CITY OF NOVI CITY COUNCIL
APRIL 26, 2021

SUBJECT: Consideration of approval to award a contract to Hydromax USA, the low bidder, for the Valve Exercising, Condition Assessment, and Repair Program, in the amount of $644,337.00.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

EXPENDITURE REQUIRED	**$ 644,337.00**
AMOUNT BUDGETED	**$ 950,130.00**
APPROPRIATION REQUIRED	**$ 0**
LINE ITEM NUMBER	**592-592.00-938.200**

BACKGROUND INFORMATION: This project involves the condition assessment, exercising, and repair of the water valves within the City's distribution system. The valves range in size from 30-inch on primary transmission mains, down to 6-inch hydrant isolation valves. The valves are a critical part of the water distribution system and are used to isolate water main segments or areas within the system for operation, maintenance, and repair.

Given the number of valves in the system, many are not inspected on a regular basis. Best practices include an exercising/operating program every five years to help ensure proper function. This program's first phase will involve the assessment, exercising, and minor repair (rusted bolts, operating nuts, packing, etc.) of the entire system, and is proposed to be completed over a two-year period. Once the initial phase is completed, an annual maintenance and exercising program will be created and implemented into the water operations budget.

Staff anticipates the assessment will also identify valves due for replacement and/or major repairs. These repairs could be significant costs; therefore, the remaining project funds in this fiscal year and another $950,000 budgeted in the next fiscal year are earmarked to address the findings. As major repairs are identified, the contractor will provide estimates. Staff will evaluate and issue change orders as needed.

Staff reviewed all proposals submitted, interviewed the two lowest bidders, and checked references. Following this review, Hydromax USA's proposal is recommended in the best interest of the City, as it is responsive and complies with all the requirements of the bidding instructions. The bid tabulation for the four bidders is attached. A summary of the four bids is as follows:

Contractor	**Total Program Bid**
Hydromax USA	$ 644,337.00
Wachs Water Services (Pure Technologies)	$ 726,981.00
M.E. Simpson Co., Inc.	$ 1,297,328.00
Watertap Inc.	$ 6,134,750

This program is expected to begin this spring or summer, with a goal of completing the assessment and exercising work within twelve months. The overall schedule will be dependent on the number, type, and magnitude of repairs.

RECOMMENDED ACTION: Approval to award a contract to Hydromax USA, the low bidder, for the Valve Exercising, Condition Assessment, and Repair Program, in the amount of $644,337.00.

CITY OF NOVI
Valve Exercising, Condition Assessment and Repair Program
Bid Tab 4/8/2021 1pm

			Hydromax USA		Wachs Water Srvcs	
Description	**Unit**	**Quantity**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**
Valve Assessment						
Mobilization Valve Assessment	Ea	1	$ -	$ -	$ 1,700	$ 1,700
Valve Assessment, 8" to 12" Diameter	Ea	3650	$ 40	$ 146,000	$ 39	$ 142,350
Valve Assessment, 16" Diameter	Ea	156	$ 51	$ 7,956	$ 80	$ 12,480
Valve Assessment, 20" Diameter	Ea	1	$ 51	$ 51	$ 156	$ 156
Valve Assessment, 24" Diameter	Ea	26	$ 150	$ 3,900	$ 100	$ 2,600
Valve Assessment, 30" Diameter	Ea	13	$ 300	$ 3,900	$ 125	$ 1,625
Valve Cannot Locate	Ea	850	$ 30	$ 25,500	$ 30	$ 25,500
Confined Space Entry	Ea	30	$ 150	$ 4,500	$ 75	$ 2,250
Minor Repairs (bolt tightening and repalcement,	Hour	200	$ 195	$ 39,000	$ 185	$ 37,000
Hydrant Valve Assessment, 6" Diameter	Ea	4430	$ 40	$ 177,200	$ 39	$ 172,770
Valve Box Re-Alignment, up to 1' Deep (Non Pavement)	Ea	50	$ 15	$ 750	$ 175	$ 8,750
Valve Box Re-Alignment, up to 1' Deep (Pavement)	Ea	50	$ 75	$ 3,750	$ 225	$ 11,250
Valve Box Re-Alignment, >1'to 3' Deep (Non	Ea	50	$ 35	$ 1,750	$ 200	$ 10,000
Valve Box Re-Alignment, >1'to 3' Deep (Pavement)	Ea	50	$ 155	$ 7,750	$ 525	$ 26,250
Valve Box Height Adjust, up to 1' Deep (Non Pavement)	Ea	425	$ 45	$ 19,125	$ 115	$ 48,875
Valve Box Height Adjust, up to 1' Deep (Pavement)	Ea	425	$ 155	$ 65,875	$ 245	$ 104,125
Miscellaneous Work	Hour	100	$ 195	$ 19,500	$ 185	$ 18,500
Large Valve Repair						
Mobilization, Large Valve Repair	Ea	1	$ 195	$ 195	$ 3,200	$ 3,200
Removal of Gears	Day	12	$ 1,560	$ 18,720	$ 2,000	$ 24,000
Re-installation of Gears	Day	12	$ 1,560	$ 18,720	$ 1,700	$ 20,400
Operating Nut Repair						
Mobilization, Operating Nut Repair	Ea	1	$ 195	$ 195	$ 3,200	$ 3,200
Replace Missing/Damaged Operating Nuts	Ea	200	$ 400	$ 80,000	$ 250	$ 50,000
			TOTAL	$ 644,337	**TOTAL**	$ 726,981

CITY OF NOVI
Valve Exercising, Condition Assessment and Repair Program
Bid Tab 4/8/2021 1pm

			M.E. Simpson		Watertap Inc	
Description	**Unit**	**Quantity**	**Unit Price**	**Total Price**	**Unit Price**	**Total Price**
Valve Assessment						
Mobilization Valve Assessment	Ea	1	$ 5,500	$ 5,500	$ -	$ -
Valve Assessment, 8" to 12" Diameter	Ea	3650	$ 78	$ 284,700	$ 685	$ 2,500,250
Valve Assessment, 16" Diameter	Ea	156	$ 98	$ 15,288	$ 1,100	$ 171,600
Valve Assessment, 20" Diameter	Ea	1	$ 158	$ 158	$ 1,200	$ 1,200
Valve Assessment, 24" Diameter	Ea	26	$ 198	$ 5,148	$ 1,400	$ 36,400
Valve Assessment, 30" Diameter	Ea	13	$ 238	$ 3,094	$ 2,000	$ 26,000
Valve Cannot Locate	Ea	850	$ 38	$ 32,300	$ 285	$ 242,250
Confined Space Entry	Ea	30	$ 345	$ 10,350	$ 750	$ 22,500
Minor Repairs (bolt tightening and repalcement,	Hour	200	$ 345	$ 69,000	$ 675	$ 135,000
Hydrant Valve Assessment, 6" Diameter	Ea	4430	$ 78	$ 345,540	$ 375	$ 1,661,250
Valve Box Re-Alignment, up to 1' Deep (Non Pavement)	Ea	50	$ 295	$ 14,750	$ 350	$ 17,500
Valve Box Re-Alignment, up to 1' Deep (Pavement)	Ea	50	$ 395	$ 19,750	$ 900	$ 45,000
Valve Box Re-Alignment, >1'to 3' Deep (Non	Ea	50	$ 495	$ 24,750	$ 850	$ 42,500
Valve Box Re-Alignment, >1'to 3' Deep (Pavement)	Ea	50	$ 595	$ 29,750	$ 1,000	$ 50,000
Valve Box Height Adjust, up to 1' Deep (Non Pavement)	Ea	425	$ 195	$ 82,875	$ 780	$ 331,500
Valve Box Height Adjust, up to 1' Deep (Pavement)	Ea	425	$ 295	$ 125,375	$ 1,300	$ 552,500
Miscellaneous Work	Hour	100	$ 345	$ 34,500	$ 675	$ 67,500
Large Valve Repair						
Mobilization, Large Valve Repair	Ea	1	$ 5,500	$ 5,500	$ 1,800	$ 1,800
Removal of Gears	Day	12	$ 3,750	$ 45,000	$ 5,800	$ 69,600
Re-installation of Gears	Day	12	$ 3,750	$ 45,000	$ 5,800	$ 69,600
Operating Nut Repair						
Mobilization, Operating Nut Repair	Ea	1	$ -	$ -	$ 800	$ 800
Replace Missing/Damaged Operating Nuts	Ea	200	$ 495	$ 99,000	$ 450	$ 90,000
			TOTAL	$ 1,297,328	**TOTAL**	$ 6,134,750

CITY OF NOVI

VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM

FEE PROPOSAL FORM

We the undersigned as proposer, propose to furnish to the City of Novi, according to the specifications, terms, conditions and instructions attached hereto and made a part thereof:

Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
	VALVE ASSESSMENT				
1	Mobilization, Valve Assessment	Ea	1	0.00	0.00
2	Valve Assessment, 8" to 12" Diameter	Ea	3650	40.00	146,000.00
3	Valve Assessment, 16" Diameter	Ea	156	51.00	7,956.00
4	Valve Assessment, 20" Diameter	Ea	1	51.00	51.00
5	Valve Assessment, 24" Diameter	Ea	26	150.00	3,900.00
6	Valve Assessment, 30" Diameter	Ea	13	300.00	3,900.00
7	Valve Cannot Locate	Ea	850	30.00	25,500.00
8	Confined Space Entry	Ea	30	150.00	4,500.00
9	Minor Repairs (bolt tightening and replacement, fix packing leaks)	Hour	200	195.00	39,000.00
10	Hydrant Valve Assessment, 6" Diameter	Ea	4430	40.00	177,200.00
11	Valve Box Re-Alignment, up to 1' Deep (Non Pavement)	Ea	50	15.00	750.00
12	Valve Box Re-Alignment, up to 1' Deep (Pavement)	Ea	50	75.00	3,750.00
13	Valve Box Re-Alignment, >1' to 3' Deep (Non Pavement)	Ea	50	35.00	1,750.00
14	Valve Box Re-Alignment, >1' to 3' Deep (Pavement)	Ea	50	155.00	7,750.00
15	Valve Box Height Adjust, up to 1' Deep (Non Pavement)	Ea	425	45.00	19,125.00
16	Valve Box Height Adjust, up to 1' deep (Pavement)	Ea	425	155.00	65,875.00
17	Miscellaneous Work	Hour	100	195.00	19,500.00

Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
	LARGE VALVE REPAIR				
	Mobilization, Large Valve Repair	Ea	1	195.00	1,560.00
	Removal of Gears	Day	12	1,560.00	18,720.00
	Re-installation of Gears	Day	12	1,560.00	18,720.00
	OPERATING NUT REPAIR				
	Mobilization, Operating Nut Repair	Ea	1	195.00	195.00
	Replace Missing/Damaged Operating Nuts	Ea	200	400.00	80,000.00
				TOTAL PRICE	644,337.00

We acknowledge receipt of the following Addenda: 1
(please indicate numbers)

EXCEPTIONS TO SPECIFICATIONS (all exceptions must be noted here):

None

COMMENTS: None

REFERENCES: Please provide at least three client (3) references for projects of similar scope done in the last 3 years.

Company Great Lakes Water Authority

Address 6425 Huber, Detroit, MI 48211

Phone 313.799.0289 Contact name Todd King, P.E., BCEE

Company Nashville – METRO WATER

Address 1600 2nd Ave. North Nashville, TN 372

Phone 615-862-4847 Contact name Alan Hand

Company City of Galveston, TX

Address 823 Rosenberg Galveston, TX 77550

Phone 409-797-3683 Contact name Trino Pedraza

THIS PROPOSAL SUBMITTED BY:

Company (Legal Registration) Hydromax USA

Address 14301 FNB Parkway

City Omaha, State NE Zip 68154

Telephone 813-305-6610 Fax 812-925-3911

Representative's Name Randall Wilson

Representative's Title CFO

Authorized Signature  SIGN HERE

E-mail shane.majetich@hydromaxusa.com

Date 3/24/21

CITY OF NOVI
VALVE EXERCISING, CONDITION
ASSESSMENT AND REPAIR PROGRAM

Please return this page with your bid form

If your company is awarded the item(s) referenced in the bid proposal, other governmental entities may wish to use this contract and will issue a purchase order or contract for the item(s) awarded in the bid proposal following minimum order/contract requirements set forth in the bid documents. Each entity will provide their own purchase order and delivery location(s) and must be invoiced separately to the address indicated on their purchase order.

1. **EXTENSION OF AWARD TO THE MITN (MICHIGAN INTER-GOVERNMENTAL TRADE NETWORK) PURCHASING COOPERATIVE:** ***OPTIONAL***

Numerous Counties, Cities, Townships, and Authorities of the State of Michigan are members of the MITN (Michigan Inter-governmental Trade Network) Purchasing Cooperative. Other associate entities are also members of the Cooperative in the Tri-County area. Please visit www.mitn.info website to view the entire list of participating agencies.

(X) If an award is made to Hydromax USA, it is agreed that the contract will be extended to other MITN Purchasing Cooperative members and associate entities under the same prices, terms, and conditions.

( ) Our company is **NOT** interested in extending the contract to those MITN members listed on the website.

Contractor Signature: Randall Wilson SIGN HERE

Company Name: Hydromax USA

Date: 3/24/21

HYDROMAX USA
Advanced Water, Wastewater and Gas Data Collection

City of Novi, MI

Valve Exercising, Condition Assessment and Repair

Prepared for: City of Novi

Attn: Finance Department

45175 Ten Mile Road

Novi, MI 48375

Due: April 8th, 2021 1:00 PM EDT

April 8th, 2021

City of Novi
Attn: Finance Department
45175 Ten Mile Road
Novi, MI 48375

RE: City of Novi - Valve Exercising, Condition Assessment and Repair

To the selection committee,

On behalf of Hydromax USA, I am pleased to submit the enclosed information for the request for bids for new valve exercising project for field services. Our team has reviewed each section of the RFP and all addenda, and we are fully compliant. Given the qualifications of our company and personnel, and the history of our success with similar projects, Hydromax USA is uniquely qualified to assist the City of Novi with their new valve exercising project for field services.

Hydromax USA's following proposal intends to develop a program to meet the objectives of the City's valve exercising project needs. The objectives of this program are listed below.

1. Evaluate and improve the operability of water valves in the water distribution system through hands on field activities.
2. To document the condition of the above water distribution assets and receive the collected information in a format compliant with the Utility's GIS system and CMMS System.
3. Provide infrastructure status reporting including:
    a. The specific condition and operability of the system.
    b. Where potential infrastructure problems may arise.
    c. Where infrastructure is currently diminishing the operability and efficiency of the distribution system.
    d. Recommendations for prioritization of remediation activities.

