CITY OF TARPON SPRINGS, FL

Procurement Services

324 East Pine Street
P.O. Box 5004
Tarpon Springs, Florida 34688-5004
(727) 942-5615
Fax (727) 937-1766

MEMORANDUM

TO: Honorable Mayor and Board of Commissioners

THRU: Janina Lewis, CPPO, NIGP-CPP, Procurement Services Director

FROM: Anela Saday, CPPB, NIGP-CPP, Senior Procurement Analyst

DATE: 12/05/2023

SUBJECT: Renew File No. 210212-C-AS, Hydrant and Valve Installation, Maintenance, and Repair Services, utilizing Seminole County Contract No. IFB-603974-20/CAR

RECOMMENDATION:

Renew File No. 210212-C-AS, Hydrant and Valve Installation, Maintenance, and Repair Services utilizing Seminole County Contract No. IFB-603974-20/CAR with Hydromax USA LLC, effective December 14, 2023 through December 13, 2024, in an estimated annual amount not to exceed $110,000, for the Public Services Department – Water Distribution Division.

BACKGROUND:

On December 14, 2020, Seminole County entered into an agreement with Hydromax USA LLC for hydrant and valve testing, maintenance, repair, and flushing services. On September 28, 2021, the BOC approved Contract File No. 210212-C-AS. On February 28, 2023, the BOC approved a one-time increase in the amount of $18,993.28, from $135,000 to $153,993.28. On October 4, 2023, Seminole County executed its first of two (2) annual renewals.

The City currently maintains over 1,300 fire hydrants and valve systems that require specific specialized service and repairs. The hydrants are essential for the protection of life, safety, and property throughout the city's service area.

Hydrants will continue to be inspected and maintained annually, using (2-hydrant) flow testing as part of an ongoing, multi-year requirement to demonstrate fire system capacity according to Insurance Services Office (ISO) standards. The continued hydrant program significantly improved the City's hydrant systems and improvement in the City's ISO rating, promotes lower insurance costs to residents. The purpose of this contract is to provide fire hydrant and valve maintenance and repair services identified during routine inspection and testing (see attached memo).

FUNDING: 402-4303-536.6300 Water and Sewer Enterprise Fund CIP and in the 402-4303-536.4600 operating FY24 budget.

Accepted by:_____
City Manager

Attest: _____
City Clerk

Paul Smith
Public Services Director

Public Services Department

Memorandum

Date: November 21, 2023

To: Janina Lewis, Procurement Services Director

Through: Paul Smith, Public Services Director PS
Raymond Page, Utilities Superintendent

From: Heather Freundel, Water Conveyance Supervisor

Subject: Authorize the Use of Seminole County Contract IFB-603974-20/CAR-HydroMax USA for Citywide Fire Hydrant and Valve Maintenance, Repair and Flushing Services

Recommendation

It is recommended that the Board authorize the use of Seminole County Contract IFB-603974-20/CAR HydroMax USA for the annual completion of citywide fire hydrant and valve installation, repair and maintenance services. The requested authorization is an amount not to exceed $110,000.

Background

The City currently maintains over 1,300 fire hydrants and valve systems that require specific specialized services and repairs. The hydrants are essential for the protection of life, safety and property throughout the City's service area.

Hydrants will continue to be inspected and maintained annually. The City plans to utilize this contract to continue with specific (2-hydrant) flow testing as part of a multi-year ongoing requirement to demonstrate fire system capacity according to ISO standards. The continued hydrant program has drastically improved our hydrant systems and the improvement in our ISO rating could provide lower insurance costs to the residents.

The contract will also be utilized to perform limited hydrant maintenance and repairs that are determined from the inspection and testing program. The contract provides for detailed unit pricing of various maintenance items (such as re-painting with specific required color code systems and applying ID tags) and repairs that may be required for some hydrants. Painting and aesthetics of the hydrants will be improved with each coating of paint that is applied. The contract is planned to be utilized to allow for repairs so that they may be completed as expeditiously as possible on a priority basis.

