is a Bid Bond complying with the provisions herein stated.
9. If this proposal is accepted and the undersigned fails to execute a contract and provide the bonds and certificate of insurance, as required, it is hereby agreed that the Bid Security shall be forfeited to the **Village of Willowbrook**, not as a penalty, but as liquidated damages.
10. Each pay item listed in the Bidding Schedule and in the Schedule of Prices shall have a unit price or lump sum price and a total price.
11. The unit price shall govern if no total price is shown or if there is a discrepancy between the product of the unit price multiplied by the quantity.
12. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.
13. A bid will be declared unacceptable if neither a unit price nor a total price is shown.
14. The undersigned firm certifies that it has not been convicted of bribery or attempting to bribe an officer or employee of the **State of Illinois**, nor has the firm made an omission of guilt of such conduct which is a matter of record, nor has an official, agent, or employee of the firm committed bribery or attempted bribery on behalf of the firm and pursuant to the direction or authorization of a responsible official of the firm. The undersigned firm further certifies that it is not barred from contracting with any unit of State or local government as a result of a violation of the State laws prohibiting bid-rigging or bid-rotating.

NOTE: Bidders shall submit a price for each item in the Bidding Schedule and in the Schedule of Prices. Failure to do so may result in rejection of the Proposal. The completed Bidding Schedule included in this Section shall accompany the Bid Proposal.

BID FORM

BIDDING SCHEDULE:

The undersigned, having carefully examined all of the Contract Documents for the "3 MG Standpipe Painting and Rehabilitation Project" as well as the site of the Work and all conditions affecting the Work, including adjacent surroundings, shall furnish all services, labor, equipment and materials necessary and to complete all the Work for the prices set forth in the following Schedule:

Item No.	Description	Unit	Qty.	Unit Cost	Cost
05 50 00/01	Continuous Seal Weld Repairs	LSUM	1		
05 50 00/02	Interior Pit Weld Repairs	LSUM	1		
05 50 00/03	Replace Bolts and Gaskets on Manways	LSUM	1		
05 52 13/01	Remove and Replace Existing Roof Vent	LSUM	1		
05 52 13/02	Installation of New Painters Rail, Safety Grabs and Rigging Couplings	LSUM	1		
05 52 13/03	Installation of New Wet Interior Ladder and Fall Protection Devices	LSUM	1		
05 52 13/04	Repair and Replace Existing Dry Interior Lighting	LSUM	1		
09 91 13/01	Interior Wet Surfaces; all surface preparation, priming and painting	LSUM	1		
09 91 13/02	Exterior Surfaces; all surface preparation, priming and painting	LSUM	1		
09 91 13/03	Interior Dry Surfaces; all surface preparation, priming and painting	LSUM	1		
09 91 13/04	Full Containment as required	LSUM	1		
09 91 13/05	Proper and Legal Disposal of Paint Chips/Flakes and Other Debris	LSUM	1		
26 42 00/01	Cathodic Protection	LSUM	1		
26 42 00/02	Service Agreement	LSUM	1		
26 56 00/01	Lighting Equipment	LSUM	1		
27 51 25/01	Modifications to Existing SCADA System	LSUM	1		
31 20 00/01	Earth Excavation	LSUM	1		
32 92 19/01	Topsoil and Seeding	LSUM	1		
TOTAL BID					

BID FORM

EXCEPTIONS AND DEVIATIONS

The Bidder shall list herein all exceptions and deviations taken to the Contract Documents by Section and page number. (Use additional sheets if required and state number of sheets).

Exceptions and deviations taken to the Contract Documents are (check one): None (); As Stated Below ()/Sheet ___ of ___.

Section/Pg. No.

Description of Exception/Deviation

SUBCONTRACTOR LISTING

The following list of subcontractors and class of work performed by each is submitted. Subcontractors are defined as persons, firms or corporations who supply labor and/or materials for work under this Contract.

Subcontractor

Class of Work

BID FORM

BIDDER'S EXPERIENCE/QUALIFICATIONS

To demonstrate the Bidder's experience/qualifications, the Bidder shall list herein at least five (5) similar projects equal or greater in capacity which the Bidder has successfully completed within the past five (5) years.

<u>Owner Or Municipality</u>	<u>General Project Description</u>	<u>Reference Name and Phone No.</u>	<u>Year Completed</u>
--------------------------------------	--	---	---------------------------

Note: Bid will be considered "Non-Responsive" if the above experience listing, qualifications and requirements are not fulfilled.

BID FORM

BID CONDITIONS

It is expressly understood and agreed that quantities in the Bidding Schedule for Unit Price Work Items are approximate only, and that payment on the Contract will be made only on the actual quantities of Work complete in place, measured on the basis defined in the Contract Conditions and the Contract Specifications.

The undersigned has carefully checked the above Bidding Schedule against the Contract Drawings and Specifications before preparing this proposal and accepts the items listed in this Bid as substantially correct, both as to classification and amount, and as correctly listing the complete Work to be done in accordance with the Contract Drawings and Specifications.

If this Bid is accepted and the undersigned shall fail to contract as aforesaid and to give the Performance Bond and Payment Bond and to provide all insurance as required by the Contract Documents within 10 days after the date of the award of the Contract, the Owner may, at his/her option, determine that the Bidder has abandoned his/her Contract, and thereupon this Bid and the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this Bid shall operate and the same shall be the property of the Owner as liquidated damages.

BID SECURITY

Accompanying this Bid is a _____
in the amount of _____ Dollars (\$ _____).

- Note: a. Insert the words "bid bond" or "cashier's check", or "certified check" as the case may be. In the case where bid security is not required by the contract insert the words "Not Required by Contract".
- b. Amount must be equal to at least **ten percent (10%)** of the Total Bid Price. Where an Alternative(s) has been requested, the Bid Security shall be at least ten percent (10%) of the highest aggregate amount whether it be the Total Base Bid Price or the Total Alternative Bid Price.

Attach Bid Security Here

PROPOSAL SIGNATURE:

State of _____)
County of _____) ss

_____, being first duly sworn on oath deposes and says that the Bidder on the above Bid is organized as indicated below and that all statements herein made are made on behalf of such Bidder and that his/her deponent is authorized to make them.

_____, also deposes and says that he examined and carefully prepared his/her Bid from the Contract Drawings and Specifications and has checked the same in detail before submitting this Bid, that the statements contained herein are true and correct.

BID FORM

(Fill Out Applicable Paragraph Below)

If Bidder is:

An Individual

By _____ (SEAL)
(Individual's Name)

doing business as _____

Business address: _____

Phone Number: _____

A Partnership

By _____ (SEAL)
(Firm Name)

(General Partner)

Business address: _____

Phone Number: _____

A Corporation

By _____
(Corporation Name)

(State of Incorporation)

By _____
(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest _____ (SEAL)
(Secretary)

Business address: _____

Phone Number: _____

END OF SECTION

WAGE RATE REQUIREMENTS

SECTION 00 43 43

1. GENERAL

- A. CONTRACTOR and Subcontractors shall pay wages not less than the prevailing hourly wage rate for each classification of employee engaged on the Work as determined by the United States Department of Labor and by the State of Illinois Department of Labor. In case of conflict, the wages paid by CONTRACTOR shall be not less than the higher of the prevailing wage determination.
- B. CONTRACTOR shall comply with the provisions of Wages of Employees on Public Works (Prevailing Wage) Act (Illinois Revised Statutes, Chapter 48, Section 39s-1 through 39s-12).
- C. The prevailing wage law does not prohibit payment of more than the prevailing rate of wages nor does it limit the hours of Work which may be performed by any employee in any particular period of time.
- D. A copy of the wage determination shall be posted by CONTRACTOR in a prominent place at the Site of the Work where it can be easily seen by the employees.
- E. If at the time the Contract is executed, or if during the term of the Contract, there is excessive unemployment in Illinois as defined in the Employment of Illinois Workers on Public Works Act, 30 ILCS 570-0.01 *et seq.*, as two consecutive months of unemployment exceeding 5%, the Contractor agrees to employ Illinois laborers as stipulated by the Act. An "Illinois laborer" is defined as any person who has resided in Illinois for at least thirty (30) days and intends to become or remain an Illinois resident.

2. WAGE DETERMINATIONS

- A. The following wage rate schedule(s) are the prevailing rate(s) of hourly wage applicable to this Contract.

If the Department of Labor revises the prevailing rate of hourly wages to be paid by the public body, the revised rate as provided by the public body shall apply to this Contract.

AFFIDAVIT OF NON-COLLUSION

SECTION 00 45 19

STATE OF ILLINOIS)

)SS
)

_____ being first duly sworn on oath deposes and states:

a. That in connection with this procurement,

1. the prices in this Bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
2. the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening directly or indirectly to any other bidder or to any competitor; and
3. no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.

b. The undersigned further states

1. He/She is the person in the Bidder's organization responsible within that organization for the decision as to the prices being bid herein and that he/she has not participated, and will not participate, in any action contrary to (a.1) through (a.3) above; or
2. He/She is not the person in the Bidder's organization responsible within that organization for the decision as to the prices being bid herein but that he/she has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (a.1) through (a.3) above, and as their agent does hereby so certify; and (b) he/she has not participated, and will not participate, in any action contrary to (a.2) through (a.3) above.

c. It is expressly understood that the foregoing statements, representations, and promises are made as a condition to the right of the Bidder to receive payment under any award made hereunder.

For Corporation:
(Corporate Seal)

(Name) Indicate if corporation, partnership or sole proprietor

ATTEST:

(Office held in Bidder Organization)

SUBSCRIBED AND SWORN TO before me

this _____ day of _____, 20__

Notary Public

END OF SECTION

CONTRACT AGREEMENT

SECTION 00 52 43

THIS AGREEMENT, made this _____ day of _____, 20____ by and between the **Village of Willowbrook** hereinafter called "Owner", and _____, hereinafter called "Contractor".

WITNESSETH:

WHEREAS, Owner has heretofore, solicited Bids for all the Work and improvements and for the doing of all things included within the hereinafter specified and related to the **3 MG Standpipe Painting and Rehabilitation Project**.

WHEREAS, Owner did on the _____ day of _____, 20____, find that Contractor was the lowest responsible bidder for hereinafter specified Work and did award Contractor a contract for said Work.

NOW, THEREFORE, for and in consideration of their mutual promises, covenants, undertaking and agreements, the parties hereto do hereby agree as follows:

ARTICLE I - WORK TO BE DONE BY CONTRACTOR

Contractor agrees, at his/her own cost and expense, to do all the Work and to furnish all the labor, materials, equipment and other property necessary to perform and complete all the Work and improvements required for and related to the **3 MG Standpipe Painting and Rehabilitation Project** all in full accordance with and in compliance with and as required by the hereinafter specified Contract Documents, including any and all Addenda for said Work, and to do, at his/her own cost and expense, all other things required of the Contractor by said Contract Documents for said Work.

All Work shall be performed in accordance with applicable laws and government agency regulations and rules; Authorities having jurisdiction; OSHA regulations and rules; and any applicable rules and regulations of the **State of Illinois** or **DuPage County** agencies. Furthermore, and as related to the Work, the Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of all public authorities bearing on the safety of persons or property or their protection from damage, injury or loss.

ARTICLE II - CONTRACT DOCUMENTS

The Contract Documents herein named include all of the following component parts, all of which are as fully a part of this Contract as if herein set out verbatim, or if not attached, as if hereto attached:

1. Instructions to Bidders
2. Bidding Requirements
3. Bid Form
4. This Contract Agreement
5. General Conditions of the Contract
6. Supplementary Conditions (if any)
7. Contract Specifications
8. Contract Drawings
9. All Bonds, Insurance Certificates and Insurance Policies mentioned or referred to in the foregoing Documents.
10. Any and all other Documents or Papers included or referred to in the foregoing Documents.
11. Any and all Addenda to the foregoing.

CONTRACT AGREEMENT

IN WITNESS WHEREOF, the parties hereto have caused this Instrument to be executed the day and year first above written.

Contractor

By _____

Title _____

(SEAL)

ATTEST:

TITLE: _____

VILLAGE OF WILLOWBROOK

Owner

By _____

Title _____

(SEAL)

ATTEST:

TITLE: _____

IMPORTANT

NOTE: If the Contractor is a corporation, the legal name of the corporation shall be set forth above, together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation; if Contractor is a co-partnership, the true name of the firm shall be set forth above, together with the signatures of all partners; and if the contractor is an individual, his/her signature shall be placed above. If signature is by an agent other than an officer of a corporation or a member of a partnership, a power-of-attorney must be attached hereto. Signature of Contractor shall also be acknowledged before a Notary Public or other person authorized by law to execute such acknowledgment.

END OF SECTION

PERFORMANCE BOND

SECTION 00 61 13-13

KNOW ALL MEN BY THESE PRESENTS THAT _____

(insert the name and address or legal title of the Contractor)

as Principle, hereinafter called Contractor, and

(insert the legal title of Surety)

as Surety, hereinafter called Surety, are held firmly bound unto the **(OWNER)** _____

_____ as obligee, hereinafter called the
Owner in the full and just sum of

_____ DOLLARS (\$ _____)

lawful money of the UNITED STATES OF AMERICA for the payment of which sum of money well and truly to be made, we bind ourselves, heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered in to a certain written contract, dated the _____ day of

_____, A.D. 20____, with the _____

for _____

complete, as described in the foregoing Contract and Articles of Agreement.

NOW THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if the said Principal shall in all respects well and truly keep and perform the said Contract, and shall pay all sums of money due or to become due, for any labor, materials, apparatus, fixtures or equipment furnished for the purpose of constructing the Work provided in said Contract, and shall remove and replace any defects in workmanship or materials which may be apparent or may develop within a period of one (1) year from the Date of Final Acceptance, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder or the Specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications.

PERFORMANCE BOND

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)
Principal

Witness:

(If Individual or Firm)

Attest:

(If Corporation)

_____ (SEAL)

_____ (SEAL)

Attest:

(Surety)

END OF SECTION

LABOR AND MATERIAL PAYMENT BOND

SECTION 00 61 13-16

KNOW ALL MEN BY THESE PRESENTS THAT _____

(insert the name and address or legal title of the Contractor)

as Principle, hereinafter called Contractor, and

(insert the legal title of Surety)

as Surety, hereinafter called Surety, are held firmly bound unto the **(OWNER)** _____

_____ as obligee, hereinafter called the
Owner in the full and just sum of

_____ DOLLARS (\$ _____)

lawful money of the UNITED STATES OF AMERICA for the payment of which sum of money well and truly to be made, we bind ourselves, heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents:

WHEREAS, the Principal has entered in to a certain written contract, dated the _____ day of
_____, A.D. 20____, with the _____

for _____

complete, as described in the foregoing Contract and Articles of Agreement.

NOW THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if the said Principal shall in all respects well and truly keep and perform the said Contract, and shall pay all sums of money due or to become due, for any and all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in the Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, and other fuels, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such Work, and all insurance premiums on said Work, and for all labor, performed in such Work whether by subcontractor or otherwise, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder or the Specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications.

CERTIFICATION OF CONTRACTOR RESPONSIBILITY

SECTION 00 62 00

(To be submitted at Preconstruction Meeting)

The following information is hereby submitted. It is understood that this Certificate shall be submitted prior to the initiation of executing the Work of this Contract and prior to or at the time of any change in the personnel assigned as the construction supervisor or safety supervisor. It is further understood that the construction supervisor and the safety supervisor shall be available on a twenty four (24) hour will call basis.

Date: _____ By: _____
(Name and Title)

PROJECT
3 MG Standpipe Painting and Rehabilitation Project

Construction Supervisor:

Name _____

Address _____

Phone _____

Fax _____

E-Mail _____

Safety Supervisor:

Name _____

Address _____

Phone _____

Fax _____

E-Mail _____

END OF SECTION

INSURANCE REQUIREMENTS

SECTION 00 62 16

Before commencing Work, the Contractor shall obtain at his/her own expense, and agree to keep in effect during the life of this Contract, as a minimum requirement, the following insurance in a company or companies acceptable to the Owner; (and authorized to transact business under the laws of the State of Illinois):

1. The Contractor shall purchase and maintain liability insurance as required until all Work required under the Contract has been completed and accepted by the Owner, except as otherwise provided. The insurance required shall be written for not less than the following limits of liability:
 - a. **WORKER'S COMPENSATION INCLUDING OCCUPATIONAL DISEASE, AND EMPLOYER'S LIABILITY INSURANCE.** Procure and maintain worker's Compensation Insurance in strict accordance with requirements of applicable State Worker's Compensation Insurance Laws for all employees to be engaged in work under this Contract. Provide Employer's Liability Insurance in an amount of not less than five hundred thousand (\$500,000) for protection of employees not otherwise protected.
 - b. **PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE.** Full Comprehensive General Liability and Property Damage Insurance coverage, providing protection from claims for damages for personal and bodily injury, including in part sickness, disease, or death, and from claims for damages to property (broad form), which may arise directly or indirectly out of, or in connection with, performance of Work, including completed operations, under the Contract by Contractor, or by any of his subcontractor or by anyone directly or indirectly employed by either of them, or under control of either of them; minimum amounts of such insurance as follows:
 - b.1 Public Liability Insurance not less than One Million Dollars (\$1,000,000) for damages arising out of personal injury and bodily injury, including in part sickness, disease, or death of one person and subject to same limit for each person and not less than One Million Dollars (\$1,000,000) in any one occurrence.
 - b.2 Property Damage Insurance (broad form) in an amount not less than One Million Dollars (\$1,000,000) for damages arising out of injury to or destruction of property of others in any one occurrence with an aggregate limit in same amount.
 - c. **AUTOMOBILE LIABILITY AND PROPERTY DAMAGE INSURANCE.** Comprehensive Automobile Liability and Property Damage Insurance coverage on all vehicles used in connection with contract, whether owned, un-owned, or hired. Liability limits not less than One Million Dollars (\$1,000,000) combined single limit.
 - d. **CONTRACTUAL LIABILITY COVERAGE.** Include "Broad Form Contractual Liability Coverage" endorsement with each and every policy for liability insurance carried by each Contractor and Subcontractor.
 - e. **UMBRELLA LIABILITY.** Umbrella liability insurance excess of primary insurance in amount of Five Million Dollars (\$5,000,000) per occurrence/Five Million Dollars (\$5,000,000) in the aggregate and following form on primary coverage as to additional insureds shall be carried by the Contractor. At the Owner's discretion, this amount may be reduced for sub-contractors.
2. Contractor shall renew any policy which expires during the performance of the Contract and shall notify Owner by appropriate Certificate of Insurance of such renewal prior to the expiration date.

INSURANCE REQUIREMENTS

3. The **Village of Willowbrook** (Owner) and **Christopher B. Burke Engineering, Ltd.** (Engineer) shall be added as an additional insured to the Contractor's general liability/property damage policy, automobile liability and property damage policy and employer's liability coverage. Owner/Engineer shall be named as an alternate employer on Contractor's Worker's Compensation coverage. Contractor hereby waives the right of subrogation against Owner as to any claims under worker's compensation and employer's liability policies.
4. Certificates of Insurance naming Owner and Engineer as additional insured, with insurance companies which are acceptable to the Owner, shall be filed with the Owner prior to commencement of the Work. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled until at least thirty (30) days prior written notice has been given to Owner.
5. All coverages shall be provided upon an occurrence basis, unless claims-made coverages are expressly approved, in writing, by Owner's Director of Risk Management and Insurance. Contractor shall renew any policy which expires during the performance of the contract and shall notify Owner by appropriate Certificate of Insurance of such renewal prior to the expiration date.
6. The Contractor agrees to indemnify and save harmless the Owner, **Christopher B. Burke Engineering, Ltd.**, and all of their officers, partners, agents and employees from and against all loss or expense (including court costs and attorney's fees) by reason of liability imposed by law upon Owner and **Christopher B. Burke Engineering, Ltd.**, for damages because of bodily injury, including death at any time, resulting therefrom sustained by any person or persons or on account of damage to or destruction of property, real or personal, including loss of use thereof, arising out of or in consequence of performance of this Work, whether such injuries to or death of persons or damage to property is due or claimed to be due to the negligence of the Contractor, his/her Subcontractors, the Owner, **Christopher B. Burke Engineering, Ltd.**, their officers, partners, agents, and employees except only such injury, death or damage as shall have been occasioned by the sole negligence of the Owner or **Christopher B. Burke Engineering, Ltd.**

END OF SECTION

LIQUIDATED DAMAGES

SECTION 00 73 93

PART 1- LIQUIDATED DAMAGES

In case of failure on the part of the Contractor to meet the Contract Completion Date, or any extensions thereof, as bid under the Bid Form (Section 00 41 43) for Completion of the Work, the Contractor shall pay to the Owner as fixed, agreed, and liquidated damages the sum of **\$250.00 for each calendar day** that completion is delayed. However, the total amount of liquidated damages to be assessed by the Owner in case of such delays, shall not exceed 10 percent of the original contract price.

In the event that it becomes necessary to terminate the Contractor's right to proceed with the Work under the Contract, such termination shall not relieve the Contractor of any responsibility for liquidated damages as set forth herein. If the Owner so terminates the Contractor's right to proceed, any resulting damage will include, subject to the limitation stated above, such liquidated damages as provided for herein until such reasonable time as may be required for completion of the Work by the Owner.

END OF SECTION

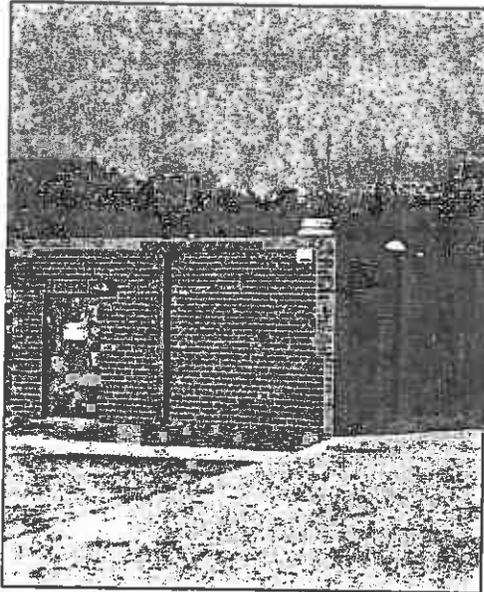


PHOTO SHOWS EXISTING DUPAGE WATER COMMISSION RECEIVING BUILDING LOCATED ON SOUTHWEST CORNER OF TANK SITE. ALL EXISTING CABLING TO BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.

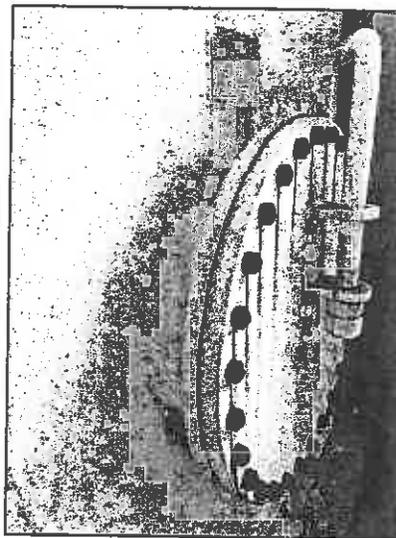
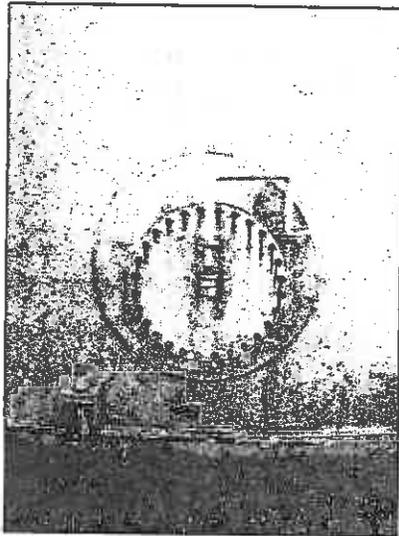
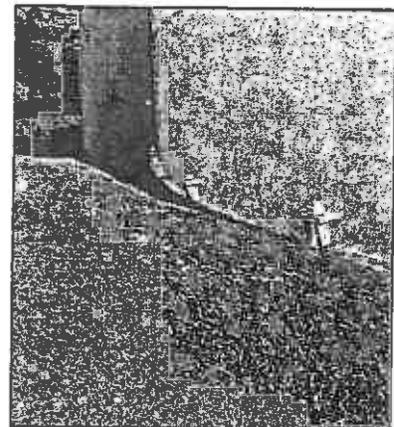


PHOTO SHOWS AN EXISTING SIDEWALL MANWAY, LOCATED ADJACENT TO THE SOUTHERN AND NORTHWESTERN PILASTERS. ALL BOLTS AND GASKETING ARE TO BE REPLACED ON HATCHES AND MANWAYS.

