



Meeting Agenda
Thursday, May 16, 2024

7:00 PM

REGULAR

Cocoa Beach Country Club - 5000 Tom Warriner Boulevard, Cocoa Beach, 32931

WELCOME

Meeting re-broadcasts on: Spectrum - Channel 499 and www.cityofcocoabeach.com.
Meeting Video Archives: www.cityofcocoabeach.com

Packets: Packets are on the City's website (www.cityofcocoabeach.com) and at Commission meetings

Rules of Order: Robert's Rules of Order and the Florida Sunshine Law govern the conduct of our meeting

Speaking Courtesy Rules:

- The Commission accepts relevant comments.
- A time limit of three minutes is imposed on each speaker. If speaking for a group, the Commission may grant an additional three minutes
- Please direct comments and questions through the Mayor
- Complete speaker cards are required for each of the items you wish to address. Submit the card to the City Clerk prior to the introduction of the item. Speaker Cards are available in the rear of the Commission Room and in the City Clerk's office prior to the meeting. The purpose of the card is to obtain the spelling of your name, contact information if follow-up is needed, and provide for efficient meeting administration
- Upon being recognized by the Mayor, please approach the dais, state your name and address, and speak into the microphone

Approval Of Order Of Business:

Note: Members of the public, Commission and Staff may remove items from the Consent Agendas, if they wish to discuss them. Requests for removal need to be made known to the City Commission under the Approval of the Order of Business, at the beginning of the meeting

Appealing a Decision:

Any person desiring to appeal any decision made by the City Commission, with respect

to any matter considered at such meeting or hearing, will need a record of the proceedings and for such purposes must ensure that a verbatim record and transcript of the proceeding is made in a form acceptable for official court proceedings, which record includes the testimony and evidence upon which the appeal is to be based. It shall be the responsibility of the person desiring to appeal any decision to prepare a verbatim record and transcript at his/her own expense as the City does not provide one

American with Disabilities Act:

ATTN: PERSONS WITH DISABILITIES. In accordance with the Americans with Disabilities Act and Section 286.26, Florida Statutes, persons needing special accommodations to participate in this proceeding shall, at least forty-eight (48) hours prior to the meeting, contact the Office of the City Clerk at (321) 868-3286; Florida Relay Service (800) 955-8771 (TDD); or (800) 955-8770 (Voice) or 711.

THANK YOU for participating in your Cocoa Beach City Government.

A. MEETING CALLED TO ORDER

1. Pledge of Allegiance
2. Invocation by Troy Stanley, Pastor, First Christian Church of Cocoa Beach
3. Roll Call

B. APPROVAL OF THE AGENDA

(Note: Members of the public, Commission and Staff may remove items from the Consent Agendas if they wish to discuss them. Requests for removal need to be made known to the City Commission under the Approval of the Order of Business, at the beginning of the meeting.)

C. SPECIAL PRESENTATIONS

1. Supervisor of Elections Voter Information Presentation
Supervisor of Elections Representative: Tim Bobanic
Staff Representative: Wayne Carragino, City Manager
2. Presentation of the 2024 Community Sustainability Award
Staff Representative: Wayne Carragino, City Manager

D. PUBLIC COMMENTS

Comments will be heard on items that do not appear on the agenda of this meeting. Citizens will limit their comments to three (3) minutes. Per Commission Procedures, the City Commission will not take any action or discuss items brought up under the "Public Comment" section of the agenda. The City Commission may schedule such items as regular agenda items and act upon them in the future.

E. STAFF REPORTS AND ANNOUNCEMENTS

F. CITY ATTORNEY REPORTS AND ANNOUNCEMENTS

G. CITY COMMISSION REPORTS AND ANNOUNCEMENTS

H. CONSENT AGENDA

1. Approve Meeting Minutes from April 18th, 2024.
Staff Representative: City Clerk
Recommendation: Approval
2. Approve \$955,000 APRA funds for Stormwater and Fire Department
Staff Representative: Patrisha Draycott, CFO
Recommendation: Approval
3. Approve changes to the City's Investment Policy
Staff Representative: Patrisha Draycott, CFO/Assistant City Manager
Recommendation: Approval
4. Geosyntec Task Order 7 for CBGOLF Muck Capping Project
Staff Representative: Wayne Carragino, City Manager
Recommendation: Approval
5. Approve Member Appointment to the **Police and Fire Pension Board**:
Appoint Dan Avodasio as a regular member for a term to expire April 1, 2026,
Commissioner Skip Williams (Seat 4)
Appoint A.J. Anderson as a regular member for a term to expire April 1, 2026,
Commissioner Karalyn Woulas (Seat 3)
Representative: City Commission
Recommendation: Approve Appointment
6. Confirm the following meeting:
July 2nd, 2024 - 6:00 PM FY 25 Budget Workshop
Staff Representative: Patrisha Draycott, CFO/Assistant City Manager
Recommendation: Confirm

I. ITEMS REMOVED FROM THE CONSENT AGENDA

J. UNFINISHED BUSINESS

1. Approve the request by Wayne Carragino to continue in his current position of city manager.

K. NEW BUSINESS

1. Permission to proceed with a Request for Qualifications (RFQ) for the 19th Hole Restaurant/Auditorium Operations and Management at the Cocoa Beach Country Club
Staff Representative: Devan Taly,
Recommendation: Approval
2. Discuss the property 3570 Ocean Beach Blvd. and the potential future usage of the property as ADA Beach Park.

Commissioner Representative: Skip Williams, Commissioner
Recommendations: Discuss

- L. GENERAL PUBLIC COMMENT
(Only if not accommodated in the 30-minute Public Comment period earlier)
- M. ADJOURNMENT

City of Cocoa Beach
2024 Community Sustainability Award - Committee Ranking

Selection Criteria			Day			Perez			Capizzi			Glasner - Did not vote			Locklear			TOTAL		
			Tiny Turtle	Beach Bucket Foundation	#JustBeachCause	Tiny Turtle	Beach Bucket Foundation	#JustBeachCause	Tiny Turtle	Beach Bucket Foundation	#JustBeachCause	Tiny Turtle	Beach Bucket Foundation	#JustBeachCause	Tiny Turtle	Beach Bucket Foundation	#JustBeachCause	Tiny Turtle	Beach Bucket Foundation	#JustBeachCause
Maximum Points																				
1 Overview	SUBTOTAL	5	5	5	5	4	4	3	1	5	5				5	5	5	15	19	18
2 Positive Impact	SUBTOTAL	30	25	20	25	30	25	25	15	1	27				28	30	25	98	76	102
3 Innovation/Creativity	SUBTOTAL	10	12	9	10	10	8	8	6	1	10				8	10	8	36	28	36
4 Overall Challenges	SUBTOTAL	20	18	15	18	20	19	15	10	1	20				20	20	18	68	55	71
5 Continuity	SUBTOTAL	20	15	12	15	20	20	15	15	1	20				20	20	20	70	53	70
6 Global Impact	SUBTOTAL	15	12	12	12	14	14	14	5	1	5				15	15	8	46	42	39
TOTAL POINTS			87	73	85	98	90	80	52	10	87	0	0	0	96	100	84	Raw Scores		
																		333 273 336		
																		Ranked Scores		
Ranking			1	3	2	1	2	3	2	3	1				2	1	3	6	9	9

CITY OF COCOA BEACH, FLORIDA
CITY COMMISSION
COCOA BEACH COUNTRY CLUB - 5000 TOM WARRINER BOULEVARD, COCOA
BEACH, 32931
MINUTES
April 18, 2024

A. MEETING CALLED TO ORDER

Mayor Capizzi called the meeting to order at 7:00 pm.