The estimate for the work is approximately $100,000 for assessment, painting, ID and marking and approximately $10,000 for follow up repairs to the portion of the hydrants requiring such work. The final cost will be based on actual units serviced and only as needed. Additional, ongoing maintenance and repairs as required will be continued into following fiscal years.

Funding

Funds for this purchase have been planned in the water and sewer enterprise fund CIP in account 402-4303-536.6300 and in the operating budget in 402-4303-536.4600 in the FY 2024 budget.

Prepared By: Public Services Department

RESOURCE MANAGEMENT DEPARTMENT

PURCHASING AND CONTRACTS DIVISION

SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

10/04/2023

Hydromax USA
2501 S. Kentucky Ave
Evansville, Indiana 47714

RE: IFB-603974-20/CAR Renewal #1 Term Contract for Hydrant and Valve Maintenance, Repair and Flushing Services

Pursuant to Seminole County Purchasing Code Section 3.554(5)(a), this notice shall serve as authorization to renew the above agreement from **December 14, 2023 through December 13, 2024** as approved by the Seminole County Board of County Commissioners. Current pricing, terms and conditions shall remain the same.

Please remember to keep this office up to date with a **current certificate of insurance** ***with the above contract number referenced on the certificate*** as required in the original, contract agreement.

Appropriate County departments and divisions will be notified of this Contract renewal action.

Thank you for your interest in doing business with Seminole County. If you have any questions or need further assistance, please contact our office.

Sincerely,

Rachel Horne

Rachel Horne
Procurement Analyst I

cc: Environmental Services - Utilities Engineering
County Attorney's Office
County Comptroller's Office
File

CITY OF TARPON SPRINGS, FL

Procurement Services

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MEMORANDUM

TO: Honorable Mayor and Board of Commissioners

THRU: Janina Lewis, CPPO, NIGP-CPP, Procurement Services Director

FROM: Anela Saday, CPPB, Senior Procurement Analyst

DATE: 02/28/2023

SUBJECT: Ratify an Increase to File No. 210212-C-AS, Hydrant and Valve Installation, Maintenance, and Repair Services, utilizing Seminole County Contract No. IFB-603974-20/CAR

RECOMMENDATION:

Ratify an Increase to File No. 210212-C-AS, Hydrant and Valve Installation, Maintenance, and Repair Services utilizing Seminole County Contract No. IFB-603974-20/CAR with Hydromax USA LLC, in a one-time amount not to exceed $18,993.28, from $135,000 to $153,993.28, for the Public Services Department – Water Distribution.

BACKGROUND:

On December 14, 2020, Seminole County entered into an agreement with Hydromax USA LLC for hydrant and valve testing, maintenance, repair, and flushing services. On September 28, 2021, the BOC approved Contract File No. 210212-C-AS. The city currently maintains over 1,300 fire hydrants and valve systems that require specific specialized service and repairs. The hydrants are essential for the protection of life, safety, and property throughout the city's service area.

Each year, an initial estimate is calculated to achieve the required testing, associated flushing, and any additional hydrant system parts and painting. The actual work completed can vary depending on hydrant pairs tested, the amount of flushing required, and hydrant equipment replaced. More work was completed during the past contract year than previously estimated to achieve annual progress on citywide testing.

Therefore, an increase to blanket purchase order no. 220035 in the amount of $18,993.28 is needed to cover final invoices for those services. The contract will then revert to the original award amount of $135,000, through the remaining contract term. The purpose of this contract is to allow citywide fire hydrant and valve inspection, maintenance, and repair services of the City's fire hydrants, which include specific two-hydrant flow testing as part of a multi-year ongoing requirement to demonstrate fire system capacity in accordance with the Insurance Services Office (ISO). Feedback from the City's most recent ISO inspection was that the City has one of the best hydrant programs in the area and as a result, the City's ISO rating correlates with lower insurance rates for the City (see attached memo). Seminole County competitively bid for fire hydrant and valve testing, maintenance, repair, and flushing services.