PHOTO SHOWS EXISTING GRADE ON SOUTHWEST CORNER OF THE THE STANDPIPE. REGRADING AND REPAIR OF THE AREA SURROUNDING THE STANDPIPE IS NECESSARY TO EXPOSE THE CONCRETE FOUNDATION 6" ABOVE FINISHED GRADE IN ACCORDANCE WITH AWWA STANDARDS.



CLIENT:



VILLAGE OF WILLOWBROOK
835 MIDWAY DRIVE
WILLOWBROOK, IL 60527
(630) 323-8215

TITLE:

WATER TANK PHOTOS
(4 OF 4)

PROJ. NO. 15-0278

DATE: 9/16/2015

SHEET 6 OF 7

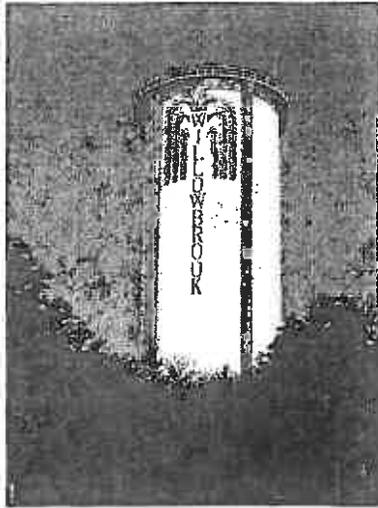
DRAWING NO.

6



CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 800 - Rosemont, Illinois 60018 - (847) 823-0500

DSGN.	GAH	SCALE:	N.T.S.
DWN.	DRK	MODEL:	Default
CHKD.	DS	PLOT DATE:	9/17/2015
FILE:	120261_06_TankPhotos4		



ORIGINAL LOGO



PROPOSED LOGO

IF THE VILLAGE DECIDES TO REPLACE ORIGINAL LOGO,
IT SHALL BE OF THE TYPE AND STYLE INDICATED ABOVE

COLOR SCHEME

OWNER HAS MADE NO PRELIMINARY SELECTION OF COLORS
CONTRACTOR TO SUBMIT COLOR CHARTS IDENTIFYING
EXISTING COLOR SCHEME WITH NEW PAINT SWATCHES.
COLORS TO MATCH LOGO ON 67TH STREET 500MG SPHEROID TANK

CLIENT:  **VILLAGE OF WILLOWBROOK**
835 MIDWAY DRIVE
WILLOWBROOK, IL 60527
(630) 323-8215

TITLE: **LOGO AND COLOR SCHEME**

PROJ. NO. 15-0278
DATE: 9/16/2015
SHEET 7 OF 7
DRAWING NO.

dk er



CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

DSGN.	GAH	SCALE:	N.T.S.
DWN.	DRK	MODEL:	Default
CHKD.	DS	PLOT DATE:	9/17/2015
FILE:	120261_07_LogoColor		

7

GENERAL REQUIREMENTS FOR TANK PAINTING

SECTION 01 01 20

PART 1- GENERAL

1.01 SCOPE

A. Description

This Section describes the General Requirements for the Work to be performed under this Contract. The Contractor shall comply with these General Requirements and shall perform all Work in accordance with the Specifications contained in this Section, as supplemented by Specifications in related Special Provisions, and as shown on the Drawings.

1.02 QUALITY ASSURANCE

Acceptable manufacturers for various materials are specified in respective Sections of these Contract Documents. For convenience of designation in the Contract Documents, certain materials are designated by manufacturer trade name or catalog name and number. Such designation shall be deemed to be followed by the words "or equal" whether such words are shown or not. The Contractor may offer materials which are equal to that so indicated or specified at the time of Bid. The burden of proof as to comparative quality and suitability of alternatives/substitutes shall be upon the Contractor. Specified items are preferred. After acceptance of Bid, no substitutions will be allowed, except as stated in the Bid. Each such request for substitution shall include the name of the specified material for which a substitute is being requested; the name of the proposed substitute material; and a complete description of the proposed substitute including performance and test data and any other information necessary for an evaluation. The decision of the **Owner** regarding the use of the proposed substitution shall be final.

1.03 CONTAINMENT/DISPOSAL REQUIREMENTS

When required by Federal, State or local regulation, the entire **water storage tank** and structure shall be enclosed and surface preparation debris contained. Refer to SSPC-GUIDE 6 I (CON), "Guide for Containing Debris Generated During Paint Removal Operations". Also refer to SSPC-GUIDE 7 I (DIS), "Guide for Disposal of Lead-Contaminated Surface Preparation Debris". NOTE: All surface preparation debris must be disposed of in accordance with applicable Federal, State and local regulations. When containment structures/enclosures are used, they shall not exceed the structural capacity of the **water storage tank** nor place excessive stress on any of the **water storage tank** components.

GENERAL REQUIREMENTS FOR TANK PAINTING

Such containment apparatus shall be designed for rapid lowering in the event of an emergency or wind storm. The enclosure shall be lowered at the end of each day's work.

The **Owner** acknowledges that they are the Generator of and are responsible for the proper containment and disposal of all waste resulting from the surface preparation of the tank. As part of this Contract, the Contractor shall arrange and pay for all containment, tests, permits, transportation and disposal of all waste resulting from the surface preparation of the **water storage tank** in strict accordance with **Illinois** EPA regulations. Copies of all documentation required by **Illinois** EPA regulations shall be submitted to the **Owner** for verification prior to the submission of the Contractor's request for Final Payment, including the properly executed Waste Manifest.

The Contractor shall cut and grind flush all exterior containment structure lugs and prepare and paint areas as specified in the exterior painting Section of these Specifications.

Upon removal of the exterior lugs, the 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-SP10) shall be required in the damaged areas.

1.04

PROTECTION OF PUBLIC AND PRIVATE PROPERTY

During surface preparation and/or painting the Contractor shall be fully responsible for all public and private property such as, but not limited to, vehicles, buildings or other such property, including any nearby water ways, that damage occurs to, or may occur to, as a direct result of the surface preparation and/or painting. The Contractor shall advise nearby businesses of the Work being performed in an effort to relocate any vehicles that could be damaged by the Contractors operations. THE USE OF SILICA SAND BASED ABRASIVE SHALL NOT BE ALLOWED FOR EXTERIOR SURFACE PREPARATION ON THIS PROJECT. The Contractor shall comply with all OSHA and any other Federal or State safety standards.

1.05

PROPOSED SCHEDULE

The Contractor shall submit a proposed schedule of construction with his/her proposal with a specified completion date.

The Contractor's proposed schedule shall include a starting date for painting the tank, completion date of Work on the

GENERAL REQUIREMENTS FOR TANK PAINTING

tank and the length of time necessary to shut down operation of the tank. The proposed schedule shall also show the number of days to perform interior painting work and the number of days to perform exterior painting work.

The Contractor's proposed schedule shall be used for bid comparison and shall be subject to the revisions or modifications and approval of the **Owner** prior to award of the Contract. Start date shall be as soon as possible (weather permitting) after contract award.

1.06 WATER TOWER DRAINING

The **3 MG Standpipe** will be completely drained by the **Owner** prior to beginning the Work of this Contract. The Contractor shall notify the **Owner** at least ten (10) working days prior to initiating any of the specified Work, to allow the **Owner** sufficient time to drain the **water storage tank**.

1.07 DISINFECTION AND FILLING OF THE WATER TOWER

Adequate ventilation that will effectively remove solvent vapors shall be provided for proper drying of paint on interior surfaces when interior surfaces of the **water storage tank** require painting. Following final coat application, the **water storage tank** shall not be disinfected or filled until the coating system is fully cured. Refer to applicable product data sheet(s) for dry time/temperature requirements. Disinfection shall be done in accordance with the current American Water Works Association standard, AWWA C652, or as instructed by the **Owner**. The disinfection process shall be repeated, as required, until water samples taken from the **water storage tank**, submitted to an approved **Illinois** EPA laboratory, show a satisfactory analysis. As a minimum, two water samples on two consecutive days shall be taken. The cost of labor, materials and samples for disinfection shall be considered incidental to the cost of this Project.

1.08 AMERICAN WATER WORKS ASSOCIATION

All Work shall be implemented in accordance with the American Water Works Association's Standard D102-11.

1.09 NSF CERTIFICATION

All coatings in contact with potable water or applied to the inside wet area of the **water storage tank** shall be listed by NSF International under ANSI/NSF Standard 61, Section 5, Protective (Barrier) Materials, Potable Water Tank Coatings.

GENERAL REQUIREMENTS FOR TANK PAINTING

1.10 WORK CREW SUPERVISION

The Contractor shall provide qualified supervision of the paint crew at all times while performing the Work of this Contract. The Contractor's supervisor shall be capable of conversing fluently in the English language and shall be authorized by the Contractor to accept and act on requests made by the **Owner's Representative**.

PART 2- PRODUCT

(As specified in Related Work Sections of these Specifications.)

PART 3- EXECUTION

3.01 MONITORING CONSTRUCTION

A. The Contractor shall submit a monitoring plan for review by the **Owner**, which shall outline the schedule, methods, locations, etc., and shall keep a diary of the Contractor's activities. Diary entries shall include, but not be limited to:

1. Date and time.
2. Representatives name(s) visiting the work site.
3. Weather conditions, including (but not limited to): wind speed, wind direction, humidity, dew point, air temperature, and surface temperature. Inclement weather conditions (such as rain or fog) shall also be documented. **Note: Contractor shall provide and maintain on site equipment to monitor weather conditions as required.**
4. Contractor's activities.
5. Work completed since previous visit.
6. Description of observations, deficiencies and conversations with the **Owner's Representative**.
7. Upcoming work.
8. Other items including lost work days and reason for same.
1. Tests conducted (including dry film thickness testing) and the results.

B. Copies of the diary shall be sent to the **Owner's Representative** at the end of each week.

3.02 GENERAL INSPECTIONS

While performing the Work of this Contract, the Contractor shall visually inspect all areas of the **water storage tank** to be painted for deficiencies such as, but not limited to,

GENERAL REQUIREMENTS FOR TANK PAINTING

loose electrical conduits and wiring, faulty or broken lighting, unrestrained piping, unfastened bolts, wobbly ladder assemblies, etc. The Contractor shall report any such deficiencies discovered without delay to the **Owner**.

3.03 RELATED WORK

Additional execution requirements shall be in accordance with the applicable Related Work Sections of these Specifications.

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for the Work specified under this Section. All costs for such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Bid Schedule.

END OF SECTION

SUMMARY OF WORK

SECTION 01 11 00

PART 1- GENERAL

1.01 DESCRIPTION OF WORK

- A. General. The Work to be performed consists of furnishing labor, materials, equipment, and supervision as required by the Contract Documents for the **3 MG Standpipe Painting and Rehabilitation Project** as required and as herein specified, including any and all accessories associated with the installation. The Contractor shall submit a staged construction schedule to Owner. The Work to be performed is generally summarized to include but not be limited to the following.
- B. Work is briefly summarized as follows:
1. Regrading and repair of the area surrounding the standpipe to expose the concrete foundation 6 inches above finished grade in accordance with AWWA standards.
 2. Replace the existing pilaster lighting units with new LED type luminaires and controls.
 3. Clean all oil and grease from surface, abrasive-blast the entire exterior to a SSPC-SP6 Commercial Blast. All weld seams should be abrasive-blasted to SSPC-SP10 near White Blast. Prime the exterior with a zinc-rich primer and apply a urethane intermediate coat. Follow the intermediate coat with one finish color coat of fluoropolymer.
 4. Abrasive-blast of the entire interior wet areas of the standpipe including ceilings, weld seams, beams, and manways to SSPC-SP10 Near White. Prime surface-prepared areas with epoxy and apply two additional coats of epoxy. Sealing along the roof beams and ceiling with caulk.
 5. Abrasive-blast all interior dry coating areas inside the pilasters to SSPC-SP6. Prime all areas with epoxy primer and apply a finish epoxy coat to match existing.
 6. Install a fail-safe, frost proof vent in place of the existing mushroom vent to protect against pressure/vacuum damage. This includes installing a flange on the existing vent pipe and providing a gasket between the flanges.

SUMMARY OF WORK

7. Installation of new painter's rail, safety grabs, rigging couplings, new wet interior ladder and fall protection devices.
 8. Remove and replace existing hanging anode cathodic protection system including rectifier.
 9. Seam seal all interior wet roof plates with caulk.
 10. Remove and replace existing manway hatch with proposed 30" diameter hatch.
 11. Replace all gasketing on all hatches and manways.
 12. After construction is complete, restore site to preconstruction condition.
- C. Debris Removal. Included as part of the above Work shall be the removal of any and all debris resulting from the Work. Such debris shall be legally and properly disposed off site. All fees for such disposal shall be the responsibility of the Contractor.
- D. Painting. Paint to be as specified in Section 09 91 13. Paint shall be that of nationally recognized manufacturer and suitable for the application. Two coats are required. Owner to select final color of paint.

1.02 LOCATION OF THE WORK

The project work site is located at **727 75th Street, Willowbrook, IL 60527.**

1.03 PHYSICAL CONDITIONS

A. General

The sites on which the Work is to be performed has limited access and boundary constraints, all of which the Contractor accepts full responsibility. Any construction easement(s) or staging area(s) required by the Contractor (other than those that may be shown on the Drawings) shall be the responsibility of the Contractor. Any specialized machinery and/or equipment as required due to the limited access/boundary constraints/type of work to be performed shall be the responsibility of the Contractor.

SUMMARY OF WORK

B. Staging Areas

Prior to staging any equipment, materials, and/or appurtenances as may be required to perform the Work, the Contractor shall obtain the permission of the Owner. Any restoration of a damaged area attributed to Contractor staging shall be the Contractor's responsibility. Any special clean up required to restore disturbed areas shall be considered incidental to the Contract.

1.04 ACCESS TO JOB SITE

Access to the project site is possible via **existing roadways**.

The Contractor shall comply with the conditions and regulations of controlling agencies of public roads, access, rights-of-way restrictions, and other limitations affecting transportation and ingress and egress at the job site.

1.05 PROJECT BOUNDARIES AND CONTRACTORS USE OF PREMISES

The area of the project is indicated by the Drawings. Subject to restrictions placed upon the Contractor by the Owner, the Contractor may locate his/her facilities within the area as will best suit his/her operations; except that at no time shall the Contractor locate his/her facilities, equipment, or materials in a manner to obstruct access or in any way interfere with the normal operation of the surrounding community and/or the existing facilities.

1.06 ADDRESSING CORRESPONDENCE

All mail pertinent to the Work shall be sent by special delivery unless delivery by regular mail can be accomplished within three days. Receipt of such mail will be promptly acknowledged when acknowledgment is requested. If acknowledgment is requested and is not received in reasonable time, duplicate copies shall be forwarded.

On all correspondence the name and official position of the signer shall be typewritten or printed immediately below the handwritten signature.

All correspondence relating to contractual matters, including prices, delivery and changes in Scope of Work, shall be directed to the Owner with two copies to the Engineer.

SUMMARY OF WORK

The address of the Owner is:

Village of Willowbrook
835 Midway Drive
Willowbrook, IL 60527

Attention: Mr. Leroy Hansen
Village Clerk

1.07 MEASUREMENT AND PAYMENT

A. Measurement

Measurement will be made for the Work as indicated in the Bidding Schedule and/or as indicated herein.

B. Payment

Payment for the Work will be made at the prices for each of the listed categories in the Bidding Schedule.

These prices shall be full compensation for furnishing all materials, equipment and labor, and for performing the Work including installation and testing and providing the required bond(s) and insurance(s) and all incidentals necessary to complete the Work, whether specified or not.

Payment will not be made for any other Items except as listed. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain.

END OF SECTION

RESPONSIBILITIES OF CONTRACTOR

SECTION 01 11 13

PART 1- GENERAL

1.01 SCOPE

This Section establishes certain minimum requirements of Contractor's responsibilities for which the Contractor shall be fully liable for during the life of the Project and for the Work of this Contract.

1.02 RESPONSIBILITY OF CONTRACTOR

A. General

The Contractor shall perform all Work of this Contract as specified in a neat and orderly manner, with skilled labor knowledgeable in the applicable trade(s), consistent with recognized work practices as required to perform the Work of this Contract and according to the Work Schedule. The Contractor shall be responsible for coordinating all phases of his/her Work with the work of others so as not to interfere with that work being performed by others. The Contractor shall be responsible for notification(s) prior to commencement of Work and/or during construction activities. The Contractor shall be responsible for providing at the Project Site a qualified construction supervisor or Superintendent.

B. Work Schedule

Within ten (10) days after receiving the Notice to Proceed, the Contractor shall submit all items, and information required by Section 01 33 23 to complete the entire Work within the Contract Time stipulated for completion. The Work Schedule shall be subject to the review of the Owner's Representative. If, at any time during the progress of Work, the Owner's Representative is of the opinion that the Contractor is not adhering to such Schedule, the Owner's Representative may request the Contractor to increase his/her force to comply with the Work Schedule. It is the intent of this Contract that the Contractor only remove and replace that portion of any of the roofs which can only be removed and replaced within one working day. Failure of the Owner's Representative to request this shall not release the Contractor from his/her obligation to complete the Work of this Contract within the specified Contract Time.

RESPONSIBILITIES OF CONTRACTOR

C. Supervision and Direction

The Contractor shall supervise and direct the Work. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor shall employ and maintain on the Project a qualified construction supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor or superintendent shall have full authority to act on behalf of the Contractor. All communications given to the supervisor or superintendent shall be as binding as if given to the Contractor. The supervisor or superintendent shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

D. Safety

The Contractor shall be solely responsible for the safety of persons, property or the Work at or adjacent to the construction site. All decisions relating to safe construction operations, the use and proper application of equipment and materials, and the protection of the general public from construction operations shall be the responsibility of the Contractor. The Contractor shall identify a qualified supervisor or superintendent in writing who shall have the authority to act on behalf of the Contractor relative to Project safety issues. The supervisor or superintendent shall be present on the site at all times as required to maintain safe Project operations. In the event that the designated construction or safety supervisor or superintendent is absent from the site, the Contractor shall designate a substitute supervisor or superintendent to act in responsible charge of the Work. Any changes in the designated construction supervisor or safety supervisor or superintendent shall be documented by written statement to the Owner and the Owner's Representative at the time of the change.

E. Repair of Damaged Items

The Contractor shall be entirely responsible for damages to structures of any kind and shall be liable for damages to public and private property. Repair of same shall be Contractor's responsibility and at Contractor's own expense, except where such items are to be removed and replaced as required by the Contract Documents, and/or as otherwise directed by the Owner's Representative during the course of Work, in which case said replacement unit(s) will be paid for at the Contract unit price, as bid.

RESPONSIBILITIES OF CONTRACTOR

F. Compliance

It shall be the responsibility of the Contractor to familiarize himself/herself and comply with all applicable laws, ordinances, rules, regulations and lawful orders of all public authorities bearing on the safety of persons or property or their protection from damage, injury or loss. Further, the Contractor shall comply with all requirements of these Contract Documents, including but not limited to referenced specifications and/or standards as well as the contents of the Occupational Safety and Health Act (OSHA), all codes and ordinances adopted by and in effect by Federal, State, County, **Village**, and municipal Governmental Bodies, and any other governmental agencies at any level having authoritative jurisdiction over the area of improvement and the type of Work to be performed.

G. Existing Utilities

The Contractor shall be responsible to make his/her own investigation to determine the existence, nature, and location of all utility lines and appurtenances within the limits of the improvement.

The Contractor shall take due care in all phases of construction to protect any utility which may be affected by the Work of this Contract. Any damages to existing utilities shall be repaired immediately by the Contractor and at the Contractor's own expense.

The Contractor shall be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, reconstruction, or abandonment by these agencies of any and all services or facilities owned or operated by them within the limits of this improvement.

H. Assignment of Contract

The Contractor shall be fully responsible for assignments of the Contract, when assignments are made by the Contractor. Furthermore, no part of the Work herein specified shall be assigned (by the Contractor) without the written consent of the Owner, and in no case shall such consent relieve the Contractor or his/her surety from the obligations herein entered into by the same or change the terms of the Contract Agreement.

RESPONSIBILITIES OF CONTRACTOR

I. Discrepancies

The Contractor shall not take advantage of any apparent discrepancies as may be presented by the Contract Documents. In the event the Contractor discovers any apparent discrepancy, the Contractor shall be responsible for immediately notifying the Owner's Representative in writing for an interpretation and/or decision; and such decision by the Owner's Representative shall be final. Should the Contractor, having knowledge of any such apparent discrepancy, proceed with the Work, such Work and/or related expenses shall be at the Contractor's own risk and cost.

END OF SECTION

PROJECT MEETINGS

SECTION 01 31 19

PART 1- GENERAL

1.01 PRECONSTRUCTION CONFERENCE

A. General

Within 10 days after issuance of the Notice to Proceed, a preconstruction conference will be held at the location, date, and time to be designated by the Owner. Contractor shall be readily available to attend this meeting and shall make the necessary arrangements to have those individuals (including subcontractors) experienced and knowledgeable, and who will be in the direct charge of the Work, to also attend the meeting.

B. Agenda

The matters to be discussed will include:

1. Set final completion date for the Work of this Contract in accordance with Notice to Proceed and identify time period.
2. Details of construction sequence, including the bar chart submitted with the Bid, lead times of equipment procurement, as well as the date by which the Contractor must place his/her material or equipment order to complete the Work within the construction schedule time limitations set in Section 00 72 23.
3. Communication and general correspondence procedures between the involved parties. The Owner will designate his/her representative and/or Engineer at the time of this meeting.
4. The names and titles of all persons authorized by the Contractor to represent and execute documents for the Contractor.
5. The names, addresses, and telephone numbers of all those authorized by the Contractor to act for him/her in emergencies. Contractor to provide phone/fax/cell numbers of those individuals who will be available and responsible for the Work on a 24-hour per day basis, 7 days per week.
6. Access and rights-of-way furnished by the Owner.

PROJECT MEETINGS

7. Forms and procedures for Contractor's Submittals as described in Section 01 33 23.
8. Construction equipment and methods proposed by the Contractor. The Contractor shall submit a list of equipment to be used in the Work.
9. Administrative and general matters as needed.
10. Parking areas for public and Contractor.
11. Subcontractors.
12. Payment estimates and submittals for payment.
13. Progress meetings during the course of the Work.

1.02 WEEKLY CONSTRUCTION MEETINGS

Construction meetings shall be held once every week or more frequently as needed or called by the Contractor or the Owner. All matters bearing on the progress and performance of the Work since the preceding progress meetings shall be discussed and resolved, including, without limitation, any previously unresolved matters, deficiencies in the Work or the methods being employed for the Work, and problems, difficulties, or delays which may be encountered, in order that the Work may be constructed on schedule and within cost.

PART 2- PRODUCT

Minutes of construction meetings shall be prepared by the Contractor subject to the review of the Owner or Owners Representative having participated in the meeting.

PART 3- EXECUTION

Minutes of construction meetings shall be submitted to the Owner or Owners Representative no later than 72 hours following the meeting.

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for the Work specified in this Section. All cost of such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

EQUIPMENT & MATERIAL SUBMITTALS

SECTION 01 33 00

PART 1- GENERAL

1.01 SCOPE

- A. This Section establishes minimum requirements and procedures for Equipment Submittals made by the Contractor for materials and equipment provided for under the Work of this Contract. Specific details for additional drawings, data and information to be submitted shall be in accordance with the applicable requirements of other Sections of these Specifications.
- B. Acceptable Manufacturers and Equipment Suppliers for various items of equipment are specified in respective Sections of these Contract Documents. For convenience of designation in the Contract Documents, certain equipment, articles, materials, and processes are designated by manufacturer trade name or catalog name and number. Such designation shall be deemed to be followed by the words "or equal" whether such words are shown or not. The Contractor may offer material or processes which are equal to that so indicated or specified at the time of Bid. The burden of proof as to comparative quality and suitability of alternatives shall be upon the Contractor. Specified items are preferred.