Established in 2003, **Hydromax USA** is a professional services firm specializing in data collection in support of locating and assessing the condition of the country's aging water, wastewater and natural gas conveyance systems. HUSA's vast experience with new technologies and techniques empowers contractors, engineers and utility owners to make the best rehabilitation decisions regarding their buried infrastructure.

Based upon a strong record of performance, our customers have recognized that HUSA brings a unique ability to meet their needs for advanced data collection. We work from coast to coast covering the entire United States, without exception. Hydromax USA utilizes the largest array of technologies, within one company, to provide the broadest capability in the country to assess buried infrastructure.

Our **400+ in-house crews and project managers** have first-hand experience working with buried infrastructure for water, wastewater, and gas systems, including similar large valve assessment programs for municipalities such as Great Lakes Water, Houston, Metro Water, Nashville and Washington Aqueduct Authority, DC.

We have **70+ full-time GIS professionals in our data center** that specialize in client information management, condition assessment program analytics, and customer reporting.

Our proven processes and best practices in the areas of progress reporting, risk management and quality assurance help us to **plan for and deliver projects on-time and within budget.**

With regard to the specific typical capabilities/requirements we see or recommend in the selection of a provider for RFPs covering the services listed in the bid for this project, we have listed them below and our capabilities with respect to each.

a) We recommend that the service provider have a minimum of five years' experience performing valve condition, assessment, exercising activities on at least 50,000 assets, including minor repairs. The Contractor shall have a minimum of five references from municipal water systems for similar work conducted within the last three years of comparable or greater size.
   (1) Please see the attached References on Page 24. Hydromax meets this requirement and has performed assessments on over 125,000 valves in the past 24 months alone.

b) We recommend that the service provider is required to have performed a minimum of 50,000 sub-foot GPS positions on water valves.
   (1) Please see the attached References on Page 24. Hydromax has performed assessments on over 125,000 valves in the past 24 months alone. HUSA utilizes Trimble R2 GPS Units, which deliver reliable sub foot performance and are used throughout our national operations.

c) The Contractor's project manager shall have a minimum of 10 years' experience on similar work.
   (1) The Project Manager for this project is Roland Burnette who holds 30+ years' continuous experience performing valve assessments for municipal clients and meets the requirements for 10 years' experience on similar work. Page 19 and 22

d) The Contractor shall have a license for Esri ArcGIS Pro and personnel with demonstrated competence in GIS software. A minimum of two GIS professionals with combined experience of 15 years is required.
   (1) HUSA has a license for Esri ArcGIS Pro and more than the necessary GIS professionals to meet these requirements. Bios for Zollen Banks, Gabriel Stewart, and Jeff Viniard included on pages 26-27.

Our team continues to be excited about this opportunity and looks forward to working with the City of Novi team in the weeks and months ahead. Should you have any questions regarding the enclosed proposal, please do not hesitate to contact me directly at (813) 305-6610.

Thank you again for your time and consideration.

Sincerely,

Shane Majetich

Shane Majetich
Vice President, Water Solutions
Corporate Office
14301 First National Bank Parkway
Suite 207
Omaha, NE 68154
813.305.6610
shane.majetich@hydromaxusa.com

Hydromax USA Data Center
11420 Watterson Ct, Suite 1100
Louisville, KY 40299

Michigan Operations Office – (Consumers Gas and GLWA)
201 Appian Way, Suite 202
Brighton, MI 48116

Table of Contents

Corporate Background

Introduction

Established in 2003, Hydromax USA is a professional services firm specializing in data collection in support of locating and assessing the condition of the country's aging water, wastewater, and natural gas conveyance systems. Hydromax USA's vast experience with new technologies and techniques empowers contractors, engineers and utility owners to make the best rehabilitation decisions regarding their buried infrastructure. Hydromax USA has performed infrastructure condition assessment programs that have evaluated hundreds of thousands of infrastructure assets, helped clients recover millions of gallons in lost water, and provided information management services for improvement of system models and development of GIS integrated solutions for utilities across the United States

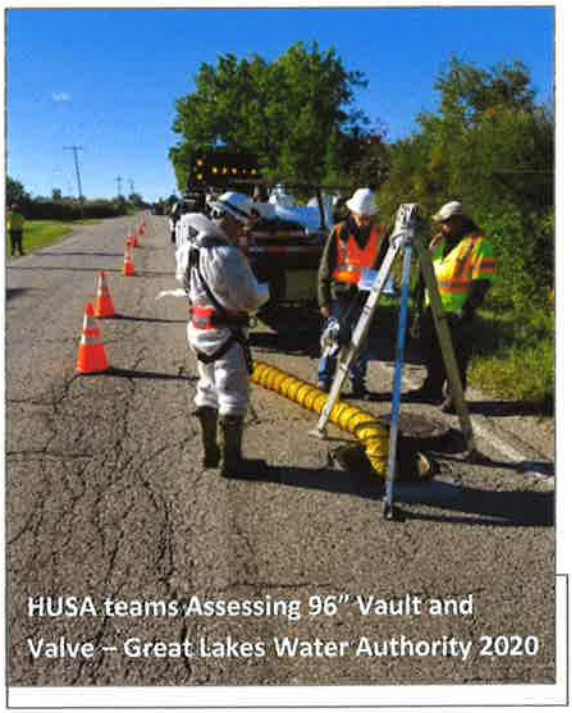
Infrastructure Condition Assessment – Valves and Hydrants

Condition assessment is integral to optimizing the performance of any water system's distribution assets and to minimizing delivery costs. Hydromax USA's Valve and Hydrant assessment programs are designed to provide you with essential information that will help to improve capital investment and O&M planning, provide continuity for critical systems, manage risk, and facilitate regulatory compliance. Our portfolio of services, depth of experience, and customer-centric focus set us apart from other firms. Hydromax USA can augment your operations by performing discrete services alongside your personnel or deliver a comprehensive, turnkey solution that utilizes our staff. Regardless, we believe you must plan for success. Hydromax USA can help you by providing trained professionals, proven implementation processes, and information management tools to achieve that goal.

AS A STATEMENT OF OUR CAPACITY, HYDROMAX STAFF HAVE MANAGED ASSESSMENT PROJECTS IMPACTING MORE THAN 250,000 VALVE AND HYDRANT ASSETS IN THE PAST 24 MONTHS ALONE.

Infrastructure Maintenance

Cost predictability is critical to any utility's maintenance program. At Hydromax USA, we pride ourselves on creating solutions that work within your budget. Our programs can extend the life of your assets, restore assets that are scheduled for replacement, and reduce service interruptions. By minimizing the economic level of repair for existing assets, we can lower your overall, long-term maintenance costs and better prioritize future needs. With our dedicated team of engineering and field operations professionals, Hydromax can help you to drive savings in your operating and capital budgets, optimize system performance, and improve customer satisfaction.



HUSA teams Assessing 96" Vault and Valve – Great Lakes Water Authority 2020

Geospatial Data Creation, Management, Analysis, and Integration

Hydromax USA provides end-to-end geospatial asset management solutions that touch on the entire lifecycle of geospatial data management, visualization and analysis. Hydromax USA employs **over 40** GIS analysts providing program data model consulting, program information management, and GIS/CMMS data integration. Our analysts have extensive expertise in consulting with clients on the effective implementation of GIS centric mobile work-order management applications for field deployment in order to improve operational control and efficiency of both human and capital assets. Hydromax USA has helped utilities increase operational efficiency and cost effectiveness through programs that have assessed hundreds of thousands of assets and developed GIS integrated solutions for utilities across the United States.

Requested Details

Proposer: Hydromax USA
Office Address: 201 Appian Way, Suite 202 Brighton, MI 48116
Office Telephone number XXXXXXXXXX
24 Hour Contact Number - 813.404.8341
Fax number: 812-925-3911N
Name of contact person: Lamar Carroll - Eastern Region Operations Manager – Water

Hydromax USA – Brighton MI Office

Valve Assessment and Maintenance Program

Hydromax USA's Water Distribution Services Team has built a reputation for the quality of our valve maintenance programs. Our capabilities have allowed us the opportunity to provide assessments and GIS services to utilities throughout the US ranging from a few thousand assets to tens of thousands of assets. Following is a summary of Hydromax USA's project understanding and approach.

Hydromax USA's valve assessment and maintenance program is designed to comply with AWWA standards (including publication M44 – Distribution Valves: Selection, Installation, Field Testing and Maintenance) and meet the requirements of oversight environmental agencies as well as all OSHA and confined space safety regulations. Hydromax USA works to develop a comprehensive valve assessment and maintenance program that meets the individual needs of each utility.

Planning and Implementation Tasks

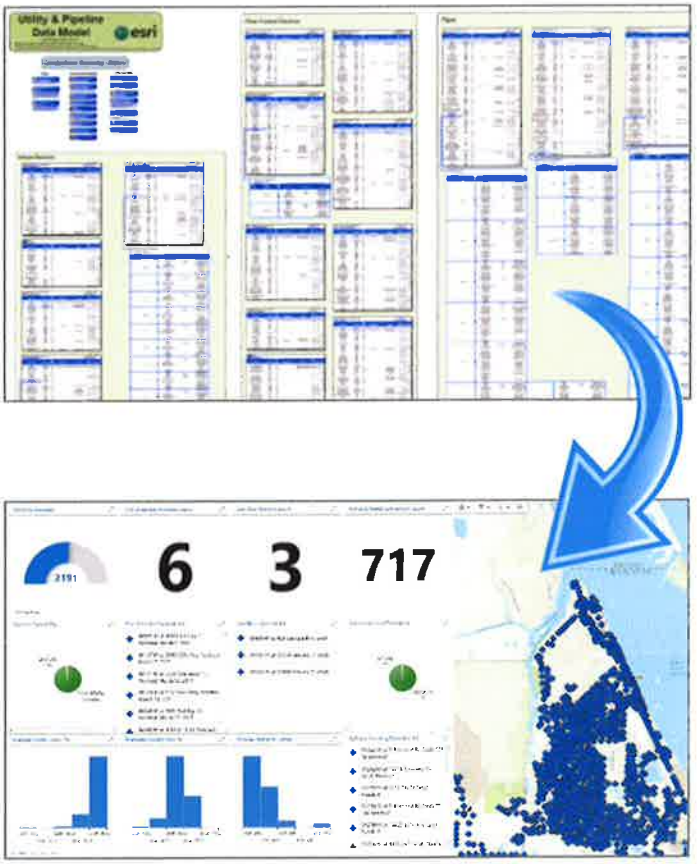
1) **Client Gap Analysis and Data Model Alignment (~9 Days):** Prior to the start of the program, HUSA will hold a project meeting at the client offices to better understand the operational characteristics of the distribution system such as problem areas prone to poor fire flow, age of pipe, and pressure problems in the distribution system. This will allow for a greater understanding of how the distribution system is functioning, establish expectations for all parties, and allow priorities to be assigned to particular segments of the work. As a part of this gap analysis, Hydromax will conclude the interview process with a water data model alignment meeting, assimilating information gathered in the process from stakeholders

Agenda for data alignment meeting

1. Introduction

a. Participants
b. Roles
c. Communications

2. Determination of Existing Conditions
    a. GeoDatabase schema
        i. Assets in existing schema
        ii. Fields in existing schema
        iii. Data capture methodology
        iv. Data QC procedures.
3. Determination of data to be captured under contract
    a. Data capture workflow.
4. ArcGIS GeoDatabase deliverable.
    a. HUSA data QA procedures.
    b. Feature classes.
        i. Valves
        ii. Pipes
        iii. Object classes
        iv. VALVE_GPS Table
        v. VALVE_INSPECTION Table.
        vi. Geometric Network
    c. Geodatabase delivery.
        i. Tables
        ii. Attributes
        iii. Field relationships
        iv. Primary/foreign keys.
5. Reports
    a. Production reports
    b. System status reports
    c. Work orders
    d. System evaluation report.
    e. Map-based reports.



2) **Program Execution Planning (~2 Days).** Hydromax will determine the Utility's desired geographical or hierarchical approach for initial implementation into areas of the distribution. This would include setting a schedule designed to maintain a level of field staffing that will insure completion of the valve assessments within the schedule and budget allotted.

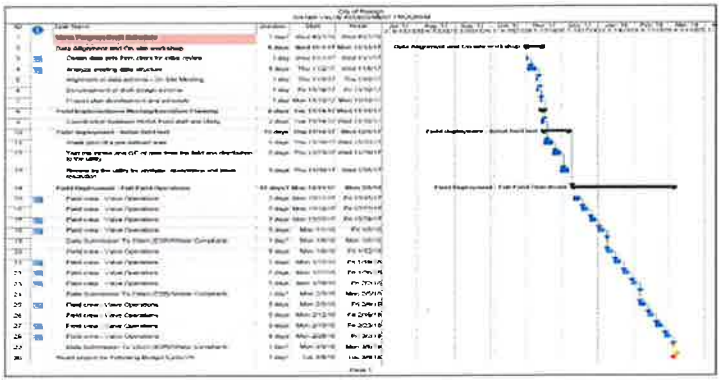
3) **Field Workflow Pilot Test Cycle (~15 Days).** Hydromax will develop and test pilot program area to validate fully functioning work flows from replicated data distribution through all field activities and test of data delivery to client.

4) **Initiate Full Program Implementation (~60 Days/Year).** Hydromax will perform assessments on the distribution system and document all locations and assessments in a manner that will allow a prioritized list of maintenance items to be provided to the municipality.

a. Locate all valves with GPS in a manner that will allow their positions to be known and readily re-creatable by Utility personnel upon demand.
b. Document each asset maintained and collect individual asset data to such an extent as to provide information characteristic to each specific attribute as defined by the Utility.
c. Provide constant communication with the Utility staff so that the program is proactively managed and permit issues to be addressed in a timely manner.
d. Provide in the field training to Utility staff during the course of the assessments so once the program is concluded the Utility staff will have a complete understanding proper operation of valve operating devices.
e. Provide periodic corroborative field survey to ensure the spatial accuracy of the data submitted

Project Scheduling / Project Reporting

After completion of Tasks 1 and 2, Hydromax USA will prepare a formal project schedule for review and approval by the City. Hydromax USA uses two primary methods to communicate project planning and project management. Project plans are formally prepared using MS Project and distributed to the project team for approval and coordination. If the project includes geographic assignments, the project schedule is updated to include this information for stakeholders inside and outside the municipality. Often this information is communicated to customer service to address customer questions regarding Hydromax staff field personnel performing assigned activities.