FUNDING: 4024303536.6300; 4024303536.4600 Water Distribution and Sewer Enterprise Fund

Accepted by: _____
City Manager

Attest: _____
City Clerk

Paul Smith
Public Services Director

Public Services Department

Memorandum

Date: February 28, 2023

To: Janina Lewis, Procurement Services Director

Through: Paul Smith, Public Services Director
R. Thomas Kiger, Public Services Assistant Director

From: Raymond Page, Utilities Superintendent

Subject: Authorize a One-time Increase for Blanket Purchase Order #220035 for Additional Services Completed for Hydrant and Valve Installation, Maintenance, and Repair Services with Hydromax USA, LLC for Water Distribution Operations

Recommendation

Authorize a one-time increase to Blanket Purchase Order #220035 for additional services completed for hydrant and valve installation, maintenance and repair services with Hydromax USA, LLC. Authorize increase from an annual amount of $135,000 to $153,993.28, an increase of $18,993.28.

Background

The City currently maintains over 1,300 fire hydrants and valve systems that require specific specialized service and repairs. The hydrants are essential for the protection of life, safety and property throughout the City's service area.

Hydrants continue to be inspected and maintained annually as part of a required maintenance program to maintain the City's fire protection and associated national Insurance Services Office (ISO) Fire Rating. The ISO is an independent organization that scores fire departments on how they are doing against its organization's standards. The ISO analyzes data it collects and assigns a Public Protection Classification (PPC) on a scale from 1 to 10. The highest ISO fire protection class is a Class 1. This rating is determined on several factors, with a major portion attributed to water supply and the associated fire hydrant system. Our resident's home insurance rates are influenced and can be reduced by improvement in the City's ISO rating.

The City's Fire Department in partnership with other City departments has made significant improvements in its ISO rating, from a past Class 4 to a recent high Class 2. Feedback from our most recent ISO inspection was that we have one of the best hydrant programs in the area, which is a testament to the Public Services Water Division, Fire Department, and contractor Hydromax USA working together and ultimately saving money on insurance for homeowners within the City each year.

The City utilizes a contract with Hydromax USA to complete hydrant inspection, testing, marking, repair, and painting. This includes a specific (2-hydrant) flow testing protocol prescribed by the ISO as part of a multi-year ongoing requirement to demonstrate fire system capacity. Limited hydrant maintenance and repairs are also performed that are determined from the inspection and testing program. Hydrants are also re-painted with specific required color code systems that correspond to each hydrant's flow rating from the testing that firefighters can utilize when responding to each fire. Road reflectors and stainless steel ID tags are also maintained and replaced as needed for rapid hydrant identification.

The original requested annual not to exceed estimate was $135,000. Each year, an initial estimate is calculated to achieve the required testing, associated flushing, and any additional hydrant system parts and painting. The actual work completed can vary depending on hydrant pairs tested, the amount of flushing required, and hydrant equipment replaced. This year included more services than previously estimated to achieve annual progress on citywide testing.

Also, there have been an additional 25 new fire hydrants added to the system resulting in an increase inventory throughout the service area. There are an additional 30 hydrants scheduled for installation due to growth in the City during the next inspection cycle. Accordingly, we anticipate an increase in the amount of funds required to maintain this level of service and continue the Fire Protection program.

Funding

Funds for these services are budgeted in the water and sewer enterprise fund, Water Distribution account 402-4303-536.46 and .63.

CITY OF TARPON SPRINGS, FL

Procurement Services

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P.O. Box 5004
Tarpon Springs, Florida 34688-5004
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Fax (727) 937-1766

MEMORANDUM

TO:	Honorable Mayor and Board of Commissioners
THRU:	Janina Lewis, CPPO, NIGP-CPP, Procurement Services Director
FROM:	Anela Saday, Senior Procurement Analyst AS
DATE:	09/28/2021
SUBJECT:	Award File No. 210212-C-AS, Hydrant and Valve Installation, Maintenance, and Repair Services, utilizing Seminole County Contract No. IFB-603974-20/CAR

RECOMMENDATION:

Award File No. 210212-C-AS, Hydrant and Valve Installation, Maintenance, and Repair Services to Hydromax USA LLC utilizing Seminole County Contract No. IFB-603974-20/CAR with Hydromax USA LLC, in an annual amount not to exceed $135,000.00, for the period of September 29, 2021 thru December 14, 2023, for the Public Services Department. Purchase orders will only be issued against approved budgets.