1. Pledge of Allegiance
2. Invocation by Deacon Joe Pecko, Our Saviour Catholic Church.
3. Roll Call

Commission Members Present:

Commissioner Joshua Jackson
Commissioner Skip Williams
Commissioner Karalyn Woulas
Vice-Mayor Jeremy Hutcherson
Mayor Keith Capizzi

Administrative Members Present:

City Attorney Becky Vose
City Manager Wayne Carragino
City Clerk Karin Grooms
Development Services Director Randy Stevenson
Chief Financial Officer/ Assistant City Manager Patrisha Draycott
Leisure Services Director, Laird McLean
Asst. Direct Leisure Services, Andrea Segarra
Interim Police Chief, Wes Mullins
Deputy CFO, Joann Clark
Planner, Cory Hall
Planner, Loren Wilke
Major Kris Kuehn
Major Joe Vergaggi
PD Administrative Assistant, Rachel Tate
Officer Bill Stanley
Officer Roy "Alex" Bond
Officer Robert Hill
Officer Nick Ingersoll
Officer Jacob Werda
Communication Officer Amy Palm
Officer Noah Barnes
Officer Jessica Clanton,

Officer Natalie Ramero

B. APPROVAL OF THE AGENDA

(Note: Members of the public, Commission and Staff may remove items from the Consent Agendas if they wish to discuss them. Requests for removal need to be made known to the City Commission under the Approval of the Order of Business, at the beginning of the meeting.)

MOTION BY WILLIAMS/HUTCHERSON

I MOVE TO APPROVE

VOICE VOTE ON THE MOTION CARRIED UNANIMOUSLY.

C. SPECIAL PRESENTATIONS

1. Swear-in Ceremony of Officers Noah Barnes, Jessica Clanton, and Natalie Romero
Staff Representative: Wes Mullins, Interim Police Chief

Interim Police Chief (IPC), Wes Mullins, started his presentation by acknowledging the Telecommunication Officers for Telecommunication Week. He spoke about their dedication to their work and honored their duties as telecommunications officers. IPC Mullins introduced the academy's new officers: Natalie Ramero, Noah Barnes, and Jessica Clanton.

It was noted that the new officers received various honors from the academy; Natalie Ramero was elected by her peers as the class leader and came to Cocoa Beach mid-session from another agency. Noah Barnes, defensive tactics, winner of the police academy. Jessica Clanton won the academic award and first aid award from the academy.

Chief Mullins read the code of ethics and swore in the new officers. After the oath, families came up and pinned the officers.

2. Presentation of the Final Annual Comprehensive Financial Report (ACFR) for Fiscal Year 2023.
CRI Representative: Yvonne Clayborne
Staff Representative: Patrisha Draycott, CGFO, Chief Financial Officer/
Assistant City Manager

Yvonne Clayborne, Partner for Carr Rigg & Ingram. Presented the Annual Audit for the Year ended September 30, 2023. She explained the audit and the reporting process.

Commissioner Williams mentioned having a set of eyes from the outside. Noted the auditor advised staff of issues, then staff would make the corrections. He explained how the city would never know about the deficiency and make the city better for that. Mayor Capizzi noted the debt when he first ran for office and mentioned where the debt is at presently.

D. PUBLIC COMMENTS

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Mr. John Miller, Xandu Condo Association President, discussed the water bill for the City of Cocoa Beach, which is from the City of Cocoa. Mentioned that in January, it noted that the condo was sent a bill for a deposit for revised sewer. The City of Cocoa Beach assisted with it but noted no representation in the City of Cocoa. Noted it is an amount not returned to the condo association. Requested for a utility bond with the City of Cocoa but noted it was not allowed. Reached out to the City of Cocoa for a waiver that mentioned multi-unit, not residential. Request the city to work with the City of Cocoa regarding the deposit situation.

Mayor Capizzi inquired about the deposit. Mr. Miller noted the condo has a deposit already on file and the City of Cocoa added \$2,000. The mentioned \$800 deposit is already on file. Commissioner Williams inquired about the delta, and Mr. Miller noted it was an additional \$2,000.

Mr. Mike Johnson, a Cocoa Beach Resident, requested from the city of an update on the current case regarding an individual who stole from an elderly male. Request the City to investigate Orange County.

Ms. Janice Scott, a Cocoa Beach Resident, gave condolences to Governor Graham. She discussed his term and his accomplishments.

Mr. John Dillon, a Cocoa Beach resident, brought his concern for life safety. Notes presented before the last budget season he requested a speed bump in the neighborhood. He mentioned that high-speed traffic was taking place down his street.

Mayor Capizzi inquired from Chief Mullins statistical data for that street and have a motorcycle cop for data. IPC Mullins confirmed for both being able to provide requested information as well as provide an officer for the area. IPC Mullins explained what was done in previously.

Mayor Capizzi requested if the speed odometer keeps records. It was confirmed.

Mr. Dillion, noted there was a radar during the week. Offered motorcycle officer usage of the driveway won't see it.

Mayor Capizzi explained collecting the data for the request.

E. STAFF REPORTS AND ANNOUNCEMENTS

Mr. Wayne Carragino, City Manager mentioned he went to a Chief of Police dinner. Cocoa Beach Officer Robert Hill was nominated for Police Officer of the Year. Noted Rachel Kabboard and thanked her for all she does.

Spoke about Mr. Tim Bobanic, Supervisor of Elections. Also noted he will be at the

commission meeting with staff to assist with voting items. Will be attending the May 16th Commission meeting.

Mr. Carragino honored an employee who does an outstanding job and noted it is a difficult job. Honored Ms. Andrea Segarra, who works in the recreation department.

The Mayor thanked Ms. Segarra for all the work she had done.

F. CITY ATTORNEY REPORTS AND ANNOUNCEMENTS

No reports from the City Attorney.

G. CITY COMMISSION REPORTS AND ANNOUNCEMENTS

Vice-Mayor Hutcherson noted he attended and met Mr. Tim Bobanic. As well as attended a seminar regarding the new Form 6 that is required for commissioners.

Commissioner Williams noted the concrete pour at 1 am and had 46 trucks. Suggested residents sign up for CBNN to be notified of what is happening in town. Explained how to sign up for it.

No reports from Commissioner Woulas and Commissioner Jackson.

1. Consider recognizing Cameron Turk's Boat Racing Championship by adding his name to the City entrance sign.

Representative: Mayor Keith Capizzi

Mayor Capizzi read the accomplishments of Cameron Turk. Explained how he is now representing the City and even checked if this was the case. The Mayor thanked Cameron for representing the City.

MOTION BY WILLIAMS/HUTCHERSON

I MOVE TO APPROVE CAMERON TURK TO REPRESENT THE CITY WITH HIS NAME AT THE ENTRANCE SIGNS

VOICE VOTE ON THE MOTION CARRIED UNANIMOUSLY.

Mr. Cameron Turk thanked the commission.

Commissioner Williams requested that the commission is made aware when it will be placed so the family can attend as well as the commission.

H. CONSENT AGENDA

MOTION BY WILLIAMS/HUTCHERSON

I MOVE TO APPROVE THE CONSENT AGENDA WITHOUT THE APPROVAL OF THE JUNE 18TH MEETING WORKSHOP

VOICE VOTE ON THE MOTION CARRIED UNANIMOUSLY.

Ms. Patrisha Draycott, CFO/Assistant City Manager noted the available dates and what are not available.

Ms. Draycott provided the commission with opportunities to meet before and after the

workshop.