1.02 SUBMITTAL SCHEDULE

The Contractor shall, within 10 days after receiving the Notice to proceed, prepare and submit for review a detailed list of all the submittals which he/she proposes to make to meet the requirements stated herein and those cited in other Sections of the Contract Documents including the dates on which he/she proposes to make such submittals. The list shall include Working Drawings, Field Detail Drawings, Project Record Documents, Quality Control Procedures, and all other items for which a submittal is required. The list shall include identifying references for each item to relate it to the specific item of the Contract Documents.

With each revision or certification of the Construction Schedule, the Contractor shall either revise this schedule of submittals and submit it for review or certify that the previously furnished schedule is still in effect.

After the Submittal Schedule is reviewed by the Owner's Representative, it shall become the basis for the submittal of all items by the Contractor.

EQUIPMENT & MATERIAL SUBMITTALS

1.03 SUBMITTAL REQUIREMENTS

A. General

The Contractor shall furnish for review his/her Submittals as outlined herein and in the Specifications. Submittals shall confirm compliance with the requirements of the Contract Documents. Submittals of equipment drawings shall be made prior to the fabrication of the equipment. The sequence of submission shall be such that information is available for review of each Submittal when it is received. All Submittals furnished formally shall bear an approval stamp or a certification. The stamp or certification shall be signed by an authorized representative of the Contractor. The Contractor's stamp or certification on any Submittals shall constitute a representation to the Owner that the Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or that he/she assumes full responsibility for doing so, and that he/she has reviewed and coordinated each Submittal with the requirements of the Contract Documents. Before submitting any drawings for review, the Contractor shall obtain approval of the list of drawings he/she proposes to submit, showing sequence of submittal and submittal dates. All drawings shall be submitted in accordance with the Submittal Schedule as previously specified herein.

B. All submittals shall be addressed to the Owner or as otherwise directed by the Owner.

C. Outline Drawings

The Contractor shall submit outline drawings of the equipment to be furnished together with estimated weights, operating forces, external forces, anchoring details, and sufficient overall dimensions, to facilitate preparation of final designs of the structures into which the equipment is to be incorporated.

D. Wiring Diagrams

The Contractor shall submit complete schematic and full-line wiring diagrams for all equipment furnished by him/her. The Contractor shall furnish drawings of switch developments for all instrument and control switches and internal connection diagrams for all instruments, relays, regulators, and other devices. One print of each wiring diagram will be returned on which will be marked the wire notations and cable numbers for outgoing circuits where this information is not otherwise available to the Contractor. The Contractor shall add this

EQUIPMENT & MATERIAL SUBMITTALS

information to his/her drawings. Adequate space shall be allowed on the wiring diagrams to accomplish this.

E. Detail Drawings and Erection Drawing

Before proceeding with fabrication or manufacture of the material and equipment designed and furnished by him/her, the Contractor shall submit the designs, design computations when requested, apparatus ratings, detailed specifications, general assembly drawings, sufficient subassembly drawings, details, and control and wiring diagrams to demonstrate fully that all parts will conform to the provisions and intent of the Contract Documents and to the requirements of their installations, operations, and maintenance. These drawings shall substantially conform to the Bid and Contract Drawings and shall show all necessary dimensions; all field joints and subassemblies in which the Contractor proposes to ship the equipment; locations and sizes of auxiliary connections for oil, grease, water and air; and the terminal boxes and wire sizes for electrical circuits. Before proceeding with fabrication or purchase, the Contractor shall submit shop drawings and/or catalog cuts as appropriate of items designed but not detailed on the Contract Drawings including, but not limited to structural steel and metal frames, covers, and gratings.

F. Field Detail Drawings

Layout drawings for any and all embedded components of the equipment such as but not limited to, piping, conduit, anchor bolts/plates, thimbles, etc. shall be submitted. These drawings shall be based on the Contract Drawings and shall contain sufficient detail for construction in the field.

G. Review of Drawings

1. The Contractor shall make all required submittals in .pdf format. All drawings submitted shall, insofar as practicable, be of one standard size, measuring approximately 24 x 36 inches. The Contractor's drawings shall have a blank area of 4 x 4 inches adjacent to the drawing title block for the review stamp of the Owner's Representative. The Contractor shall verify by inspection of sample reproductions that good legible reproductions can be obtained from the reproducible before submittal.

EQUIPMENT & MATERIAL SUBMITTALS

2. Within two weeks of receipt of shop drawings or manufacturer's data, the Owner's Representative will return one copy of each drawing and/or data sheet marked to indicate the result of the Owner's Representative's review, as follows:
 - a. "REVIEWED" - Revision of drawing or data will not be required.
 - b. "REVIEWED WITH CORRECTIONS" - Contractor shall revise the drawings or data and shall submit four print copies and one reproducible copy for Owner's Representative's records.
 - c. "REVISE AND RESUBMIT" - Contractor shall revise the drawing or data and shall resubmit the revised drawing or data to the Owner's Representative for review.
 - d. "REJECTED" - Drawings are non-conforming and do not meet intent of Specifications.
3. Copies marked "REVIEWED" or "REVIEWED WITH CORRECTIONS" authorize the Contractor to proceed with construction or fabrication covered by those drawings or data sheets with corrections, if any, incorporated.
4. Review will not relieve the Contractor of responsibility for conformity to the Contract Documents and correct detail and fit of parts when installed.
5. If minor revisions are made after a drawing has been returned to the Contractor marked "REVIEWED", the Contractor shall furnish without delay one print copy and one reproducible copy subsequent to each revision. No major revision affecting the design shall be made after a drawing has been marked "REVIEWED" without resubmitting the drawing.
6. When prints of drawings have been marked "REVIEWED WITH CORRECTIONS" or "REVISE AND RESUBMIT" the Contractor shall make the necessary corrections and submit four print copies and one paper-type reproducible. Every revision shall be shown by number, date, and subject in a revision block, and in addition, each revised drawing shall have its latest revision clearly indicated. Submitted drawings which do not illustrate these indications will be considered non-conforming.

EQUIPMENT & MATERIAL SUBMITTALS

7. The applicable parts of the requirements of the above paragraphs with reference to the drawings shall apply equally to design data, catalog cuts, illustrations, printed specifications, draft reports or any other submittals furnished for review.
8. The Contractor shall make any changes in the designs which are necessary to make the equipment conform to the provisions and intent of the Contract Documents, without additional cost to the Owner.
9. Should an error be found in a Contractor's drawing during the erection of structures or installation of equipment, the correction, including any field changes found necessary, shall be noted on the drawing, and it shall be resubmitted for review, and recorded as outlined above.

H. Record Drawings

Prior to completion of the Work under the Contract Documents, the Contractor shall furnish one complete set of full-size permanent reproducible copies of approved quality and type and 3 full size sets of prints of all Contractor's drawings and equipment as finally built, including any field changes.

I. Operating and Maintenance Instructions

1. Two hard copy sets and one .pdf version of detailed operating and maintenance instruction manuals which shall include reduced-size copies of applicable drawings, applicable parts lists and catalogs covering all equipment furnished and which may be needed or useful in operation, maintenance, repairs, dismantling or assembling, and for repair and identification of parts for ordering replacements, shall be furnished as specified.
2. Furnish operation and maintenance manuals for the various types of equipment and systems, as required by the Contract Documents. Unless otherwise indicated, a separate manual shall be furnished for each piece of equipment and/or system. The manual shall include complete information necessary to operate, maintain and repair the equipment and/or system and shall include the following specific requirements:
 - a. Table of contents and index.
 - b. Brief description of the equipment/system and principal components.

EQUIPMENT & MATERIAL SUBMITTALS

- c. Starting and stopping procedures both normal and emergency.
 - d. Installation, maintenance and overhaul instructions which shall include detailed assembly drawings with parts list and numbers, and recommended spare parts list with recommended quantity, manufacturer's price, suppliers address and telephone number.
 - e. Recommended schedule for servicing including technical data sheets that indicate weights and types of oil, grease or other lubricants recommended for use and their application procedures.
 - f. One copy of each component wiring diagram and the system wiring diagram showing wire size and identification.
 - g. One approved copy of each submittal with any changes made during construction properly noted including test certificates, characteristic curves, factory and field test results.
 - h. For electrical systems include dimensioned installation drawings, single line diagrams, control diagrams, wiring and connection diagrams, list of material for contactors, relays and controls, outline drawings showing relays and controls, outline drawings showing relays, meters, controls and indication equipment mounted on the equipment or inside cubicles, control and protective schematics and recommended relay settings.
3. Submittal Requirements: One preliminary copy of the manual in .pdf format shall be submitted no later than the date of shipment of equipment, and installation shall not begin until they are accepted by the Owner's Representative. One approved hard copy and one in .pdf format of complete manual shall be delivered to the Owner's Representative prior to Owner's Representative inspections and tests.

J. Language

All drawings, design data, reports, instructions, catalogs, illustrations, and printed specifications shall be submitted in English.

EQUIPMENT & MATERIAL SUBMITTALS

K. System of Units of Measurement

All units of measurement used shall be in the U.S. Customary System.

PART 2- PRODUCTS

(Refer to Paragraph 1.03, Submittal Requirements, of this Section.)

PART 3- EXECUTION

(Refer to Paragraph 1.02, Submittal Schedule, of this Section.)

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for the Work specified in this Section. All costs of such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

MATERIAL AND EQUIPMENT

SECTION 01 60 00

PART 1- GENERAL

1.01 SCOPE

A. Description

This Section covers minimum general requirements related to and including, but not limited to the following:

1. Products.
2. Transportation and handling.
3. Storage and protection.
4. Product options.
5. Substitutions.

B. Related Work

1. All Sections of the Contract Documents including Bidding Documents and Drawings.
2. Refer to related Specification Sections for details.

1.02 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing facilities or premises, except as specifically permitted by the Contract Documents.
- C. Provide interchangeable components of the same manufacturer, for similar components.

1.03 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.

MATERIAL AND EQUIPMENT

- B. Promptly inspect shipments to assure 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.

1.04 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on sloped supports, above ground.
- C. Provide off-site storage and protection when site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Do not allow mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

1.05 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.

1.06 SUBSTITUTIONS

- A. Owner will consider requests for Substitutions only at time of Bid. Where Specifications indicate "No Substitutions Allowed", the Contractor shall provide the designated manufacturers equipment without exception.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.

MATERIAL AND EQUIPMENT

- C. Document request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
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 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 10 days prior to bid date. Limit each request to one proposed Substitution.
 2. Submit shop drawings, product data and certified test results attesting to the proposed product equivalence.
 3. The Owner will notify Contractor, in writing, of decision to accept or reject request.

END OF SECTION

CUTTING AND PATCHING

SECTION 01 73 29

PART 1- GENERAL

1.01 SCOPE

This Section covers cutting and patching where required to perform the Work of these Contract Documents.

1.02 QUALITY ASSURANCE

Cutting and patching shall be performed in accordance with recognized and applicable standards of construction using materials equal to or exceeding those of the parent structure.

1.03 SUBMITTALS

- A. Before doing any cutting as required to complete the Work, submit a written notice to Owners Representative, and the Owner of the specific item involved requesting consent, including:

Description of affected work

Necessity for cutting

Scope of cutting and patching

Trades and products to be used and extent of refinishing

- B. Prior to doing cutting and patching identified in writing by Owner's Representative as additional work, submit a cost estimate.

PART 2- PRODUCT

Materials used for replacement of work removed shall be of the same type, style, size, thickness, etc. of like new materials for the type of work to be performed.

PART 3- EXECUTION

3.01 GENERAL

- A. Perform all cutting and patching required to complete the Work.
- B. Cutting and patching shall include the cutting, fitting, or patching necessary to:

CUTTING AND PATCHING

1. Accomplish/perform modifications to existing structures as shown on the Drawings.
 2. Remove and replace defective or deteriorated work.
 3. Remove and replace work not conforming to the Contract Documents.
- C. All Work shall be performed by skilled workers licensed to perform the Work of the trade involved and/or as may be required.

3.02 EXECUTION

- A. Protect adjacent portions of the Work and existing facilities from damage due to cutting and patching operations.
- B. Restore work which has been cut or removed. Install new products to provide completed Work meeting all requirements of the Contract Documents.
- C. Refinish entire surfaces as necessary to provide an even and uniform finish.

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for the Work specified in this Section. All costs of such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

MAINTENANCE OF WORK SITE & DAILY CLEAN-UP

SECTION 01 74 00

PART 1- GENERAL

This Section covers general maintenance of the Work Site and daily clean-up which the Contractor shall be responsible for the duration of the Project, and includes, but is not limited to storage, stockpiling and/or protection of materials and Work.

PART 2- PRODUCTS

(Not applicable to this Section.)

PART 3- EXECUTION

3.00 GENERAL

Contractor shall comply with all applicable requirements specified in Section 00 72 23.

3.01 MAINTENANCE OF WORK SITE

The Contractor shall keep the site of the Work and adjacent premises as free from material, debris and rubbish as is practicable, and shall remove same from any portion of the site, if, in the opinion of the Owner's Representative, such material, debris, or rubbish constitutes a nuisance or is objectionable in any way to the public. The Contractor shall remove all machinery, materials, barricades, staging, false-work, debris and rubbish connected with, or caused by said Work, immediately upon the completion of the same and shall clean all structures and Work constructed under this Contract to the satisfaction of the Owner's Representative and leave the premises in an approved condition insofar as affected by the Work under this Contract.

3.02 DAILY CLEAN-UP

Each day before the Contractor shuts down Work operations for the day, the Contractor shall clean all areas in/around/adjacent to the Work site of all dirt, mud, debris, or other items deposited thereupon resulting from the Work.

3.03 RESPONSIBILITY FOR PROTECTION OF MATERIALS

The Contractor shall be responsible for the safe storage of all equipment and materials furnished by, or to, or accepted by the Contractor, and intended for the Work until such equipment or material has been incorporated into the completed Project. Such equipment and materials as well as their related

MAINTENANCE OF WORK SITE & DAILY CLEAN-UP

appurtenances and accessories shall, unless otherwise directed by the Owner, be unloaded at the "staging site" point of delivery, hauled to, and distributed as necessary to the specific Work site of the Project, by the Contractor. They shall at all times be handled with care to avoid damage.

All construction shall be protected by the Contractor to prevent accidental or pre-meditated damage. All cost associated with the supervision, the repair, or the replacement of damaged areas shall be considered incidental to the Contract.

3.04

STOCKPILING MATERIAL

Materials shall be so stockpiled as not to endanger the Work and so that free access may be had at any time to all parts of the Work, and shall be kept neatly piled so as not to inconvenience public travel, private property owners, or adjoining tenants.

At no time shall material be stored in the street.

END OF SECTION

TESTING, CHLORINATING, FILLING AND FINAL INSPECTION AND ACCEPTANCE

SECTION 01 77 00

PART 1- GENERAL

- 1.01 Upon completion of all Work specified in the Contract Documents, the Contractor shall perform final field alignments, adjustments, and tests to verify that the overall performance as specified have been satisfied. Acceptance tests conducted on the completed installation will be witnessed and subject to the approval of the Owner's Representative.
- 1.02 When all Work has been completed and the equipment has been installed, the Contractor will work with the Village to back flush standpipe, fill to acceptable levels to chlorinate standpipe and potable water to acceptable levels to allow for the water to be reintroduced to the system. Once the standpipe has been placed into operation, have potable water tested by independent contractor and subsequently has satisfactorily operated, a thorough inspection will be made by the Owner in the company of the Contractor and the Owner's Representative, and if the Work is found to comply with the Specifications, the Work will be formally accepted and the Contractor so notified in writing as to the Final Acceptance of the Work by the Owner.
- 1.03 Should any Work be found to be inadequate, faulty, or otherwise not in accordance with these Specifications, it shall be the Contractor's responsibility to correct such Work at the Contractor's own expense, prior to Final Acceptance.
- 1.04 The period of equipment and workmanship guarantees shall commence immediately after Final Acceptance. Upon being notified of the Final Acceptance, the Contractor shall supply, to the Owner, a certificate of guarantee which shall guarantee all equipment and workmanship for a period of not less than one year or as otherwise specified in subsequent Sections of the Specifications. Guarantees shall be unconditional. Limited guarantees are not acceptable.

PART 2- PRODUCT

A "Final Inspection" report prepared by the Contractor shall be submitted to the Owner's Representative documenting the results of the Final Inspection.

PART 3- EXECUTION

Advise Owner's Representative a minimum of 72 hours prior to performing the Final Inspection.

TESTING, CHLORINATING, FILLING AND FINAL INSPECTION AND ACCEPTANCE

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for the Work specified in this Section. All costs of such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

MISCELLANEOUS METAL REPAIRS

SECTION 05 50 00

PART 1- GENERAL

1.01 SCOPE

This Section covers miscellaneous metal repairs which may be ordered by the Owner during construction, but only after an approved Change Order has been processed. Supports, anchors and other incidentals, where required, shall be included under this Section of Work.

1.02 QUALITY ASSURANCE

A. Acceptable Materials

As specified herein.

B. Applicable Standards

All Work shall conform to the applicable provisions of the codes, standards and Specifications as specified herein and as follows:

<u>Name</u>	<u>Abbreviation</u>
Welded Steel Tank for Water Storage	AWWA D-100
American Society for Testing & Materials	ASTM
Welding	ASME Sect. IX

C. Welding Qualifications

All welders shall be qualified by ASME Section IX requirements for all positions.

D. Field Verification

The Contractor shall verify field conditions and measurements so that the fabricated metals shall fit together properly and be suitable for the field conditions.

1.03 SUBMITTALS

The Contractor shall submit to the Owner's Representative for review drawings, data and information in accordance with the applicable requirements of Section 01300. Submittals shall include but are not limited to drawings showing location, sizes of metal, method of assembly, hardware, fasteners, anchorage, and connection with other work. The drawings shall include a listing of metals used and governing ASTM specifications. Where structural components are the design

MISCELLANEOUS METAL REPAIRS

of the Contractor, the drawings shall bear the seal of a professional structural engineer registered in the State of Illinois.

PART 2- PRODUCT

2.01 MATERIALS

- A. Structural steel shapes, ASTM A36.
- B. Bent or cold-formed steel plates, ASTM A283, Grade C.
- C. Galvanized carbon steel sheets, ASTM A526, with 1.25 ounces commercial zinc coating, ASTM A525.
- D. Gray iron castings, ASTM A48.
- E. Bolts and nuts (for general use), Type 304 stainless steel, ASTM A320 unless otherwise specified.
- F. High strength bolts shall comply with ASTM A325 with nuts conforming to ASTM A563 and washers complying with ASTM F436.
- G. Anchor bolts and connection bolts for steel assemblies shall comply with ASTM A307.
- H. Anchor bolts and connection bolts for aluminum shall be stainless steel.
- I. Stainless steel, Type 316.
- J. (Not used.)
- K. Welding Electrodes: Filler metal for welding of structural steel shall comply with AWS D1.1, Structural Welding Code. Filler metal for welding of aluminum shall comply with AWS D1.2.
- L. Grout: Grout for bedding and grouting structural steel components shall be of non-shrink type grout.

2.02 COATINGS

Galvanizing shall be performed by the hot-dip process after fabrication in compliance with the following standards:

- A. Iron and steel hardware, ASTM A153.
- B. Rolled, pressed, and forged steel shapes, plates, bars, and strips 1/8 inch thick and heavier, ASTM A123.

MISCELLANEOUS METAL REPAIRS

- C. Assembled steel products, ASTM A386.

PART 3- EXECUTION

3.01 SHOP INSPECTION

Each item of equipment shall be shop assembled to the extent practical and shall be inspected prior to shipment. Minimum requirements for shop inspection shall be a visual exam and a dimensional check to verify that the equipment has been fabricated correctly.

3.02 FABRICATION

- A. Design and fabricate all metal parts to comply with the intent and requirements of the Drawings. Make field measurements and prepare templates as required to ensure proper fit. Assemblies shall be fitted together in the shop and delivered to the site complete and ready for installation.
- B. Miscellaneous metals shall have holes, connections, and other provisions for accommodating other work. In general, holes for bolts shall be drilled or reamed 1/16-inch larger than the diameter of the bolt. Holes for anchor bolts shall be 1-1/3-times the anchor bolt diameter.
- C. Miscellaneous metal work shall be formed to shape and size, with sharp lines and angles. Items shall be sheared and punched to obtain clean, true lines and surfaces. Permanent connections shall be welded. Screws or bolts shall not be used where avoidable, but if used, heads shall be countersunk, screwed tight, and threads nicked to prevent loosening. Curved work shall be sprung evenly.
- D. Exposed surfaces shall have smooth finish and sharp, well defined lines and arises. Joints shall be mill machined to a close fit. Necessary rabbets, lugs, and brackets shall be provided so that work can be assembled in a neat and substantial manner. Metal thicknesses, assembly details, and supports shall provide ample strength and stiffness. Joints shall be designed to prevent trapping of moisture.
- E. Fastenings shall be concealed where practical. Metal thickness and details of assembly and supports shall be designed to provide strength and stiffness. Joints exposed to weather shall be formed to exclude water.

MISCELLANEOUS METAL REPAIRS

- F. Expansion anchor bolts shall be of the types and sizes recommended by the manufacturer for the particular application. When set in concrete or masonry, the minimum penetration of the expansion anchor bolts shall be six times the diameter of the shank.
- G. Structural joints made using high strength bolts, hardened washers, and nuts tightened to a high bolt tension shall comply with the "Specification for Structural Joints Using ASTM A325 or A490 Bolts".
- H. Welded joints shall comply with AWS D1.1, Structural Welding Code', and AISC "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings". All welds shall be made by operators who have been previously qualified as prescribed by AWS B3.0, Welding Procedure and Performance Qualification. All welds exposed to view shall be dressed smooth.
- I. Anchor holes in concrete or masonry for grouted bolts shall be a minimum of 1-1/2 times the bolt shank diameter. Anchor holes in concrete and masonry for expansion type anchor bolts shall comply with the bolt manufacturer's recommendations.
- J. Castings shall be true to pattern, smooth, straight, sound, and free from warp, holes, and other defects that impair strength or appearance.

3.03 PAINTING

- A. Paint all surfaces except those which have a galvanized surface finish according to the requirements of Section 09900. Prepare surfaces and prime in compliance with the manufacturer's recommendation for the specific environment to which the metal components will be subjected.
- B. Where dissimilar metals contact each other, apply alkali-resistant paint to the more active metal. Where steel work contacts aluminum, apply two coats of aluminum paint over shop coat.
- C. Metal components used for miscellaneous metal repairs may be shop or field primed and painted. Contractor shall be responsible for touch-up field painting as required.

MISCELLANEOUS METAL REPAIRS

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Miscellaneous Metal Repair Work specified in this Section; except that measurement will be made as follows:

05 50 00/01,	Continuous Seal Weld Repairs
05 50 00/02,	Interior Pit Weld Repairs
05 50 00/03,	Replace Bolts and Gasketing on Manways

4.02 PAYMENT

- A. Payment for the Miscellaneous Metal Repair Work (which includes Continuous Seal Weld and Interior Pit Repair Work specified in this Section will be made only after an **Owner** approved Change Order has been processed for work ordered during construction.
- B. Payment for Continuous Seal Weld Repair Work specified in this Section will be made at the contract unit price for Continuous Seal Weld Repair, in the Bidding Schedule. This price shall include all labor, tools, materials and equipment for repairs as herein specified.
- C. Payment for Interior Pit Weld Repair Work specified in this Section will be made at the contract unit price for Interior Pit Weld Repair, in the Bidding Schedule. This price shall include all labor, tools, materials and equipment for repairs as herein specified.
- D. These prices shall be full compensation for furnishing all materials; and for all preparation, and placing of the materials; and for all labor, equipment, tools and incidentals necessary to complete the miscellaneous metal repairs as required.
- E. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

WATER STORAGE TANK REHABILITATION AND RELATED REPAIRS

SECTION 05 52 13

PART 1- GENERAL

1.01 SCOPE

A. Description

This Section covers the rehabilitation and repairs of potable water storage tanks of the elevated or standpipe type and includes furnishing all materials, equipment, tools and labor necessary for the repair and rehabilitation of the elevated and/or standpipe water storage tanks, together with all appurtenant components and associated fittings, and miscellaneous equipment specified in other Sections of these Specifications, including necessary supports and anchors, to be designed, furnished, installed and tested as shown on the Drawings and as specified herein. All fittings, connectors, supports and anchors, where required shall be included under this Section of Work.