Hydromax utilizes our custom HUSA Operations Dashboard to provide client management real time access to field activity and program results. The dashboard will provide a vehicle for Hydromax to provide program metrics to the Utility on a daily basis and will form the foundation for monthly progress reporting. The Utility will be able to see detailed valve physical and operational condition as they are found by our field crews.

Geospatial Data Management

Information Management Approaches

The data capture during this program will be one of the factors utilized in risk and CIP prioritization models. The critical aspects to this project are field collection and data management between the field crews and Hydromax and the replication of collected data between Hydromax and the Utility. To assure

smooth, low impact, data deliverables Hydromax USA will hold 'GIS data alignment meeting(s)' to obtain and review the current water database structure, also known as 'data-model'. This review will focus on Hydromax's internal data workflow processes and identifying possible data-model revision recommendations for the Utility to consider prior to the beginning of field operations. Hydromax is flexible regarding project data deliverables and will work with the Utility to determine the most efficient delivery format. These proven GIS data deliverables can range from simple Personal Geodatabase, ArcSDE to XML exports, to ArcSDE versioned database replication:

- Personal Geodatabase deliverables provide a simple, single file, format of GIS data that can be reviewed in ArcMap prior to migrating this data into the Utility's enterprise GIS. Manual or Model-builder geoprocessing tools can then be employed to append deliverable data in the Utility's enterprise GIS.
- ArcSDE to XML export creates a small foot-print file that retains SDE (Spatial Database engine) properties. This file would need to be 'Imported' into a staging SDE geodatabase for review in ArcMap prior to migrating this data into the Utility's enterprise GIS. Manual or Model-builder geoprocessing tools can then be employed to append deliverable data in the Utility's enterprise GIS.

Minimum Data Deliverable Quality Assurance & Quality Control

Hydromax USA's Quality Assurance Program is a formal methodology designed to assess and continually monitor the quality of services provided to ensure the services are within specifications of the contract scope. Our quality assurance includes formal review of processed and data, problem identification, corrective actions to remedy any deficiencies and evaluation of actions taken.

Quality Control involves defining the standard means and methods that data will be captured and then reviewed for accuracy. This includes automated tests for adherence to domain values, maintaining integrity of database schemas, and validating data based on best practices established by Hydromax for field inspections of water features. Hydromax will perform these tests as a combination of programmatic geoprocessing tools and manual review prior to submission to the utility.

Data delivered from the field is processed through Hydromax' standardized QA/QC ModelBuilder scripts to evaluate data against established HUSA program queries for valve data discrepancies. All data that is identified as exception data is reviewed by the program Operations Manager and reported to the Data Auditor prior to being released to the field for correction.

Reflective of our commitment to data accuracy, Hydromax USA employs a dedicated **Data Auditor** to support our Project Managers and GIS analysts.

Hydromax auditing services include:

- The minimum levels of accuracy to be attained under the program are as follows:
  - Inspection Accuracy 95%
  - GPS Accuracy 98%

- Hydromax will perform this QA/QC analysis on all data recorded before the data is submitted to the client.
- Hydromax will also review, prior to each submission, the accuracy of the billing, contractual compliance (including program M/WDE participation) and internal procedural compliance.
- All non-conforming audit findings will be documented with Corrective Action Requests as appropriate.

Accepted/Latest Professional Engineering Practices - Operation and Repair of Valves

Hydromax will bring to the program a vast amount of experience and knowledge within the field of water infrastructure condition assessment. Valve assessment is an essential component of good distribution system management. Malfunctioning, closed, "frozen" and/or "lost" valves make isolating a specific area of the distribution system for emergency and/or routine repairs difficult, time consuming and on occasion, impossible. Such conditions inevitably lead to excessive overtime, excessive water loss and adverse public relations. Initial distribution system valve assessment followed by annual system wide valve maintenance enhances the utility operator's capability to effectively control the flow of water within the distribution system. Valve assessment and maintenance will prolong the life of the valves in the distribution system, insure that the valves can be located, accessed and operated as needed and allows for the utility to better plan for and schedule system repairs/improvements.

The first step in an assessment program is to prioritize the valve and hydrant locations. Usually those near critical customers such as hospitals are the most important. Other factors could include the size of the water main, proximity to pump stations and treatment plants, the amount of flow through the valve and water main, age of the valve or hydrant, or proximity to a main intersection on a busy street. The main components to a Valve Exercise Program are:

- Find and document the location. Note the precise location using global positioning system (GPS) equipment and by traditional surveying
- Take a digital picture showing the hydrant/valve and surrounding area. The point is: don't lose the valve site location once it has been found.
- Ensure that the valve operates through the full range of motion *at least* two full cycles until the valve operates freely with little resistance. This may take several full cycles as well as several partial reverse/forward exercises.
- Keep and maintain detailed records for each hydrant and valve. This includes mapping locations taken from as-built drawings or road maps as well as field verification of locations, and possible interviews with staff regarding unrecorded installations of valves and hydrants. This data will then be maintained in both electronic and hard copies.
- Schedule and perform needed repairs. Often, valve boxes are out of alignment, so a valve key cannot access the valve. Valves and hydrants are sometimes broken during the exercising program because they have not previously been used or previously incorrectly turned. Fixing the broken valves or hydrants in a timely manner is very important so the integrity of the distribution system is maintained and safety of the public is insured.
- Repeat these steps on a routine basis. Experts recommend exercising a valves and operating hydrants annually if possible. Valves should at least be operated once every two to three years. Some valves will need to have a different schedule than others based on their location or unusual operating conditions such as large valves or those in critical areas. It's usually a

good idea to perform the exercising program during moderate weather conditions although valves and hydrants should be able to be operated in any condition.

When operating valves and hydrants, Hydromax will adhere to a strict methodology involving the following principles

- Work in an orderly and safe manner to insure protection of the local residents, Utility employees, and the Field Staff so that no avoidable accidents occur. Use confined space practices to ensure safe entries when required.
- Employ a combination of recorded information, manual and technical testing techniques as needed to establish the location of valves and hydrants.
- Operate valves in accordance with the AWWA manual M-44, "Distribution Valves: Selection, Installation, Field Testing and Maintenance"
- Attempt to operate the valve or hydrant manually.
- Don't force the valve or hydrant, or be in a hurry.
- During initial valve closure, the valve will be turned no more than five turns before turn direction is reversed to two turns, thus allowing the threads of the stem and gate to free themselves.
- If the valve cannot be operated manually by one person, then employ a hydraulic operator with torque control.
- The valves will then be exercised from full open to full closure until such time as this can be done without further turn range improvement or no further reduction in the required operating torque is noted, through *a minimum* of two consecutive ranges of operations.
- Use the lowest hydraulic torque (turning force or rational force) setting possible to allow valve operation.
- Turn valves and hydrants slowly to avoid water hammer or potential water main rupture.
- Listen closely as water flow changes can occur when operating a valve. This may help determine if the valve is operating correctly.
- Debris can be stirred up during valve and hydrant programs so public notification should be performed before starting the process. This will keep the dirty water complaint calls down.
- Turns will be counted both down and up to insure they match. Valve sizes should match accepted turn ranges per size of valve. In cases where large valves are gear reduced, gear ratios should be noted if that determination can be made.
- Butterfly valves will need to be operated with great care so they are not over torqued and damaged.
- If there is reasonable evidence that a valve or hydrant might break during the exercising process, the Utility will be notified immediately and a decision will be made to attempt or not to attempt the process.
- Broken valves and hydrants will be reported immediately to the Utility so that notations can be made for future potential emergency situations.

Valve Maintenance Activities 4" And Smaller Gate Valves

- Special care will be taken for valves in this size range. Unless directed otherwise, all valves, 6" and smaller will be manually operated to avoid damage.

- Locate valve, properly position valve operator for minimum interference with vehicular and/or pedestrian traffic.
- Establish and set up M.O.T. as appropriate. Remove valve box lid and clean out valve box to access valve.
- Verify location, size and operational direction (left or right) of valve by cross reference of supplied water atlas.
- Valves of this size (especially 2" and 3") may be located at the "dead end" of a water main. If this is the case, follow protocol established as opening may create a washout.
- Attempt to identify the type of valve. Older valves, (especially in the 2" to 3" range) may be bronze disc "plumbing" style valves such as NIBCO or bronze ball valves of the "corporation stop" style. In either case, neither will have the standard operating nut and a pronged or slotted valve wrench will need to be employed.
- Carefully work the valve from open to closed, to back open position until the appropriate number of turns is achieved.
- Carefully operate the valve through a minimum of (2) full cycles leaving valve in full open position, unless directed otherwise.

6" To 12" Gate Valves

- Locate valve then properly position valve operator for minimum interference with vehicular and/or pedestrian traffic.
- Establish and set up M.O.T. as appropriate. Remove valve box lid and/or open valve vault hatch covers. Clean out valve box and/or vault to access valve.
- Verify location, size and operational direction (left or right) of valve by cross reference of supplied water atlas.
- Work the valve from open to closed, to back open position until the minimum torque limit or appropriate number of turns is achieved. If torque limit is reached prior to obtaining the appropriate number of turns, continue to "massage" the valve by repeating the process and slowly increasing the torque limit up to, but not exceeding the maximum torque limit, until the appropriate number of turns are obtained.
- Operate the valve through a minimum of (2) full cycles leaving valve in full open position, unless directed otherwise.

Actual experience in operating 16-inch and larger geared valves is far scarcer in the industry than the experience of having operated buried service valves that do not entail complex and extremely old gearing. Hydromax will approach the exercising of large geared valves with an engineered protocol:

16" And Larger Gate Vales That Are Not Geared.

- Locate main line valve (and by-pass valve, if applicable) then properly position valve operator for minimum interference with vehicular and/or pedestrian traffic.
- Establish and set up M.O.T. as appropriate. Remove valve box lid and/or open valve vault hatch covers. Clean out valve box and/or vault to access valve.
- Verify location, size and operational direction (left or right) of main line valve (and by-pass valve, if applicable) by cross reference of supplied water atlas.
- Identify size and type of main line valve (and by-pass valve, if applicable) and determine if valve is geared or not. If possible, determine manufacturer of valve. Cross reference the

manufacturers specifications for minimum and maximum torque and the number of turns from full open to full closed for both the by-pass valve (if applicable) and main valve.

- Set the hydraulic valve operator for desired minimum torque and appropriate number of turns (for by-pass valve first, if applicable).
- Work valve from open to close position until the minimum torque limit or appropriate number of turns is achieved. If torque limit is reached prior to obtaining the appropriate number of turns, continue to "massage" the valve by repeating the process and slowly increasing the torque limit up to, but not exceeding the maximum torque limit, until the appropriate number of turns are obtained.
- Operate both the main line valve (and by-pass valve, if applicable) through a minimum of (2) full cycles leaving valve in full open position, unless directed otherwise by Water Department.

16" And Larger Geared Valves

- Locate main line valve (and by-pass valve, if applicable) then properly position valve operator for minimum interference with vehicular and/or pedestrian traffic.
- Establish and set up M.O.T. as appropriate. Remove valve box lid and/or open valve vault hatch covers. Clean out valve box and/or vault to access valve.
- Verify location, size and operational direction (left or right) of main line valve (and by-pass valve, if applicable) by cross reference of supplied water atlas.
- Identify size and type of main line valve (and by-pass valve, if applicable) and determine if valve is geared or not. If possible, determine manufacturer of valve.
- Cross reference the manufacturers specifications for minimum and maximum torque and the number of turns from full open to full closed for both the by-pass valve (if applicable) and main valve.

- If valve is found to be geared, activate gear reduction mode on hydraulic valve operator and enter desired torque range.
- Set the hydraulic valve operator for desired minimum torque and appropriate number of turns.
- Work valve from open to close position until the minimum torque limit or appropriate number of turns is achieved. If torque limit is reached prior to obtaining the appropriate number of turns, continue to "massage" the valve by repeating the process and slowly increasing the torque limit up to, but not exceeding the maximum torque limit until the appropriate number of turns are obtained.
- Operate valve through a minimum of (2) full cycles leaving valve in full open position, unless directed otherwise by Water Department.

Butterfly Valves of Various Sizes

- Locate valve, properly position valve operator for minimum interference with vehicular and/or pedestrian traffic.
- Establish and set up M.O.T. as appropriate. Remove valve box lid and/or open valve vault hatch covers. Clean out valve box and/or vault to access valve.
- Verify location, size and operational direction (left or right) of valve by cross reference of supplied water atlas.

- Attempt to determine manufacturer of valve. Cross reference the manufacturers specifications for torque and actuator requirements and the number of turns from full open to full closed position.
- Keeping in mind that this is a butterfly valve and not a gate valve, set the hydraulic valve operator for desired minimum torque and appropriate number of turns.
- After verifying the operational direction of valve, work valve from open to close position until the minimum torque limit or appropriate number of turns is achieved. If torque limit is reached prior to obtaining the appropriate number of turns, continue to "massage" the valve by repeating the process and slowly increasing the torque limit up to, but not exceeding the maximum torques. If valve is determined to be "stuck" between the open and closed position, notify utility for permission to access actuator. If permission is granted, access the actuator and check for jamming. If nothing is found, the interference is likely in the valve. If this is the case,
- Do not attempt to force the disc open or closed since excessive torque in this situation can severely damage internal valve and/or actuator components.
- Once it is established that butterfly valve is operational, cycle the valve through (2) full cycles leaving valve in full open position, unless directed otherwise.

Controlling Torque Using Hydraulic Valve Turning Device

The torque is automatically monitored and controlled by the hydraulic valve operator once our technician pre-sets the desired torque limit and activates the automatic mode. The technician will then closely monitor the torque range while the valve operator is turning to insure that mechanical failure does not inadvertently impact the valve being turned.

Valves Found in the Wrong Position

If a valve is found in the wrong (closed) position, our technician will immediately contact the Water Department and inform them of the situation. If instructed to leave closed, our technician will document all appropriate data and proceed to the next valve. If instructed to operate valve to full open position, our technician will proceed as appropriate for the type of valve encountered.

Valve Technical Specifications

Torque Limits for Each Valve

The following information is compiled from AWWA references and various resilient wedge, double disc and butterfly valve manufacturer specifications. Specific manufacturer requirements will supersede below information if applicable.