1. Approve the following Meeting Minutes: March 21, 2024 and April 4, 2024
Representative: City Clerk
Recommendation: Approve
2. Approve the termination of the agreement of the Joinder to the Second Amended and Restated Interlocal Agreement relating to the Creation of the Florida Resiliency and Energy District. (FRED)
Representative: Wayne Carragino, City Manager
Recommendation: Approve
3. Confirm the following meetings:
June 18, 2024 - 6:00 PM FY 25 Budget Workshop
July 18, 2024 - 7:00 PM Set the Tentative Millage Rate - Regular Meeting
Representative: Patrisha Draycott, CFO/ Assistant City Manager
Recommendation: Confirm

I. ITEMS REMOVED FROM THE CONSENT AGENDA

J. NEW BUSINESS

1. Consider a request for a Density Variance for property at 505 North Orlando Ave. Pursuant to Section 4-41 (A)(3) of the Land Development Code, the applicant is requesting a variance to allow a density of thirty (30) transient lodging units per acre on the subject property. **The requested variance requires a concurring vote of four (4) members of the City Commission.**
Applicant: Francesca DiPasquale
Representative: Randy Stevenson, Development Services Director
Recommendation: Approve

The City Attorney read item J1.

MOTION BY WILLIAMS/WOULAS

I MOVE TO APPROVE THE DENSITY VARIANCE FOR 505 NORTH ORLANDO AVE.

Pursuant to Section 4-41 (A)(3) of the Land Development Code

Randy Stevenson, Development Director, addresses this variance and the ability to have it in the Land Development Code and the Comp plan. The project is requesting 30 transient lodgings per section 4-41 of the Land Development Code and Policy 2.2.2 A3 of the Comprehensive Plan. Noted this was built into the code and comp plan and required a variance. If the variance is approved, he would request the commission to approve the conceptual site plan for the project. It was noted that the project will return to the commission at a future point for final approval. The planning board saw the project on April 1st, 2024.

Mr. Stevenson explained all the steps needed to be done before returning to the Commission.

Mr. Stevenson responded to email comments sent in before the meeting. The main inquiry was why the variance did not go before the Board of Adjustment. Due to a recent change in the code, density variances are only to be approved by the City Commission. Commissioner Williams confirmed cutting down the burden on the requestor. Mr. Stevenson confirmed and clarified.

Noted that transient lodging and the code for west of Atlantic Avenue in the Future Land Use Element of the Comp plan does not apply to the Redevelopment Districts. Noted the project is located in the downtown Redevelopment District. Mr. Stevenson also informed the Commission that the applicant has been in contact with the owners of the Secrest Building for joint use for 32 parking spaces. Noted that the mix use project is permitted in the town center. Read the definition of mix use from the Land Development Code.

Commissioner Williams requested from the Commission to proceed with the vote of the variance without the video.

Mayor Capizzi inquired the from the commission on Commissioner Williams request. Discussion between the commission on the video and the expectations. Commissioner Williams walked through the process.

Mayor Capizzi requested the applicant how she would like for the commission to proceed.

The applicant noted the video was created for the variance and gave more explanation for the request.

The Mayor inquired from the applicant if the video should be played and the applicant requested the video to be played.

The video was played for the residents.

Mr. Stevenson explained to the Commission what the next steps are along with the Land Development Code as well as the Comp Plan. Continues to explain the Land Development Code sections and the need for development within the city.

He continued to discuss a study that was previously done within the City. Noted this is how to implement the studies.

Vice-Mayor Hutcherson inquired for clarity regarding the denial of this variance it being just transient lodging. Mr. Stevenson agreed.

Mayor Capizzi agreed with Commissioner Hutcherson. Express wanting the residents to understand feel comfortable.

Commissioner Jackson inquired about the setbacks and the variance along with everything coming back to the commission. Mr. Stevenson confirmed.

Mr. Stevenson noted the applicant needs to know what project they have. There are tasks that need to be accomplished then brought back to the Commission.

Ms. Francesca DiPasquale noted if not approved for the mix use it won't be at this volume. Request for the park like area. Noted this is dream of what it could be, and the residents would want the same thing.

Mr. Bill Geiger, a Cocoa Beach residents noted his family and generation. Noted the email sent. The issue is parking and understand it is at a later point. Noted, Seacrest Building and noted the parking for this building. Explain how not understand to park.. Explained the parking for 4th street and parking lot, not sure if there is an agreement. noted the businesses used from other businesses. Explained a hardship, noted this is not a hardship. That was mistake from the presentation not in his opinion. None of the parking has the parking lot north side, and west side, pervious, if get away allocated, won't be pervious, don't see how its a alible.

Ms. Rebecca Sparks, a Cocoa Beach resident, noted that has a local business as well that celebrate 35th anniversary. Noted Cocoa Beach is a gem. Supports the Stina project. Explained the reasoning for agreement of this project.

Ms. Janice Scott, noted the Glass Bank and would like to see something there. Mentioned confusion of the variance and it that goes with the land. Don't see how this meets the criteria for the variance expect they want it. Would like clarification condo or hotel. Critical issue is the parking and not adding the density to it. Noted the ABC store. Noted the height, and mentioned the grandfather of the 85 ft. hardly

City Attorney noted the motion.

Commissioner Williams amended the motion.

MOTION WILLIAMS/JACKSON

I MOVE TO APPROVE THE DENSITY VARIANCE FOR 505 NORTH ORLANDO AVE. PURSUANT TO SECTION 4-41(A)(3) OF THE LAND DEVELOPMENT CODE FOR MAKING FINDINGS OF FACT THAT PETITIONER HAS MET THE LEGAL STANDARDS FOR VARIANCE AS SET FORTH IN SECTION 4-41. VOICE VOTE ON THE MOTION CARRIED UNANIMOUSLY.

Commission Hutcherson inquired about the parking.

Mayor Capizzi noted this is for the variance only. Noted to the applicant they go the raw end of the deal, and does not play a role in the decision. Due to being in the code, it is allowed. Noted he is representing the city and liked the look bring back old school. Would like it to benefit the residents.

Commissioner Woulas noted the following project for the last couple years. Commends the applicant and using the property to the full potential. Connecting the city with the new developments coming into the city.

ROLL CALL VOTE:

COMMISSIONER JACKSON - AYE

COMMISSIONER WILLIAMS - AYE

COMMISSIONER WOULAS - AYE

VICE - MAYOR HUTCHERSON - AYE
MAYOR CAPIZZI - AYE

2. Review and Consider the STINA project conceptual site plan pursuant to Section 4-02 (C) of the Land Development Code. The site plan requires review and final action by the City Commission since the plan contains structures of thirty thousand (30,000) square feet or greater.
Representative: Randy Stevenson, Development Services Director
Recommendation: Approve

The City Attorney read item J2.

MOTION WILLIAMS/JACKSON

MOVE TO REVIEW & CONSIDER THE STINA CONCEPTIONAL PLAN WITH THE FINAL CONSIDERATION AND BOARDS.

Mr. Cory Hall, Planner, noted this is a conceptual site plan that the applicant is asking for. Various steps mentioned need to be taken.

Vice-Mayor Hutcherson noted that this conceptual plan does not need to be approved. Discussion among the commission regarding the conceptual plan and the need for approval.

Mr. Stevenson mentioned this is a concept and has a lot to do before starting. Would like the comments, and approval of a concept plan.

Vice-Mayor Hutcherson noted he would disapprove of a conceptual plan that's not compliant.

Mayor Capizzi noted the applicant would like direction on how commission feel regarding the project.

Vice-Mayor Hutcherson noted conversations regarding noncompliance issues.