BACKGROUND:

On December 14, 2020, Seminole County entered into an agreement with Hydromax USA LLC for hydrant and valve testing, maintenance, repair, and flushing services. The contract is for a three (3) year term, with the option of two (2) additional one-year renewal periods.

The purpose of this contract is for the continuation of citywide fire hydrant and valve inspection, maintenance, and repair services of the City's fire hydrants, which includes specific two-hydrant flow testing as part of a multi-year ongoing requirement to demonstrate fire system capacity in accordance with the Insurance Services Office (ISO). Feedback from the City's most recent ISO inspection was that the City has one of the best hydrant programs in the area and as a result, the City's ISO rating correlates with lower insurance rates for the City. Seminole County competitively bid for fire hydrant and valve testing, maintenance, repair, and flushing services (see attached memo).

FUNDING: 4024303536.6300 and 4024303536.4600/Water/Sewer/CIP FY22 Public Services Department

Accepted by: _____
City Manager

Attest: _____
City Clerk

Paul Smith
Public Services Director

Public Services Department

Memorandum

Date: August 30, 2021

To: Janina Lewis, Procurement Services Director

Through: Paul Smith, Public Services Director PS

From: Raymond Page, Utilities Superintendent

Subject: Authorize the Use of Seminole County Contract IFB-603974/20-CAR -Hydromax USA for Citywide Fire Hydrant and Valve Installation, Repair, and Maintenance Services.

Recommendation

It is recommended that the Board authorize the use of Seminole County Contract IFB-603974/20-CAR Hydromax USA for the annual completion of citywide fire hydrant and valve installation, repair, and maintenance services. The requested authorization is an amount not to exceed $135,000.

Background

The City currently maintains over 1,200 fire hydrants and valve systems that require specific specialized service and repairs. The hydrants are essential for the protection of life, safety and property throughout the City's service area.

Hydrants will continue to be inspected and maintained annually. The City plans to utilize this contract to continue with specific (2-hydrant) flow testing as part of a multi-year ongoing requirement to demonstrate fire system capacity according to ISO standards. Feedback from our most recent ISO inspection was that we have one of the best hydrant programs in the area, which is a testament to the water division, fire department, and contractor Hydromax working together. As a result, we have drastically improved in this area from our last inspection in 2015. This may result in an improvement in our ISO rating, which would correspond to lower insurance rates for our customers.

This contract will also be utilized to perform limited hydrant maintenance and repairs that are determined from the inspection and testing program. The contract provides for detailed unit pricing of various maintenance items (such as re-painting with specific required color code systems and applying ID tags) and repairs that may be required for some hydrants. Painting and aesthetics of the hydrants will be improved with each coating of paint that is applied. The contract is planned to be utilized to allow for repairs so that they may be completed as expeditiously as possible on a priority basis.

The estimate for the work is approximately $100,000 for assessment, painting, ID, and marking and approximately $35,000 for follow op repairs to the portion of the hydrants requiring such work. The final cost will be based on actual units serviced and only as needed. Additional, ongoing maintenance and repairs as required will be continued into following fiscal years.

Funding

Funds for this purchase have been planned in the water and sewer enterprise fund CIP in account 402-4303-536.6300 and in the operating budget in 402-4303-536.4600 in the FY 2022 budget.

Prepared By: Public Services Department

HYDROMAX USA

Advanced Water, Wastewater and Gas Data Collection

City of Tarpon Springs

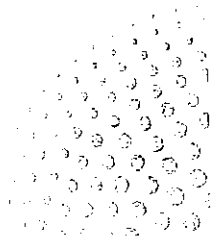
Proposal for Fire Hydrant Service (2021)

Piggy-back of Seminole County Contract IFB-603974-20/CAR

Prepared for Raymond Page

Prepared by Andrew Page

July 9, 2021



understand the present | **protect the future**

July 9, 2021

Raymond Page
Utilities Superintendent
City of Tarpon Springs
1624 L&R Industrial Boulevard
Tarpon Springs, FL 34689

RE: Hydrant Assessment

Dear Raymond,

Hydromax USA is extremely pleased to provide the enclosed proposal in response to your request.