B. Related Work

1. Section 09 91 13.
2. Section 26 42 00.
3. Other Sections as herein specified.

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers

Tank: Chicago Bridge & Iron Company or equal.

Other Items: As required.

B. Applicable Standards

All Work including materials and inspection of the elevated tank shall conform to the applicable and current provisions of the codes, standards, and Specifications, as specified herein, and the following:

<u>Name</u>	<u>Abbreviation</u>
Welded Steel Tank for Water Storage	AWWA D100
Structural Concrete for Buildings	ACI 301
Welding	ASME Sect. IX

WATER STORAGE TANK REHABILITATION AND RELATED REPAIRS

C. Welding Qualifications/Supervision

All welders shall be qualified by ASME Section IX requirements for all positions. The contractor shall employ the services of a welding supervisor independent of the tank painting foreman's jurisdiction.

1.03 SUBMITTALS

- A. The Contractor shall submit to the Owner's Representative for review product specifications and description, mill certificates, inspection reports, together with instruction manuals, installation procedures, field check-out and testing procedures specified in Section 01300 of all equipment furnished.

1.04 WARRANTY

The herein specified all water storage tank repairs shall be warrantied for a period of 12 months from the date of Final Acceptance of the Work to the extent that the contractor shall be solely responsible for the repair or replacement of defective parts including but not limited to repair of any reported defects during the warranty period which may appear because of faulty workmanship or material furnished under the Specifications. Defects caused by damaging service conditions such as electrolytic; chemical, abrasive or other damaging service conditions are not intended to be covered by this warranty.

PART 2- PRODUCT

2.01 GENERAL

- A. The tank and supporting structure is of all-welded steel design. Tank construction is as specified herein.
- B. The tank has a shape as shown on the Drawings.

2.02 PERTINENT DATA AND REQUIREMENTS

A. Pertinent Data

1. Time of Completion - **120** calendar days. See **Instructions to Bidders** for additional information and details.
2. Location - As identified in the Bid Form.
3. Nearest Town - Willowbrook, IL.

WATER STORAGE TANK REHABILITATION AND RELATED REPAIRS

4. Railroad Siding - None immediately adjacent to or through proposed site development.
5. Compressed Air - Not available at site.
6. Corrosion Allowance - None.
7. Ladder and Safety Devices - Required in accordance with state and federal regulations. A ladder safety device meeting OSHA standards is required. Ladders and safety devices shall extend above landing platform. A minimum of two (2) safety **harnesses** shall be provided.
8. Inspection Report - An inspection report per Paragraph 11.2.1 of AWWA D100 shall be required for the 3 MG Standpipe.

2.03 DETAILS OF CONSTRUCTION

- A. Details of tank construction (as a minimum) shall be in accordance with AWWA D100. Where contradictions occur, the more stringent shall apply.
- B. Install a fail-safe vent in place of the existing mushroom vent to protect against pressure/vacuum damage. This includes installing a flange on the existing vent pipe and providing a gasket between the flanges. The maximum anticipated inlet rate is estimated to be gpm. The maximum anticipated withdrawal rate is estimated to be gpm. The open area of the overflow shall not be considered as venting area. The vent screen shall be a No. 4 mesh insect screen and shall be designed to relieve any pressure or vacuum in the event the screen frosts over or is otherwise clogged. The vent screen shall be easily dismantled to remove the screens for cleaning.
- C. Install new painters handrail which shall include the installation and erection of a new 4" flat stock painted steel, 30" high x 20'-0" diameter painters handrail. The painters rail to be centered around the roof access hatch at the roof of the tank and have continuous railings between pilaster and access hatch. The proposed handrail shall be welded in place in accordance with AWWA Standard D100 and the AWWA Manual M42. Surface preparation and painting shall be in accordance with ¶1.01A(2) of this Section. Along with this work the contractor will provide and install 4 new safety grabs on the exterior of the tank roof to allow tie off points when exiting roof access hatch and wet interior access hatch.

WATER STORAGE TANK REHABILITATION AND RELATED REPAIRS

- D. Install new rail type fall protection device on the exterior pilaster ladder. The existing pilaster ladder will be painted to match the proposed exterior paint coating system and will include the OSHA required fall protection devices. Both fall protection devices will include matching harnesses.
- E. Repair and/or replace the existing dry interior lighting lamps with LED type light bulbs.

PART 3-- EXECUTION

3.01 FACTORY TESTING AND INSPECTION

The contractor shall inspect and test components of the tank repairs in accordance with AWWA D100. Certified copies of the shop inspections and test reports shall be furnished to the Owner's Representative.

3.02 INSTALLATION AND TESTING

- A. The equipment shall be installed as shown on the Drawings and in accordance with the manufacturer's instructions and recommended best practices. All necessary shims, grout, anchor bolts, and other items required for installation and testing shall be furnished. All items of equipment shall be operated, adjusted, and tested for proper performance in accordance with the manufacturer's recommended test procedure. Any and all excavation, trenching, concreting, backfilling required for the repair and rehabilitation of the Water Storage Tanks shall be performed by the Contractor at the Contractor's expense.
- B. After the Contractor has completed all repairs, including painting of the interior wet portion of the standpipe, the Contractor will make piping connections to the tank, furnish, pump and dispose of sufficient water for a single test and sterilization. While under test, the tank Contractor shall chlorinate the tank in accordance with AWWA C652 Method 3. **In addition, disinfecting of the elevated tank shall be in accordance with Section 7.0.18 of the Recommended Standards for Water Works (Latest Edition).** Any leaks which are disclosed by this test shall be repaired by gouging out defective areas and rewelding. All costs associated with such repair work including costs for additional water usage (beyond one time fill provided by the Owner) shall be the responsibility of the Contractor. No repair work shall be done on any joint unless the water in the tank is at least two feet below the point being repaired. After repair work has been completed, the tank shall be retested to verify the integrity of the repair. Any paint damaged by repairs shall

WATER STORAGE TANK REHABILITATION AND RELATED REPAIRS

be properly restored. The tank shall not be placed in service until satisfactory bacteriological tests have been provided. The Contractor shall work in cooperation with **Village Water Department Personnel** who will be conducting the bacteriological tests.

3.03 PAINTING

Painting of the tank and its components shall be in accordance with the applicable requirements of Section 09900, Painting and Grouting.

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

A. Payment for the Work specified in this Section will be made at the lump sum prices for the below listed Items in the Schedule of Prices:

05 52 13/01,	Remove and Replace Existing Roof Vent
05 52 13/02,	Installation of New Painters Rail and Safety Grabs
05 52 13/03,	Installation of New Wet Interior Ladder and Fall Protection Devices
05 52 13/04,	Repair and Replace Existing Dry Interior Lighting

B. These prices shall be full compensation for furnishing all materials, equipment and labor as well as any and all incidentals necessary to complete the Items of Work.

C. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

D. Payment for other items of equipment specified in other Sections of these Specifications will be made at the prices for those respective Items in the Schedule of Prices.

END OF SECTION

PAINTING WATER STORAGE TANK

SECTION 09 91 13

PART 1- GENERAL

1.01 SCOPE

A. Description

This Section covers painting materials to be furnished and applied, including preparing surfaces and providing adequate conditions for proper workmanship, as shown on the Drawings and as specified herein.

B. Related Work

1. Sections 01010, 01011 and 01012.
2. Section 01800.

1.02 QUALITY ASSURANCE

A. Acceptable Materials and Manufacturers shall conform to the herein specified material and construction standards.

B. Applicable Standards

All Work shall conform to the applicable provisions of codes, standards and Specifications, as specified herein as follows:

<u>Name</u>	<u>Abbreviation</u>
National Fire Protection Association	NFPA
Steel Structure Painting Council	SSPC
Ten State Standards	--
Painting Steel Water Storage Tanks	AWWA D102

1.03 SUBMITTALS

A. The Contractor shall submit to the Owner's Representative for review product specification of paint materials and descriptions of surface preparation contemplated for the Work to illustrate compliance with applicable requirements of this Section and other Related Work Sections. Submittals shall be in accordance with Section 01300 and as herein specified.

PAINTING WATER STORAGE TANK

- B. Submittals shall include, but not be limited to the following:
1. Project schedule not to exceed consecutive calendar days; and start date not to deviate more than 2 weeks from start date indicated on the preliminary schedule submitted at the time of bid unless otherwise approved by the **Owner**.
 2. Surface preparation details including containment methods when and where containments are utilized.
 3. Application instructions for each type of coating to be used.
 4. Maintenance recommendations for each type of coating used.
 5. Color samples for selection and scheduling. (Note: Color to be selected by **Owner** if not specified; refer to Section 01010, Paragraph 2.02 for additional details).
 6. MSDS sheets for all products used.
 7. Monitoring Plan (refer to Section 01012; Paragraph 3.01), dry film thickness test results and diary of daily painting activities.
 8. Product Certification and Waste Manifest in accordance with Section 01800; Paragraphs 2.01 & 2.02.

PART 2- PRODUCT

The following manufacturers are named herein (under Protective Coating Systems) and approved for use. Contractor shall use the product(s) of only one paint product manufacturer. Products listed herein are that of Tnemec Company, Inc.

2.01 CONTAINMENT

The Contractor shall provide full containment curtain for entire standpipe and include a bonnet. The Contractor shall provide shop drawings of all proposed components of containment system and rigging drawings for review and approval.

When required by federal, state or local regulation, the entire tank and structure shall be enclosed and surface

PAINTING WATER STORAGE TANK

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 owner is the generator of and is responsible for the proper containment and disposal of all waste resulting from the surface preparation of this tank(s). As part of this contract, the contractor shall arrange and pay for all containment, tests, permits, transportation and disposal of all waste resulting from the surface preparation of this tank(s) in strict accordance with Illinois EPA regulations. Copies of all documentation required by Illinois EPA regulations shall be submitted to the owner for verification prior to the submission of the contractor's request for final payment.

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-SP10) will be required in the damaged areas.

PART 3- EXECUTION

3.01 GENERAL

- A. Do not proceed with the application of paint until the following conditions are met: Proper temperature and humidity, dust free spaces, proper surface preparation. Starting Work constitutes acceptance of conditions and substrates and full responsibility for the quality and suitability of the finished Work.
- B. Furnish inspection devices, in good working condition, for the detection of holidays and the measurement of coating film thickness (wet and dry). Inspect surfaces to be painted and conditions of the area before starting Work. Report any defects that render any area or surface unfit to receive paint.

PAINTING WATER STORAGE TANK

- C. Handle and store materials in accordance with the provisions of the Flammable and Combustible Liquids Code, NFPA 30. All materials shall be handled and stored to avoid fire and explosion.
- D. Provide masks, gloves, and other protective materials or clothing and furnish special ventilation as necessary or recommended by the paint manufacturer.
- E. During surface preparation, contain and dispose of any and all paint chips/flakes in accordance with Federal, State and/or local requirements, or as otherwise specified.

3.02 DELIVERY TO SITE

All materials furnished shall be labeled. Each label shall indicate the manufacturer's name, the brand name, the type of material as specified, the class of flammability or combustibility if applicable, the color, and the mixing and application instructions. Each container shall be stenciled or embossed at the factory with the product number and name as it appears in the manufacturer's catalog. Deliver materials to the site in unbroken, unopened containers, with labels affixed on each container by the manufacturer. Containers delivered to site which are damaged shall be cause for rejection.

3.03 CONDITIONS FOR APPLYING MATERIALS

- A. Materials other than water thinned materials shall be applied only to surfaces that are free of surface moisture as determined by sight or touch.
- B. Materials shall not be applied when the temperature of the surfaces to be covered are below recommended levels, or the surrounding atmosphere is below recommended levels, or when the relative humidity exceeds 85 percent.
- C. Additional conditions to be satisfied prior to application shall be as specified in Section 01010.
- D. Prepare all surfaces to receive materials as required herein or as required by the coatings manufacturer. Clean surfaces to remove all foreign matter. Roughen surface as recommended by the coating manufacturer for proper adhesion of coating to the substrate.

3.04 APPLICATION

- A. Mix and apply materials in accordance with the manufacturer's

PAINTING WATER STORAGE TANK

printed instructions. Allow each succeeding coat to dry in accordance with manufacturer's printed instructions.

- B. Apply each coat in accordance with these Specifications and the paint manufacturer's recommendations. The coating shall be applied at the specified thickness. If the specified thickness is not obtained, an additional coat(s) of paint shall be applied at no additional cost to the **Owner**.
- C. All paint shall be applied in strict accordance with the applicable manufacturer's printed data sheet and container label outlining recommended minimum and maximum surface and air temperatures required for application.
- D. Do not paint code required labels, (Underwriters Laboratories, Inc., Factory Mutual, or the like) or any equipment identification, performance ratings, name, or nomenclature plates. Remove any paint inadvertently or previously applied to such items.
- E. Protect adjacent surroundings against splash or overspray. Remove materials from surfaces not designated to receive such materials.
- F. Finished surfaces shall be uniformly coated with the thickness specified, free of runs, drips, sags, brush marks, holidays, or other defects. Such defects shall be corrected without change in Contract Price.
- G. Remove waste rags and coating debris on a daily basis. Keep storage spaces and work areas neat and clean.

3.05 PROTECTIVE COATING SYSTEMS

- A. General: The application of any coating or primer indicates the acceptance of and responsibility for the condition of the substrate and the primer thereon.
- B. Protect adjacent materials/surroundings/properties/etc. subject to damage by the Work to be performed under this Contract.
- C. Exterior Coating System

1. Surface Preparation

Remove all oil and grease from the surface prior to blast cleaning. All exterior surfaces shall be abrasive blast cleaned to a Commercial Finish, removing all existing paint, rust, dirt, mill scale and foreign

PAINTING WATER STORAGE TANK

matter by the recommended methods outlined in the SSPC Society of Protective Coating's Specification SP-6. A minimum angular blast profile of 2.0 mils is required.

2. Prime Coat

Immediately after blasting and before any rusting occurs (within 12 hours maximum), apply one coat of Tnemec Series 91-H₂O Hydro-Zinc to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 - 3.5 mils.

3. Additional Prime Coat

Apply by brush only, one additional spot prime coat to all inaccessible and hard to reach areas, such as the inside of anchor bolt chairs, vent, manways, tie rods, turnbuckles, and accessories, with one coat of Tnemec Series 135-color Chembuild.

4. 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.

5. Finish Coat

Apply one complete coat of Tnemec Series V700-color HydroFlon at a dry film thickness of 2.0 - 3.0 mils.

6. Lettering/Logo Painting

Two coats Tnemec Series V700-color HydroFlon shall be used for the lettering/ logo applied at a dry film thickness of 2.0 per coat.

D. Interior (Wet) Coating System

1. Surface Preparation

The entire surface shall be abrasive blast cleaned to a Near White Finish, removing all existing paint, rust, dirt, mill scale and foreign matter by the recommended methods outlined in the SSPC Society of Protective Coating's Specification SP-10. A minimum angular anchor profile of 2.0 mils is required.

PAINTING WATER STORAGE TANK

2. Prime Coat

Immediately after blasting and before any rusting occurs (within 12 hours maximum), apply one coat of Tnemec Series 91-H20 Hydro-Zinc to all bare steel surfaces. This coating shall be applied at a dry film thickness of 2.5 - 3.5 mils.

3. Stripe Coat

After the primer has cured in accordance with the manufacturer's recommendations, apply one stripe coat, by brush only, of Tnemec Series N140-1255Beige Pota-Pox Plus to all weld seams, edges of unseal welded roof plates, angles, and sharp edges.

4. Finish Coat

Apply one complete coat of Tnemec Series FC22-WH08 Off-White Epoxoline Plus at a dry film thickness of 30.0 - 35.0 mils. Apply with heated plural component spray equipment only.

E. Interior (Dry) Coating System (Decorative Pilasters)

1. Surface Preparation

The entire surface shall be abrasive blast cleaned to a Commercial Finish, removing all existing paint, rust, dirt, mill scale and foreign matter by the recommended methods outlined in the SSPC Society of Protective Coating's Specification SP-6. A minimum angular blast profile of 2.0 mils is required.

2. Prime Coat

Immediately after blasting and before any rusting occurs (within 12 hours maximum), apply one coat of Tnemec Series N140-1255 Chicago Beige Pota-Pox Plus primer to all surfaces. This coating shall be applied at a dry film thickness of 3.0 to 5.0 mils.

3. Finish Coat

Apply one complete coat of Tnemec Series N140-15BL Tank White Pota-Pox Plus to all surfaces at a dry film thickness of 4.0 to 6.0 mils.

3.06 COMPLETION OF WORK

PAINTING WATER STORAGE TANK

- A. When Work is complete leave all materials properly coated to conform to the above Specifications. Remove and/or clean-up dry fall, overspray, droppings, or spatter from adjacent materials and properties. Make good damage to other work to the satisfaction of Owner's Representative.
- B. Furnish two copies and all instructions, manufacturers' certificates, and documents to Owner's Representative.

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the contract lump sum prices for the below listed Items in the Schedule of Prices:

09 91 13/01,	Interior Wet Surfaces; all surface preparation, priming and painting
09 91 13/02,	Exterior Surfaces; all surface preparation, priming and painting
09 91 13/03,	Interior Dry Surfaces; all surface preparation, priming and painting
09 91 13/04,	Full Containment as required
09 91 13/05,	Proper and Legal Disposal of Paint Chips/Flakes and Other Debris (Resulting from Prep/Paint Work Interior Wet)

- B. These prices shall be full compensation for furnishing all materials, equipment and labor, as well as any and all incidentals necessary to complete the Items.
- C. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain.

END OF SECTION

GENERAL PROVISIONS FOR ELECTRICAL WORK

SECTION 26 00 10

PART 1- GENERAL

1.01 SCOPE

- A. This Section describes the general provisions for the Work to be performed under Division 26 - Electrical, of this Contract as well as Division 33 - Utilities, where applicable. The Contractor shall comply with these general provisions and shall perform all Work in accordance with the Specifications contained in this Section, as supplemented by Specification in related Sections, and as shown on the Drawings. Related mechanical work shall be performed in accordance with the applicable provisions of Division 33.
- B. The following specifies the minimum general requirements by which the Contractor shall furnish, fabricate, deliver, erect, install, connect and test electrical materials, equipment and systems specified in the respective Sections of Division 26 and shown on the Drawings, so as to constitute a complete and operating electrical installation.
- C. The Contractor shall provide all necessary coordination between the suppliers of the specified equipment so as to provide a well-designed and satisfactory operating facility to the Owner. The Contractor is advised that these Specifications are not indented to cover every and all details of the Work. In case(s) where details related to the specified Work are not covered by these Specifications, it shall be the responsibility of the Contractor to include and execute such coordination and Work at no additional cost to the Owner.
- D. Items of equipment furnished and installed as a part of the Work under other Sections of the Specifications shall be connected and wired as a part of the Work under this Section.
- E. All operating limits of electrical apparatus whether furnished under this Section or in other Sections of the Specifications shall be adjusted in the field to meet the operating conditions reviewed by the Owner=s Representative and as required. This shall include settings of all overcurrent and trip devices, limit switches, timers, and control device adjustments, etc.

GENERAL PROVISIONS FOR ELECTRICAL WORK

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers and Equipment Supplier

1. As shown on the Drawings and/or as specified hereinafter in subsequent Sections.
2. Acceptable manufacturers for various items of equipment are specified in respective Sections of these Contract Documents. For convenience of designation in the Contract Documents, certain equipment, articles, materials, and processes are designated by manufacturer trade name or catalog name and number. Such designation shall be deemed to be followed by the words "or approved equal" whether such words are shown or not. Contractor may offer material or processes which are equal to that so indicated or specified at the time of Bid. The burden of proof as to comparative quality and suitability of alternatives shall be upon Contractor. Specified items are preferred. After acceptance of Bid, no substitutions will be allowed, except as stated in the Bid. (Exception: Where Specifications indicate "No Substitutions Allowed" Contractor shall provide the designated manufacturers equipment without exception.)

B. Applicable Standards

1. All electrical work furnished and installed under this Section shall be in strict compliance with the ordinances and bylaws of the City, State and/or any other political subdivision thereof governing the installation of the electrical work on this Project. In the absence of other more stringent authority, the electrical work shall conform to the requirements of the National Electrical Code.
2. The Contractor shall conform to the latest safety standards as required by the Occupational Safety and Health Administration (OSHA) in all Work performed. In addition, all equipment and materials shall meet all applicable OSHA requirements.
3. All equipment shall be U.L. rated.

1.03 SUBMITTALS

- #### A.
- The Contractor shall comply with the requirements specified in Section 01 33 00 - Equipment Submittals, and as specified herein.

GENERAL PROVISIONS FOR ELECTRICAL WORK

- B. The Contractor shall not install any electrical work for any item of equipment specified under this or other Sections of the Contract until shop drawings of such equipment, reviewed by the Owner's Representative, are made available to him/her. Any such Work installed by the Contractor prior to the Owner's Representative review will be the responsibility of the Contractor and any modification of the electrical work necessary to meet the equipment requirements shall be made without additional compensation.
- C. Before fabrication and assembly of equipment, submit the following:
1. Front and rear elevations showing dimensions and the arrangement for each cubicle.
 2. Plan and section views, including dimensions and mounting details.
 3. Details of bus, connections, terminals, etc., including the complete ground bus arrangement and enclosure ground connections.
 4. Single line diagram of equipment and control schematic diagram.
 5. Wiring Diagrams
 - a. Connection diagrams for the wiring of equipment in each cubicle.
 - b. Interconnection diagrams for the wiring to equipment in other cubicles. Clearly identify the terminal block points for the external wiring to be routed in or out of the cubicles. Provide adequate space on the wiring diagrams for additions (by the Contractor) or cable and wire designations for that external wiring to be routed in or out of the cubicles at the terminal block.
 6. Bill of Material.
 7. Factory test procedures and protocols.
- D. Prior to shipment of the equipment, submit for record and distribution:
1. All drawings as finally reviewed and corrected.
 2. Recommended storage instructions.

GENERAL PROVISIONS FOR ELECTRICAL WORK

3. Installation instructions and operating and maintenance manuals.
 4. Spare parts bulletins.
 5. Factory test reports (certified).
 6. Booklet on maintenance procedures for circuit breakers and other equipment.
 7. Field test procedures and protocols.
- E. After final installation of the equipment the Contractor shall deliver a complete set of reproducible shop drawings of (including schematics, internal point-to-point and interconnecting) diagrams for all equipment and panels showing Work "as installed".

1.04 WARRANTY

All equipment (electrical and/or mechanical) specified by these Specifications shall be warrantied, and shall be provided with such warranties covering all parts and labor for a period of one (1) year from the date of Final Acceptance.

PART 2- PRODUCTS

2.01 GENERAL

A. Standard Products

The equipment furnished shall be standard products in production by reputable companies regularly engaged in the manufacture of high-quality equipment of the type specified. Similar equipment shall have been in satisfactory and successful operation for a period of at least two years. All parts of the specified equipment shall be so designed as to be especially adapted for the service required and shall be proportioned, enclosed, or guarded as to have ample and liberal strength and stability to withstand, without damage, the stresses to which they may be subjected during erection or operation. The component parts of duplicate items shall be fabricated on a principle of interchangeability to facilitate ready replacement.

GENERAL PROVISIONS FOR ELECTRICAL WORK

B. Materials

All material incorporated in the equipment shall be new and of first-class quality, free from injurious defects and imperfections, and of the classifications and grades designated. Materials not specifically designated herein shall be subject to the review of the Engineer and shall be suitable for the purpose intended.

2.02 RATINGS

The sizes, ratings, capacities, and performance characteristics of various specified items of equipment and devices are based on currently available standard products, which are available through United States manufacturers. In no case shall the size, rating, capacity or performance characteristic be less than that specified unless approved in writing by the Owner. Ratings and performance characteristics, where applicable, of various devices and items of equipment are specified in respective Sections of these Specifications. All electrical equipment shall be UL listed.