Commissioner Jackson pointed out that the owner is at risk at a number of these things and the commission is out of sorts of then it is fair and agree with Commissioner Williams. It must meet the code. Telling them they are accepting some level of risk but giving them a direction.

Conceptionally I like this plan, but it needs to meet code, looking at it for a business side is understandable.

Commissioner Woulas agrees with Commissioner Jackson, if agree with conceptual site plan and it will come back to the commission and will deal with these issues.

Mr. Stevenson noted the building is shown where the building is going to be located. As well noted the money being spent, and asking the commission is workable, understanding forthcoming issues that they will go after passing this phase. Staff will be spending a lot of time and will meet code.

Mayor Capizzi noted this is not needed to be a 5-0, but trying to understand Vice-Mayor

Hutcherson.

Commissioner Williams noted the applicant is looking for the commission's confidence level.

Mayor Capizzi requested for unity and not vote based on principle.

City Attorney Becky Vosed noted it's not unusual to have a vote to approve a concept plan. Gave example of a project that would not be ideal. It is not required but assured not unusual.

VOICE VOTE ON THE MOTION CARRIED UNANIMOUSLY.

K. GENERAL PUBLIC COMMENT

(Only if not accommodated in the 30-minute Public Comment period earlier)

L. ADJOURNMENT

The meeting was adjourned at 8:59 pm.

Karin Grooms, MPA, CMC
City Clerk

Keith Capizzi
Mayor-Commissioner

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

Finance /
PATRISHA DRAYCOTT, CFO
Morgan Zuhlke, Staff Engineer

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Approve \$955,000 APRA funds for Stormwater and Fire Department
Staff Representative: Patrisha Draycott, CFO
Recommendation: Approval

IS THIS ITEM BUDGETED (IF APPLICABLE)?

1. Stormwater Slip Lining - \$250,000 is budgeted in FY2024; \$75,000 is not in the current budget.
2. Stormwater Vulnerability Assessment - not in the current budget
3. Maritime Hammock Preserve Alum Injection System Improvements - Budgeted
4. Fire Station 51 tilt wall joints and window caulking - not in the current budget

BACKGROUND:

1. Stormwater Slip Lining - \$325,000 - The Stormwater fund slip lining of infrastructure projects have been identified as an eligible use of ARPA funds. \$250,000 has been budgeted in FY2024 for slip lining, and there are additional areas which should be done which will cost an estimated \$75,000. By completing the slip lining in FY2024, the work can be done at the same time as sewer slip lining, saving the City costs by scheduling the work on both projects. St Lucie Ln was slip lined at the end of March. The remaining pipes identified to be slip lined are Sunflower St and 4th St S. Piggyback on St. Augustine's contract with Insituform.
2. Stormwater Vulnerability Assessment - \$550,000 - This assessment looks at how future conditions such as heavy rainfall, sea level rise and flooding risks due to tides or storms can affect existing infrastructure and what improvements can be made to minimize those results. The assessment will cover the entire city and provide a roadmap of infrastructure improvements for the city to start implementing. This assessment is required to be eligible to apply for specific grants.
3. Maritime Hammock Preserve Alum Injection System Improvements - \$20,000 - The Maritime Hammock Preserve Alum Injection System treats the first flush of stormwater from 128 acres of the surrounding area. This system is currently not operating and needs improvements. Since this pond is connected to the Banana River, these improvements will benefit the River. This will include weekly monitoring of the system. Piggyback on Orange County's contract with Analytical & Diagnostic Services, LLC.

4. Fire Station 51 tilt wall joints and window caulking - \$60,000 - Caulking the tilt wall joints and windows will prevent future leaks within the Fire Station. Currently, the Fire Station leaks through the tilt walls and windows during rainstorms.
5. Approval to use any unused ARPA funds as of 09/30/2024 for City Hall construction costs.

3-21-24

Brad Kalsow
City of Coco Beach
1600 Minutemen Causeway
Cocoa Beach, FL 32931
bkalsow@cityofcocoabeach.com

Re: Cost Proposal – 4th Street Storm CIPP Lining Project

Brad,

Insituform Technologies, LLC, ("ITLLC") is pleased to provide the following proposal to the **City of Cocoa Beach**, hereinafter referred to as "Customer", for the scope of work detailed below for the above-referenced Project. This proposal is based off the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

PROPOSAL PRICING

ITLLC proposes the following pricing for the scope of services described herein:

Bid Item per Docs	Description	Measure	Quantity	Bid Price	Total
TM1	Traffic Control MOT Index 601 or 602	Day	2	\$446.80	\$893.60
M1	Mobilization	EA	4	\$4,746.90	\$18,987.60
A30	Stormwater Systems Heavy Cleaning & Inspections 15" Diameter	LF	30	\$6.20	\$186.00
A89	Stormwater Sewer CIPP Lining 15" Diameter 9.0 mm nominal thickness	LF	30	\$109.30	\$3,279.00
	TOTAL				\$23,346.20

INSITUFORM SCOPE OF WORK / RESPONSIBILITIES

ITLLC will provide the following:

1. Mobilization and demobilization of personnel, equipment, and materials to and from the Project site.
The price presented is based upon one (1) instance of mobilization and demobilization.
2. Install **polyester** resin impregnated CIPP liner in accordance with ASTM F1216 or F1743 using either water

or air/pull-in/steam, at the discretion of ITLLC. We have not included any costs associated with the disposal of inversion water.

3. Internal reinstatement of all service connections as directed by the Customer or their representative.
4. CCTV inspection of the pipe before and after the lining is complete.
5. Standard ITLLC one-year warranty from date of installation, excluding any required warranty TV inspection and/or testing.
6. Standard insurance coverage with the following limits:
 - General Liability: \$2,000,000 per occurrence/\$4,000,000 aggregate
 - Auto: \$2,000,000 Combined Single Limit
 - Workers Compensation: Statutory with \$1,000,000 Employer's LiabilityThe above insurance shall not include Primary and Non-Contributory Coverage and ITLLC shall not provide a Waiver of Subrogation endorsement.

NOTE: Modifications to the Scope of Work/Responsibilities of ITLLC may result in a change in price and/or duration.

ASSUMPTIONS AND QUALIFICATIONS

ITLLC's Proposal Pricing is based upon the following assumptions and clarifications:

1. ITLLC assumes the work will be completed during dry weather conditions.
2. Quantities are estimated. Customer shall be invoiced for actual quantities at the above unit prices.
3. ITLLC is an open-shop company and shall not be subject to any union requirements or agreements and will not enter into any Project Labor Agreement or any such similar agreement for this Project. Where required by the Contract Documents, ITLLC will pay the Prevailing Wages then in effect for the Project and will submit Certified Payroll Reports in a timely manner.

EXCLUSIONS:

The following items are excluded from ITLLC's above Pricing and Scope of Services / Responsibilities stated in this Proposal. These items, if necessary, applicable or otherwise required, shall be furnished by Customer, at Customer's direction and at no cost to ITLLC or may, upon mutual agreement in writing between ITLLC and Customer, be provided by ITLLC at an additional cost:

1. Permits, licenses and construction easements.
2. Manual operation of any pumping and/or metering stations.
3. Environmental/erosion controls (i.e., hay bales, silt fence etc.) that may be required adjacent to manholes, access points and/or water supply hose.
4. Access to and use of fire hydrants and/or sufficient water supply (within 500 ft. of the installation site) to complete flushing and CIPP installation.
5. Burial and/or ramping of discharge or bypass hose/pipe.
6. External service reconnections.
7. Traffic control, including without limitation, police details, flagmen and special traffic control setups.
8. Obstruction removal (calcium, concrete, mineral deposits, roots, etc.) and/or protruding tap removal.
9. Point repairs.
10. Bypassing of services or laterals.
11. Repair of pipe damaged during any industry standard high-pressure jet cleaning operations, preparation or lining and any subsequent cleaning necessary to remove debris that has fallen into the pipe as a result of any such collapse or repair.
12. Directives setting forth which service connections must be reinstated prior to final CCTV inspection.
13. Locations of and access (of ITLLC equipment and/or personnel) to all manholes associated with the project and as required by ITLLC's work plan.