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 unmatched record of performance, our customers recognize that HUSA brings a unique ability to meet their needs for advanced data collection and choose to partner with us again and again. As a national solutions provider, Hydromax USA utilizes the largest array of technologies within a single company to provide the broadest capability for assessing buried infrastructure.

Our in-house crews and project managers have first-hand experience working with buried infrastructure for water, wastewater, and gas systems. In addition, we have 60 dedicated 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.

Our team is excited about this opportunity to continue to serve the City of Tarpon Springs and we look forward to working with you and your 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 (863) 398-9202 or andrew.apgar@hydromaxusa.com.

Thank you again for your time and consideration.

Sincerely,

Andrew S. Apgar

Andrew S. Apgar
Business Development Manager

Hydromax USA Florida Office
2007 Wood Court
Suite 3
Plant City, FL 33563

Hydromax USA Corporate Office
14301 First National Bank Parkway
Suite 207
Omaha, NE 68154

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

INTRODUCTION

WELCOME TO HYDROMAX USA, A UNIQUE ORGANIZATION PROVIDING ESSENTIAL SERVICES FOR UTILITIES ACROSS AMERICA.

Our Solutions are designed to maximize the value of our customer's water products and services by optimizing water distribution system performance and reliability, minimizing delivery costs, controlling water loss, and enhancing water quality.

Our Team has performed infrastructure condition assessment programs that have evaluated *hundreds of thousands* of water distribution system 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. Our customers consider us a part of their team and appreciate our genuine sense of accountability in meeting their goals. No matter how large or small your needs are, our professionals are ready to exceed your expectations.

HYDRANT ASSESSMENT AND MAINTENANCE PROGRAM

Hydromax USA's Water Distribution Services Team has built a reputation for the quality of our hydrant maintenance programs. Our capabilities have enabled us to provide assessments and GIS services to utilities throughout the United States, ranging from a few thousand assets to tens of thousands of assets. The following is a summary of Hydromax USA's project understanding and approach.

Hydrant Assessment and Maintenance

Hydrant maintenance is an essential part of good distribution system management. Few things can harm a utility's reputation so quickly as a fire hydrant that does not work in an emergency.

Annual system-wide hydrant maintenance can help to improve the utility's ISO rating. It is also a visible sign to the public that the utility is actively working to ensure that fire hydrants are properly working to protect their property and personal safety. Annual hydrant maintenance can also play a vital part in maintaining water quality when incorporated into an organized flushing program. Hydromax USA's hydrant assessment and maintenance program is designed to comply with AWWA standards (including publication M17 – Installation, Field testing, and Maintenance of Fire Hydrants) and meet the requirements of oversight environmental agencies. Hydromax USA works to develop a comprehensive hydrant assessment and maintenance program that meets the individual needs of each utility.

Hydromax USA will develop an overall schedule of work to be approved by Tarpon Springs, prior to commencement of work. HUSA will also provide all spatial and feature class attribute data collected, metadata, including a detailed citation describing field data collection practices, equipment settings, post processing procedures, base stations used for differential correction and expected accuracy will be submitted with final and interim data deliveries.

Hydromax USA has the ability to perform required repairs in order to bring hydrants in the system to 100% operability. Aforementioned repairs will be captured and HUSA will work with the utility to provide this data in a format suitable for client documentation in the GIS systems.

Hydromax USA will also evaluate and analyze the results of the hydrant assessment program and develop an evaluation report for Tarpon Springs. The evaluation report will include an analysis of the results of the program, findings and recommendations. The following deliverable reports will be provided to Tarpon Springs.