2.03 DETAILS OF CONSTRUCTION

- A. Electrical work shall meet requirements of these Specification, product manufacturer's instructions, recommended tolerances and recommended procedures, and as indicated by final reviewed submittals for the Work.
- B. Materials shall be of size and thickness indicated. If not indicated, size and thickness shall be selected to provide strength and durability in finished Work for intended application. Work to dimensions indicated, using proven fabrication details.
- C. Product finishes, surfaces and edges shall be smooth and free of marks, burrs, seams, roughness and like defects or conditions.
- D. Other electrical-mechanical product construction details shall be in accordance with the best engineering practices, applicable code requirements and as specified and/or other Sections of these Specifications.

GENERAL PROVISIONS FOR ELECTRICAL WORK

PART 3- EXECUTION

3.00 GENERAL

- A. The Contract Drawings indicate the general details necessary for the complete electrical installation. It shall be the Contractor's responsibility to install all electrical work in a neat and workmanlike manner. The Contractor shall cooperate with others to permit the installation of all of the work without interferences. If changes become necessary to avoid interference between the Work installed under various Sections, the Contractor shall submit to the Owner's Representative, for review, the proposed changes and upon review by the Owner's Representative, proceed with the installation of such changes without additional cost to the Owners.
- B. The Contractor shall maintain at the site a set of black-line prints on which shall be accurately shown the actual installation of all Work done under Division 26 and any variation from the Contract Drawings as reviewed by the Owner's Representative including changes in sizes, locations, and dimensions shall be indicated thereon. At the conclusion of the Work, the Contractor shall furnish record drawings in accordance with the General Conditions and as specified herein.

3.01 FACTORY TEST AND INSPECTION

- A. All equipment shall be shop-assembled and tested in the manufacturer's shop in accordance with recognized standard practices. Factory tests and inspections shall be conducted to verify that the equipment is operating satisfactorily and in compliance with the Specifications.

3.02 INSTALLATION AND TESTING

- A. General: Examine the areas and conditions under which electrical work is to be installed or performed and remedy any conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.
- B. Existing Facilities: Verify existence, location, and operation of existing electrical facilities to be abandoned, removed, altered, modified and/or temporarily relocated to allow activities during construction of the Work.

GENERAL PROVISIONS FOR ELECTRICAL WORK

- C. Install electrical work. Meet requirements of these Specifications, product manufacturer's instructions, recommended tolerances, and recommended procedures and as indicated by final reviewed submittals for the Work.

3.03 PAINTING

- A. All specified equipment shall be shop-primed and painted in accordance with manufacturer's standard finish.
- B. The Contractor shall be responsible for coordination of the compatibility between manufacturer's standard finish and the field paint specified.

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for the Work specified in this Section. All costs for such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

CATHODIC PROTECTION

SECTION 26 42 00

PART 1- GENERAL

1.01 SCOPE

This Section covers the cathodic protection system, related electrical panels and associated accessories including but not limited to power unit, conduit, wires and cables, junction boxes, anodes and all other necessary appurtenances to be designed, furnished, installed, and tested as shown on the Drawings and as specified herein. All fittings, connectors, hangers, supports, anchors and accessories where required, not otherwise specifically provided for in these Specifications, but necessary to complete the various systems shall be included under this Section of Work. Any and all miscellaneous electrical work required for installation and to electrically connect and provide for a complete and operational system shall be included under this Section of Work.

1.02 QUALITY ASSURANCE

A. Acceptable Supplier

The cathodic protection equipment supplier shall utilize personnel who have been engaged in the design and installation of impressed current corrosion control systems for five (5) or more years. The Work shall be performed under the direction of a licensed professional engineer or a person with N.A.C.E. certification who has experience in water tank cathodic protection design. Equipment shall be as manufactured by Corpro Waterworks, Inc. (@ 330-725-6681); no exceptions allowed.

B. Applicable Standards

All Work shall conform to the applicable provisions of the codes, standards, and Specifications, as specified herein and the following:

<u>Name</u>	<u>Abbreviation</u>
American Water Works Association	AWWA D104
National Electrical Code	NEC
Underwriters Laboratories	UL
National Association of Corrosion Engineers	NACE

1.03 SUBMITTALS

A. The Contractor shall submit to the Owner's Representative for review drawings, design details, product specifications, and

CATHODIC PROTECTION

description, including control schematic diagrams, wiring connection diagrams, together with instruction manuals, installation instructions, operating and maintenance manuals and field check-out, start-up and testing procedures specified in Section 01300 for all equipment furnished.

- B. Submit copy of ANSI/NSF 61 classification for all system components located within the tank.

PART 2- PRODUCT

2.01 GENERAL

- A. General. All materials and equipment shall conform to the Specifications listed below. All products shall have minimum ratings as specified herein. Identification symbols and nomenclature where used in this Section are the same as those shown on the Drawings. Paragraphs of these Specifications describing the requirements of a single item of equipment shall apply equally to all identical items of equipment to be furnished.
- B. Standard Products. All materials shall be new and conform to the applicable portion of these Specifications. The materials to be furnished under these Specifications shall be the standard product of manufacturers regularly engaged in the production of such equipment and shall be the manufacturer's latest standard design.
- C. Special Products. The supplier of the power units, anodes and other special cathodic protection materials and equipment shall have a minimum of five (5) continuous years of successful experience in the manufacture, installation and service of cathodic protection systems for similar tank structures.

2.02 EQUIPMENT CRITERIA AND OPERATION

- A. Type. The **existing** cathodic protection system is of the automatic impressed current type with IR Drop Free mode of operation to control corrosion of the submerged steel surfaces of a potable water storage tank.
- B. Design Criteria. 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 drops). The potential shall be measured with protective current being applied as recommended in NACE Standard RPO 388-88 latest version and/or ANSI/AWWA D104-91.

CATHODIC PROTECTION

- C. Design Requirements. The cathodic protection system shall be designed based upon capacity and performance requirements as follows:

Total submerged surface area of the tank. Total surface area includes high water level in tank and wet risers including draft tube recirculation piping, which are 30" diameter or larger.

Total bare surface area to be protected will be a minimum of 25% of total surface area.

Type of coating and condition of coating.

Minimum current density of 0.5 MA/ft² bare surface area.

Chemical analysis of water including resistivity expressed in ohm-cm.

Tank being susceptible to icing.

Minimum anode design life of twenty (20) years.

Selection, dimensions and layout of system components specified hereinafter.

- D. Mode of Operation. The **existing** power unit is capable of operating in the following three (3) modes with the selection of the desired operating mode made on the front panel without additional equipment or tools with access limited to authorized personnel only.

1. Manual Mode. The power unit shall operate as a constant current rectifier continuously delivering preselected current to the anodes. In this mode, the automatic control shall be locked out without affecting the preprogrammed settings. The output of the power unit shall be regulated from 0-100% of rated capacity without the use of transformer taps.
2. Auto-1 Mode. In the Auto-1 mode, the controller shall automatically and continuously monitor the potential of the structure and make necessary adjustments in the current output to maintain the structure potential at the preselected value. A single reference electrode placed within 1 to 2 cm. from the protected structure shall be used to measure the potential and control operation of the power unit.
3. Auto-2 Mode (IR Drop Free). The Auto-2 model shall function the same as Auto-1 except the potential shall

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be monitored against a reference electrode located some distance from the protected structure. The measured and displayed potential shall be free of IR drop error.

- E. Data. The following data shall be used as the basis for system design.

ITEM	TANK DATA
Type:	Standpipe
Style:	--
Capacity:	3 Million Gallons
Tank Height:	153'-6"
Tank Diameter:	57'-9.5"
Draft Tube Mixer:	None; per Village

2.03 DETAILS OF CONSTRUCTION

- A. General. The existing anodes and suspension system will need to be removed and replaced under this contract. This Specification outlines the minimum quality required for long-term economy and reliability of the cathodic protection power unit (rectifier) which is solid state, air-cooled and consisting of the necessary potential control circuitry, transformers, rectifiers, circuit breaker, meter, wiring, terminals and appurtenances of adequate capacity to meet the requirements of the system. Multiple D.C. output circuits exist, each circuit consists of separate transformers, rectifier and control. The output of each circuit is electronically controlled in all modes of operation. The entire unit is field serviceable. The unit is designed to operate on 110 volts, 1 phase, 60 hertz, A.C.
- B. Existing Transformer. The transformer is of the separate primary and secondary type and shall withstand continuous operation 10% above rated input voltage at the maximum rated D.C. output. The transformer is designed for a maximum hot spot heat rise not to exceed 50EC.
- C. Existing Rectifiers. The rectifier unit(s) performs in accordance with ANSI/AWWA Standard D104-04 Section 4: 4.1.1.1.1, IR drop free system and include:
1. Transformer
 2. Selenium or silicon rectifying elements
 3. Circuit breaker(s)
 4. Lightning, surge and overload protection
 5. Provision for air-cooling operation

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6. Voltmeter(s) and ammeter(s)
7. Weatherproof cabinet in accordance with NEMA 4R 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, 60Hz, single phase AC power
11. DC output capacity in volts and amperes in accordance with Design Criteria and Requirements specified in Paragraph 2.02
12. Number of circuits or separate rectifiers in accordance with Design Criteria and Requirements specified in Paragraph 2.02
13. Automatic controller is AWWA D104-04, Type A and adjusts 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) mounted in 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 potential meter(s) to display tank-to-water potential, free of IR drop

- D. Proposed Long Life Reference Electrode(s). The permanent reference electrode shall consist of a copper-copper sulfate electrode which shall be manufactured to remain stable (plus or minus 10 MV) for a 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 in the tank water to provide the most representative measurements for the submerged surface area(s).

- E. Proposed Anode Suspension System. The anode suspension system shall be designed to be resistant to ice damage and in accordance with ANSI/AWWA Standard D104-04, 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 of the tank bowl or to the exterior of the dry access column of spheroidal type tanks and the side wall of wet risers which are 30" diameter or larger. All cord

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to cord connections shall be tied and taped.

Handhole assemblies used for the installation of vertical anode suspension systems from the roof of the tank shall consist of a 6" diameter steel cover, rubber gasket and a steel bar and bolt assembly for each 5" diameter access opening.

F. Proposed Anode Materials. The anode materials shall be selected in accordance with Design Criteria and Requirements specified in Paragraph 2.02 and shall consist of one of the following:

1. Minimum .062" diameter platinized niobium with 25 micro inches of platinum. The wire anode shall be continuous with a maximum of two (2) anode to header connections.
2. Minimum .062" diameter titanium with a precious metal oxide coating. The wire anode shall be continuous with a maximum of two (2) anode to header connections.

All anode to header cable connections shall be sealed to prevent water migration.

G. Proposed Pressure Entrance Fitting. For icing tanks the pressure entrance fitting shall accommodate anode and reference electrode lead wires at the base of the tank. 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 a maximum 1.5 inch Schedule 80 steel coupling.

H. Existing Control Circuits. The control circuits are designed to continuously monitor the potential of the structure and automatically regulate the protective current as required to maintain the potential at the preselected level. The current output of the unit is controlled to prevent overprotection.

I. Existing Circuit Breaker. The circuit breaker shall be of the single phase, 2 pole, series trip, manually reset, magnetic type not affected by change in ambient temperature.

J. Wiring. Wiring for the cathodic protection system and equipment shall be as follows:

1. Existing Power Unit Wiring. The wires to connect components of the power unit are stranded or solid copper meeting the requirements of the N.E.C. for

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allowable current carrying capacities. The D.C. output terminals are conveniently located and are sized to accommodate wires as required for safe operation of the cathodic protection system.

2. Proposed Wiring Within Tank. All wiring within the tank shall be insulated to prevent copper conductor to water contact.
 3. Proposed Exterior Tank Wiring. All wiring on the exterior of the tank shall be insulated and run in rigid conduit.
- K. Proposed Hardware. All hardware used in conjunction with the system shall be protected against corrosion.
- L. 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 A Drinking Water System Components@.

PART 3- EXECUTION

3.01 FACTORY TESTING

All equipment shall be inspected and tested in the manufacturer's shops. Monitoring and control devices shall be functionally tested to verify correct operation and that all component parts function properly.

3.02 INSTALLATION AND TESTING

- A. General. The equipment shall be installed as shown on the Drawings in accordance with the manufacturer's instructions and recommended best practices. All necessary items required for installation and testing shall be furnished. All items of equipment shall be operated, adjusted, and tested for proper performance in accordance with the manufacturer's recommended test procedure. All miscellaneous electrical work required for electrification of the cathodic protection system, including conduit and wiring, shall be in accordance with local codes and standards.
- B. Field Supervisory Personnel. The equipment manufacture shall provide the services of factory trained field supervisory personnel who shall perform all necessary checkouts and energize and adjust the system to operate within the specified criteria. The factory trained field supervisory personnel shall be responsible for adjusting the system to perform in accordance with specified design

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criteria as well as conducting potential profile measurements.

- C. Qualifications. The cathodic protection field supervisory personnel shall have a minimum of five (5) years' experience installing and servicing the types of system described by these Specifications. The system shall be installed by personnel specifically trained by the cathodic equipment manufacturer to provide all workmanship required for corrosion control performance.
- D. 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 cathodic equipment manufacturer.
 2. Pressure entrance fitting shall be installed in accordance with AWWA D100-96, Section 3.13.
 3. Welding, cutting and coating shall be in accordance with AWWA Standards D100, D102 and D105.
 4. Welding of steel coupling and anchors for horizontal anode suspension and rectifier mounting bracket shall be coordinated and furnished by the Contractor prior to coating the tank. Cutting of 5" diameter access openings for vertical anode suspension shall be coordinated and furnished by the Contractor as required. The cathodic protection equipment manufacturer shall furnish installation drawings and materials to the Contractor prior to tank coating.
 5. Electrical continuity of all section of bolted or riveted tanks shall be furnished by the Contractor.
 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 is mounted at a convenient height (eye level) above grade for monitoring and service purposes.
 11. AC power to the rectifier shall be provided as shown on the Drawings.
 12. Disinfection of the tank shall be in accordance with the applicable requirements of Section 01012.
- E. Energizing System. After the system is installed and the tank is filled, the cathodic protection field supervisory

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personnel shall provide startup service which includes energizing, testing and adjusting the system for optimum performance of the cathodic protection system. This startup service shall be in accordance with ANSI/AWWA D104-04 Section 5.2 Testing, 5.2.1 Field Test for Type A, IR Drop-Free System. This startup service shall be coordinated with the Owner and/or Owner's 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 in the regular employment of the cathodic protection equipment manufacturer.

The final test and adjustment of the system shall be conducted approximately twelve (12) months after the startup service.

- F. Monitoring During Guarantee Period. The cathodic protection equipment manufacturer shall furnish self-addressed report cards to be completed by the Owner. Report cards received by the cathodic protection equipment manufacturer during the one-year guarantee and service period shall be evaluated for system performance.
- G. Service Agreement. The cathodic protection equipment manufacturer shall furnish a Service Agreement for the type of system installed. The Service Agreement shall include the annual service rate and a complete description of the scope of work proposed. The Service Agreement for annual inspection and potential testing shall be in accordance with AWWA D104-04 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 cell.
 4. Adjustment for optimum corrosion control shall be in accordance with criteria for protection.
 5. Data recorded shall provide sufficient information to evaluate the performance of the system relating to criteria for protection.
 6. In the event additional work is required, the cathodic equipment manufacturer shall submit a report with recommendations for optimizing corrosion control.

CATHODIC PROTECTION

3.03 PAINTING

All equipment specified in this Section shall be shop painted with the manufacturer's standard finish. Contractor shall be responsible for touch-up field painting as required.

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for the below listed Items, in the Schedule of Prices:

26 42 00/01; Cathodic Protection
26 42 00/02; Service Agreement

- B. These prices shall be full compensation for furnishing all materials, equipment and labor as well as any and all incidentals necessary to complete the Items of Work to provide a complete and operational system.
- C. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

LIGHTING EQUIPMENT

SECTION 26 56 00

PART 1- GENERAL

1.01 SCOPE

A. Description

This Section covers the lighting system to be furnished, installed, connected and tested as specified described herein and as shown on the Drawings. The lighting system shall include outlet boxes, pull and junction boxes, conduit and fittings, wire, cable, grounding connections, wiring devices and plates, fixtures, lamps, receptacles and switches, and accessories required for a complete lighting system. All related fittings, connectors, supports and anchors where required, but not specifically provided for in these Specifications shall be included under this Section of Work.

B. Related Work

1. Sections 16010 and 16050.
2. Sections 16110 and 16120.
3. Other Sections as specified herein.

1.02 QUALITY ASSURANCE

A. Acceptable Manufactures

1. Light Fixtures: As shown on the Drawings.
2. Other items: As specified herein.

B. Applicable Standards

Lighting fixtures, lamps, and accessories shall conform with the requirements of the NEC.

1.03 SUBMITTALS

The Contractor shall submit to the Owner's Representative for review drawings, product specifications and descriptions, including control schematic diagrams, wiring connection diagrams, polar charts of the lighting pattern together with installation instruction, and operating and maintenance procedures specified in Section 01300 for all equipment furnished.

LIGHTING EQUIPMENT

PART 2- PRODUCTS

2.01 GENERAL

The Drawings show the approximate locations of lighting fixtures, switches, receptacles, and other equipment connected to the lighting panelboards. They also show the circuit assignment to each device. Conduit and wiring connections shall be furnished by the Contractor in accordance with the circuiting and control shown on the Drawings. Branch circuit breakers, spares, and spaces shall be as shown on the Drawings.

2.02 RATINGS

(See Equipment and Panelboard Schedules on Drawings for ratings, where applicable.)

2.03 DETAILS OF CONSTRUCTION

A. Outlet Boxes

1. Each fixture or continuous row of fixtures and all switches, receptacles, and other wiring devices shall be provided with suitable outlet boxes.
2. Outlet boxes shall be of the cast ferrous or aluminum alloy type.
3. Drains shall be provided on all boxes located at lowest point in conduit run, as specified, or as shown on the Drawings.
4. Outlet boxes shall be equipped with suitable covers, canopies, or device plates as specified.
5. Outlet box extension rings shall be provided for exposed conduit extensions from embedded outlet boxes. Extension rings shall match the embedded boxes. Where extension rings are mounted on cast type boxes, neoprene gaskets shall be used.

B. Wiring Devices and Plates

1. The Contractor shall furnish and install all wiring devices and device plates as shown on the Drawings and as specified herein and in Section 16113.

LIGHTING EQUIPMENT

2. Wall switches and receptacles shall be covered with device plates suitable for the type and number of devices enclosed. Covers mounted on boxes containing 2 or more devices shall be of the combination type.
3. Switches for the control of lighting shall be as specified in Section 16113.
4. Convenience outlets shall be as specified in Section 16113.

C. Fixtures

Fixtures shall be of the types specified on Drawings in the Lighting Fixture Schedule and shall be furnished complete with mounting brackets, fixture mounting stems, or hangers, together with steel supports and/or channels as required, and fixture wires. Fixture wire shall be as specified in Section 16120, Wire and Cable.

D. Exit Signs and Emergency Lighting Fixtures

Exit signs and emergency lighting fixtures shall be self-contained, battery operated during emergency. They shall be completely automatic and shall provide a minimum of one and a half hours operation under emergency condition. A solid state SCR charger shall maintain the battery at full charge. Upon interruption of normal AC power, the transfer circuit shall automatically switch the load to the battery. A low voltage disconnect circuit shall be included to protect the battery from damage. When normal AC power is restored, the unit shall automatically transfer to the normal power supply and the battery charger shall resume the recharge cycle. A test switch and a rate of charge indicating pilot light shall be included. Battery shall be of the no-maintenance, long life (minimum 15 years) type.

- E. Panelboard: Panelboard (designated LP-1) shall be factory assembled and shall be of the unit type mounted on a back-plate properly formed to provide a rigid assembly to protect against damage during handling and installation. The structure shall be designed and assembled so that unit can be easily replaced. A removable barrier pan shall be provided over the main and branch-circuit protective devices to provide easy access to the wiring. All lugs shall be of the solderless type. The neutral bar shall be a solid, grounded bar and shall have numbered terminals for connection of neutral wires. Main buses shall have current carrying capacities of 225-A. Terminals of the panelboard main breaker shall be of the pressure type suitable for a wire size range from 4 to 1/0 AWG to No. 8 AWG. A door shall be provided for

LIGHTING EQUIPMENT

the complete panelboard. On the inside of the door there shall be a directory frame on which the Contractor shall neatly type the identification for each branch circuit. The panelboard shall be provided with a ground connector suitable for No. 1/0 AWG ground wire.

- F. Panelboard Circuit Breakers: Circuit breakers shall be molded case type, quick make/quick break with thermal and magnetic tripping and shall be provided with self-contained, non-interchangeable trip elements effectively sealed to prevent tampering. Multi-pole breakers shall have a common trip mechanism and common operating handle. Circuit-breakers shall have an interrupting capacity of 22,000 A, rms symmetrical at 240-V AC. All circuit breakers shall give a clear indication of their "ON", "OFF" and "TRIPPED" positions. All branch circuits shall be clearly numbered to correspond to the directory on the door.

PART 3- EXECUTION

3.01 FACTORY TEST AND INSPECTION

Each item of equipment shall be shop-assembled and tested in accordance with the manufacturer's standard procedure, monitoring and control devices shall be functionally tested to verify correct operation and that all parts function properly.

3.02 INSTALLATION AND TESTING

- A. The Contractor shall install all lighting fixtures, lamps, switches, receptacles, and associated supports and fittings, conduit, boxes, wiring and grounding conductors as specified and as shown on the Drawings, and in accordance with the manufacturer's instructions and recommendations.
- B. All fixtures shall be aligned and directed as shown on the Drawings so as to illuminate the desired area properly. Fixtures shall be directly and rigidly mounted on their supporting structures. The conduit system shall not be used to support fixtures except where specifically shown on the Drawings.
- C. Lighting fixtures indicated on the Drawings to be flush mounted, shall not be fastened directly to concrete but shall be spaced away by means of one inch galvanized metal channels or spacers.

LIGHTING EQUIPMENT

- D. All lighting fixtures shall be directly grounded to the equipment grounding system by bonding the grounded conduit system to the non-current carrying metal enclosure. Grounding type lock-nuts or conduit bushings shall be used.
- E. After installation, the complete lighting system shall be given adequate field visual and functional tests, witnessed by the Owner's Representative, to demonstrate that the requirements of the Specifications and Drawings have been met and that the performance of the system is satisfactory. Three certified copies of the field tests shall be furnished to the Owner's Representative.

3.03 PAINTING

- A. All equipment specified in this Section shall be shop-painted with the manufacture's standard finish. All equipment specified in this Section shall be field painted in accordance with Section 09900.
- B. The Contractor shall be responsible for coordination of compatibility between the manufacturer's standard finish and the field paint specified.

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made of the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for the below listed Items, in the Schedule of Prices:

26 56 00/01; Lighting Equipment

- B. This price shall be full compensation for furnishing and installing all materials; and for all preparation; and for all labor, equipment, tools, and incidentals necessary for the Work as required by the Specifications and Drawings. Payment for excavation and backfill required for installation shall be included in the prices bid for these Items as they pertain.

LIGHTING EQUIPMENT

- C. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain.

END OF SECTION

SCADA SYSTEM MODIFICATIONS

SECTION 27 51 25

PART 1- GENERAL

1.01 SCOPE

A. Description

This section covers the instrumentation and control equipment upgrades, together with related accessories to be furnished, installed, programmed and tested as shown on the Drawings and as specified herein. All piping, conduits, wiring, fittings, connectors, supports and anchors, where required shall be included under this Section of Work.

B. Related Work

1. Division 26 - Electrical.
2. Other Sections as specified herein.

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers

1. SCADA modifications shall be performed by City's preferred System Integrator, Metropolitan Industries, Inc. No exceptions.

B. Applicable Standards, Codes and Permits

All Work performed and all materials furnished or otherwise used shall be in accordance with the National Electric Code, the National Electrical Safety Code, and applicable local regulations and ordinances. Where required by applicable codes, materials and equipment shall be listed by Underwriters' Laboratories or other testing organizations acceptable to the governing authority. The Contractor shall, at his/her own expense, arrange for and obtain all necessary permits, inspections, and approvals by the proper authorities in local jurisdiction of such Work.