14. Equivalent pipe diameter access from the invert to the street level. This may include removal of the frame, cover and/or cone section of the liner installation manhole(s) such that the opening at the street level is no less than equivalent to the pipe diameter.
15. Payment and Performance bonds. If payment and performance bonds are required, add 2.5% to the total Project cost.
16. Removal and disposal of any hazardous or toxic materials encountered during the Project.
17. Holiday work, rush delivery or adverse weather work (as defined by ITLLC).
18. Complete independent testing of liner samples from each installation. Will be provided if required per specifications.
19. Certified Professional Engineer stamped designs. Will be provided if required in specifications.
20. State and local sales and/or use taxes.
21. Additional premiums for special insurance coverage(s) specific to this project.

GENERAL TERMS AND CONDITIONS:

ITLLC's Proposal is conditioned and shall adhere to the General Terms and Conditions written in the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

The information contained in this letter is proprietary to Insituform Technologies, LLC. and shall be retained by the recipient in confidence and shall not be published or otherwise disclosed to third parties without the express written consent of Insituform Technologies, LLC. The foregoing shall not preclude the use of any data which (i) was in its possession without restriction as to use prior to receipt as proprietary of the same or similar data from Insituform Technologies, LLC., (ii) is or becomes available from a public source on or after such receipt from Insituform Technologies, LLC. or (iii) is obtained by the recipient from a third party not under obligation of confidentiality or other restriction with respect to use.

Please do not hesitate to contact me with any further questions.

Very truly yours,

Insituform Technologies, LLC.

Dave Raymond

Dave Raymond
Business Development Manager

Accepted By: _____
(signed)

(print name)

Date: _____

Title: _____

CITY OF COCOA BEACH
AGREEMENT TO PIGGYBACK SERVICES

THIS AGREEMENT TO PIGGYBACK SERVICES is made and entered into this _____ day of _____, 2024, by and between the CITY OF COCOA BEACH, a Florida municipality, hereinafter referred to as the (“City”), and INSITUFORM TECHNOLOGIES, LLC, a corporation authorized to do business in Florida (“Contractor”), concerning that certain contract with CITY OF ST. AUGUSTINE, a political subdivision of the State of Florida (“St. Augustine Contract”).

WITNESSETH:

WHEREAS, Section 119.0701, Fla. Stat., requires that certain public agency contracts must include certain statutorily required provisions concerning the contractor’s compliance for Florida’s Public Records Act; and

WHEREAS, Section 768.28, Fla. Stat., sets forth certain mandatory limitations on indemnification and liability for Florida public agencies; and

WHEREAS, Florida law requires that public agency contracts be subject to non-appropriation and thereby contingent upon appropriation during the public agency’s statutorily mandated annual budget approval process; and

WHEREAS, Section 448.095, Fla. Stat., imposes certain obligations on public agencies with regard to the use of the E-Verify system by their contractors and subcontractors; and

WHEREAS, Section 287.135, Fla. Stat., provides restrictions on local governments contracting with companies that are on certain Scrutinized Companies lists; and

WHEREAS, On or around mid-January 2020, City of St. Augustine advertised a solicitation titled Sanitary Sewer Cleaning, Inspection and Renewal Request for Proposal No. PW2020-06 (“RFP”) for certain services. A copy of the RFP is attached hereto as **Exhibit “A”**; and

WHEREAS, City of St. Augustine thereafter awarded the solicitation to Contractor based on the terms and conditions set forth in the RFP, effective on or around October 7, 2020, a copy of which is included as part of as **Exhibit “A”**. The initial term of the City of St. Augustine Contract began on October 7, 2020 and continues for one (1) year until September 30, 2021 and may be extended up to four (4) consecutive years, upon mutual consent of the parties; and

WHEREAS, the services provided by Contractor are needed by the City of Cocoa Beach; therefore, the City desires to enter into an agreement with the Contractor pursuant to the same terms of the City of St. Augustine except as amended herein; and

WHEREAS, the City of St. Augustine was competitively bid with procedural guarantees of fairness and competitiveness substantially equivalent to those of the City of Cocoa Beach; 2)

CITY OF COCOA BEACH
AGREEMENT TO PIGGYBACK SERVICES

The City of Cocoa Beach and Contractor authorize the “piggyback” on the competitive pricing of their Contract; and 3) it is in the best interest of the residents of the City of Cocoa Beach to enter into an agreement with Contractor containing similar terms and conditions as contained the City of St. Augustine Contract; and

WHEREAS, the parties hereby agree and consent to “piggyback” on the rates/prices and terms and conditions in City of St. Augustine including, all attachments, addenda, unit prices, and all other applicable documents except as otherwise provided herein.

NOW, THEREFORE, in consideration of the covenants set forth herein, the parties agree to this addendum as follows:

1. Incorporation by Reference. The foregoing WHEREAS clauses are incorporated by reference.

2. Amendments. In the event of a conflict between the terms of the City of St. Augustine Contract and terms of this Agreement to “piggyback”, the terms of this Agreement to “piggyback” shall prevail. This Agreement to “piggyback” services hereby amends and supplements the terms of the City of St. Augustine Contract by the following:

(a) The City of Cocoa Beach and its equivalent staff and address shall be substituted for City of St. Augustine and its staff and addresses, as may be required in the awarded City of St. Augustine Contract.

(b) The scope of services in the City of St. Augustine Contract are supplemented by the scope of services contained in **Exhibit “B”** which is attached hereto and made a part hereof.

3. Public Records Compliance. Contractor agrees that, to the extent that it may "act on behalf" of the City within the meaning of Section 119.0701(1)(a), Florida Statutes in providing its services under this Agreement, it shall:

- (a) Keep and maintain public records required by the public agency to perform the service.
- (b) Upon request from the public agency’s custodian of public records, provide the public agency with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law.
- (c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the public agency.
- (d) Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of the contractor or keep and maintain public records required by the public agency to perform the service. If the contractor transfers all public records to the public agency upon completion of the contract, the contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon completion of the contract, the contractor shall meet all

CITY OF COCOA BEACH
AGREEMENT TO PIGGYBACK SERVICES

applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

- (e) Pursuant to Section 119.0701(2)(a), Fla. Stat., **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

CITY HALL - FIRST FLOOR
1600 MINUTEMEN CAUSEWAY
P.O. BOX 322430
COCOA BEACH, FL 32932-2430.
321-868-3286,
CITYCLERK@CITYOFCOCOABEACH.COM

4. Public Records Compliance Indemnification. Contractor agrees to indemnify and hold the City harmless against any and all claims, damage awards, and causes of action arising from the contractor's failure to comply with the public records disclosure requirements of Section 119.07(1), Florida Statutes, or by contractor's failure to maintain public records that are exempt or confidential and exempt from the public records disclosure requirements, including, but not limited to, any third party claims or awards for attorneys' fees and costs arising therefrom. Contractor authorizes the public agency to seek declaratory, injunctive, or other appropriate relief against Contractor in Brevard County Circuit Court on an expedited basis to enforce the requirements of this section.