- (4" through 12" valves have an opening torque that is approximately 30% of the closing torque)
- (14" through 60" valves have an opening torque that is equal to or less than the closing torque during normal operation)
- 6" non-geared resilient wedge (RW) or double disc gate valve -50 to 110 ft #

- 6" bevel geared RW or DD gate valve - 30 to 64.7 ft # (Rotork) or 25 to 56.3 ft # (MasterGear)
- 6" spur geared RW or DD gate valve- 30 to 60.1 ft # (Rotork)
- 8" non-geared RW or DD gate valve- 75to 150 ft #
- 8" bevel geared R W or DD gate valve - 4 5 to 88.2 ft# (Rotork) or 40 to 76.7 ft # (MasterGear)
- 8" spur geared RW or DD gate valve- 40 to 82 ft #(Rotork)
- 10" non-geared RW or DD gate valve-90tol85 ft #
- 10" bevel geared RW or DD gate valve- SO to 108 .8 ft # (Rotork) or 45 to 94.6 ft #(MasterGear)
- 10" spur geared RW or DD gate valve - SO to lOLl ft # (Rotork)
- 12" non-geared RW or DD gate valve - 100 to 225 ft #
- 12" spur geared RW or DD gate valve - 60 to 123 ft # (Rotork)
- 14" non-geared RW or DD gate valve - 110 to 225 ft #
- 14" bevel geared RW or DD gate valve - 30 to 75 ft # (Rotork) or 25 to 58.8 ft # (MasterGear)
- 14" spur geared RW or DD gate valve - 25 to 61ft # (Rotork 4.1:1), or 55 to 117.9 ft # (Rotork 2.12:1)
- 16" non-geared RW or DD gate valve - 110 to 225 ft #
- 16" bevel geared R W or DD gate valve - 130 to 161.8 ft # (Rotork 2:1), 45 to 91.7 ft # (Rotork 4:1) or 35 to 71.9 ft # (MasterGear)
- 16" spur geared RW or DD gate valve - 30 to 61 ft # (Rotork 4.1:1), or 55 to 117.9 ft # (Rotork 2.12:1)
- 18" non-geared RW or DD gate valve - 110 to 225 ft #
- 18" bevel geared RW or DD gate valve -80 to 161.8 ft # (Rotork 2:1),90 to 91.7 ft # (Rotork 4:1) or 35 to
- 71.9 ft # (MasterGear 4.5:1)
- 18" spur geared RW or DD gate valve- 35 to 74.5 ft # (Rotork 4.1:1), or 70 to 144.1 ft # (Rotork 2.12:1)
- 20" non-geared RW or DD gate valve- 100 - 300 ft #
- 20" bevel geared RW or DD gate valve - 65 to 176.5 ft # (Rotork 2:1), 50 to 100 ft # (Rotork 4:1) or 35 to 78.4 ft # (MasterGear 4.5:1)
- 20" spur geared R W or DD gate valve - 40 to 81.3 ft # (Rotork 4.1:1), or 75 to 157.2 ft # (Rotork 2.12:1)
- 20" butterfly valve - 100 to 300 ft #
- 24" non-geared RW or DD gate valve - 160 to 325 ft #
- 24" bevel geared RW or DD gate valve - 60 to 127.5 ft # (Rotork 3:1)
- 24" spur geared RW or DD gate valve- 40 to 88.1 ft # (Rotork 4.1:1), or 60 to 120.4 ft # (Rotork 3:1)
- 24" butterfly valve - 100 to 300 ft #
- 30" non-geared RW or DD gate valve -150 to 450 ft #
- 30" bevel geared RW or DD gate valve - 80 to 176.5 ft # (Rotork 3:1), 65 to 132.4 ft # (Rotork 4:1) or 60 to 125 ft # (Limitorque 4:1)
- 30" spur geared R W or DD gate valve - 60 to 127.8 ft # (Rotork 4:1), or 80 to 166.7 ft # (Rotork 3:1)
- 30" butterfly valve -100 to 300 ft #
- 36" non-geared RW or DD gate valve-200 to 550 ft #
- 36" bevel geared RW or DD gate valve - 80 to 161.8 ft # (Rotork 4:1) or 75 to 152.8 ft # (Limitorque 4:1)
- 36" spur geared R W or DD gate valve - 75 to 156.3 ft # (Rotork 4:1) +
- 36" butterfly valve - 100 to 300 ft #
- 42" non-geared RW or DD gate valve-200to700 ft #
- 42" bevel geared RW or DD gate valve - 100 to 205.9 ft # (Rotork 4:1) or 90 to 194.4 ft # (Limitorque 4:1)
- 42" spur geared RW or DD gate valve - 90 to 198.9 ft #(Rotork 4:1) +
- 42" butterfly valve - 100 to 300 ft #
- 48" non-geared RW or DD gate valve - 300 to 800 ft #
- 48" bevel geared RW or DD gate valve - 115 to 235.3 ft #. (Rotork 4:1) or 110 to 222.2 ft # (Limitorque 4:1)
- 48" spur geared RW or DD gate valve - 110 to 227.3 ft # (Rotork 4:1)
- 48" butterfly valve - 100 to 300 ft #
- 54" non-geared RW or DD gate valve - 300 to 850ft ft #
- 54" bevel geared R W or DD gate valve - 120 to 240ft ft #

- 54" spur geared RW or DD gate valve- ll0to227 ft #
- 54" butterfly valve - 100 to 300 ft #
- 60" non-geared RW or DD gate valve- 350to900 ft #
- 60" bevel geared double disc valve - 125to 250 ft #
- 60" butterfly valve - 100 - 300 ft #

Hydromax adheres to strict guidelines for the operation and exercising of valves as indicated in the torque limit chart provided within these technical specifications. At no time will HUSA exceed the suggested maximum torque limits without authorization from the utility thereby releasing Hydromax USA from obligations that exceed the published torque specifications. HUSA is aware that exceeding the maximum torque may release pressure and increase operability but will not proceed beyond the recommended torque specification without authorization and witnesses form the utility to verify the operational ability and possibility of operation beyond the specified limits.

Hydromax USA repairing dashpot assembly on 24" check valve – Houston 2020

Team Organization, Experience and Certifications/Qualifications

Shane Majetich, Vice President, Water Solutions

Shane leads HUSA's business segment of the Water Solutions division. Shane is a graduate of University of South Florida with a Master's Degree in Accounting and Business Management. His experience includes the execution of water infrastructure assessment programs impacting hundreds of thousands of water systems assets while employed most recently as Business Unit Manager for Mueller Service Company where he had complete responsibility for the division. He provides expertise in the assessment of aging water infrastructure through the implementation of technology based solutions providing actionable infrastructure information for client's water network assets.

Project Role: Shane will hold responsibility for project execution, client coordination, and data management for the project and be available as a resource to the client.

Lamar Carroll, Operations Manager, Water Distribution System Services – OSHA 30

Mr. Carroll has been in the water infrastructure condition assessment and maintenance industry for 14 years, managing regional operations throughout the Eastern US. His responsibilities include management of all regional field staff and equipment field operations providing valve assessment, hydrant assessment, pipe wall assessment, leak detection, and construction/remediation activities. Lamar has managed assessment, maintenance, and remediation projects spanning hundreds of thousands of water system assets, including Metro Nashville's previous program.

Project Role: Lamar will manage all day-to-day field activities and field personnel and perform client coordination for project execution.

Roland Burnett, Project Manager – OSHA 10

Mr. Burnett is a Project Manager and Crew Chief with 30+ years of professional experience in the water industry, the majority of which include large valve work. Roland has extensive experience in the execution of valve and hydrant maintenance programs on water systems across the US. Roland has been a Project Manager and Crew Chief supervising projects and field personnel on numerous valve and hydrant assessment programs including highly technical large valve programs. Roland has also performed hydrant flow testing and unidirectional flushing programs across the country for our clients.

Project Role: Roland will function as the Project Manager of the Program

Zollen Banks, Director, Louisville Data Center

Zollen brings a career with 20+ years of Data and Project management experience which he leverages in leading Hydromax USA's Data, GIS, and Development teams. Under his guidance, these teams innovate to create unique and innovative data platforms to serve the water, wastewater, and natural gas industries. Zollen joined the HUSA team in 2009 and has a bachelors from University of Kentucky.

Gabriel Jones, GIS Admin, GISP

Gabriel Jones is Hydromax USA's GIS Admin, overseeing a staff of 70 GIS Professionals and Data Analysts in our Louisville KY Data Center. Gabriels is a Graduate of the University of Kentucky. **Project Role**: Gabriel will lead the implementation of the client side HUSA Operations Dashboard and internal QA/QC ModelBuilder and Python scripting driving the data control process.

Jeff Vinard, GIS Analyst

Jeff Vinard holds a Master's Degree in Geographic Information Systems (GIS) and Applied Mathematics from Murray State University. He has worked to help organizations maintain and improve their GIS through a wide range of methods. These include using GIS software to standardize information from multiple data sources, automating time consuming tasks through scripts and models, and utilizing web technologies to develop new products and extend the range of maps and data. As a GIS analyst, Jeff has played a significant role in the development of leading edge software applications used by Hydromax which help to create a value proposition that is unequaled by other service providers.

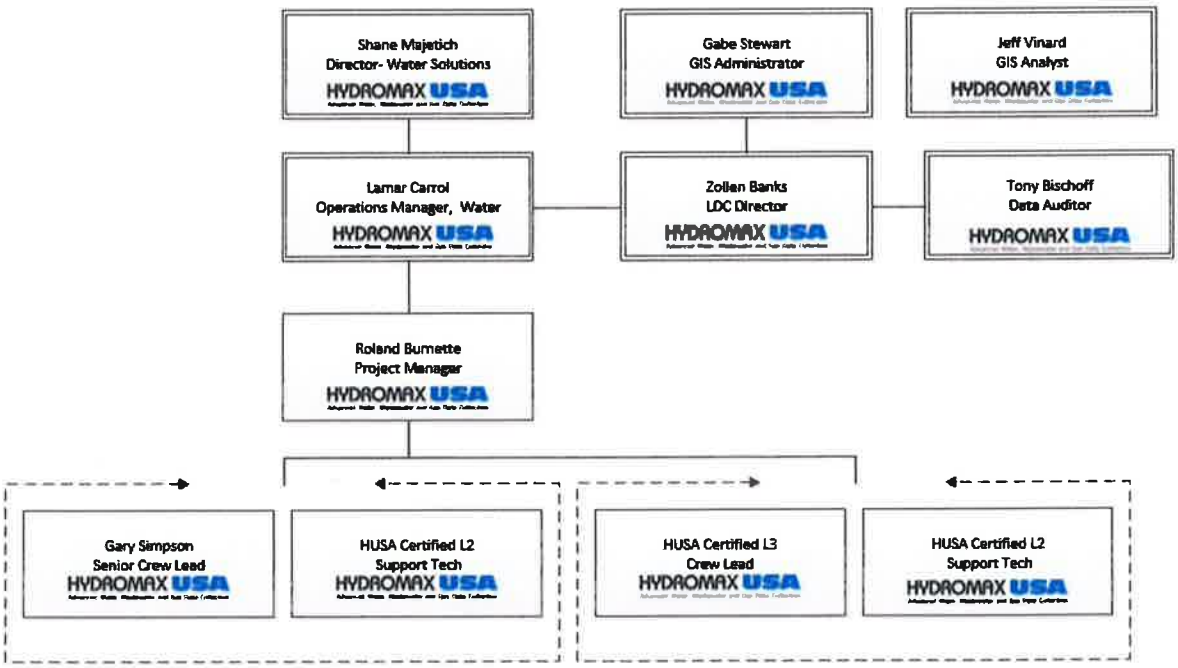
Tony Bischoff, Data Auditor

Tony Bischoff is a professional engineer from Louisville, KY and has served as the Company's CIO Chief Information for over 10 years. He was the 2003 "Young Engineer of the Year" of the Bluegrass Section of American Society of Civil Engineers and a past president of that organization. Tony received his Bachelor and Master Degrees of Civil Engineering from the University of Kentucky. Throughout his career he has developed a wealth of experience performing independent audits of HUSA client deliverables.
Project Role: Tony will perform audits of our field data collection and QA/QC procedures to ensure that HUSA is compliant with our commitment to 95% inspection attribution accuracy and 98% GPS accuracy of spatial positioning.

Gary Simpson, Senior Field Technician – OSHA 10

Mr. Simpson is a Senior Technician and Crew Chief with eight years of professional experience in the water industry. Gary has extensive experience in the execution of valve and hydrant maintenance programs on water systems. Gary has been Crew Chief supervising field personnel on numerous valve and hydrant assessment programs and highly technical large valve repair programs working with multiple crews. Mr. Simpson has inspected, audited and exercised thousands of valves from 1" ball valves to large gate, butterfly and cone valves. He is an expert at valve operating equipment, valve operators, torque limits on specific valves and the operating characteristics of all valve types including specific expertise in operating large and high torque valves.
Project Role: Gary will lead a team of 2 personnel in the execution of the program.

Team Organization



Team Qualifications/Certifications

Valve Assessment and Maintenance Program – Operations Manager

Name & Title:

Lamar Carroll. Operations Manager

Licensed Underground Utility Contractor – FL,TN
Florida L3 Water Distribution Operators License
NSC Level III M.O.T. Certification
Confined Space Safety Certified
Trench & Excavation Competent Person Certified
OHSA 30 Certification

Years' experience:
16 years

Mr. Carroll has been in the water infrastructure condition assessment and maintenance industry for 14 years, managing project and regional operations throughout the Eastern US. His responsibilities include management of all regional field staff and equipment field operations providing valve assessment, hydrant assessment, pipe wall assessment, leak detection, and construction/remediation activities. Lamar has managed assessment, maintenance, and remediation projects spanning hundreds of thousands of water system assets.

Operations Manager for the following selected projects covering: Valve Assessment, Hydrant Assessment, Remediation, Leak Detection, and GIS/CMMS Integration

2012-2014 City of Cocoa, FL
Lamar managed a comprehensive assessment program to assess and remediate the city's 30,000 system assets, which was completed in 14 months. Lamar Carroll managed 4 Valve Crews, 2 Hydrant Crews, 1 Remediation Crew, 1 Leak Detection Crew, and 1 On-site project manager for this project

2003-2014 Seminole County, FL
Lamar managed the Seminole County contract, performing assessment services on over 35,000 assets, implementing UDF programs, and performing Valve and Hydrant remediation and replacement services. Lamar has managed this project for the entirety of its 10 years.

2010-2013 Providence Water Supply Board, RI
Lamar managed a comprehensive assessment program to assess and remediate the city's almost 30,000 system assets, which was completed in 24 months.