- Validated compliant database
- Annotated maps which depict the program area
- A list of recommended hydrant repairs
- Work orders for these repairs
- Repair Services

Project Management Support

Hydromax USA employs a critical path project approach utilizing PMI principles and philosophies. This is designed to ensure a continuum of the following:

- Management of key decisions and milestones during this project.
- Preparation of initial project development plan (including the schedule of work tasks and key personnel to perform the work in the field to meet the milestones and objectives)

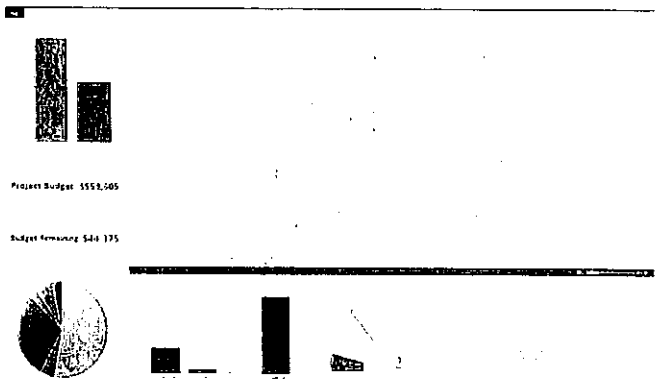
- Coordination of communications and meetings with the Utility as needed or requested to review technical concepts and alternatives, gathering staff feedback and coordinating activities with the project team
- Oversight of the execution and development of the project deliverables.

This comprehensive approach is not just employed by the project manager who owns it, but each member of the support team and field crew in order to provide superior hydrant assessment service.

Project Scheduling / Project Reporting

Hydromax USA will prepare a formal project schedule for review and approval by Tarpon Springs. 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 physical and operational conditions as they are found by our field crews.



Responsiveness – Routine, Urgent, Emergency

The Hydromax team is fully poised to deliver and mobilize the necessary equipment for this program's operational needs. Most importantly our Tampa Hydromax facility holds the ability to quickly mobilize a vast array of equipment to support the needs of the Utility during conditions where the ability to serve the public is in jeopardy or has been compromised. The utility's operations teams will have access to Hydromax teams for unscheduled activities as the contract requires. Phone information will be available for the on-site Project Lead and Operations Manager as well as the Manager of National Water Distribution Services to ensure access to the full complement of resources that Hydromax can bring to bear if needed. Our field technicians will be based out of our Tampa, FL office for the term of the project and will be able to respond appropriately as needed

HYDRANT MAINTENANCE AND ASSESSMENT ACTIVITIES

HUSA is responsible for obtaining all permits, approvals, etc., required by any other governmental agency having jurisdiction, including the County. HUSA will follow the minimum requirements set forth in these specifications. All work will comply with all applicable provisions and standards of the following recognized entities: State and local building and plumbing codes, American National Standards Institute® (ANSI®), American Water Works Association® (AWWA®), Florida Department of Environmental Protection (FDEP), National Sanitation Foundation® (NSF®), US Environmental Protection Agency (EPA), US Food and Drug Administration (FDA) and the US Occupational Safety and Health Administration (OSHA).

Fire Hydrant Maintenance and Assessment (per Seminole County specification IFB-603974-20/CAR)

- Locate and access each fire hydrant
- Locate access and exercise fire hydrant isolation valve
- Check fire hydrant nozzle height for correct ground clearance
- Identify make, model, nozzle size and year of hydrant manufacture
- Lubricate operating nut (if appropriate for hydrant make/model) and all nozzle outlets with noncorrosive FDA approved lubricant
- Open hydrant with nozzle caps in place to check for seal leakage
- Verify that hydrant main (bottom) valve completely closes
- Flow hydrant to maximum rate for 15 minutes, record working pressure and calculate flow rate and gallons flushed. The use of a calibrated combination pitot gauge and hydrant diffuser is required for all hydrant flushing. If hydrant fails to flow clear in the initial 15 minute flush, contact client.
- Continue to flow hydrant until water clears, checking in 15 minute increments. – **Separate Line Item Charge**
- Close hydrant completely. Back off the opening nut enough to take the pressure off the packing.
- Remove all outlet nozzle caps, clean the threads, check the condition of the gaskets replace as required, and lubricate the threads. Check the ease of operation of each cap.
- Check outlet nozzle chains for free action on each cap. If the chains bind, open the loop end around the cap until they move freely.
- Record static pressure
- Re-attach hydrant nozzle caps
- Scrape, wire brush/or sand blast and paint hydrant appropriate color. Paint per the Seminole County specification is single color-spray applied and is specified as Sherwin-Williams Industrial Marine Coatings, or approved equal. Coating shall be spray applied to a minimum of a 4 ml dry coat thickness.
    - **** Per the request of the City of Tarpon a separate line item from the Seminole County contract has been added to the schedule in order to account for brush painting the hydrants to 2-color NFPA standards**
- Replace (if defective) hydrant ID tag, or install (if not present) hydrant ID tag. – **Separate Line Item Charge**
- Replace (if defective) blue reflective road marker, or install (if not present) blue reflective road marker. Reflective pavement markers in blue shall be used to identify the hydrant locations. Each marker is to be placed on the center line of the roadway lane closest to the hydrant. – **Separate Line Item Charge**
- Obtain and record GPS site coordinates of hydrant.
- Document any operational deficiencies and/or miscellaneous findings.
    - Notification of all malfunctioning and/or out of service hydrants or valves shall be immediately reported to client.
    - Document all pertinent data into an electronic spreadsheet or database including the following:

- Hydrant ID tag number
- Hydrant address location
- Hydrant GPS site coordinates
- Date of flush or service
- Hydrant brand
- Hydrant model number
- Hydrant year
- Hydrant size
- Hydrant flow rate obtained
- Hydrant pressure after 5 minutes of flushing
- Total gallons flushed during service
- Degree of operating difficulty
- Deficiencies and/or repairs required to be immediately reported to the Utility.

- Data shall be delivered to Tarpon Springs in an electronic format compatible with ArcGIS/ArcMap system or SQL database

**Collect M-17 Residual performing 2-hydrant test

Fire Hydrant Upper Barrel Repair (per Seminole County specification IFB-603974-20/CAR)
Upper Barrel Repair: An upper bonnet repair shall consist of repairing and/or replacing all necessary components within the upper portions of the hydrant, from the operating nut downwards to the top of the break away (upper barrel) flange, in order to return hydrant to working order. Hydrant rotation shall also be considered as an upper barrel repair.

Fire Hydrant Lower Barrel Repair (per Seminole County specification IFB-603974-20/CAR)
Lower Barrel Repair: A lower barrel repair shall consist of repairing and/or replacing all necessary components of the hydrant from the top of the break away (upper barrel) flange to the bottom of the hydrant foot valve in order to return hydrant to working order. Hydromax receives the data from Utilis ready for final correlation and can provide multiple options for completion of the leak verification and locating process

GEOSPATIAL DATA MANAGEMENT

All the water distribution hydrants encountered in this contract are to be GPS mapped within sub-foot accuracy and the data delivered in a spatially accurate file compatible with Tarpon Springs' existing enterprise system software. Coordinate data shall be field collected with autonomous GPS readings and subsequently differentially corrected via post-processing. HUSA shall further refine positions through filtering and inspection to eliminate noise, problematic satellite geometry and multi-path degradation. Point features will be collected at an epoch of 1 second with a minimum occupation of 30 seconds. Differential Post-processing of raw field collection data will be performed to achieve the desired positional accuracy described above. A minimum of (4) qualified GPS Base stations, within 100Km and as equally dispersed around the project site, will be identified, utilized and recorded in the GIS Meta-data.

Data Attribution – Hydrant Feature Class

Documentation data will be collected on each distribution hydrant and will be agreed upon with Tarpon Springs in advance of work startup. Data documentation will include, at a minimum:

Location data - Mapping grade GPS coordinate data parameters as noted in the GPS mapping section.

Discrepancies - Details on discrepancies so that a work order (as described below) can be concisely created.

Physical data - Hydrant:

- A Unique Identification Number
- Fire Hydrant source main size
- Fire Hydrant Year
- Boolean indicating whether operated
- Number of Turns
- Boolean indicating whether adequate flow observed
- Date of Operation
- Fire Hydrant Manufacturer
- Boolean indicting whether drained
- Close Direction
- Fire Hydrant Condition (operable/inoperable)
- Address information submitted will conform to NENA standards

Deliverable Database – Hydrant Inventory Feature Classes

Hydromax USA will provide applicable hydrant data in a spatially accurate format compliant with the Utility's existing data structure in a format that will fully integrate into ESRI systems. Before field operations commence, a meeting to be attended by HUSA and Tarpon Springs will be held to reach alignment on specific data schemas to be employed. It is at this juncture that HUSA and Tarpon Springs will reach agreement on which specific features will be collected, the format this feature data will conform to, and the final resting place for all collected information within Tarpon Springs' data infrastructure so that it can be appropriately mapped and accessed by the utility staff.