5. Compliance/Consistency with Section 768.28, Fla. Stat. Any indemnification or agreement to defend or hold harmless by City specified in the Brevard County Contract shall not be construed as a waiver of City's sovereign immunity and shall be limited to such indemnification and liability limits consistent with the requirements of Section 768.28, Fla. Stat. and subject to the procedural requirements set forth therein. Any other purported indemnification by Brevard County in the Brevard County Contract in derogation hereof shall be void and of no force or effect.

6. Non-appropriation. City's performance and obligation to pay under this Agreement is contingent upon an appropriation during the City's annual budget approval process. If funds are not appropriated for a fiscal year, then the Contractor shall be notified as soon as is practical by memorandum from the City Manager or designee that funds have not been appropriated for continuation of the Agreement, and the Agreement shall expire at the end of the fiscal year for which funding has been appropriated. The termination of the Agreement at fiscal year end shall be without penalty or expense to the City subject to the City paying all invoices for services rendered during the period the Agreement was funded by appropriations.

7. E-Verify Compliance. Contractor affirmatively states, under penalty of perjury, that in accordance with Section 448.095, Fla. Stat., Contractor is registered with and uses the E-

CITY OF COCOA BEACH
AGREEMENT TO PIGGYBACK SERVICES

Verify system to verify the work authorization status of all newly hired employees, that in accordance with such statute, Contractor requires from each of its subcontractors an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien, and that Contractor is otherwise in compliance with Sections 448.09 and 448.095, Fla. Stat.

8. Compliance/Consistency with Scrutinized Companies Provisions of Florida Statutes. Section 287.135(2)(a), Florida Statutes, prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services of any amount if, at the time of contracting or renewal, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, or is engaged in a boycott of Israel. Section 287.135(2)(b), Florida Statutes, further prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services over one million dollars (\$1,000,000) if, at the time of contracting or renewal, the company is on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, both created pursuant to section 215.473, Florida Statutes, or the company is engaged in business operations in Cuba or Syria. Contractor hereby certifies that Contractor is not listed on any of the following: (i) the Scrutinized Companies that Boycott Israel List, (ii) Scrutinized Companies with Activities in Sudan List, or (iii) the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. Contractor further hereby certifies that Contractor is not engaged in a boycott of Israel or engaged in business operations in Cuba or Syria. Contractor understands that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject Contractor to civil penalties, attorney's fees, and/or costs. Contractor further understands that any contract with City for goods or services of any amount may be terminated at the option of City if Contractor (i) is found to have submitted a false certification, (ii) has been placed on the Scrutinized Companies that Boycott Israel List, or (iii) is engaged in a boycott of Israel. And, in addition to the foregoing, if the amount of the contract is one million dollars (\$1,000,000) or more, the contract may be terminated at the option of City if the company is found to have submitted a false certification, has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has been engaged in business operations in Cuba or Syria.

9. Venue and Jurisdiction. Notwithstanding any of other provision to the contrary, this Agreement and the parties' actions under this Agreement shall be governed by and construed under the laws of the state of Florida, without reference to conflict of law principles. As a material condition of this Agreement, each Party hereby irrevocably and unconditionally: i) consents to submit and does submit to the jurisdiction of the Circuit Court in and for Brevard County, Florida for any actions, suits or proceedings arising out of or relating to this Agreement.

10. Attorneys' Fees and Costs. Notwithstanding any of other provision to the contrary, if litigation ensues regarding this Agreement, each party hereto shall bear its own attorneys' fee and costs.

11. Additional Terms. Notwithstanding any of other provision to the contrary, the parties agree as follows:

A. None.

CITY OF COCOA BEACH
AGREEMENT TO PIGGYBACK SERVICES

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed on the date first above written.

THE CITY OF COCOA BEACH

Attested By:

City Clerk
City of Cocoa Beach

Keith Capizzi
Mayor
City of Cocoa Beach

Date Approved by Commission

Date

Approved for Legal Form and Content by:

Gretchen R.H. "Becky" Vose
City Attorney

Patrisha Draycott
CFO
City of Cocoa Beach

INSITUFORM TECHNOLOGIES, LLC.

Attested by:

Signature

Signature
Insituform Technologies, LLC.
Representative

Printed Name

Printed Name

Date

Title

Date

**SECOND RENEWAL OF THE AGREEMENT BETWEEN
THE CITY OF ST. AUGUSTINE
AND INSITUFORM TECHNOLOGIES, LLC FOR SANITARY SEWER CLEANING,
INSPECTION, AND RENEWAL**

THIS RENEWAL AGREEMENT is entered into by and between the CITY OF ST. AUGUSTINE (the "City"), whose mailing address is P. O. Box 210, St. Augustine, Florida 32085, and INSITUFORM TECHNOLOGIES, LLC, ("Contractor"), whose address is 17988 Edison Avenue, Chesterfield, Missouri 63005.

The City entered into an Agreement with Insituform Technologies, LLC on October 7, 2020 for Sanitary Sewer Cleaning, Inspection, and Renewal for a term ending on September 30, 2021. The Agreement included the option to renew up to four (4) consecutive years.

- On September 24, 2021, the Agreement was renewed for an additional two (2) year term, October 1, 2021 through September 30, 2023 (Renewal #1).
- On October 26, 2021, the Agreement's Scope of Work was amended to include four new Sections, and Unit Price Schedule was amended to include Maintenance of Traffic and Sanitary Sewers Renewal and Sanitary Main CIPP Lining (Amendment #1).

The City and Contractor now desire to renew the Agreement for a final two (2) year term, October 1, 2023 through September 30, 2025 (Renewal #2).

In consideration of the mutual covenants contained herein and for other good and valuable consideration, the parties agree to the following:

1. The Agreement, Contract No. PW2020-06, is renewed for a final two (2) year term beginning October 1, 2023 and ending September 30, 2025. For satisfactory performance of the Work outlined in the Contract during this additional term period, the City agrees to pay Contractor in accordance with the Agreement's Revised Unit Price Schedule.
2. The City's Project Manager has changed to:

Stephen Slaughter, P.E.
904-209-4274
sslaughter@citystaug.com

All other terms and conditions of the Agreement are hereby ratified and continue in full force and effect.

SIGNATURES APPEAR ON THE FOLLOWING PAGE

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in duplicate, each of which shall be deemed an original on the day and year first below written.

CITY OF ST. AUGUSTINE,
FLORIDA a municipal corporation

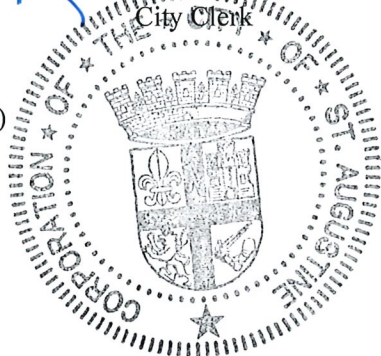
ATTEST:

Name:

Darlene Delamater

City Clerk

(SEAL)



By:

John P. Regan

Printed Name: John P. Regan

Title: City Manager

Date:

5/26/23

INSITUFORM TECHNOLOGIES, LLC

Signed, sealed and delivered
in the presence of:

Janet Hass

Janet Hass (May 25, 2023 15:17 CDT)

Witness

Printed Name: Janet Hass

Ursula Youngblood

Ursula Youngblood (May 25, 2023 17:12 CDT)

Witness

Printed Name: Ursula Youngblood

By: Diane Partridge

Diane Partridge (May 25, 2023 14:28 CDT)