Additional projects:

2008-2014	City of Melbourne, FL
2003-2009	Polk County Utilities, FL
2012-2013	City of Reidsville, NC
2011-2012	City of Norwich, Ct
2009-2013	Longboat Key, FL
1998-2009	City of Sunrise, FL
2008-2014	City of Lake Mary, FL

Operations Manager for the following selected projects covering: Valve Assessment, Remediation, Leak Detection, and GIS/CMMS Integration

2010-2013	Macon Water Authority, GA
2008-2010	City of Tampa, FL

Operations Manager for the following selected projects covering: Valve Assessment, Remediation, and GIS/CMMS Integration

2020-Present	Great Lakes Water, MI
2013-2013	Sarasota County Utilities, FL
2006-2009	Broward County, FL

Operations Manager for the following selected projects covering: Valve Assessment and GIS/CMMS Integration

2011-Present	Metro Gov. Nashville, TN
2012-2013	Disney Worldwide Services, Inc, FL
2010-2013	Cooper City, FL
2013-2014	City of Plant City, FL

Operations Manager for the following selected projects covering: Hydrant Assessment, Remediation, and GIS/CMMS Integration

2012-Present	Knoxville Utility Board
2009-2013	Volusia County, FL
2009-2013	City of Coral Springs, FL
2011-2013	Chatham County, NC
2011-2014	City of Bartow, FL
2011-2012	Brevard County, FL

Operations Manager for the following selected projects covering: Leak Detection and GIS/CMMS Integration

2013-2013	Gainesville Regional Utilities, FL
2013-2013	City of St Cloud, FL

Valve Assessment and Maintenance Program – Project Manager

Name & Title:

Roland Burnette, Crew Co-Lead

UDF and Valve/Hydrant Assessment

NC L3 Water Distribution Operators License
FL - M.O.T. /Flagger Certified
Confined Space Safety Certified
OHSA 10 Certification
CPR/First Aid Certified

Years' experience:
44 years

Mr. Burnett has been in the water infrastructure condition assessment and maintenance industry for 44 years, with 30 of those years dedicated to supporting operations of Orange Water and Sewer Authority, NC. His deep system knowledge has helped him in his roles as Hydromax USA, managing projects throughout the Eastern US. His responsibilities include management of regional programs providing valve assessment, hydrant assessment, unidirectional flushing programs, and construction/remediation activities.

Project Manager/Field Supervisor for the following selected projects covering: Valve Assessment and Hydrant Assessment
Great Lakes Water Authority – 6k Large Valves
Nashville Metro Water TN, Ph 2 – 60k Valves/35k Hydrants
Pinellas County Florida – 25k Valves
City of St Louis, MO – 20k Valves
Henrico County VA – 13k Valves/5k Hydrants
Indian River County FL – 4k Valves/2k Hydrants
City of Raleigh – 1350 Large Valves
Statesville NC /Hazen - 800 Valves
Durham NC/Hazen – 800 Valves

Field Supervisor for the following selected projects covering: Unidirectional Flushing Programs with Valve and Hydrant Assessment
Portsmouth VA/Hazen and Sawyer – 3k Miles/7k Valves/3k Hydrants
Reidsville NC – 800 miles (3 Projects)/1k Valves
Port Everglades, FL – 50 Miles
Charlotte NC/Hazen and Sawyer – 100 Miles/5k Valves/500 Hydrants
City of Cocoa FL – (2 Projects) 50 Miles/36k Valves/12k Hydrants

Valve Assessment and Maintenance Program – Senior Technician

Name & Title:

Gary Simpson, Field Project Lead

M.O.T. Certification
Confined Space Safety Certified
Trench & Excavation Competent Person
OHSA 10 Certification
Certified Valve and Hydrant Operator and Crew Chief
Truck Safety, Equipment and Inspection
Trimble Operation and Data Management

Years' experience:
9 years

Mr. Simpson is a Senior Technician and Crew Chief with eight years of professional experience in the water industry. Gary has extensive experience in the execution of valve and hydrant maintenance programs on water systems. Gary has been Crew Chief supervising field personnel on numerous valve and hydrant assessment programs and highly technical large valve repair programs working with multiple crews.

Valve and Hydrant Assessment Experience:
Mr. Simpson has inspected, audited and exercised thousands of valves from 1" ball valves to large gate, butterfly and cone valves. He is an expert at valve operating equipment, valve operators, torque limits on specific valves and the operating characteristics of all valve types. Mr. Simpson has specific expertise in operating large and high torque valves.

Senior Technician for the following selected projects covering: Valve Assessment, Hydrant Assessment, Remediation, Leak Detection, and GIS/CMMS Integration

2012-2014 City of Cocoa, FL
Lamar managed a comprehensive assessment program to assess and remediate the city's 30,000 system assets, which was completed in 14 months. Lamar Carroll managed 4 Valve Crews, 2 Hydrant Crews, 1 Remediation Crew, 1 Leak Detection Crew, and 1 On-site project manager for this project

2003-2014 Seminole County, FL
Lamar managed the Seminole County contract, performing assessment services on over 35,000 assets, implementing UDF programs, and performing Valve and Hydrant remediation and replacement services. Lamar has managed this project for the entirety of its 10 years.

Additional projects:

2008-2014	City of Melbourne, FL
2003-2009	Polk County Utilities, FL
2009-2013	Longboat Key, FL
1998-2009	City of Sunrise, FL
2008-2014	City of Lake Mary, FL

Senior Technician for the following selected projects covering: Valve Assessment, Remediation, Leak Detection, and GIS/CMMS Integration

2010-2013	Macon Water Authority, GA
2008-2010	City of Tampa, FL

Senior Technician for the following selected projects covering: Valve Assessment, Remediation, and GIS/CMMS Integration

2006-2009	Broward County, FL

Senior Technician for the following selected projects covering: Valve Assessment and GIS/CMMS Integration

2011-Present	Metro Gov. Nashville, TN
2012-2013	Disney Worldwide Services, Inc, FL
2010-2013	Cooper City, FL
2013-2014	City of Plant City, FL

Senior Technician for the following selected projects covering: Hydrant Assessment, Remediation, and GIS/CMMS Integration

2012-Present	Knoxville Utility Board
2009-2013	Volusia County, FL
2009-2013	City of Coral Springs, FL
2011-2014	City of Bartow, FL

Requested – Valve and Hydrant Assessment References

References	**City of Houston, Assessment Repair, Replacement and GIS Integration, 42,000 valves per year / 5 years. Water and Wastewater 17,000 valves 12" or Larger**	**Great Lakes Water Authority, Large Valve Assessment Program 5000 Valves (primarily 20-108") Assessment, Vault Inspection, and Trimble Unity data integration**	**City of Galveston, Assessment, Repair and GIS Integration 7000 Valves, 700 12" and larger.**
Project Owner	City of Houston	Great Lakes Water Authority	City of Galveston
Reference Information	Drew Molly Senior Assistant Director 611 Walker St, Houston TX 77002 832-395-3785 Andrew.Molly@houstontx.gov	Todd King, P.E., BCEE Field Services Director 6425 Huber, Detroit, MI 48211 C: 313.799.0289 Todd.King@glwater.org	Trino Pedraza, Director 823 Rosenberg Galveston, TX 77550 409-797-3683 TPedraza@GalvestonTX.Gov
Contract Value Consolidated	$12.0M	$5.5M	$500k
Contract Term	9/1/2019-9/1/2024	9/1/2020-9/1/2023	6/1/2019 – 6/1/2021
Percentage of Contract Complete	20%	10%	90%
Project Manager	Russ Jackson	Lamar Carroll	Russ Jackson
References	**Henrico County, VA Valve Condition Assessment, Hydrant Condition Assessment and Flowing / Maintenance GIS Data Integration 13,000 Valves / 5000 Hydrants Includes 1490 Valves 14" or larger**	**Palm Beach County FL Valve Condition Assessment, and Repair/Replacement / Maintenance GIS Data Integration 12,000 Valves/year**	**Raleigh, NC Large Valve Condition Assessment, Maintenance and GIS Integration 1350 Total Valves 1350 Valves 12" or Larger**
Project Owner	County of Henrico VA	Palm Beach County, FL	City of Raleigh
Reference Information	Vin Kamatchi 1590 E Parham Road Henrico, VA 23273-0775 P) 804-501-5680 kam001@henrico.us	Conrad Thirbenny, Super Palm Beach County Water 8100 Forest Hill Boulevard, West Palm Beach, FL 33416 Office: 561-493-6154 Cell: 561-307-8098 cthirbenny@pbcwater.com	John Sorrell, P.E. Manager City of Raleigh Public Utilities Department (919) 996-3485 john.sorrell@raleighnc.gov
Contract Value Consolidated	$1.0M (Budget)	$10.0M budget	$425k (Budget and Actual)
Contract Term	10/1/2015 – 10/1/2020	10/1/2019-10/1/2024	10/1/2017-10/1/2022
Percentage of Contract Complete	100%	20%	75%
Project Manager	Lamar Carroll		Lamar Carroll
References	**Nashville – METRO WATER (2020-2025) Valve and Hydrant Condition Assessment, Maintenance and GIS Integration 60,000 Total Valves 35,000 Hydrants Includes 1358 Valves 14" or larger**	**Nashville – METRO WATER (2015-2020) Valve and Hydrant Condition Assessment, Maintenance and GIS Integration 60,000 Total Valves 35,000 Hydrants Includes 1358 Valves 14" or larger**	**Nashville – METRO WATER (2011-2014) Valve Condition Assessment, Maintenance and GIS Integration 30,000 Total Valves 3,000 Valves 12" or Larger**
Project Owner	Nashville, TN	Nashville, TN	Nashville, TN
Reference Information	Alan Hand - Operations 1600 2nd Ave. North Nashville, TN 37208 P) 615-862-4847 F) 615-862-4839 alan.hand@nashville.gov	Alan Hand - Operations 1600 2nd Ave. North Nashville, TN 37208 P) 615-862-4847 F) 615-862-4839 alan.hand@nashville.gov	Hal Balthrop, Asst. Director 1600 2nd Ave. North Nashville, TN 37208 P) 615-862-4847 F) 615-862-4839 Hal.balthrop@nashville.gov
Contract Value Consolidated	$12M (Budget)	$5M (Budget)	$1.25M (Budget and Actual)
Contract Term	1/1/2020-1/1/2025	9/1/2015-9/1/2020	9/1/2011 – 9/1/2014
Percentage of Contract Complete	0% (Prog. 1–100% Complete)	100%	100%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

Valve and Hydrant Assessment and UDF References - Continued

References	**Charlotte Water – Central Business District (Downtown) Valve and Hydrant Condition Assessment, Maintenance and GIS Integration 3500 Total Valves 1000 Hydrants – Full Shutdown Verification**	**Charlotte UDF Valve Condition Assessment, Hydrant Condition Assessment and Flowing / Maintenance / UDF Execution /GIS Data Integration 1500 Valves / 500 Hydrants 100 Miles**	**City of Greensboro, NC Valve Condition Assessment Maintenance & GIS Integration 500 Valves**
Project Owner	Charlotte Water	Charlotte Water	City of Greensboro, NC
Reference Information	Bhavana Swayampakala, Eng Dir Charlotte Water 5100 Brookshire Blvd Charlotte, NC 28216 Tel: 704-336-4976 bhavana.swayampakala@ci.charlotte.nc.us	Bhavana Swayampakala, Eng Dir Charlotte Water 5100 Brookshire Blvd Charlotte, NC 28216 Tel: 704-336-4976 bhavana.swayampakala@ci.charlotte.nc.us	Scott M. Alpert, PhD, PE Hazen and Sawyer 9101 Southern Pine Blvd #250, Charlotte, NC 28273 Tel: 704-357-3150 salpert@hazenandsawyer.com
Contract Value Consolidated	$500k (Budget and Actual)	$200k (Budget and Actual)	$25k (Budget and Actual)
Contract Term	1/1/2018-9/1/2018	1/1/2018-9/1/2018	1/1/2018-9/1/2018
Percentage of Contract Complete	5%	100%	100%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

References	**Pasco County FL M17 Hydrant Condition Assessment Maintenance & GIS Integration 9000 M17 Hydrants & GPS**	**Tarpon Springs, FL M17 Hydrant Condition Assessment Maintenance, Repairs & GIS Integration 700 M17 Hydrants & GPS**	**Reidsville, NC Valve and Hydrant Condition Assessment /Flowing Maintenance GIS Integration Unidirectional Flushing Program 800 Miles / 1000 Valves**
Project Owner	Pasco County	Tarpon Springs FL	City of Reidsville
Reference Information	Sherman Applegate, Utilities Operations Manager 19420 Central Blvd. Land O Lakes, FL 34637 813-929-2755 sapplegate@pascocountyfl.net	Raymond Page, Utilities Superintendent 1624 L&R Industrial Blvd., Tarpon Springs, FL 34688 727.938.3711 rpage@ctsfl.us	Richard G Vaughn Engineering 230 W Morehead St Reidsville, NC 27320 P) 336.347.2316 rvaughn@ci.reidsville.nc.us
Contract Value Consolidated	$250k (Budget and Actual)	$350,000.00 (Budget and Actual)	$80,000.00 (Budget)/ per project
Contract Term	10/1/2017-10/1/2019	9/1/2017-10/1/2019	10/1/2014 and 10/1/2016
Percentage of Contract Complete	50%	50%	100%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

References	**City of Cocoa Valve and Hydrant Condition Assessment Maintenance/Flowing GIS/CMMS Integration 26,000 Valves / 6000 Hydrants & GPS Unidirectional Flushing Program Includes 395 Valves 14" or larger**	**Cocoa Wellfields and Plant Facility Valve Location/Condition Assessment. GIS Data Integration 400 Valves**	**Indian River Valve and Hydrant Condition Assessment, Maintenance and GIS Integration 4,000 Valves, 2,000 Hydrants**
Project Owner	Cocoa, FL	Cocoa, FL	City of Indian River
Reference Information	Jack Walsh/Chris Collier 351 Shearer Boulevard Cocoa, FL 32922 P) 321-433-8400 ccollier@cocoafl.org	Jack Walsh/Chris Collier 351 Shearer Boulevard Cocoa, FL 32922 Tel: 321-433-8400 Fax: 321-433-8634 ccollier@cocoafl.org	Terry Southard Operations Manager Indian River County Utilities 772-226-3404 Terry Southard terrysouthard@ircgov.com
Contract Value Consolidated	$1.3M (Budget and Actual)	$100k	700,000 (Budget and Actual)
Contract Term	3/1/2012-3/1/2014	9/30/2016-9/30/2017	Annual Piggyback Contract
Percentage of Contract Complete	100%	100%	50%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