C. Coordination

Instrument and control systems shall be designed and coordinated for proper operation with related equipment and materials furnished by other suppliers under other Sections of these Specifications, and where applicable, to related existing equipment. All instruments and control devices shall be applied in full conformity with the

SCADA SYSTEM MODIFICATIONS

drawings, specifications, engineering data, instructions, and recommendations of the instrument or device manufacturer and the related equipment manufacturer.

Review of drawings submitted prior to the final determination of related equipment shall not relieve the Contractor from supplying systems in full compliance with the specific requirements of the related equipment.

Related equipment and materials may include, but will not be limited to, pump controls, supervisory control equipment, telemetry, flow meter, conduit, cable, and piping as described/specified in other Sections of these Specifications all as associated with this Project.

Installation drawings shall be prepared for interconnecting wiring and piping between the related equipment and the equipment furnished under this Section. All interconnecting wiring shall be appropriate for the service and shall result in a properly functioning system.

Coordination with other sub-contractors and/or Owner designated contractors, and supervision of installation shall be provided by the Contractor as required during construction.

1.03 SUBMITTALS

The Contractor shall submit to the Owner's Representative for review detailed shop drawings, product specifications and descriptions, including control schematic diagrams, internal wiring diagrams, interconnecting wiring diagrams, sample screen displays, together with instruction manuals, installation instructions, operating and maintenance manuals and field check-out, start-up and testing procedures as specified in Section 013300 for all equipment furnished.

1.04 MATERIAL DELIVERY, STORAGE AND HANDLING

It is anticipated that no new equipment will be needed for this work. The work will be programming existing SCADA equipment only.

PART 2- PRODUCTS

2.01 GENERAL

- A. All materials and equipment shall conform to the specifications listed below and shall be equal to the products listed below by brand name and catalog number.

SCADA SYSTEM MODIFICATIONS

Identification symbols and nomenclature where used in this Section are the same as those shown on the Drawings. Paragraphs of these Specifications describing the requirements for a single item of equipment shall apply equally to all identical items of equipment to be furnished.

2.02 DESCRIPTION/OPERATIONAL AND PERFORMANCE REQUIREMENTS

The SCADA pump control logic shall use the Village of Willowbrook Lake Hinsdale High Tank as the primary sensing location

The SCADA pump control logic shall use station flow meter signals, local pressure sensing and VFD current sensing as self-checks for normal operating conditions.

The SCADA system pump logic control shall provide for operation during and after a utility power failure, station transfer to emergency power and return to normal utility power.

2.03 INSTRUMENTATION

Instrumentation shall consist of existing primary sensing elements and transmitters for pressure sensing. Sensors and transmitters should be existing at locations indicated on the Drawings.

PART 3- EXECUTION

3.01 FACTORY TEST AND INSPECTION

Not applicable.

3.02 INSTALLATION AND TESTING

A. General

The programming shall be installed as shown on the Drawings and in accordance with the manufacturer's instructions and recommended best practices. All necessary fittings, connectors, supports, anchors and other items required for installation and testing shall be furnished. All items of equipment shall be operated, adjusted and tested for proper performance in accordance with the manufacturer's recommended test procedure.

SCADA SYSTEM MODIFICATIONS

B. Instrumentation Installation

The instrumentation equipment shall be installed by the Contractor or his/her subcontractors. The services of the System Integrator's technical representative shall be provided as necessary to calibrate, test and advise others of procedures for installation, adjustment and operation of equipment, devices, components, etc. all in accordance with the requirements of other Sections of the Specifications. System Supplier shall be responsible for performing any and all software engineering and programming/calibrating required by these Specifications and as directed by the Owner to provide a complete and operational installation. The System Integrator's technical representative shall be factory-trained and shall perform all necessary coordination to check-out, start-up and place into operation the water works facilities as well as instruct Owner personnel in the control and operation of the herein specified equipment.

Installation of instrumentation equipment shall be in accordance with the following:

1. Field Wiring. Field wiring materials and installation shall conform to the requirements of the electrical Sections.
2. Field Piping. Field piping materials and installation shall conform to the requirements of the piping Sections.
3. Field-Mounted Instruments. Instruments shall be mounted so that they may be readily approached and easily serviced and so that all appurtenant devices may be easily operated. Installation details for some instruments are indicated on the Drawings. Unless otherwise indicated on the Drawings, instruments which include local indicators shall be mounted so that the indicator is approximately 5'-0" above the floor. Indicators shall be oriented for ease of viewing. Transmitters shall be mounted on corrosion-resistant pipe supports suitable for floor, wall or bracket mounting.

SCADA SYSTEM MODIFICATIONS

4. Field Calibration. A technical representative of the System Supplier shall calibrate each instrument and shall provide a written calibration report for each instrument indicating the results and final tuning adjustment settings. Instrument calibration shall be accomplished prior to a checkout of the operation of the system. Field calibration work shall also include any and all necessary software modification required.
5. Systems Check. A technical representative of the System Integrator shall participate in the checkout of the control systems. If interrelated devices furnished by other suppliers, such as valve actuators, and/or motor controls, do not perform properly when placed in service, the technical representative shall use suitable test equipment to introduce a simulated signal to verify or measure signals from those devices as may be required to locate the source of trouble or malfunction. A written report stating the results of such tests shall be furnished, if requested by the Owner's Representative, as necessary to assign responsibility for corrective measures.

C. Customer Training

The coordinating System Integrator shall provide a qualified representative at the job site to train the Owner's personnel in operating and maintaining the equipment. The representative shall be a skilled, factory-trained technician capable of providing services to supervise and inspect the installation and start-up operation of all systems, as well as to instruct Owner's operating personnel in the operation and maintenance of the equipment. The training session shall include a technical explanation of the equipment and an actual hands-on demonstration. The training session shall consist of 2 full 8 hour consecutive working days, and the schedule shall be arranged and coordinated with the Owner.

3.03

PAINTING

All equipment specified in this Section shall be shop painted with the manufacturer's standard finish.

SCADA SYSTEM MODIFICATIONS

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the contract lump sum prices for the below listed Items in the Schedule of Prices:

27 51 25/01; Modifications to Existing SCADA System

- B. These prices shall be full compensation for furnishing all materials; for all preparation/installation/programming, and placing of the materials; and for all labor, equipment, tools and incidentals necessary to complete these items for instrumentation equipment installation as shown on the Drawings.
- C. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION

EARTH EXCAVATION

SECTION 31 20 00

PART 1- GENERAL

1.01 DESCRIPTION

This work shall consist of all excavation necessary to complete the work to the line and grade shown on the plans. At the Contractors option, with the review of the Engineer, suitable excavated material may be utilized as fill material in non-structural areas. Excavation and Disposal of material shall be in accordance with Section 202 of the Standard Specifications.

Earth Excavation will include all materials encountered including but not limited to the following:

Natural Rock

Bituminous Surface Removal, 1 1/2"

Sanitary and Sewer Structures

Sidewalk

Bituminous Concrete Driveway Pavement

Excavation for storm sewer items, sanitary items, lighting items including foundations shall be included in the cost of the various items and paid for separately under those items. No undercuts shall be performed without specific direction by the Engineer.

1.02 QUALITY ASSURANCE

Except as modified herein, the work shall conform to the applicable portions of the Standard Specifications, Sections 202, 204, 205, 211 and 502.

PART 2- PRODUCTS

(Not Used)

PART 3- EXECUTION

3.01 This Work shall be performed in accordance with the applicable portions of Sections 202, 204, 205, 211 and 502 of the Standard Specifications.

EARTH EXCAVATION

- A. Earth excavation shall include structure excavation, topsoil stripping and stockpiling, furnished excavation, embankment and removal and disposal of unsuitable material, and shall include all labor, materials, equipment, tipping fees and all incidental construction required.
1. Furnished excavation shall be placed in accordance with Section 204 of the IDOT Standard Specifications to the lines and grades as shown on the Drawings to fill the area around the meter station to finished grade.
 2. Topsoil shall be stripped and stockpiled on site in accordance with Section 211 of the IDOT Standard Specifications. Topsoil stockpile may be left on site for use in topsoil placement.
 3. Removal and disposal of unsuitable material shall be in accordance with Section 202 of the IDOT Standard Specifications. Unsuitable material shall be excess excavated material not used in furnished excavation or embankment fill operations. Contractor shall dispose of unsuitable material and excess earth excavation off site. Soil testing and certification by an IL PE to meet the requirements of CCDD shall be included in the Contractor's scope of work and shall be included in the cost of Earth Excavation. Earth Excavation not meeting the CCDD requirements shall be hauled off site and disposed of and paid for as Non-Special Waste Disposal.
- B. Compaction of the existing subgrade shall be to a minimum of 95 percent of maximum dry density as determined by the Modified Proctor Test - ASTM D 1557. Embankment shall be placed in 9 inch lifts for cohesive soils and 12 inch lifts for granular backfill, with each lift compacted to the specified density prior to the placement of additional embankment. Porous Granular Embankment shall meet 3000 psf bearing in all structural areas.

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Work specified in this Section.

EARTH EXCAVATION

4.02

PAYMENT

Payment for the Work specified in this Section will be paid for at the contract unit price for the below listed Items in the Schedule of Prices:

31 20 00/01; Earth Excavation

END OF SECTION

TOPSOIL AND SEEDING

SECTION 32 92 19

PART 1- GENERAL

1.01 SCOPE

This Section covers the Work required for the incidental restoration of plain grassy areas impacted by all related infrastructure improvements scheduled for the area involved, and all things necessary for preparing, placing, and maintaining topsoil, seed and mulch, or sod in accordance with these Specifications and as shown on the Drawings. All disturbed areas shall be restored with topsoil, seed and mulch, or sod as shown on the Drawings. The Work of this Section includes, but is not limited to the following:

1. Preparation of sub-grade to receive topsoil.
2. Placing, raking and leveling of topsoil as required to prepare for seed and mulch, or sod.
3. Placing of seed and mulch, or sod.
4. Maintenance of seed and mulch, or sod.

1.02 QUALITY ASSURANCE

- A. Work of this Section shall conform to the applicable requirements of the IDOT Standard Specifications Sections 250, 251 and 252, modified as herein specified.
- B. As a measure of the quality of Work to be performed, the Contractor shall be responsible for restoring all disturbed areas to original conditions (as a minimum).

1.03 SUBMITTALS

Contractor shall submit to the Owner's Representative for review prior to procurement of the materials, the name and location of the nursery from which the sod originates, the brand name and mixture of the seed, and the brand name and chemical composition of the fertilizer.

TOPSOIL AND SEEDING

PART 2- PRODUCTS

2.01 TOPSOIL

Topsoil for seeded or sodded areas shall be 6 inches in thickness as a minimum. No spreading of topsoil will be permitted until subgrade is approved by the Owner's Representative. Topsoil shall be a finely pulverized, fertile, friable, rich, black dirt free of lumps/clots and without admixture of sub-soil, or any material toxic to plant growth. Topsoil shall be of uniform quality and free of large roots, sticks, hard clay, weeds, brush, stones or other litter or waste products and shall have demonstrated, in its original location, the ability to grow healthy grass. Topsoil shall not be delivered or spread in muddy or frozen condition.

2.02 SEED AND MULCH

Seed shall be IDOT Class 1 in accordance with IDOT Article 251. Erosion control blanket shall be placed and anchored in all locations seed had been placed.

2.03 SOD

Sod shall be drought tolerant and native to the area and shall be in accordance with the applicable requirements of IDOT Standard Specification, Article 252.02.

2.04 FERTILIZER

A. All fertilizer used shall be a commercial mixture providing a complete plant food and containing nitrogen, phosphorous and potash in the proportions of 5 percent water soluble nitrogen, 3 percent available phosphorous and 2 percent water soluble potash or in other similar proportions approved by the Owner's Representative. The Contractor shall obtain approval from the Owner's Representative of the fertilizer proposed to be used before delivery of the fertilizer to the Work Site.

B. Fertilizer shall be provided at 180 pounds of fertilizer nutrients per acre applied at a 5:3:2 ratio as follows:

Nitrogen Fertilizer Nutrient	90 lbs/acre
Phosphorus Fertilizer Nutrient	54 lbs/acre
Potassium Fertilizer Nutrient	36 lbs/acre

C. All commercial fertilizer (5-3-2) shall be delivered in standard size bags of the manufacturer, showing weight, analysis and name of manufacturer.

TOPSOIL AND SEEDING

PART 3- EXECUTION

3.01 GENERAL

- A. Restoration of the plain grassy areas shall consist of removing all surplus excavated material; and after suitable settlement time (where settlement may be expected due to other excavation work of these Specifications) then installing (as a minimum) six inch (6") layer of topsoil raked into place and seeding (or sodding) the area to be restored. For all seeded areas, straw mulch shall be placed to retain the seed and water. The Contractor shall be responsible for the maintenance of seeded/sodded areas as specified herein. Ditches which have been disturbed in the course of the Project Work shall be regraded to the original grade. Any restoration on a slope of 3 to 1 or greater shall be provided with erosion control by the Contractor at no additional cost to the Owner.
- B. For sodding applications the ground preparation, sodding time, transportation, placing, staking, watering and/or supplemental watering, disposal of surplus material and inspection shall be in accordance with IDOT Standard Specification Articles 252.03 through 252.11 except as may otherwise be modified as specified herein.

3.02 PLACING TOPSOIL

- A. Place topsoil in all areas where sodding and planting will be performed. Place to the required depths, up to finished grade elevations.
- B. Use topsoil in relatively dry state. Place during dry weather.
- C. Fine grade topsoil, eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles and contours of subgrades.
- D. Remove stone, roots, grass, weeds, debris and other foreign material while spreading.
- E. Manually spread topsoil around trees, plants, equipment and building(s) to prevent damage which may be caused by grading equipment.
- F. Lightly compact placed topsoil.

TOPSOIL AND SEEDING

3.03 MAINTENANCE

- A. The Contractor shall furnish all watering equipment for planting and maintenance until Final Payment.
- B. All seeded/sodded areas shall be maintained by the Contractor until the Work is accepted with a minimum maintenance period of 60 days commencing with the completion of seed/sod installation.
- C. Maintenance shall consist of watering, mowing, fertilizing and repair of damaged areas as directed by the Owner's Representative.
- D. Erosion, damage or other irregularity requiring repair during the maintenance period shall be made as directed by the Owner's Representative.
- E. When directed by the Owner's Representative, any defective or unsatisfactory Work shall be removed and replaced by the Contractor at the Contractor's expense, if such defective or unsatisfactory Work is determined by the Owner's Representative to be the fault of the Contractor.

PART 4- MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

Measurement will not be made for the Work specified in this Section.

4.02 PAYMENT

- A. Payment for the Work specified in this Section will be made at the lump sum prices for the below listed Items in the Schedule of Prices:

32 92 19/01, Top Soil & Seeding

- B. These prices shall be full compensation for furnishing all materials; and for all preparation; and for all labor, equipment, tools, and incidentals necessary for the installation and maintenance of the seed/sod as required by the Specifications and Drawings.
- C. Payment will not be made for any other items except as listed above. All other costs associated with such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain.

END OF SECTION

GENERAL PROVISIONS FOR MECHANICAL WORK

SECTION 33 05 50

PART 1- GENERAL

1.01 SCOPE

- A. This Section describes the general provisions for the Work to be performed under Division 22 - Plumbing, Division 33 - Utilities of this Contract as well as Division 26 - Electrical, where applicable. The Contractor shall comply with these general provisions and shall perform all Work in accordance with the Specifications contained in this Section, as supplemented by Specifications in related Sections, and as shown on the Drawings. Related electrical work shall be performed in accordance with the applicable provisions of Division 26.
- B. The following specifies the minimum general requirements for the furnishing, installation and testing of the materials and equipment. Additional details of items furnished and installation and testing procedures are specified under individual Sections of the Specifications.
- C. The Contractor shall provide all necessary coordination between the suppliers of the specified equipment so as to provide a well-designed and satisfactory operating facility to the Owner. The Contractor is advised that these Specifications are not intended to cover every and all details of the Work. In case(s) where details related to the specified Work are not covered by these Specifications, it shall be the responsibility of the Contractor to include and execute such coordination and Work at no additional cost to the Owner.

1.02 QUALITY ASSURANCE

A. Acceptable Manufacturers and Equipment Suppliers.

Acceptable manufacturers for various items of equipment are specified in respective Sections of these Contract Documents. For convenience of designation in the Contract Documents, certain equipment, articles, materials, and processes are designated by manufacturer trade name or catalog name and number. Such designation shall be deemed to be followed by the words "or equal" whether such words are shown or not. The Contractor may offer material or processes which are equal to that so indicated or specified at the time of Bid. Such offers must be in accordance with the hereinafter specified requirements. The burden of proof as to comparative quality and suitability of alternatives shall be upon the Contractor. Specified items are preferred. After

GENERAL PROVISIONS FOR MECHANICAL WORK

acceptance of Bid, no substitutions will be allowed, except as stated in the Bid. (Exception: Where Specifications indicate "No Substitutions Allowed" the Contractor shall provide the designated manufacturers equipment without exception.)

B. Applicable Standards

Systems as installed by the Contractor shall be in accordance with all applicable Specifications included in these Contract Documents and shall conform to State, Federal and/or Local codes and regulations. Any conflicts between Drawings or Specifications or applicable codes regulations and/or authorities having jurisdiction, shall be brought immediately to the Owner's attention. In such cases, the more stringent requirements or design practices shall govern and shall be complied with, without any extra cost to the Owner.

C. Field Verification

The Contractor shall verify field conditions, measurements and dimensions so as to assure that all items of equipment shall fit properly and be suitable for the field conditions.

D. Proposed Substitute Equipment

Comply with requirements of Section 01 33 00.

1.03 SUBMITTALS

A. General

The Contractor shall comply with the requirements specified in Section 01 33 00 - Submittals, and as specified herein.

B. Materials

1. The Contractor shall submit lists of material, equipment, apparatus, and accessories intended for use.
2. The Contractor shall include with all submittals all physical and performance data, including materials, manufacturer's names, model numbers, weights, sizes, capacities, temperatures, pressures, flow rates, performance curves, electrical ratings, finishes, colors, dimensions, accessories, and all other data required to completely describe the equipment and to indicate compliance with the Specifications.

GENERAL PROVISIONS FOR MECHANICAL WORK

C. Shop Drawings and Testing Procedures

1. The Contractor shall submit for review dimensioned outline shop drawings showing the general arrangement of the equipment to be furnished, in accordance with the specified submittal schedule, and/or as otherwise specified herein.
2. Before proceeding with the manufacture of the equipment, the Contractor shall submit for review general assembly shop drawings, subassembly shop drawings, detail shop drawings, calculations, design data, catalog cuts and similar engineering documents required to demonstrate fully that all parts will conform to the provisions and intent of the Specifications and to the requirements of their installation, operation, and maintenance. These shop drawings shall show all necessary dimensions and fabrication details, including the design of welded and bolted joint connections, tolerances of fits and clearances, and all field joints and subassemblies in which the Contractor proposes to ship the equipment. Design criteria, calculations, and detailed specifications, shall be submitted for the design of all major components and for other features or details when requested.
3. All submittals by the Contractor shall be certified by the respective equipment manufacturer.
4. The Contractor shall submit complete full-line wiring diagrams covering all equipment furnished. The Contractor shall furnish shop drawings of switch developments for all instrument and control switches and internal connection diagrams for all instruments, relays, regulators, etc. The Owner's Representative will return one print of each wiring diagram on which will be marked the wire notations and cable numbers for outgoing circuits where this information is not otherwise available to the Contractor. The Contractor shall add this information to his shop drawings. Adequate space shall be allowed on the wiring diagrams to accomplish this.
5. Shop drawings shall include electrical devices, accessories and wiring furnished as component parts of mechanical equipment and shall show arrangement and dimensions.
6. The Contractor shall prepare and submit shop drawings for all work areas, indicating solutions to space

GENERAL PROVISIONS FOR MECHANICAL WORK

problems and coordination with requirements in other Sections. These shop drawings, as a requirement of this Division, shall indicate superimposed items of all Divisions and Sections involved in congested areas, including, but not limited to, piping, structural work, electrical work and ceiling work.

7. Protocol of all shop and field testing procedures shall be submitted. In addition and prior to conducting testing activities at the site, the Contractor shall prepare a test program, showing the sequence of work required for specified tests. This program shall be in the form of a plan drawing to the extent practical and shall be exclusive of all other plans and schedules required under this Contract. This program shall be supplemental by sketches, text, bar diagrams, showing the sequence of work required for testing.

D. Operating and Maintenance Manuals

1. Upon completion of the Work, the Contractor shall furnish to the Owner six (6) complete sets of operating instructions, maintenance instructions, parts lists, and all other bulletins and brochures pertinent to the operation and maintenance of the mechanical equipment and systems provided.
2. The operating and maintenance manuals shall be bound in durable binders, labeled to correspond with all mechanical systems shown or specified, and indexed into sections such as, but not limited to, the following:
 - a) A chart tabulating all types of pipe and pipe fittings, valves and piping specialties installed in each system.
 - b) Manufacturer's brochures, including names, addresses and telephone numbers, for all items installed in each system. Identify items by item number shown on the Contract Documents. Reference the manufacturer's part or model number and the system in which it is installed.
 - c) All major equipment such as pumps, valves, compressors and related equipment, including shop drawings.
 - d) Lubrication charts for equipment requiring lubrication, listing each item of equipment, proper lubricant and dates lubricated, and a lubrication schedule.

GENERAL PROVISIONS FOR MECHANICAL WORK

- e) List of consumable items, parts, and supplies, with applicable price lists.

E. Certificates

At the completion of the construction, the Contractor shall submit, to the Owner's Representative for review, written certification that all mechanical systems have been tested, and that the installation and performance of these systems conform to the requirements of the Specifications.

1.04 WARRANTY

All specified equipment shall be warrantied, and shall be provided with such warranties covering all parts and labor for a periods of one (1) year from the date of Final Acceptance unless otherwise specified in subsequent Sections of these Specifications.

PART 2- PRODUCTS

2.01 GENERAL

A. Standard Products

The equipment furnished shall be standard products in production by reputable companies regularly engaged in the manufacture of high-quality equipment of the type specified. Similar equipment shall have been in satisfactory and successful operation for a period of at least two years. All parts of the specified equipment shall be so designed as to be especially adapted for the service required and shall be proportioned, enclosed, or guarded as to have ample and liberal strength and stability to withstand, without damage, the stresses to which they may be subjected during erection or operation. The component parts of duplicate items shall be fabricated on a principle of interchangeability to facilitate ready replacement.

B. Materials

All materials incorporated in the equipment shall be new and of first-class quality, free from injurious defects and imperfections, and of the classifications and grades designated. Materials not specifically designated herein shall be subject to the review of the Owner's Representative and shall be suitable for the purpose intended.

GENERAL PROVISIONS FOR MECHANICAL WORK

2.02 RATINGS

The sizes, ratings, capacities, and performance characteristics of various specified items of equipment and devices are based on currently available standard products, which are available through United States manufacturers and/or suppliers. In no case shall the size, rating, capacity or performance characteristic be less than that specified unless approved in writing by the Owner. Ratings and performance characteristics, where applicable, of various devices and items of equipment are specified in respective Sections of these Specifications. All electrical components of mechanical equipment shall be UL rated.

2.03 DETAILS OF CONSTRUCTION

A. Nameplates

Each item of manufactured equipment furnished under the Specifications shall have a permanent nameplate affixed thereto in a readily visible place, showing the serial number, the name and address of the manufacturer, rated capacity, speed, electrical characteristics, and other pertinent data, as applicable and as specified herein after. Nameplates of distributing agents alone will not be acceptable.

B. Samples

The Contractor shall furnish to the Owner's Representative for review, when requested or required by the Specifications, samples of all materials and finishes to be used in the execution of the Work. Such samples shall be submitted before the Work is commenced and in ample time to permit examination thereof. All materials furnished and finishes applied shall be fully equal to the reviewed samples found to be acceptable.

C. Loose Parts

All loose parts, spare parts, fasteners, anchor bolts and other non-attached pieces shall be properly tagged. A loose parts list shall accompany the equipment to identify loose parts.