Printed Name: Diane Partridge

Title: Contracting and Attesting Officer

Date: May 25, 2023

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

Isabelle C. Lopez

Isabelle C. Lopez, City Attorney

Contract PW 2020-05 PAT Renewal #2 for Sanitary Sewer Manhole Inspections and Rehabilitation Project

Final Audit Report

2023-05-25

Created:	2023-05-18
By:	Joshua Pfeiffer (jPfeiffer@citystaug.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAP_VSEGo9ph50x5c_yTeaBrskTmBxF8UK

"Contract PW 2020-05 PAT Renewal #2 for Sanitary Sewer Manhole Inspections and Rehabilitation Project" History

-  Document created by Joshua Pfeiffer (jPfeiffer@citystaug.com)
2023-05-18 - 2:26:30 PM GMT
-  Document e-signed by Joshua Pfeiffer (jPfeiffer@citystaug.com)
Signature Date: 2023-05-18 - 2:30:16 PM GMT - Time Source: server
-  Document emailed to Sharon Whitener (swhitener@citystaug.com) for signature
2023-05-18 - 2:30:17 PM GMT
-  Email viewed by Sharon Whitener (swhitener@citystaug.com)
2023-05-18 - 2:31:46 PM GMT
-  Document e-signed by Sharon Whitener (swhitener@citystaug.com)
Signature Date: 2023-05-18 - 2:34:15 PM GMT - Time Source: server
-  Document emailed to sslaughter@citystaug.com for signature
2023-05-18 - 2:34:16 PM GMT
-  Email viewed by sslaughter@citystaug.com
2023-05-18 - 2:35:41 PM GMT
-  Signer sslaughter@citystaug.com entered name at signing as Stephen Slaughter
2023-05-18 - 2:36:17 PM GMT
-  Document e-signed by Stephen Slaughter (sslaughter@citystaug.com)
Signature Date: 2023-05-18 - 2:36:19 PM GMT - Time Source: server

-  Document emailed to rfranklin@citystaug.com for signature
2023-05-18 - 2:36:20 PM GMT
-  Email viewed by rfranklin@citystaug.com
2023-05-18 - 8:59:42 PM GMT
-  Signer rfranklin@citystaug.com entered name at signing as Reuben Franklin
2023-05-18 - 9:00:06 PM GMT
-  Document e-signed by Reuben Franklin (rfranklin@citystaug.com)
Signature Date: 2023-05-18 - 9:00:08 PM GMT - Time Source: server
-  Document emailed to lcollier@ess-1.net for signature
2023-05-18 - 9:00:10 PM GMT
-  Email viewed by lcollier@ess-1.net
2023-05-25 - 1:28:18 PM GMT
-  Signer lcollier@ess-1.net entered name at signing as Jim Collier
2023-05-25 - 1:32:07 PM GMT
-  Document e-signed by Jim Collier (lcollier@ess-1.net)
Signature Date: 2023-05-25 - 1:32:09 PM GMT - Time Source: server
-  Document emailed to Jim Collier (jcollier@ess-1.net) for signature
2023-05-25 - 1:32:12 PM GMT
-  Email viewed by Jim Collier (jcollier@ess-1.net)
2023-05-25 - 1:32:47 PM GMT
-  Document e-signed by Jim Collier (jcollier@ess-1.net)
Signature Date: 2023-05-25 - 1:34:53 PM GMT - Time Source: server
-  Document emailed to awebb@ess-1.net for signature
2023-05-25 - 1:34:55 PM GMT
-  Email viewed by awebb@ess-1.net
2023-05-25 - 1:36:20 PM GMT
-  Signer awebb@ess-1.net entered name at signing as Adam Webb
2023-05-25 - 1:36:58 PM GMT
-  Document e-signed by Adam Webb (awebb@ess-1.net)
Signature Date: 2023-05-25 - 1:37:00 PM GMT - Time Source: server
-  Agreement completed.
2023-05-25 - 1:37:00 PM GMT



**CONSTRUCTION SERVICES AGREEMENT
BETWEEN THE
CITY OF ST. AUGUSTINE
AND INSITUFORM TECHNOLOGIES, LLC
FOR SANITARY SEWER CLEANING, INSPECTION AND RENEWAL**

THIS AGREEMENT is entered into by and between the CITY OF ST. AUGUSTINE (“the City”), whose address is P. O. Box 210, St. Augustine, Florida 32085-0210, and INSITUFORM TECHNOLOGIES, LLC (“Contractor”), whose address is 17988 Edison Avenue, Chesterfield, Missouri 63005. All references to the parties hereto include the parties, their officers, employees, agents, successors, and assigns.

In consideration of the payments hereinafter specified, the covenants and conditions of this Agreement, and other good and valuable consideration, the adequacy of which is hereby acknowledged, Contractor agrees to furnish and deliver all materials and perform all services and labor required for (“the Work”). In accordance with RFP Number PW2020-06, Contractor shall complete the Work in conformity with this Agreement, which consists of and incorporates all of the following documents: (1) advertisement for proposals; (2) Instructions to Respondents; (3) addenda; certifications, and affidavits; (4) proposal submittals; and (5) this Agreement, including the Scope of Work, Specifications, General Conditions and any Special Conditions or other attachments. If any provision in the body of this Agreement conflicts with any attachment hereto, the terms of this Agreement shall prevail unless the referenced attachment is a requirement pursuant to grant funding. This Agreement, including attachments, shall take precedence over all solicitation documents (items 1 - 4). The parties hereby agree to the following terms and conditions.

1. TERM OF AGREEMENT

- (a) The term of this Agreement shall run from the Effective Date to the Final Completion Date. Time is of the essence for each and every aspect of this Agreement. Where additional time is allowed to complete the Work, the new time limit shall also be of the essence. All provisions of this Agreement that by their nature extend beyond the Completion Date shall survive termination or expiration of this Agreement.
- (b) **Effective Date.** The Effective Date is the date upon which the last party to this Agreement has dated and executed the same.
- (c) **Completion Date.** The Completion Date of this Agreement is September 30, 2021, unless extended by mutual written agreement of the parties. The Completion Date for specific work orders shall be the time for completion stated in the work order; which shall be agreed upon by both parties.
- (d) This Agreement may be renewed by mutual and written consent of each party for no more than a total of four (4) consecutive years.

2. COMMENCEMENT OF WORK

- (a) Contractor shall commence the Work within fourteen (14) days of issuance of a Work Order by the City, this date shall be known as the “Commencement Date.” Contractor shall prosecute the Work regularly, diligently, and uninterruptedly so as to complete the Work ready for use in accordance with the Scope of Work and the time for completion stated therein. Contractor shall not commence the Work until any required submittals are received and approved.

3. LIQUIDATED DAMAGES

- (a) If Contractor neglects, fails, or refuses to satisfactorily complete the Work by the Completion Date, Contractor shall, as a part of the consideration for this Agreement, pay the City the amount stipulated herein, not as a penalty, but as liquidated damages for such breach, for each calendar day Contractor is in default thereafter. This amount is fixed and agreed upon between the parties due to the impracticability and extreme difficulty of ascertaining the actual damages the City would sustain in such event. The amount of liquidated damages shall be \$500.00 per day. Liquidated damages shall be deducted from payments as they become due and may be deducted from the retainage due upon completion. They constitute an agreed-upon liquidated sum solely for consequential damages attributable to delay and are not a substitute for any other consequential damages incurred by the City, such as the cost of finding a replacement Contractor for completion of the Work if this Agreement is terminated by the City for non-performance.
- (b) Contractor shall not be charged with liquidated damages or any excess cost when the City determines that Contractor's reasons for the time extension are acceptable in accordance with **FORCE MAJEURE; DELAYS; EXTENSION OF COMPLETION DATE, as described below**. A written extension of the Completion Date constitutes a waiver of liquidated damages to the new Completion Date unless expressly provided therein to the contrary.