Valve and Hydrant Assessment and UDF References – Continued

References	**Broward Hydrant Condition Assessment Maintenance & GIS Integration 8,000 M17 Hydrants & GPS Port Everglades – Secure Area Unidirectional Flushing Program**	**City of Portsmouth VA Valve Condition Assessment, 3000 M-17 Hydrant Condition Assessment and Flowing / Maintenance / UDF Execution GIS Data Integration 7000 Valves / 3000 Hydrants**	**Seminole Valve Assessment and Hydrant Maintenance /Flowing and GIS Integration 6,000 Valves/31000 Hydrants & GPS – UDF 300 Miles**
Project Owner	Broward County, FL	City of Portsmouth	Seminole County, FL
Reference Information	Carlos Garcia, Project Manager 255 W Copans Rd Pompano Beach, FL 33069 P) 954-520-5881 F) 954-831-0798 cbgarcia@broward.org	P. Troy McPherson, PE, ENV SP Hazen and Sawyer 2809 S. Lynnhaven Road, Suite 350, Virginia Beach, VA 23452 Tel: 757 785-9488 tmcpherson @hazenandsawyer.com	Shannon Ashworth Utilities Program Coordinator 500 W Lake Mary Blvd Sanford, FL 32773 P) 403-665-2015 / F) 407-665-2019 sashworth@seminolecountyfl.gov
Contract Value Consolidated	$1.2M (Budget and Actual)	1.0M (Budget and Actual)	$1.9M (Budget and Actual)
Contract Term	9/1/2015 – 9/1/18	3/1/2016 – 3/1/2017	1/26/2003 - 6/30/2014
Percentage Complete	100%	100%	100%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll
References	**Pinellas County, FL Valve and Hydrant Condition Assessment, Maintenance and GIS Integration 25,000 Valves, 7,500 Hydrants Includes 1170 Valves 14" or larger**	**Wellington, FL Valve Condition Assessment, Hydrant Condition Assessment Maintenance GIS Data Integration 4000 Valves / 1000 Hydrants**	**(Name Restricted) Valve Condition Assessment, Hydrant Condition Assessment and Flowing / Maintenance GIS Integration 3,300 Valves All FL Theme Parks Resorts**
Project Owner	Pinellas County	City of Wellington, FL	(Name Restricted)
Reference Information	Alan Bollenbacher Maintenance Division Manager 6730 142nd Avenue N. Largo, FL 33771 P) 727- 464-5825 abollenb@pinellascounty.org	Bradley C. Wolak, P.E., PMP Assistant Director 12133 Ken Adams Way Wellington, FL 33414 Tel: 561-753-2480/Fax: 561-791-4045 | bwolak@wellingtonfl.gov	Richard McArthur, Global Contracts, PO Box 10000 Lake Buena Vista, Florida 32830 P) 407-939-4614 F) 407-939-4692 Richard.E.McArthur@disney.com
Contract Value Consolidated	$1.8M (budget)	$150k (Budget and Actual)	$160,000.00 (Budget and Actual)
Contract Term	6/16 – 6-20	9/1/2017-9/30/2018	7/1/15-7/1/16
Percentage Complete	25%	100%	95%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll
References	**Washington Aqueduct /US Army Corp of Engineers/Arcadis – Transmission Main Valve Assessment Program Assessment, Maintenance and GIS Integration ~250 Total Valves. Includes 50 Valves 14" or larger**	**Broward Valve Condition Assessment Maintenance & GIS/CMMS Integration 28,000 Valves & GPS**	**Corpus Christi Large Valve Condition Assessment Maintenance & GIS/CMMS 2,000 Valves 12" and Larger**
Project Owner	Washington DC	Broward County, FL	City of Corpus Christi, TX
Reference Information	Kris Wheaton, Project Engineer Arcadis U.S., Inc. 2101 L Street NW Washington,DC 20037 P) 202 912 8100 Kristin.Wheaton@arcadis.com	Carlos Garcia, Project Manager 255 W Copans Rd Pompano Beach, FL 33069 P) 954-520-5881 F) 954-831-0798 cbgarcia@broward.org	Gabriel Maldonado 1201 Leopard Street Corpus Christi, TX 78401 P) 361-826-3165 F) 361-826-3174 GabrielM@cctexas.com
Contract Value Consolidated	$150,000	$2.8M (Budget and Actual)	$180,000.00 (Budget and Actual)
Contract Term	10/6/17-12/31/17	1/31/2006 - 1/31/2009	1/1/2010 - 1/1/2012
Percentage Complete	10%	100%	100%
Project Manager	Todd Christman	Lamar Carroll	Lamar Carroll

Valve and Hydrant Assessment and UDF References - Continued

References	**City of Melbourne** **Hydrant Assessment, Flowing, Maintenance, and Repair** **GIS Integration** **30,000 Total Hydrants**	**Knoxville TN** **Hydrant Assessment, Flowing, Maintenance, and Repair** **GIS Integration** **6,000 Total Hydrants**	**Sunrise Valve and Hydrant Condition Assessment /Flowing Maintenance & GIS/CMMS Integration** **50,000 Valves & GPS**
Project Owner	City of Melbourne	Knoxville TN	City of Sunrise, FL
Reference Information	Bill Spann 900 East Strawbridge Ave Melbourne FL 32901 P) 321-722-5373 F) 321-608-7070 bspann@melbourneflorida.org	Danny E. Maxwell, P.E. 4505 Middlebrook Pike Knoxville, TN 37921 P) 865.558.2553 danny.maxwell@kub.org	Joe Mazella, Project Manager 10770 W Oakland Park Blvd Sunrise, FL 33351 P) 954-846-7406
Contract Value Consolidated	$1.6M (Budget and Actual)	$600,000.00 (Budget and Actual)	$6.0M (Budget and Actual)
Contract Term	1/1/2000-6/1/2014	6/1/2012-6/1/2014	6/1/1998 - 6/1/ 2009
Percentage Complete	100%	100%	100%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

References	**Hillsborough County Valve Condition Assessment and GIS Integration** **50,000 Valves**	**Providence Valve and Hydrant Condition Assessment/Flowing Maintenance & GIS/CMMS Integration 20,000 Valves / 6000 Hydrants & GPS**	**City of St. Louis – (IPZ/LPZ) Valve Condition Assessment Maintenance & GIS/CMMS Integration** **20,000 Valves & GPS**
Project Owner	Hillsborough County, FL	City of Providence, RI	City of St. Louis
Reference Information	Jon Johanson, Project Manager 601 E Kennedy County Center 18th Floor, Tampa, FL 33601 P) 813-635-8137	Ken Booth, Water Super. 522 Academy Avenue Providence, RI 02908 P) 401-521-6300x7175 F) 401-464-8721 kenb@provwater.com	Mark Nankovil, Distribution Mgr 1640 S. Kingshighway St. Louis, MO 63110-2285 P) 314-633-9026 F) 314-664-6786 mnankovil@stlwater.com
Contract Value Consolidated	$750,000.00/Yr (Budget and Actual)	$1.8M (Budget and Actual)	$1.2M (Budget)
Contract Term	10/13/2005 - 10/13/2008	8/1/2010 - 8/1/2012	2/15/2016 – 10/1/2016
Percentage Complete	100%	100%	90%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

References	**City of Melbourne** **Hydrant Assessment, Flowing, Maintenance, and Repair** **GIS Integration 3,500 Total Hydrants**	**Tampa Valve Condition Assessment, Maintenance and GIS Integration** **25,000 Valves**	**Macon GA** **Valve Condition Assessment Maintenance & GIS/CMMS Integration** **20,000 Valves & GPS** **Water Treatment Plant Valve and Facility Assessment**
Project Owner	City of Melbourne	City of Tampa, FL	City of Macon, GA
Reference Information	Bill Spann 900 East Strawbridge Ave Melbourne FL 32901 P) 321-722-5373 F) 321-608-7070 bspann@melbourneflorida.org	Ron Calderoni Distribution Project Manager 2603 N. Rome Ave Tampa, FL 33607 P) 813-259-1805 F) 813-348-2059 ron.calderoni@tampagov.net	Michel Wanna 702 2nd street Macon GA 31202 P) 478-464-5636 F) 478-741-9146 mwanna@maconwater.org
Contract Value Consolidated	250k/Yr	$2.1M (Budget and Actual)	$1.8M (Budget and Actual)
Contract Term	Annual Piggyback Contract	5/1/2008 - 5/1/2010	4/1/2010 - 4/1/2012
Percentage Complete	100%	100%	100%
Project Manager	Lamar Carroll	Lamar Carroll	Lamar Carroll

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Valve and Hydrant Assessment and UDF References - Continued

Project Equipment

Valve Assessment Program, Houston

Valve Assessment and Data Management Equipment

Hydromax USA understands the value in investing in the appropriate valve maintenance tools and equipment and dedicates the resources required to effectively and efficiently execute valve assessment projects. We utilize the following equipment:

- Grand LX Valve Maintenance Trailer: HUSA valve maintenance trailers include the ERV-750 extended reach system and the powerful TM-7 hi torque (up to 2500 ft/lb) valve exercisers. The trailer is also equipped with a high pressure water system and 500CFM industrial vacuum.
- Pumps for Dewatering Vaults – Hydromax utilizes dewatering pumps to pump out vaults so that the valve will be fully exposed for inspection and evaluation. These pumps allow for complete valve evaluation including items that normally would be submerged.
- Trimble R2 GPS Units - deliver reliable sub foot performance and are used throughout our national operations.
- ESRI ArcGIS Software – Hydromax USA's GIS department utilizes the industry leading ArcGIS software package for all asset validation and spatial data analysis.
- Trimble TerraSync Software & Trimble Pathfinder Office.

HYDROMAX USA Health and Safety Policy

ISN Collect. Verify. Connect.

MICCS SAFETY CERTIFIED

VERIFORCE INTEGRATED COMPLIANCE SOLUTIONS

PEC SAFETY

INDUSTRIAL TRAINING SERVICES

Hydromax USA has established an aggressive Health & Safety Policy and Program that demands the commitment and involvement of ownership, management, and employees. Clear objectives and responsibilities help create and maintain safe working environments, which benefit employees and clients alike.

Hydromax USA has maintained an outstanding safety record in a high-risk profession. We are proud of our performance, with no serious injuries in our years of operation.

In fulfilling this commitment, we will apply the best available technology to eliminate the risks and hazards that could be prejudicial to the safety of our employees. Hydromax USA will ensure all company programs and services meet or exceed legislative requirements and industry codes of practice.

The effectiveness of our program is measured through frequent audits, as well as the recording of monthly, quarterly, and annual performance metrics.

At Hydromax USA, we pride ourselves on maintaining a high standard of safety, and we have established a recognized company image by working safely at our own job sites and those of our clients.

100% THIRD PARTY COMPLIANCE

A number of our clients use third-party companies such as ISNetworld to manage their contractor/supplier safety requirements. To qualify for work with our various clients, we must be registered with these third party companies, pay registration fees, and populate and maintain their safety databases as to the client's required standard. Hydromax USA maintains compliance for all requirements.

HYDROMAX USA
Advanced Water, Wastewater and Gas Data Collection

City of Novi, MI

Valve Exercising, Condition Assessment and Repair

Prepared for: City of Novi

Attn: Finance Department

45175 Ten Mile Road

Novi, MI 48375

Due: April 8th, 2021 1:00 PM EDT

DROMAX USA
Water, Wastewater and Gas Data Collection

City

Valve Exercising, Condition Assessment and Repair
RFP Response

Prepared for: City of Novi

Attn: Finance Department

45175 Ten Mile Road

Novi, MI 48375

Due: April 8th, 2021 1:00 PM EDT

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TO FINANCE DEPARTMENT
CITY OF NOVI
45175 TEN MILE ROAD

NOVI MI 48375
(813) 305-6610

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PO: REF: BID SUBMITTAL
DEPT:

56D.025EF2/FE4A

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T. Marzonie

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NOTICE - CITY OF NOVI

VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM

REQUEST FOR PROPOSALS (RFP)

This RFP is issued by the Purchasing Office of the City of Novi.

IMPORTANT DATES

RFP Issue Date	March 19, 2021
Last Date for Questions	Friday, April 2, 1:00 PM Submit questions via email to: Scott Roselle, Water & Sewer Manager sroselle@cityofnovi.org
Response Due Date	**Thursday, April 8 2021, 1:00 PM** Deliver to: City of Novi, Attn: Finance Department 45175 Ten Mile Road, Novi, MI 48375
Anticipated Award Date	**May 10, 2021**

DESCRIPTION:

The City of Novi will receive sealed proposals for performing a VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM. The purpose of the program is to exercise each valve and report on the present valve condition, and then complete repairs as directed.

NOTICE TO PROPOSERS

The City of Novi officially distributes RFP documents through the Michigan Intergovernmental Trade Network (MITN). **Copies of RFP documents obtained from any other source are not considered official copies**. The City of Novi cannot guarantee the accuracy of any information not obtained from the MITN website and is not responsible for any errors contained by any information received from alternate sources. Only those vendors who obtain RFP documents from the MITN system are guaranteed access to receive addendum information, if such information is issued. If you obtained this document from a source other than the source indicated, it is recommended that you register on the MITN site, www.mitn.info and obtain an official copy.

INSTRUCTIONS

QUESTIONS

Please email all questions to the staff member listed above. Please write the name of the RFP in the subject line. If you write anything else in the subject line, your email may be deleted as spam.

MANDATORY PRE-PROPOSAL MEETING

A mandatory pre-proposal meeting will not be held.

TYPE OF CONTRACT

If a contract is executed as a result of the bid, it stipulates a fixed price for products/ services

CHANGES TO THE RFP/ADDENDA

Should any prospective Proposer be in doubt as to the true meaning of any portion of the Request for Proposal, or should the Proposer find any patent ambiguity, inconsistency, or omission therein, the Proposer shall make a written request (via email) for official interpretation or correction. Such request shall be submitted to the specified person by the date listed above. The individual making the request shall be held responsible for its prompt delivery.

Such interpretation or correction, as well as any additional RFP provisions that the City may decide to include, will be made as an addendum, which will be posted on the MITN website at www.mitn.info . Any addendum issued by the City shall become part of the RFP and shall be taken into account by each proposer in preparing their proposal. Only written addenda are binding. It is the Proposer's responsibility to be sure they have obtained all addenda. Receipt of all addenda must be acknowledged on proposal form.

PROPOSAL SUBMITTALS

Proposals may be submitted by mailing hard copies to the address shown above.

All hard copy bids must be submitted in a SEALED envelope marked **"VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM"** to the address shown on the Notice above.

Provide **one (1)** unbound, signed copy of your proposal. The bid may be clipped but should not be stapled or bound. Bids must be signed by an official authorized to bind the Contractor to its provisions.

As this RFP is being made available by electronic means, the proposer accepts full responsibility to ensure that no changes are made to the RFP documents. In the event of conflict between a version of the RFP submitted by proposer, the version maintained by the City of Novi Purchasing Department shall govern.