Deliverable Database – Hydrant inspection Object Tables

Hydrant Inspection attributes will be provided in an Object Table to be related to the Inventory Feature classes by a Relationship Class built on a unique Feature ID. This relationship class will be built on a 1-to-many basis to account for additional future inspections. HUSA will maintains an understanding of building and maintaining GIS Relationship Class objects and will provide recommendations for inspection data attributes to be collected.

Deliverable Database – GPS Location Object Table

Locational data, including GPS related attributes and coordinate data is to be delivered in a related GIS Object Table. This data is to be related using a GIS Relationship Class using a 1-to-1 relationship using the unique Feature ID. No orphaned records will be accepted.

Work Order Data – Hydrants

HUSA will create a report documenting repairs completed in order to bring the hydrants in the system up to 100% operability.

GIS Meta-Data

HUSA will complete and provide Meta-Data built on the ESRI platform, for delivered GIS product. This Meta-Data will include: complete provider contact information, a detailed citation describing field data collection practices; equipment settings; post processing procedures; base stations used for differential correction; spatial coordinate reference and expected accuracy

Additional Project Notes:

- Notifications will be issued immediately from the field for: OOS Hydrants and Low Flow Hydrants
- Planned early morning work in tourist/business district.
- Additional line items available within Seminole County specification IFB-603974-20/CAR

HYDRANT ASSESSMENT AND REMEDIATION QUOTATION

*****Per Pricing Terms and Condition of Seminole County specification IFB-603972-20/CAR**

ITEM NUMBER	UNIT OF MEASURE	ITEM DESCRIPTION	QTY	UNIT PRICE	EXTENSION
Annual ISO Testing - 40% Estimated at extended flushing					
A1 x2	Each	Hydrant Maintenance (includes scrape, wire brush and 1-color spray paint) $51.00 x 2 for 2-hydrant testing	480	$102.00	$48,960.00
A6	Each	Extended Flushing - 15 minute Unit (reserve for expected 40% of hydrants require at least 15 additional minutes flush time)	192	$21.50	$4,128.00
D2	Each	Hydrant Maintenance Services Hourly Rate - Used to provide 2-color NFPA brush painting - 4 additional min/ea.	480	$12.33	$5,918.40
Annual Hydrant Maintenance - 40% Estimated at extended flushing					
ITEM NUMBER	UNIT OF MEASURE	ITEM DESCRIPTION	QTY	UNIT PRICE	EXTENSION
A1	Each	Hydrant Maintenance (includes scrape, wire brush and 1-color spray paint)	820	$51.00	$41,820.00
A6	Each	Extended Flushing - 15 minute Unit (reserve for expected 75% of hydrants require at least 15 additional minutes flush time)	328	$21.50	$7,052.00
D2	Each	Hydrant Maintenance Services Hourly Rate - Used to provide 2-color NFPA brush painting - 4 additional min/ea.	820	$12.33	$10,110.60
				Hydrant Maintenance Total	**$117,989.00**

Reserve For Possible Additional Work					
A4	Each	Furnish and attach Hydrant ID Tag	200	$12.00	$2,400.00
A5	Each	Furnish and install reflective road marker	200	$10.00	$2,000.00
A8	Each	Upper Barrel Repair	15	$400.00	$6,000.00
A9	Each	Lower Barrel Repair	10	$700.00	$7,000.00
A10	Each	Hydrant Extension 6"	15	$890.00	$13,350.00
A11	Each	Hydrant Extension 12"	10	$973.00	$9,730.00
B4	Each	Raise Isolation Valve Box to Grade < 12" (excluding concrete and vehicular arteries)	50	$31.13	$1,556.50
B5	Each	Raise Isolation Valve Box to Grade < 12" (Including concrete and vehicular arteries)	5	$155.00	$775.00
				Reserve Total	**$42,811.50**