D. Lifting Provisions

Equipment shall be equipped with adequate provisions for lifting, such as, lifting lugs, threaded holes for removable eyebolts, holes for sling passage, etc. to facilitate initial placement and future moving. All items such as, but not limited to, lifting beams, slings and other devices necessary

GENERAL PROVISIONS FOR MECHANICAL WORK

for handling during placement and/or removal of the equipment shall be provided by the Contractor and shall remain the property of the Owner.

E. Anchor Bolts

Anchor bolts, nuts and washers shall be adequate for the intended use. Each anchor bolt shall be furnished with all required flat washers, lock washers and nuts. Anchor bolts shall be furnished by the Contractor as a part of each piece of equipment.

F. Spare Parts

(As specified in subsequent Sections of these Specifications.)

G. Guards

All rotating equipment such as but not limited to belt and chain drives, exposed gearing and shafting and flywheels, clutches, fan blades, stub shafts, couplings, etc. shall be completely guarded from all directions. Guards shall enclose the top, bottom ends, front and back of the drive assembly to prevent access to the danger zone during equipment operation. All guards shall be checked for proper running clearances and adjusted as required.

2.04 RELATED ELECTRICAL FEATURES OF MECHANICAL EQUIPMENT

A. General

Electrical equipment shall conform to NEC, UL, ANSI, and NEMA Standards. The installed equipment shall conform to ANSI-C1, "National Electrical Code", considering the atmospheric and climatic conditions and the elevation at the project site.

B. Wiring and Conduit

Wiring of the control panels and component parts shall be in accordance with the applicable requirements of Division 26.

PART 3- EXECUTION

3.00 FABRICATION AND WORKMANSHIP

A. General

Like parts and spare parts shall be interchangeable wherever possible. Surface finish of machined parts shall be adequate for their functional requirements. Machining of fits on

GENERAL PROVISIONS FOR MECHANICAL WORK

renewable parts shall be accurate and to specified dimensions so that replacements made to drawing sizes may be readily installed. All work shall be done by workers skilled in their various trades and completed in a thorough manner following the best modern practices.

During erection the Contractor shall take the necessary precautions to prevent foreign objects or dirt from entering piping or equipment. All openings in equipment shall remain closed and protected during installation until ready for make-up of pipe connections or matching of sectionalized equipment. Damaged covers shall be repaired or replaced immediately to protect the interior of piping or equipment against weather or other contamination.

B. Electric Welding

1. Minimum Weld Requirements

All welds shall be made continuous. The minimum size of fillet welds shall be 1/4 inch. All butt welds shall be full penetration welds welded from both sides.

2. Preparation of Base Material

Members to be joined by welding shall be cut to shape and size by mechanical means such as shearing, machining, grinding, or by gas or arc cutting, to suit the conditions. Design of welded joints and selection of weld filler metal shall allow thorough penetration and good fusion of the weld with the base metal. The edges of surfaces to be welded shall be sound metal free of visible defects, such as lamination or defects caused by cutting operations, and free from rust, oil, grease, and other foreign matter.

3. Weld Finish

Welds shall in general be treated so that they will display good appearance and a surface suitable for painting. Structure welds shall be ground and blended to avoid stress raisers. All welds which required nondestructive examinations shall be dressed by chipping and grinding as required for good interpretation by the selected weld examination methods.

GENERAL PROVISIONS FOR MECHANICAL WORK

4. Welding Qualifications

The qualification of welding procedures, welders, and welding operators for all welding including weld repairs, shall conform to the AWS D1.1, "Structural Welding Code". Contractor shall furnish the facilities, all equipment, materials and other articles required to perform qualification tests of his welders and welding operators. Certificates of welders' qualifications shall be submitted when requested.

5. Technique of Welding

The technique of welding, the appearance and quality of the welds, and the methods used in correcting defective work shall conform to the AWS D1.1, "Structural Welding Code". Special care shall be taken to avoid undercuts along the seams or warping of the structure. If undercuts appear along the welds, they shall be filled using a small diameter electrode of the same composition as the original electrode.

C. Fabrication of Structural Steel

1. If straightening is necessary, it shall be done by methods that will not injure the metal. Sharp kinks or bends will be cause for rejection of the material. Shearing and cutting shall be carefully performed, and all portions of the Work which will be exposed to view after completion shall be neatly finished.
2. Design and fabrication of structural parts shall conform to the applicable provisions of the AISC "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings", of the AISC "Code of Standard Practice for Steel Buildings and Bridges".

D. Machine Work

1. General

All tolerances, allowances, and gauges for metal fits between plain (non-threaded) cylindrical parts shall conform to ANSI-B4.1, "Preferred Limits and Fits for Cylindrical Parts", for the class of fit as shown or otherwise required. Sufficient machining stock shall be allowed on parts to be machined to insure true surfaces of solid materials. Finished contact or bearing surfaces shall be true and exact to secure full contact. Journal and sliding surfaces shall be polished, and all

GENERAL PROVISIONS FOR MECHANICAL WORK

surfaces shall be finished with sufficient smoothness and accuracy to insure proper operation when assembled. All drilled holes for bolts which are intended to match other drilled holes shall be accurately located and drilled from templates. No machining shall be done on working surfaces of "Lubrite" bushings or washers.

2. Finished Surfaces

All surfaces that are indicated on the Drawings or those that require machining for their intended function, or those that are usually machined according to good workshop practice shall be machined. Surface finish qualities shall be adequate for the intended use and shall be indicated on the Contractor's drawings and shall be in accordance with ANSI-B46.1, "Surface Texture". Compliance with specified surface will be determined by sense of feel and by visual inspection of the Work compared to standard roughness specimens, in accordance with the provisions of ANSI B46.1.

3. Unfinished Surfaces

So far as practicable, all Work shall be laid out to secure proper matching of adjoining unfinished surfaces. Where there is a large discrepancy between adjoining unfinished surfaces they shall be chipped and ground smooth, or machined, to secure proper alignment. Unfinished surfaces shall be true to the lines and dimensions shown on the Drawings and shall be chipped or ground free of all projections and rough spots. Depressions or holes not affecting the strength or usefulness of the parts may be filled in an approved manner. Corrosion resistant steel seal plates shall have all surfaces thoroughly cleaned and those in contact with seals shall have a smooth and even surface.

4. Pins and Pin Holes

Pin holes shall be bored true to gauges, smooth and straight, and at right angles to the axis of the member. The boring shall be done after the member is securely fastened in position.

5. Protection of Machined Surfaces

- a. Machine-finished surfaces shall be thoroughly cleaned of foreign matter. Finished surfaces of large parts and other delicate surfaces shall be protected with wooden pads or other suitable means. Unassembled pins and bolts shall be oiled

GENERAL PROVISIONS FOR MECHANICAL WORK

and wrapped with moisture resistant paper or protected by other means in keeping with good engineering practice.

- b. Finished surfaces of ferrous metals to be in bolted contact shall be washed with a rust inhibitor and given one thin coat of Tung oil.

E. Lubrication

Solvents shall not be used on "Lubrite" bearings. Before assembly all bearing surfaces, journals, and grease and oil grooves shall be carefully cleaned and lubricated with an approved oil or grease. After assembly each lubricating system shall be flushed and filled with an approved lubricant in accordance with the equipment manufacturer's written recommendations. "Lubrite" bearings shall not be greased and shall be assembled dry according to the manufacturer's instructions.

3.01 FACTORY TEST AND INSPECTION

- A. Test of Materials. All materials or parts used in the equipment shall be tested, unless otherwise directed, in conformity with applicable methods prescribed by the ASTM, or such other organization as may be specifically required, and in general accordance with the best commercial methods. When requested, tests shall be made in the presence of the Owner's Representative. Stocked material may be used, provided evidence is furnished to the Owner's Representative to show that such material meets the requirements specified herein, in which case tests on stocked materials may be waived.
- B. Test Certificates. Certified material test reports shall be furnished in triplicate to the Owner's Representative as soon as possible after the tests are made. The test certificate shall identify the component for which the material is to be used and shall contain all information necessary to verify compliance with the Specifications.
- C. Shop Assembly and Tests. The shop assemblies and tests specified for the various items of equipment shall be conducted. The completed shop inspection forms shall be signed by the Contractor or his representative. Copies of all shop inspection records shall be furnished to the Owner's Representative. No equipment shall be shipped from the manufacturer's shops until it has been inspected. Prior to the major shop assemblies and tests the Contractor shall submit an outline of the procedures and test he plans to demonstrate fulfillment of the requirements specified. Where witnessing of shop testing is required by these

GENERAL PROVISIONS FOR MECHANICAL WORK

Contract Documents, the Contractor shall give sufficient notification to the Owner's Representative (as specified) so that such factory testing may be witnessed. Costs which may be incurred by the Owner's Representative directly related to witnessing of shop tests (such as travel and lodging) will be the responsibility of the Owner. All other costs related to shop testing shall be considered incidental to the items of Work to which they pertain and shall be included in the lump sum price of the specified equipment.

3.02 INSTALLATION AND TESTING

- A. Receiving, Handling and Storage. The Contractor shall be responsible for the receiving, handling and storing of all materials and equipment required for the Work. Installation and maintenance instructions shall accompany all equipment delivered to site. All materials and equipment shall be stored to protect them from the weather and injury prior to installation. Damaged materials and equipment shall not be installed.
- B. Installation. The equipment shall be installed as shown on the Drawings and in accordance with the manufacturer's instructions and recommended best practices. All equipment shall be installed in a neat, accurate and workmanlike manner. Equipment shall be set level, true to line, at correct elevation and in proper orientation as shown on the Drawings. Equipment set on concrete foundations shall be properly grouted (with non-shrink grout) in such a manner to eliminate any voids which may be present under the base. Where shims are used and where shims are not removed after the grout sets, care shall be taken to totally cover any exposed surface areas which may result in a void. All necessary shims, grout, anchor bolts, and other items required for installation shall be furnished by the Contractor. In addition, certain anchor bolts when supplied by equipment suppliers shall be installed by the Contractor. The Contractor shall inspect all materials and equipment delivered to the site to assure compliance with the associated reviewed shop drawings. If the Contractor discovers any defect in material or equipment, he shall notify the Owner's Representative immediately. Any Work performed by the Contractor after such discovery, until authorized in writing by the Owner's Representative, will be done at the Contractor's risk and the cost of correcting such work shall be borne by the Contractor. In addition, any material or equipment installed by the Contractor prior to the completion of the Owner's Representative's review, will be done at the Contractor's risk and the cost of correcting such work shall be borne by the Contractor. Where trenching, excavation, backfilling and/or concreting is required for the equipment installation the Contractor shall perform such

GENERAL PROVISIONS FOR MECHANICAL WORK

activities in accordance with the applicable requirements of IDOT Standard Specifications.

C. Adjustments/Alignment/Leveling. The Contractor shall perform all adjustment, fitting, cleaning and calibration of components to be incorporated into the Work to assure correct operation and workmanlike installation. As minimum requirements the Contractor shall provide/comply with the following:

1. Mild carbon steel leveling plates or smooth-troweled surfaces shall be provided at all anchor bolts in concrete bases as required for leveling.
2. All equipment, unless furnished with leveling screws or otherwise specified, shall be leveled with stainless steel shims at each anchor bolt, shim on both sides of each bolt, and at intermediate points as required to prevent distortion of the equipment. Shims shall have square cut edges, not trimmed or sheared, and shall be of varying thickness to minimize the number of shims required.
3. Rotating mechanical equipment shall be set, leveled, aligned, and inspected with precision tools such as steel straight edge, dial indicator, graduated levels, transit, etc. The alignment shall be accomplished prior to making-up any piping flange connections. After units have been aligned, the piping flange bolts shall be tightened. Sufficient alignment checks shall be made to verify that there is no load or strain on the installed equipment and that the drive shaft and the driven shaft are within the manufacturer's specified tolerances for alignment.
4. Electric motors shall be checked for correct direction of rotation prior to connection to driven equipment.

D. Field Testing. All necessary piping, pipe closures, gates, meters, valves, and other test equipment required for testing shall be furnished by the Contractor. All items of equipment shall be operated, adjusted and tested for proper performance in accordance with the manufacturer's recommended test procedure, and as otherwise specified herein. Before final grouting of equipment is done, after alignment is completed, and before any final performance tests are made, the Contractor shall notify the Owner's Representative so that such alignment may be inspected and tests may be witnessed by the Owner's Representative.

The Contractor shall then test, operate and calibrate as

GENERAL PROVISIONS FOR MECHANICAL WORK

necessary to demonstrate proper performance of the equipment in the presence of the Owner's Representative. Should it become necessary for any items of equipment to be retested, the Contractor shall perform all necessary Work, including removal, repair or replacing, reinstallation and retesting of the defective equipment. The Contractor will not be reimbursed for the cost of such Work associated with the retesting of defective equipment, if the defect was due to the Contractor's negligence or lack of workmanship.

- E. Maintenance and Operation of Equipment and Materials. All equipment and appurtenances installed shall be provided with proper oil and lubricants by the Contractor before being placed in operation. All permanent equipment furnished under these Specifications shall be properly maintained and operated by the Contractor until the Work is accepted by the Owner.
- F. Field Check-Out and Start-Up Procedure. The Contractor shall complete all new Work to the maximum extent possible before making actual tie-in and final connection to existing systems. Tie-ins requiring cutting and patching shall be performed in accordance with applicable requirements, best recommended procedures and as specified herein. No tie-in shall be made until authorized by the Owner. The Contractor shall advise the Owner in sufficient time (minimum 24 hours) to arrange for proper coordination with Existing Systems and scheduled cut-ins and tie-ins.

3.03 PAINTING

- A. All equipment shall be shop-primed and painted in accordance with Section 09900 and/or as specified in subsequent Sections of these Specifications. All equipment shall be field-painted in accordance with Section 09900 and/or as specified in subsequent Sections of these Specifications.
- B. The Contractor shall be responsible for coordination of the compatibility between the manufacturer's standard finish and field-paint specified.

PART 4- MEASUREMENT AND PAYMENT

Separate measurement or payment will not be made for Work specified in this Section. All costs for such Work shall be considered incidental and shall be included in the prices bid for the various items to which they pertain in the Schedule of Prices.

END OF SECTION



CHRISTOPHER B. BURKE ENGINEERING, LTD.

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EST. 1960

Willowbrook

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MONTHLY REPORT
MUNICIPAL SERVICES DEPARTMENT
Permits issued for the month of September, 2015

Mayor

Frank A. Trilla

Village Clerk

Leroy R. Hansen

Village Trustees

Sue Berglund

Umberto Davi

Terrence Kelly

Michael Mistele

Gayle Neal

Paul Oggerino

Asphalt	8
Building Shell	1
Concrete	8
Deck	1
Fence	1
Fire Alarm	1
Fire Restoration	1
Interior Renovations	1
Lawn Sprinkler	1
New Construction	1
Pit Ladder	1
Plan Review	5
Remodel Bathrooms	1
Reoccupancy	1
Roof	9
Sealcoating	3
Security Alarm	2
Sewer Repair	1
Special Promotion	1
Waterheater	2
Window Replacement	3
TOTAL	48

Village Administrator

Tim Halik

Final Certificates of Occupancy	0
Temporary Certificates of Occupancy	0
Permit Revenue for September, 2015	146,015.93
Total Revenue Collected for Fiscal Year To Date	213,123.78
Total Budgeted for Fiscal Year 2015/16	200,000.00
Total Percentage of Budgeted Revenue Collected to Date	106.56

Chief of Police

Mark Shelton

Respectfully submitted,

Timothy Halik
Village Administrator

TH/jp



Proud Member of the
Illinois Route 66 Scenic Byway

MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE

Fiscal Year 2015/16

MONTH	CURRENT FISCAL YEAR	PRIOR FISCAL YEAR
MAY	\$ 11,447.58	\$ 12,317.12
JUNE	\$ 21,083.13	\$ 8,573.76
JULY	\$ 19,426.58	\$ 15,008.48
AUGUST	\$ 15,150.56	\$ 8,890.90
SEPTEMBER	\$ 146,015.93	\$ 44,003.58
OCTOBER		\$ 36,457.55
NOVEMBER		\$ 4,709.37
DECEMBER		\$ 52,874.78
JANUARY		\$ 17,590.14
FEBRUARY		\$ 23,298.46
MARCH		\$ 110,947.28
APRIL		\$ 20,097.94
COLLECTED REVENUE	\$ 213,123.78	\$ 354,769.36
BUDGETED REVENUE	\$ 200,000.00	\$ 175,000.00
REVENUES COLLECTED- (OVER)/UNDER BUDGET	(13,123.78)	(179,769.36)
PERCENTAGE OF BUDGETED REVENUE COLLECTED	106.56	202.73

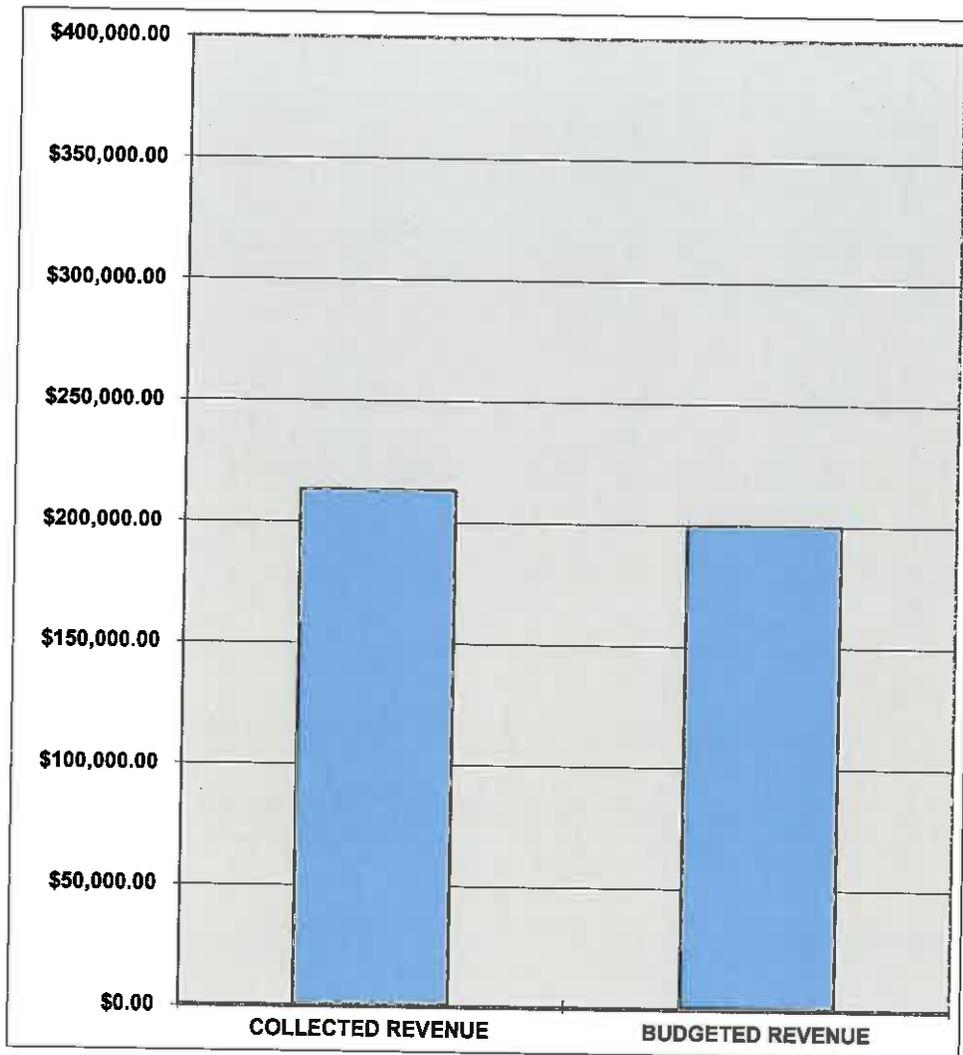
MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE

	Fiscal Year 15/16	Fiscal Year 14/15
COLLECTED REVENUE	\$ 213,123.78	\$ 354,769.36
BUDGETED REVENUE	\$ 200,000.00	\$ 175,000.00

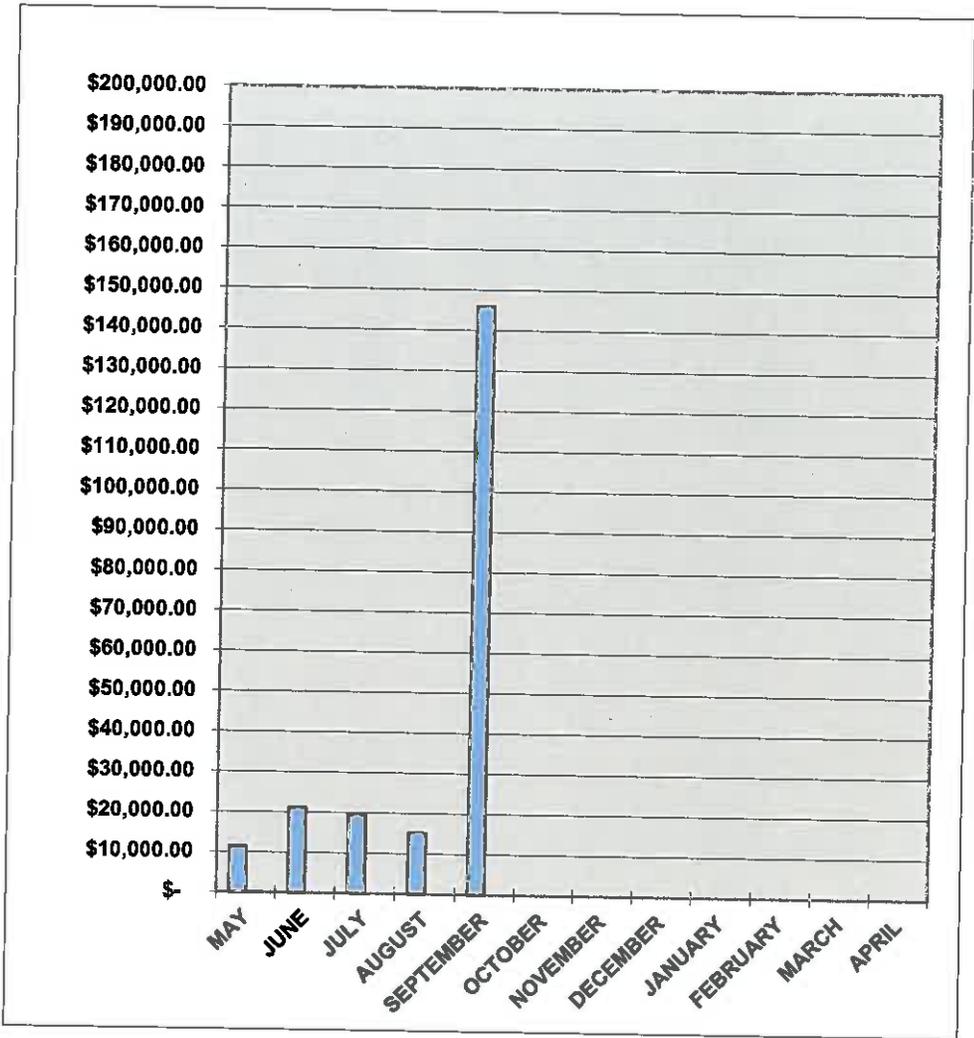
MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE



MUNICIPAL SERVICES DEPARTMENT

PERMIT REVENUE



2015

Permit	Date Issued:	Name:	Address:	Permit Purpose:	Business Name:	Fee:	RES / COMM:	Date Released:
15-314	09/03/15	Town Center	7155 Kingery	Asphalt	Town Center	\$ 75.00	C	09/03/15
15-341	09/21/15	Lake Hinsdale Village	1 Clubhouse Drive	Asphalt		\$ 75.00	R	09/21/15
15-339	09/21/15	Lake Hinsdale Village	201 Lake Hinsdale Drive	Asphalt		\$ 75.00	R	09/21/15
15-342	09/21/15	Lake Hinsdale Village	1 Clubhouse Circle	Asphalt		\$ 75.00	R	09/21/15
15-251	09/21/15	Mike Denyko	58 W. 75th Place	Asphalt		\$ 75.00	R	09/21/15
15-344	09/25/15	Wayde Milas	7550 Quincy	Asphalt	WKGGG	\$ 75.00	C	09/25/15
15-298	09/10/15	Peter Elliott	513 Ridgemoor Drive	Asphalt		\$ 75.00	R	09/10/15
15-311	09/03/15	Nancy Costea	5831 Bentley Ave	Asphalt		\$ 75.00	R	09/03/15
15-346	09/25/15	David Hrizak	650 Willowbrook Center	Building Shell	Willowbrook Bus. Ctr.	\$ 82,404.55	C	09/25/15
15-316	09/03/15	Michelle Courtney	26 Portwine	Concrete		\$ 75.00	R	09/03/15
15-322	09/03/15	Lake Hinsdale Village	67 Portwine	Concrete		\$ 75.00	R	09/03/15
15-323	09/03/15	Lake Hinsdale Village	24 Windward	Concrete		\$ 75.00	R	09/03/15
15-324	09/03/15	Lake Hinsdale Village	1 Clubhouse Circle	Concrete		\$ 75.00	R	09/03/15
15-320	09/03/15	Lake Hinsdale Village	12 Portwine	Concrete		\$ 75.00	R	09/03/15
15-321	09/03/15	Lake Hinsdale Village	43 Portwine	Concrete		\$ 75.00	R	09/03/15
15-301	09/21/15	Luz Canino-Baker	121 58th Place	Concrete		\$ 375.00	R	09/21/15
15-343	09/30/15	Hayes Willowbrook	7630 Madison	Concrete	Hayes Willowbrook	\$ 375.00	C	09/30/15
15-230	09/30/15	Nasib Natf	6446 Western Ave	Deck		\$ 50.00	R	09/30/15
15-312	09/03/15	John Emmenegger	6123 Bentley Ave	Fence		\$ 50.00	R	09/03/15
15-318	09/03/15	Ashton Place	341 75th Street	Fire Alarm	Ashton Place	\$ 200.00	C	09/03/15
15-305	09/14/15	Lake Hinsdale Tower	6340 Americana Drive	Fire Restoration		\$ 782.96	R	09/14/15
15-278	09/09/15	Willowbrook Inn	7800 Kingery Hwy	Interior Renovations	Willowbrook Inn	\$ 18,477.86	C	09/09/15
15-348	09/25/15	McNaughton Develop	6435 Bentley	Lawn Sprinkler		\$ 75.00	R	09/25/15
15-337	09/15/15	Amos Preston	6258 Kingery	New Construction	Little Sunshine	\$ 38,111.41	C	09/15/15
15-295	09/10/15	Sunrise Assisted	6300 Clarendon Hills Rd	Pit Ladder		\$ 450.00	R	09/10/15
	09/02/15	Petco	6300 Kingery - Unit 201	Plan Review	Petco	\$ 4,000.00	C	09/02/15
	09/03/15	Willowbrook Lanes	735 Plainfield	Plan Review	Willowbrook Lanes	\$ 1,000.00	C	09/03/15
	09/10/15	Mark Astrella	7635 Eleanor	Plan Review		\$ 750.00	R	09/10/15
	09/17/15	Bill McNaughton	545 Plainfield Rd	Plan Review	F. Novotny & Assoc.	\$ 1,000.00	C	09/17/15
	09/29/15	Milenko Ilic	352 W. 63rd Street	Plan Review		\$ 750.00	R	09/25/15
15-330	09/17/15	Casey Kurek	7409 S. Quincy	Remodel Bathrooms	The Plastics Group	\$ 960.00	C	09/17/15
15-336	09/21/15	Matt Freidman	625 Plainfield	Reoccupancy		\$ 200.00	R	09/21/15
15-304	09/03/15	Calvin Kung	365 65th Street	Roof		\$ 35.00	R	09/03/15
15-306	09/03/15	Ken Carson	7825 Brookbank Rd	Roof		\$ 35.00	R	09/03/15
15-315	09/03/15	Jean Pauga	6348 Tennessee	Roof		\$ 35.00	R	09/03/15
15-325	09/10/15	Janet Linly	6010 Bentley	Roof		\$ 35.00	R	09/10/15
15-334	09/11/15	Janine Zenner	125 Waterford Drive	Roof		\$ 35.00	R	09/11/15
15-338	09/21/15	Dejan Mijalovic	7743 Cherry Tree Lane	Roof		\$ 35.00	R	09/21/15
15-308	09/21/15	The Knolls	6160 & 6162 Knollwood	Roof		\$ 50.00	R	09/21/15
15-307	09/21/15	The Knolls	6182 - 6186 Pinewood	Roof		\$ 50.00	R	09/21/15

2015

Permit	Date Issued:	Name:	Address:	Permit Purpose:	Business Name:	Fee:	RES / COMM:	Date Released:
15-347	09/25/15	Alice Gyuran	6535 Wingate Road	Roof		\$ 35.00	R	09/25/15
15-328	09/10/15	Willowbrook Ford	7301 Kingery	Sealcoating	Willowbrook Ford	\$ 75.00	C	09/10/15
15-335	09/14/15	Midtown Athletic	215 W. 63rd St	Sealcoating	Midtown Athletic	\$ 150.00	C	09/14/15
15-329	09/17/15	Denny Restaurant	7737 Kingery	Sealcoating	Denny's Restaurant	\$ 75.00	C	09/17/15
15-332	09/10/15	Steven McCarty	43 Ridgefield Lane	Security Alarm		\$ 50.00	R	09/10/15
15-333	09/10/15	Kuo Liu	6026 Western Ave	Security Alarm		\$ 50.00	R	09/10/15
15-345	09/29/15	Gwen Williams	721 68th Place	Sewer Repair		\$ 50.00	R	09/29/15
15-310	09/03/15	Clovers	735 Plainfield	Special Promotion	Clovers	\$ 200.00	C	09/03/15
15-331	09/10/15	Thomas Bothen	6333 Tremont St	Waterheater		\$ 50.00	R	09/10/15
15-340	09/21/15	Shalini Singh	7711 Virginia Ct.	Waterheater		\$ 50.00	R	09/21/15
15-319	09/10/15	Wayne Johnson	6533 Bentley	Window Replacement		\$ 75.00	R	09/10/15
15-327	09/14/15	Sharon Slavik	6188 Pinewood Ct	Window Replacement		\$ 75.00	R	09/14/15
15-349	09/25/15	Mark Mueller	16 Lakeview Court	Window Replacement		\$ 75.00	R	09/25/15

VILLAGE OF WILLOWBROOK

REVENUE REPORT FOR SEPTEMBER, 2015

ACCT. NO.	DESCRIPTION	RECEIVED THIS MONTH	RECEIVED THIS YEAR	BUDGET AMOUNT	PERCENT COLLECTED	BUDGET REMAINING
<u>GENERAL CORPORATE FUND</u>						
<u>Operating Revenue</u>						
<u>Property Taxes</u>						
01-310-101	PROPERTY TAX LEVY-SRA	29,541.87	71,441.41	73,181.00	97.62	1,739.59
01-310-102	PROPERTY TAX LEVY-RD & BRIDGE	40,601.14	98,498.49	101,938.00	96.63	3,439.51
01-310-103	PRIOR YEAR TAX COLL	0.00	0.00	0.00	0.00	0.00
*TOTAL	Property Taxes	70,143.01	169,939.90	175,119.00	97.04	5,179.10
<u>Other Taxes</u>						
01-310-201	MUNICIPAL SALES TAX	349,847.40	1,499,862.50	3,600,000.00	41.66	2,100,137.50
01-310-202	ILLINOIS INCOME TAX	141,752.01	496,221.25	634,095.00	78.26	137,873.75
01-310-203	AMUSEMENT TAX	6,323.06	29,860.59	69,984.00	42.67	40,123.41
01-310-204	REPLACEMENT TAX	0.00	383.47	1,220.00	31.43	836.53
01-310-205	UTILITY TAX	71,760.26	339,667.10	1,075,000.00	31.60	735,332.90
01-310-207	TELECOMMUNICATION LEASE	0.00	0.00	0.00	0.00	0.00
01-310-208	PLACES OF EATING TAX	45,462.83	220,861.34	460,000.00	48.01	239,138.66
01-310-209	WATER TAX	17,953.04	72,425.04	165,800.00	43.68	93,374.96
01-310-210	WATER TAX - CLARENDON WATER CO	0.00	275.05	1,000.00	27.51	724.95
*TOTAL	Other Taxes	633,098.60	2,659,556.34	6,007,099.00	44.27	3,347,542.66
<u>Licenses</u>						
01-310-301	VEHICLE LICENSES	0.00	0.00	0.00	0.00	0.00
01-310-302	LIQUOR LICENSES	0.00	3,000.00	60,500.00	4.96	57,500.00
01-310-303	BUSINESS LICENSES	0.00	4,672.50	82,000.00	5.70	77,327.50
01-310-305	VENDING MACHINE	125.00	140.00	2,000.00	7.00	1,860.00
01-310-306	SCAVENGER LICENSES	0.00	0.00	6,000.00	0.00	6,000.00
*TOTAL	Licenses	125.00	7,812.50	150,500.00	5.19	142,687.50
<u>Permits</u>						
01-310-401	BUILDING PERMITS	146,015.93	213,123.78	200,000.00	106.56	-13,123.78
01-310-402	SIGN PERMITS	0.00	714.26	5,000.00	14.29	4,285.74
01-310-403	OTHER PERMITS	24.00	114.00	500.00	22.80	386.00
01-310-404	COUNTY BMP FEE	14,937.60	16,536.60	2,000.00	826.83	-14,536.60
*TOTAL	Permits	160,977.53	230,488.64	207,500.00	111.08	-22,988.64
<u>Fines</u>						
01-310-501	CIRCUIT COURT FINES	10,306.54	56,200.66	120,000.00	46.83	63,799.34
01-310-502	TRAFFIC FINES	1,525.00	8,528.33	25,000.00	34.11	16,471.67
01-310-503	RED LIGHT FINES	3,224.00	120,889.00	540,000.00	22.39	419,111.00
*TOTAL	Fines	15,055.54	185,617.99	685,000.00	27.10	499,382.01

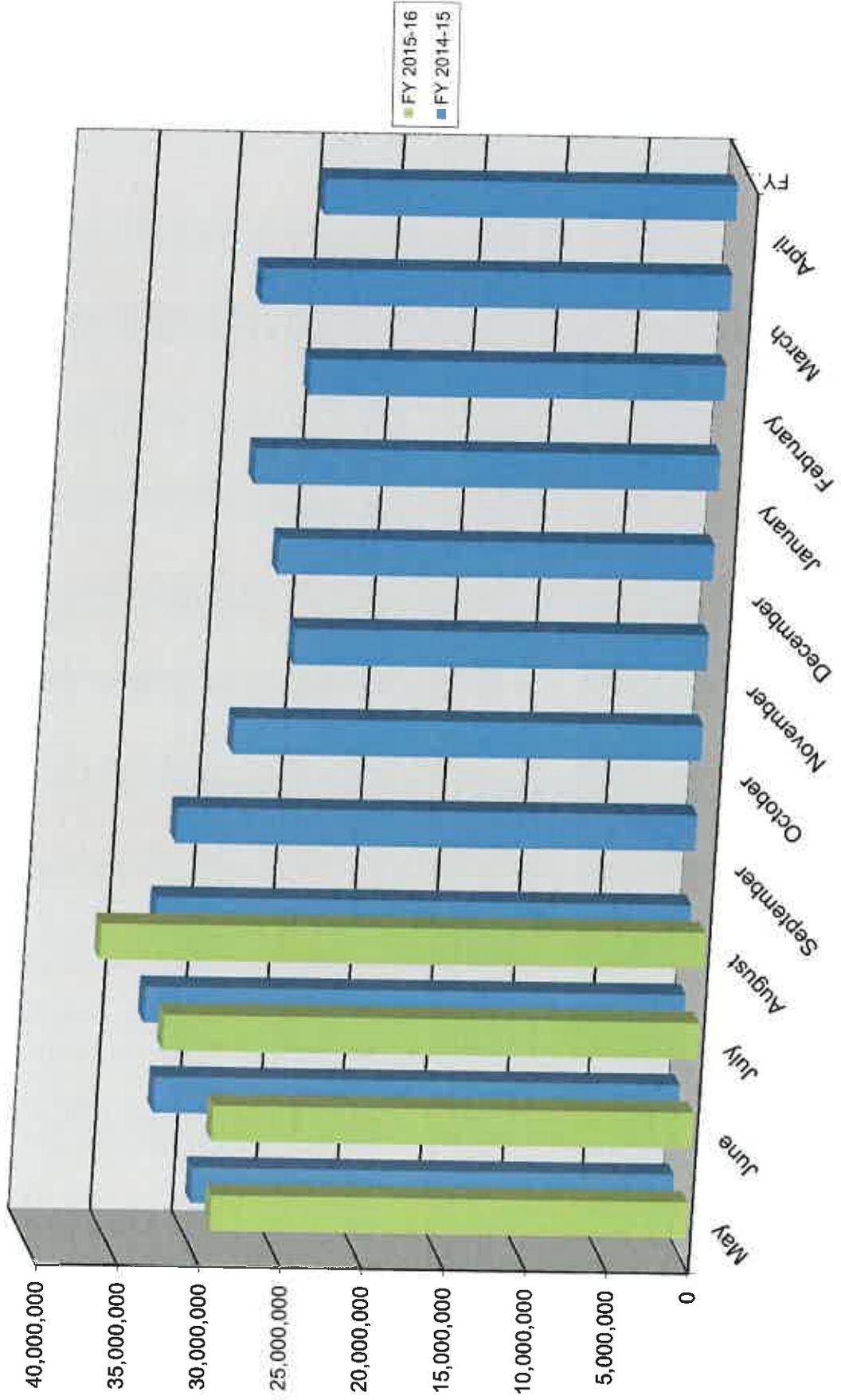
VILLAGE OF WILLOWBROOK - PUMPAGE REPORT
TOTAL GALLONS PUMPED
FY 2002/03 - FY 2015/16

Month	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
May	32,267,000	33,518,000	35,018,000	35,919,000	35,162,000	36,696,000	33,890,000	31,322,000	31,715,000	30,725,000	34,220,000	30,860,000	29,547,000	29,213,000
June	38,911,000	38,691,000	35,447,000	48,511,000	42,471,000	43,700,000	33,817,000	32,087,000	31,799,000	32,620,000	44,635,000	31,512,000	32,193,000	29,447,000
July	52,100,000	39,116,000	41,248,000	52,479,000	43,279,000	44,574,000	41,463,000	36,819,000	38,513,000	41,371,000	49,498,000	39,106,000	33,122,000	32,813,000
August	44,167,000	40,433,000	41,059,000	47,861,000	41,114,000	38,778,000	43,017,000	38,516,000	38,745,000	35,639,000	40,272,000	41,448,000	32,796,000	36,985,000
September	40,838,000	36,275,000	39,658,000	43,906,000	32,998,000	42,013,000	33,418,000	34,331,000	33,992,000	32,273,000	33,657,000	35,737,000	31,869,000	
October	33,128,000	31,667,000	33,765,000	35,009,000	31,937,000	34,612,000	30,203,000	28,919,000	33,789,000	29,892,000	30,283,000	29,226,000	28,728,000	
November	28,560,000	28,260,000	30,106,000	29,515,000	29,153,000	29,847,000	28,054,000	26,857,000	28,125,000	27,138,000	27,535,000	28,446,000	25,364,000	
December	30,503,000	29,133,000	32,786,000	31,086,000	30,102,000	31,435,000	29,568,000	28,931,000	29,257,000	28,643,000	27,863,000	29,847,000	26,710,000	
January	30,343,000	29,602,000	31,223,000	29,411,000	30,340,000	32,444,000	29,383,000	28,123,000	28,401,000	28,846,000	28,427,000	31,265,000	28,505,000	
February	27,216,000	28,755,000	26,768,000	27,510,000	29,078,000	29,470,000	26,629,000	25,005,000	24,988,000	26,635,000	24,308,000	29,230,000	25,484,000	
March	29,488,000	30,315,000	30,025,000	29,905,000	30,362,000	31,094,000	28,408,000	27,945,000	27,909,000	28,911,000	27,862,000	29,917,000	28,779,000	
April	29,845,000	29,350,000	29,478,000	30,452,000	29,468,000	30,239,000	27,193,000	27,793,000	27,145,000	34,220,000	27,514,000	28,101,000	25,255,000	
TOTAL	417,366,000	395,115,000	406,581,000	441,564,000	405,464,000	424,902,000	385,043,000	366,648,000	374,378,000	376,913,000	396,074,000	384,695,000	348,352,000	128,458,000

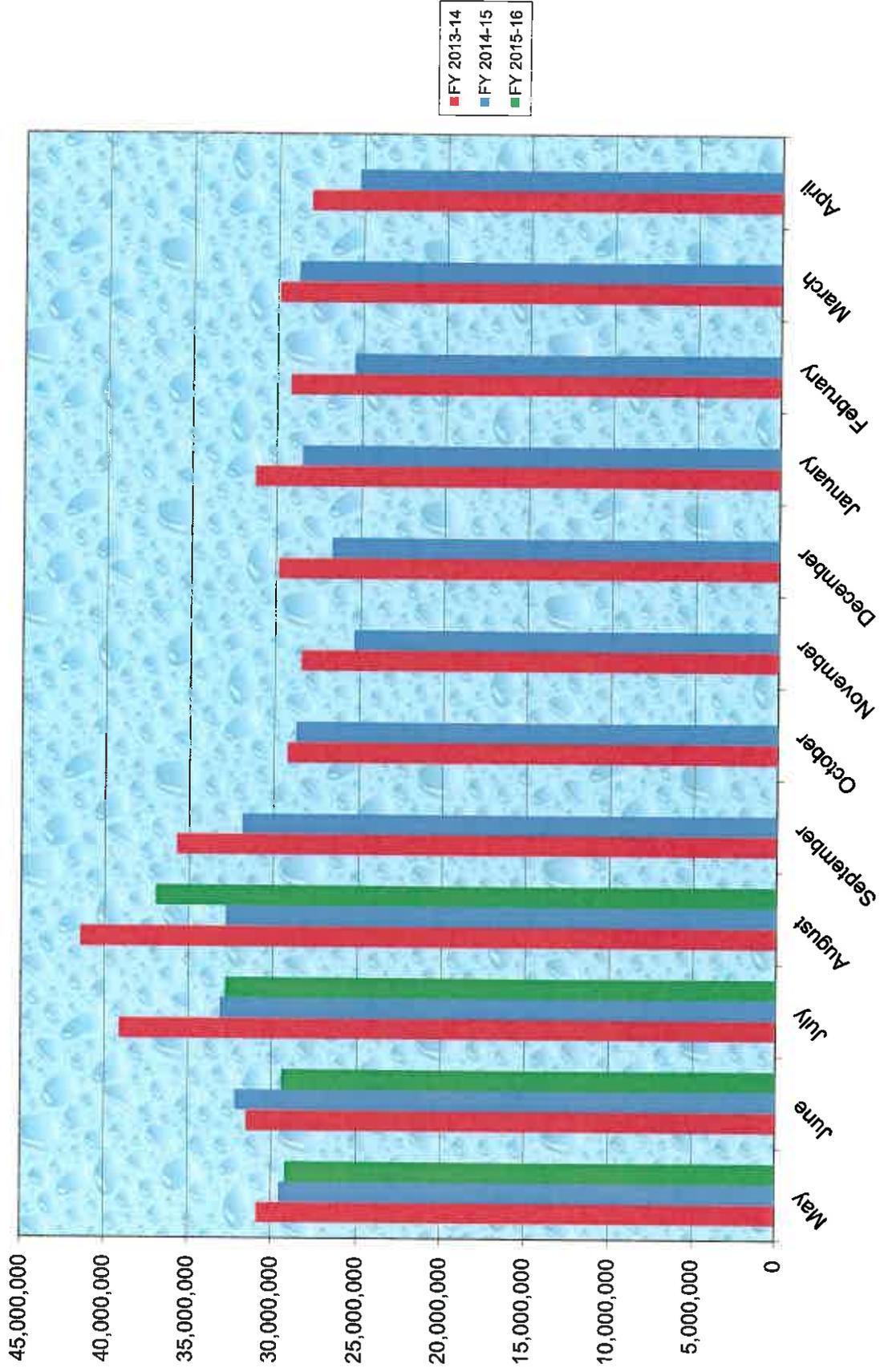
YEAR TO DATE LAST YEAR (gallons):	127,658,000
YEAR TO DATE THIS YEAR (gallons):	<u>128,458,000</u>
DIFFERENCE (gallons):	800,000
PERCENTAGE DIFFERENCE (+/-):	0.63%
FY14/15 PUMPAGE PROJECTION (gallons):	350,000,000
FY14/15 GALLONS PUMPED TO DATE:	<u>128,458,000</u>
CURRENT PERCENTAGE PUMPED COMPARED TO	36.70%

All table figures are in millions of gallons sold on a monthly basis per fiscal year.

Monthly Pumpage Chart



Village of Willowbrook Pumpage Report





On May 29th, the Illinois Department of Public Health (IDPH) reported the first WNV-positive adult mosquito sample in downstate St. Clair County, across from St. Louis. As of September 28th, IDPH has reported WNV activity in 60 counties, 1,609 positive adult mosquito samples and 50 positive birds. In the Chicago are, there was a surge of positive mosquitoes in late July, August and early September, the historical and key WNV transmission period. As of September 28th, IDPH has reported 30 human cases including 4 fatalities.

Recommendations

The CDC currently shows a risk category 2, as defined by the following parameters and recommendations:

- Sustained transmission activity in mosquitoes or birds.
- Human case or viremic blood donor reported.
- Intensify and expand adult mosquito control in areas using ground and/or aerial applications where surveillance indicates human risk.
- Intensify visible activities in community to increase attention to WNV transmission risk and personal protection measures.
- Work with collaborators to address high risk populations.
- Intensify and expand surveillance for human cases.

Brood Prediction

The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Distinct hatches of floodwater mosquito populations, or broods, are triggered by significant rainfall events. The Clarke Brood Prediction Model calculates peak annoyance periods based on rainfall and temperature data collected from weather stations in your area.

Weather Station Name	Rainfall Date	Rain Amount (inches)	Brood Prediction Date
Du Page Co.	08/18/2015	0.55	09/05/2015
Du Page Co.	08/28/2015	0.59	09/17/2015
Du Page Co.	08/29/2015	0.66	09/18/2015
Du Page Co.	09/08/2015	0.87	10/01/2015
Du Page Co.	09/10/2015	0.66	10/01/2015
Du Page Co.	09/17/2015	1.19	10/01/2015
Du Page Co.	09/18/2015	1.17	10/02/2015

Upcoming Operations - October

All operations completed for the season



September 2015 New Jersey Light Trap Counts

(*Red numbers indicate an annoyance level)

Trap Location	Sep 02	Sep 04	Sep 07	Sep 09	Sep 11	Sep 14	Sep 16	Sep 18
Willowbrook Community Park Midway Dr	1	4	4	0	1	0	0	2

Operation and Surveillance Reports

Below is a report outlining all services performed in the last month. These services could include the following:

- **0952 N. J. Light Trap Seasonal Service:** *Seasonal Light Trap Service for adult mosquito population monitoring.*
- **1252 Complete Site Larval Inspection Service:** *Inspection service of all potential mosquito larvae development sites.*
- **1302 Targeted Site Larval Inspection:** *Inspection of all targeted larval development sites.*
- **1352 Larval Site Service Call:** *Special inspection of standing water for mosquito breeding per hot line request.*
- **1502 Ground Prehatch:** *Ground prehatch for control of mosquito larvae.*
- **1752 Backpack Larviciding:** *Backpack larviciding for biological control of mosquito larvae sites.*
- **1754 Hand Larviciding:** *Hand equipment larviciding for biological control of mosquito larvae.*
- **2019 Altosid XR CB Bike - 150 day:** *Catch Basin treatment for larval control.*
- **2202 Helicopter Prehatch Appl:** *Helicopter prehatch application for larval control.*
- **2922 0.5% FLIT (Permethrin) BP Barr:** *Backpack barrier strip application to reduce adult mosquito reinfestation.*

Services Performed September 2015:

Service Item	Start Date
ROS1305 - Culex Site Inspection Service	09/16/2015
ROS1305 - Culex Site Inspection Service	09/24/2015
ROS2018 - Vectolex WSP CB Bike - 30 day	09/25/2015
ROS1305 - Culex Site Inspection Service	09/29/2015