FAILURE TO SUBMIT PRICING ON THE PROPOSAL FORM PROVIDED BY THE CITY OF NOVI MAY CAUSE THE BID TO BE CONSIDERED NON-RESPONSIVE AND INELIGIBLE FOR AWARD.

SUBMISSION OF PROPOSALS

To be considered, sealed proposals must be submitted, as specified in this Instructions section on or before the specified time and date. There will be no exceptions to this requirement. Faxed, emailed, or telephone proposals are not acceptable. The City of Novi shall not be held responsible for lost or misdirected proposals. The City reserves the right to postpone an RFP opening for its own convenience.

Proposals must be clearly prepared and legible and must be signed by an Authorized Representative of the submitting Company on the enclosed form when one is provided in the RFP documents. Proposals must show unit and total prices when requested. In case of mistakes in price extension, unit pricing shall govern. *ANY CHANGES MADE ON THE PROPOSAL FORM MUST BE INITIALED OR YOUR PROPOSAL MAY BE CONSIDERED NON-RESPONSIVE.*

A proposal may be withdrawn by giving written notice to the Purchasing Manager before the stated due date/closing time. After the stated closing time, the bid may not be withdrawn or canceled for a period of One Hundred and Twenty (120) days from closing time.

Proposers are expected to examine all specifications and instructions. Failure to do so will be at the proposer's risk.

Failure to include in the proposal all information requested may be cause for rejection of the proposal.

Any samples, CDs, DVDs or any other items submitted with your proposal will not be returned to the contractor.

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 City Novi upon any debt or contract, or that is in default as surety or otherwise, or failed to perform faithfully any previous contract with the City.

USE OF THE CITY LOGO IN YOUR PROPOSAL IS PROHIBITED.

INELIGIBILITY OF IRAN LINKED BUSINESS

Under 2012 PA 517, an Iran Linked Business, as defined therein, is not eligible to contract with the City and shall not submit a proposal.

CONSIDERATION OF PROPOSALS

In cases where items are requested by a manufacturer's name, trade name, catalog number or reference, it is understood that the proposer intends to furnish the item so identified or an item of "equal" quality and value as determined by the City of Novi.

Reference to any of the above is intended to be descriptive, but not restrictive, and only indicates articles that will be satisfactory. Bids of "equal" quality and value will be considered, provided that the proposer states in his/her bid what he/she proposed to

furnish, including literature, or other descriptive matter which will clearly indicate the character of the item covered by such bid.

The City hereby reserves the right to approve as an "equal", any item proposed which contains minor or major variations from specification requirements, but which may comply substantially therewith.

RESPONSIVE PROPOSALS

All pages and the information requested herein shall be furnished completely in compliance with instructions. The manner and format of submission is essential to permit prompt evaluation of all proposals on a fair and uniform basis. Unit prices shall be submitted if space is provided on proposal form. In cases of mistakes in extension, the unit price shall govern. Accordingly, the City reserves the right to declare as non-responsive, and reject an incomplete proposal if material information requested is not furnished, or where indirect or incomplete answers or information is not provided.

EXCEPTIONS

The City will not accept changes or exceptions to the RFP documents/specifications unless Contractor indicates the change or exception in the "Exceptions" section of the proposal form. If Contractor neglects to make the notation on the proposal form but writes it somewhere else within the RFP documents and is awarded the contract, the change or exception will not be included as part of the contract. The original terms, conditions and specifications of the RFP documents will be applicable during the term of the contract.

CONTRACT AWARD

The contract that will be entered into will be that which is most advantageous to the City of Novi, prices and other factors considered. The City reserves the right to accept any or all alternative proposals and to award the contract to other than the lowest proposer, waive any irregularities or informalities or both, to reject any or all proposals, and in general, to make the award of the contract in any manner deemed by the City, in its sole discretion, to be in the best interests of the City of Novi.

After contract award, notification will be posted on the MITN website at www.mitn.info.

The City may, from time to time, find it necessary to continue this contract on a month-to-month basis only, not to exceed a six (6) month period. Such month-to-month extended periods shall be by mutual agreement of both parties, with all provisions of the original contract or any extension thereof remaining in full force and effect.

SELECTION PROCESS

This document is a Request for Proposals. It differs from an Invitation to Bid in that the City is seeking a solution as described herein, and not a bid meeting firm specifications for the lowest price. As such the lowest price will not guarantee an award recommendation. Competitive sealed proposals will be evaluated based on criteria formulated around the most important features of the service, of which qualifications, experience, capacity and methodology, may be overriding factors, and price may not be determinative in the issuance of a contract or award. The proposal evaluation criteria should be viewed as standards that measure how well a contractor's approach meets the desired requirements of the city. Those criteria that will be used and considered in evaluation for award are set

forth in this document. The City will thoroughly review all proposals received. A contract will be awarded to a qualified contractor submitting the best proposal.

PROPOSAL EVALUATION CRITERIA

Proposals will be evaluated by the Qualifications Based Selection (QBS) process Qualifications using the following criteria:

1. Qualification and experience of personnel
2. Valve exercising and assessment experience with similar programs
3. Methodology/equipment to be used.
4. References
5. Price

PROPOSAL FORMAT

The provided Fee Proposal Form shall be submitted with this bid.

GENERAL CONDITIONS

INSURANCE

A certificate of insurance naming the City of Novi as an additional insured must be provided by the successful proposer prior to commencement of work. A current certificate of insurance meeting the requirements in Attachment A is to be provided to the City and remain in force during the entire contract period.

PERMITS

Where required by code, permits and all required inspections must be obtained by the Contractor. Fees for permits and inspections obtained from the City of Novi will be waived by the City for work on City buildings. Upon completion, all work will be subject to the State Laws and City Ordinance Codes.

CLEAN UP

The contractor shall keep the work area and surrounding area reasonable free from rubbish at all times and shall remove debris from the site from time to time or when directed to do so by the City's designated representative(s). Before final inspection and acceptance of the work, the Contractor shall clean his portion of the work area. All materials removed/replaced shall be the responsibility of the contractor to properly dispose of.

SAFETY REQUIREMENTS

The Contractor shall be solely responsible for the entire work site and provide all necessary protections as required by laws or ordinances governing such conditions and as required by the Owner. He shall be responsible for any damage to the Owner's property or that of others on the job, by himself, his personnel or his subcontractors, and shall make good such damages. He shall be responsible for and pay for any claims against the owner arising from such damages.

The Contractor shall provide all necessary safety measures for the protection of all persons on the work, and shall fully comply with all state laws or regulations and Michigan State

building code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all necessary protective devices and signs throughout the progress of the work.

CONTRACT RENEWAL
No contract shall be automatically renewed at the end of any contract term.

NO EXCLUSIVE CONTRACT
Contractor agrees and understands that the contract shall not be construed as an exclusive agreement and further agrees that the City may, at any time, secure similar or identical products/services at its sole option. The Contractor will not be reimbursed for any anticipatory profits should the City exercise this option.

TAX EXEMPT STATUS
It is understood that the City of Novi is a governmental unit, and as such, is exempt from the payment of all Michigan State Sales and Federal Excise taxes. Do not include such taxes in the bid prices. The City will furnish the successful proposer with tax exemption certificates when requested. The City's tax-exempt number is 38-6032551.

The following exception shall apply to installation projects: When sales tax is charged to the successful proposer for materials to be installed during the project, that cost shall be included in the "Complete for the sum of" bid price and not charged as a separate line item. The City is not tax exempt in this case and cannot issue an exemption certificate.

FREIGHT CHARGES/SHIPPING/HANDLING
All bid/proposal pricing is to be F.O.B. destination.

INVOICING
Invoices may be mailed to: City of Novi, Attn: Finance Department, 45175 Ten Mile Road, Novi, MI 48375, OR emailed to: invoices@cityofnovi.org. *This email is to be used for invoices and statements only and not for any other type of communication or sales. We are unable to respond to any inquiries from this email.*

CONTRACT TERMINATION
The City may terminate and/or cancel this contract (or any part thereof) at any time during the term, any renewal, or any extension of this contract, upon thirty days (30) days written notice to the Contractor, for any reason, including convenience without incurring obligation or penalty of any kind. The effective date for termination or cancellation shall be clearly stated in the written notice.

TRANSFER OF CONTRACT/SUBCONTRACTING
The successful proposer will be prohibited from assigning, transferring, converting or otherwise disposing of the contract agreement to any other person, company or corporation without the expressed written consent of the City of Novi. Any subcontractor, so approved, shall be bound by the terms and conditions of the contract. The contractor shall be fully liable for all acts and omissions of its subcontractor(s) and shall indemnify the City of Novi for such acts or omissions.

ACCEPTANCE OF PROPOSAL CONTENT

Should a contract ensue, the contents of the proposal of the successful Proposer may become contractual obligations. Failure of a contractor to accept these obligations may result in cancellation of the award.

DISCLOSURE

All documents, specifications, and correspondence submitted to the City of Novi become the property of the City of Novi and are subject to disclosure under the provisions of Public Act No. 442 of 1976 known as the "Freedom of Information Act". This Act also provides for the complete disclosure of contracts and attachments hereto. This means that any informational material submitted as part of this RFP is available without redaction to any individual or organization upon request.

ECONOMY OF PREPARATION

Proposals should be prepared simply and economically, providing a straightforward and concise description of the contractor's ability to meet the requirements of the bid. Emphasis should be on completeness and clarity of content. Included in the response must be a point by point response to the Requirements and other sections of the bid.

The City of Novi is not liable for any costs incurred by proposers prior to issuance of a contract.

INDEPENDENT PRICE DETERMINATION

By submission of a proposal, the offeror certifies, and in case of a joint proposal, each party hereto certifies as to its own organization, that in connection with the proposal:

(a) The prices in the proposal 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 offeror or with any other Competitor; and
(b) No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not submit a proposal for the purpose of restricting competition.

Each person signing the proposal certifies that:
(c) He is the person in the offeror's organization responsible within that organization for the decision as to prices being offered in the proposal and that he has not participated and will not participate in any action contrary to (a) and (b) above; or
(d) He is not the person in the offeror's organization responsible within that organization for the decision as to prices being offered in the proposal but that he has been authorized in writing to act as agent for the persons responsible for such decisions in verifying that such persons have not participated, and will not participate, in any action contrary to (a) and (b) above , and that as their agent, does hereby so certify; and that he has not participated, and will not participate in any action contrary to (a) and (b) above.

A proposal will not be considered for award if the sense of the statements required in the proposal has been altered so as to delete or modify the above.

NON-DISCRIMINATION

The Contractor shall not discriminate against any employee or applicant for employment with respect to hire, tenure, terms, condition or privileges of employment on a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status pursuant to the Elliot Larsen Civil Rights Act, 1976, P.A. 453. The Agency and the Municipality shall also comply with the provisions of the Michigan Handicappers Civil Rights Act, 1976, P.A. 220 and the Federal Rehabilitation Act of 1973, P.A. 93-112, 87 Stat. 394, which require that no employee or client or otherwise qualified handicapped individual shall, solely by reason of his/her handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal Assistance. No person shall, on the grounds of race, creed, color, sex, age, national origin, height, weight, handicap, or marital status be excluded from participation in, be denied the proceeds of, or be subject to discrimination in the performance of this contract. The Consultant further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78. Stat. 252 and 1976 PA 453) and will require a similar covenant on the part of any consultant or sub-consultant employed in the performance of this contract.

CITY OF NOVI

VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM

SPECIFICATIONS

The City of Novi Water and Sewer Division will receive sealed proposals for performing a VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM, and is requesting an RFP for the following scope of work.

The City of Novi will receive sealed proposals for performing a VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM. The purpose of the program is to exercise each valve and report on the present valve condition, and then complete repairs as directed.

The City's water distribution system consists of approximately 360 miles of water main. The water valves are operated and maintained on an "as-needed" basis. Most of the City's water valves are operated during emergency water main breaks, or during routine maintenance on the distribution system. The City of Novi is planning to complete a valve exercising program to help assure that all valves in the water system operate properly during emergency operations.

The City has three primary goals with this program:

1. Locate and perform valve exercising on all distribution system valves.
2. Complete a full, thorough assessment of the valve's condition.
3. Provide a complete and comprehensive report of each valve exercised/assessed specifically focusing on those that need preventative maintenance and/or repairs.
4. Complete repairs as directed.

The City will be flexible with regards to the timeline of this project; however, once the City issues a "Notice to Proceed", the selected contractor shall complete the program within 12 months. A final comprehensive report will be due to the City within thirty (30) days of the completion of the program.

VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM DESCRIPTION

The City of Novi is seeking to retain the services of a qualified and experienced Firm with extensive experience in water distribution system valve exercising, valve assessment and repair.

The water distribution system for the City of Novi contains approximately:

- 360 miles of 8" to 36" Water Main
- 4,430 Hydrant Valves
- 3,850 Main Line Valves
  - 3,650 – 8" to 12"
  - 156 – 16"
  - 1 – 20"
  - 26 – 24"
  - 15 – 30"

The selected contractor will develop, plan, and execute a valve exercising, condition assessment and repair program. Valves will be exercised, and thoroughly assessed in accordance with the specifications herein. A report of each valve exercised and assessed will be provided. Results will include analytical data of the location, valve ID number (asset ID), and will be prioritized according to condition and criticality of needed repairs. Recommendations for a system-wide program will also be made based on the overall evaluation of the criticality of each valve.

The services to be provided related to this proposal are described in the Minimum Scope of Services section of this proposal. All work must adhere to the City, AWWA and MDOT standards as required.

MINIMUM SCOPE OF SERVICES

The City is seeking a Firm that will develop, plan, and execute a Valve Exercising, Condition Assessment and Repair program to exercise water distribution systems valves, assess the valve condition to known, and complete repairs as directed.

Valve Exercising & Condition Assessment Working Hours

The permitted working hours per City ordinance are as follows:

- 7:00 AM to 7:00 PM Monday through Saturday,
- No work is allowed on Sundays or holidays.

Safety

1. There will always be a minimum of Two Persons per team working on the program. The use of One Person Project Teams is not acceptable and will not be allowed to perform work on the water system.
2. Proper PPE (personal protection equipment) shall be worn **at all times**. A class III reflective safety vest will be worn for all work. Class II will not be acceptable.
3. The Project Team will follow all traffic safety rules, as is designated by the City, the Department of Labor, OSHA and the Michigan Department of Transportation.
4. The Project Team will follow all procedures regarding Workplace First Aid & CPR, as is designated by the Utility, the Department of Labor and OSHA.
5. The City of Novi is not responsible for site safety. The Proposer is solely and exclusively responsible for construction means, methods, technologies and site safety.

Traffic Control

Appropriate measures must be exercised to ensure traffic and worker safety especially in high traffic areas. When impacting a lane of traffic, these measures would include appropriately diverting traffic to proper distances, safety apparatus, and high visibility clothing, and obtaining the necessary permits form the appropriate agency.

Misc.

All field staff will have readily observable identification badges worn while in the field.

Valve Exercising Equipment

Valves 8" and larger will be exercised with an electric or hydraulic valve exerciser with torque control and an automated turn counter.

Preprogram Tasks

1. Conduct a kick-off meeting with the City to cover the goals of the project, project schedules, and to outline work procedures.
2. The Proposer will provide detailed, written valve exercising processes that will be used by Proposer's field crew that will include torque limits for every valve type and size anticipated in the scope of this project.
3. The Proposer shall prepare a proposed Valve Exercising, Condition Assessment and Repair Project Schedule.

Valve Locations

1. The City will provide reference geodatabase files to assist in location and identification of known features. Additional GIS information will be made available as requested.

2. Once located, the valve boxes or valve vault covers, and adjacent curbs shall be painted with an environmentally formulated precautionary blue paint for future identification (paint provided by contractor).
3. All located water valves shall be exercised and assessed as a part of the program unless specifically directed not to do so by the Water & Sewer Manager.
4. For valves that cannot be located initially, a search shall be conducted to locate the valve for up to 15 minutes. If it cannot be located after that search, it will be considered a 'Valve Cannot Locate'. The Proposer will return to complete the assessment once the valve has been located by the City.

Valve Assessment Tasks

The valve condition assessment shall essentially consist of the following elements:

1. The Proposer will execute a thorough visual inspection of the valve body and valve structure. The condition assessment shall be conducted from ground level and is intended to discover discrepancies and deficiencies with the valve.
2. Valve vaults shall be pumped out if needed, and the valve body, bonnet, and operating nut area shall be cleaned and clearly visible. In order to provide this service, the Proposer will need to provide crews with a water pump and a means to clean the valve body.
3. No valve is to be exercised if deteriorated or missing bonnet bolts are observed until bolts have been replaced as necessary.

Valve Exercising Tasks

The valve exercising shall essentially consist of the following elements:

1. The Proposer will report each morning (or per request of the City), to the assigned City personnel and cover what areas will be covered the current day.
2. Each valve located shall be exercised to such an extent as to ensure its ability to operate through its full range of "turns" or complete revolutions upon demand.
3. The contractor will first attempt to operate each of the valves manually. If a valve cannot be started manually, the Water & Sewer Manager shall be contacted for further direction.
4. Valves greater than 16" will be exercised following notification of the Water & Sewer Manager for each instance.
5. A visual inspection of the packing gland for all 30" and 36" valves shall be completed. This would required a confined space entry.
6. Valves will be exercised with the minimum torque required to prevent valve damage.

7. If a valve fails to cycle at the set torque limit, the exercise process for that valve will stop immediately. Additional torque may be applied to the valve as directed by the Water & Sewer Manager (with input from the contractor). Additional effort required to free the valve will be per the direction of the Water & Sewer Manager, and will be considered 'Miscellaneous Work'.
8. During initial valve closure, the valve will be turned no more than five (5) turns before turn direction is reversed to two (2) turns, thus allowing the threads of the stem and gate to free itself. This closure and partial reversal process shall be repeated until the valve has achieved full closure.
9. Valves shall be exercised from full open to full closure until such time as this can be done without further turn range improvement or no further reduction in the required operating torque is noted, through a minimum of three (3) consecutive ranges of operations. Then, the top and bottom operation range shall be additionally exercised an additional three (3) times.
10. Valve boxes with debris shall be cleaned out by the Proposer to facilitate proper exercising (15 minutes or less).
    a. For valve boxes requiring heavy cleaning (15 minutes or more) the Water & Sewer Manager can be contacted to determine whether the proposer or the City should continue the cleaning.
11. After the valve is exercised, the contractor will verify that the valve is not leaking. The contractor will check either visually, if appropriate, or with an electronic listening device if the valve is located within a valve box.
12. The contractor will immediately notify the Water & Sewer Manager of any valves found leaking, closed, broken, or if any unsafe conditions are observed.

Valve Repairing Tasks

The valve exercising shall essentially consist of the following elements:

1. All valve potential repairs identified will be brought to the attention of the Water & Sewer Manager.
2. If a repair would like to be pursued by the City, Proposer shall provide a written quote for the work for review and approval by the City.

Post Program Tasks

1. A final report (two (2) copies and one (1) digital file) will be prepared for the City at the completion of the program which will include:
    a. Each valve that is exercised and/or assessed will be documented with the following information:
        i. Valve asset ID
        ii. Size
        iii. Type (gate/butterfly)

iv. Operating nut depth
v. Enclosure type (vault or box)
vi. Number of turns to achieve full closure
vii. Direction of closure
viii. Valve position at start and completion of work
ix. Torque Rating
x. Date exercised and condition assessment performed
xi. Valve structure discrepancies or deficiencies
xii. Valve body discrepancies or deficiencies
xiii. Any mapping errors
xiv. Detailed description of any repairs completed

2. This final report shall be submitted to the City within thirty (30) working days of the completion of the project.

1. <u>Introduction</u>

A brief introduction shall include the following information:

1. Name of Proposer
2. Office Address (within 100 miles of CITY)
3. Office Telephone number
4. 24-hr. emergency telephone number
5. Fax number
6. Name of contact person

2. <u>Project Approach</u>

This section should include the following:

1. A description of the firm's thorough understanding of the scope of the project.
2. An overall account of the philosophy and methods the Proposer will utilize to successfully complete this project.
3. A detailed outline of the tasks associated with each element of the scope of services described above including any additional tasks that the Proposer may choose to identify.
4. A description of potential problems to be expected and the possible techniques to be employed for solving these problems.

3. <u>Project Team</u>

Provide experience of key professional members of the firm who will be directly involved with this project. The key personnel should include the following:

1. Project Manager who will be responsible for coordinating all activities (preferred to have ten (10) years' experience managing valve exercising, condition assessment and repair programs).
2. A Field Project Leader with three (3) years of valve exercising, assessment

and repair experience. The Field Project Leader shall be onsite at all times during this project. This person shall be trained in traffic control (MUTCD standards) and confined space entry.

4. **Similar Project Experience**

Provide at least three specific examples of municipal valve exercising, assessment and repair projects completed within the last three years that are similar in nature to this project.

Include a description of each project that include:

1. Location
2. Client Name and phone number
3. Project team that staffed the project (Project Manager, Field Project Leader)
4. Duration of the project
5. Key events or activities that distinguish the project from others

5. **Equipment used**

Provide a narrative of the specific name and age of the equipment your firm proposes to utilize on this program.

CITY OF NOVI
INSURANCE REQUIREMENTS
ATTACHMENT A

1. The Contractor shall maintain at its expense during the term of this Contract, the following insurance:

   a. **Worker's Compensation** insurance with the Michigan statutory limits and Employer's Liability insurance with minimum limits of **$100,000** (One Hundred Thousand Dollars) each accident.

   b. **Commercial General Liability Insurance –** The Contractor shall procure and maintain during the life of this contract, Commercial General Liability Insurance, Personal Injury, Bodily Injury and Property Damage on an "Occurrence Basis" with limits of liability not less than **$1,000,000** (One Million Dollars) per occurrence combined single limit.

   c. **Automobile Liability** insurance covering all owned, hired and non-owned vehicles with Personal Protection insurance to comply with the provisions of the Michigan No Fault Insurance Law including Residual Liability insurance with minimum bodily injury limits of **$1,000,000** (One Million Dollars) each person and **$1,000,000** (One Million Dollars) each occurrence and minimum property damage limits of **$1,000,000** (One Million Dollars) each occurrence.

   d. The Contractor shall provide proof of **Professional Liability** coverage in the amount of not less than **$1,000,000** (One Million Dollars) on a per claim/aggregate.

2. All policies shall name the Contractor as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice date to the City; alternately, contractor may agree to provide notice of such cancellation or reduction.

3. The City of Novi shall be named as Additional Insured for General Liability and Auto Liability. Certificates of Insurance evidencing such coverage shall be submitted to City of Novi, Purchasing Department, 45175 Ten Mile Road, Novi, Michigan 48375-3024 prior to commencement of performance under this Contract and at least fifteen (15) days prior to the expiration dates of expiring policies. A current certificate of insurance must be on file with the City for the duration of the contract. Said coverage shall be primary coverage rather than any policies and insurance self-insurance retention owned or maintained by the City. Policies shall be issued by insurers who endorse the policies to reflect that, in the event of payment of any loss or damages, subrogation rights under those contract documents will be waived by the insurer with respect to claims against the City.

4. The Contractor shall be responsible for payment of all deductibles contained in any insurance required hereunder.

5. If, during the term of this Contract, changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate insurance limits, the Contractor will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such insurance shall be effected at the Contractor's expense, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City.

6. If any work is sublet in connection with this Contract, the Contractor shall require each subcontractor to effect and maintain at least the same types and limits of insurance as fixed for the Contractor.

7. The provisions requiring the Contractor to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Contractor under this contract.

8. The City has the authority to vary from the specified limits as deemed necessary.

ADDITIONAL REQUIREMENTS

HOLD HARMLESS/INDEMNITY

1. The Contractor agrees to fully defend, indemnify and hold harmless the City, its City Council, its officers, employees, agents, volunteers and contractors from any claims, demands, losses, obligations, costs, expenses, verdicts, and settlements (including but not limited to attorney fees and interest) resulting from:

A. Acts or omissions by the Contractor, its agents, employees, servants and contractors in furtherance of execution of this Agreement, unless resulting from the sole negligence and tort of the City, its officers, employees, agents and contractors.

B. Violations of state or federal law involving whether administrative or judicial, arising from the nature and extent of this Agreement.

C. The Contractor agrees to defend the City from and against any and all actions or causes of action, claims, demands or whatsoever kind or nature arising from the operations of the Contractor and due to the acts or omissions of the Contractor or its agents, including, but not limited to, acts of omissions alleged to be in the nature of gross negligence or willful misconduct. The Contractor agrees to reimburse the City for reasonable attorney fees and court costs incurred in the defense of any actions, suits, claims or demands arising from the operations of the Contractor under this Agreement due to the above-referenced acts or omissions.

2. The Contractor agrees that it is its responsibility and not the responsibility of the City of safeguard the property and materials used in performing this Contract. Further the Contractor agrees to hold the City harmless for any loss of such property and materials used in pursuant to the Contractor's performance under this Contract.

3. The Contractor shall not discriminate against any employee, or applicant for employment because of religion, race, color, national origin, age, sex, height, weight, handicap, ancestry, place of birth, sexual preference or marital status. The Contractor further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78. Stat. 252 and 1976 PA 453) and will require a similar covenant on the part of any consultant or subcontractor employed in the performance of this contract.

CITY OF NOVI

VALVE EXERCISING, CONDITION ASSESSMENT AND REPAIR PROGRAM

FEE PROPOSAL FORM

We the undersigned as proposer, propose to furnish to the City of Novi, according to the specifications, terms, conditions and instructions attached hereto and made a part thereof:

Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
	VALVE ASSESSMENT				
	Mobilization, Valve Assessment	Ea	1		
	Valve Assessment, 8" to 12" Diameter	Ea	3650		
	Valve Assessment, 16" Diameter	Ea	156		
	Valve Assessment, 20" Diameter	Ea	1		
	Valve Assessment, 24" Diameter	Ea	26		
	Valve Assessment, 30" Diameter	Ea	13		
	Valve Cannot Locate	Ea	850		
	Confined Space Entry	Ea	30		
	Minor Repairs (bolt tightening and replacement, fix packing leaks)	Hour	200		
	Hydrant Valve Assessment, 6" Diameter	Ea	4430		
	Valve Box Re-Alignment, up to 1' Deep (Non Pavement)	Ea	50		
	Valve Box Re-Alignment, up to 1' Deep (Pavement)	Ea	50		
	Valve Box Re-Alignment, >1' to 3' Deep (Non Pavement)	Ea	50		
	Valve Box Re-Alignment, >1' to 3' Deep (Pavement)	Ea	50		
	Valve Box Height Adjust, up to 1' Deep (Non Pavement)	Ea	425		
	Valve Box Height Adjust, up to 1' deep (Pavement)	Ea	425		
	Miscellaneous Work	Hour	100		

Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
	LARGE VALVE REPAIR				
	Mobilization, Large Valve Repair	Ea	1		
	Removal of Gears	Day	12		
	Re-installation of Gears	Day	12		
	OPERATING NUT REPAIR				
	Mobilization, Operating Nut Repair	Ea	1		
	Replace Missing/Damaged Operating Nuts	Ea	200		
				TOTAL PRICE	

We acknowledge receipt of the following Addenda: _____
(please indicate numbers)

EXCEPTIONS TO SPECIFICATIONS (all exceptions <u>must</u> be noted here):

_____

_____

_____

_____

COMMENTS: _____

_____

_____

_____

_____

_____

REFERENCES: Please provide at least three client (3) references for projects of similar scope done in the last 3 years.

Company _____

Address _____

Phone _____ Contact name _____

Company _____

Address _____

Phone _____ Contact name _____

Company _____

Address _____

Phone _____ Contact name _____

THIS PROPOSAL SUBMITTED BY:

Company (Legal Registration) _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Representative's Name _____

Representative's Title _____

Authorized Signature _____

E-mail _____

Date _____

CITY OF NOVI
VALVE EXERCISING, CONDITION
ASSESSMENT AND REPAIR PROGRAM

Please return this page with your bid form

If your company is awarded the item(s) referenced in the bid proposal, other governmental entities may wish to use this contract and will issue a purchase order or contract for the item(s) awarded in the bid proposal following minimum order/contract requirements set forth in the bid documents. Each entity will provide their own purchase order and delivery location(s) and must be invoiced separately to the address indicated on their purchase order.

1. EXTENSION OF AWARD TO THE MITN (MICHIGAN INTER-GOVERNMENTAL TRADE NETWORK) PURCHASING COOPERATIVE: ***OPTIONAL***

Numerous Counties, Cities, Townships, and Authorities of the State of Michigan are members of the MITN (Michigan Inter-governmental Trade Network) Purchasing Cooperative. Other associate entities are also members of the Cooperative in the Tri-County area. Please visit www.mitn.info website to view the entire list of participating agencies.

( ) If an award is made to _____, it is agreed that the contract will be extended to other MITN Purchasing Cooperative members and associate entities under the same prices, terms, and conditions.

( ) Our company is **NOT** interested in extending the contract to those MITN members listed on the website.

Contractor Signature: _____

Company Name: _____

Date: _____