4. DELIVERABLES

- (a) The Work is specified in the Scope of Work, Exhibit A. Contractor shall deliver all products and deliverables as stated therein. Contractor is responsible for the professional quality, technical accuracy, and timely completion of the Work. Both workmanship and materials shall be of good quality. Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials provided. Unless otherwise specifically provided for herein, Contractor shall provide and pay for all materials, labor, and other facilities and equipment necessary for performance of the Work. The City's Project Manager shall make a final acceptance inspection of the deliverables when completed and finished in all respects.
- (b) If not otherwise addressed in the Scope of Work and/or Specifications, upon written request, Contractor shall submit written progress reports to the City's Project Manager at the frequency requested in the form approved by the Project Manager at no additional cost to the City. The progress report shall provide an updated progress schedule, taking into account all delays and approved changes in the Work. Failure to provide a progress report will be cause to withhold payment.

5. OWNERSHIP OF DELIVERABLES

All deliverables, including Work not accepted by the City, are City property when Contractor has received compensation therefor, in whole or in part. Any City source documents or other City or non-City documents, specifications, materials, reports, or accompanying data developed, secured, or used in the performance of the Work, excluding proprietary materials, as outlined in the Statement of Work, are City property and shall be safeguarded and provided to the City upon request. City plans and specifications shall not be used on other work and, with the exception of the original plans and specifications, shall be returned to the City upon request. This obligation shall survive termination or expiration of this Agreement.

6. FUNDING OF AGREEMENT

- (a) For satisfactory performance of the Work, the City agrees to pay Contractor in accordance with the Unit Price Schedule, Exhibit D and as set forth in each Work Order and billed in accordance with the terms of the Work Order.

7. PAYMENT OF INVOICES

- (a) Contractor shall submit monthly itemized invoices by one of the following two methods: (1) by mail to the City of St. Augustine, Financial Management, P. O. Box 210, St. Augustine, FL 32085-0210, or (2) by e-mail to purchasing@citystaug.com. Each invoice shall be submitted in detail sufficient for proper pre-audit and post-audit review. If necessary, for audit purposes, Contractor shall provide additional supporting information as required to document invoices.

8. CONTRACT PAYMENT AND COMPLIANCE WITH THE LOCAL GOVERNMENT PROMPT PAYMENT ACT

- (a) Each month, the Contractor shall submit an application for payment for work performed to that point. The Owner will process and issue payment in compliance with the requirements of the Florida Local Government Prompt Payment Act as described below. Final payment in the amount of ten percent (10%) of the total project amount will be retained pending final inspection and acceptance of the project by the Owner and proof of complete payment to all subcontractors and suppliers.
- (b) All invoices shall include the following information: (1) City contract number; (2) City encumbrance number; (3) City work-order number, if applicable; (4) Contractor's name and address (include remit address, if necessary); (5) Contractor's invoice number and date of invoice; (6) City Project Manager or Work Order Manager, if applicable; (7) Contractor's Project Manager; (8) supporting documentation as to cost and/or project completion (as per the cost schedule and other requirements of the Statement of Work; for work-orders, see special requirements under **WORK ORDERS**); (9) Progress Report (if required); (10) Diversity Report (if otherwise required herein). Invoices that do not correspond with this paragraph shall be returned without action, stating the basis for rejection. Payments shall be made within twenty (20) business days of receipt of an approved invoice. Disputes regarding invoice sufficiency are resolved pursuant to the dispute resolution procedure of this Agreement.
- (c) As conditions precedent to final payment under this Contract, the Contractor shall furnish any manufacturers' guarantees or warranties for materials provided or equipment installed in the Work; shall have performed all other requirements pursuant to the Contract Documents; shall warrant all workmanship for a period of one (1) year after the date of final acceptance of the Work by the Owner and shall furnish signed copies of the Contractor's Warranty Guarantees signed by Contractor, subcontractors, materialsmen, suppliers, laborers or others furnishing work, labor, materials, machinery or fixtures in the performance of the Work. The City shall be the expressly designated beneficiary of any and all Warranty Guarantees. Acceptance of any Work or any possession taken by Owner shall not operate as a waiver of any provision of the Contract Documents or any right or power reserved to Owner, including any right to damages provided in the Contract Documents.

- (d) In order to comply with the provisions of the Florida Local Government Prompt Payment Act, the City designates the following as its Agent:
1. James Wheeler, P.E.
Public Works Department
City of St. Augustine
P.O. Box 210
St. Augustine, FL 32085-0210
904-209-4276 (Office)
904-209-4286 (Fax)
Email: jwheeler@citystaug.com
 2. The City's Agent is required to review invoices or payment requests prior to processing for payment.
 3. The due date for payment of construction services by the City shall be determined as follows:
 - a) If the City's agent must approve the payment request or invoice submitted by the Contractor before the payment request or invoice is submitted to the City, payment shall be due twenty-five (25) business days after the date on which the payment request or invoice is stamped as received as provided in Section 218.74(1), F.S. The Contractor may send the City an overdue notice. If the payment request or invoice is not rejected within four (4) business days after delivery of the overdue notice, the payment request or invoice shall be deemed accepted, except for any portion of the payment request or invoice that is fraudulent or misleading.
 - b) If the City's agent need not approve the payment request or invoice submitted by the Contractor, payment is due twenty (20) business days after the date on which the payment request or invoice is stamped as received as provided in Section 218.74(1), F.S.
 - c) If a payment request or invoice submitted by the Contractor does not meet the contract requirements, the City must reject the payment request or invoice within twenty (20) business days after the date on which the payment request or invoice is stamped as received as provided in Section 218.74(1), F.S. The rejection must be written and must specify the deficiency and the action necessary to make the payment request or invoice proper.
 - d) If a payment request or invoice is rejected and the Contractor submits a payment request or invoice which corrects the deficiency, the corrected payment request or invoice must be paid or rejected ten (10) business days after the date the corrected payment request or invoice is stamped as received as provided in Section 218.74(1), F.S.
 - e) If a dispute between the City and the Contractor cannot be resolved by the procedure described above, the dispute shall be resolved in accordance with the dispute resolution procedure described in Section 217.76(2), F.S.

- f) If the City disputes only a portion of a payment request or invoice submitted by the Contractor, the City shall pay the undisputed portion in a timely manner in accordance with subsections (a) and (b) above.

4. Punch List

- a) For projects less than \$10,000,000.00.
Within thirty (30) calendar days of reaching Substantial Completion of the Work as defined in the Contract or, if not defined in the Contract, upon reaching beneficial occupancy or use, the City's Project Manager, the Project Engineer and the Contractor shall review the work, note any deficiencies and develop a single list of items required to render the construction services purchased by the City complete, satisfactory and acceptable. The list shall be delivered to the

Contractor no later than five (5) calendar days after it has been developed and reviewed.

- b) For projects more than \$10,000,000.00.
Within thirty (30) calendar days or, if extended by Contract, up to sixty (60) calendar days, of reaching Substantial Completion of the Work or, if not defined in the contract, upon reaching beneficial occupancy or use, the City's Project Manager, the Project Engineer and the Contractor shall review the Work, note any deficiencies and generate a list of items required to render the construction services purchased by the City complete, satisfactory and acceptable. The list shall be delivered to the Contractor no later than five (5) days after it has been developed and reviewed.
- c) The Final Contract Completion Date shall be no fewer than thirty (30) days after delivery of the list of items. If the list is not provided to the Contractor by the agreed upon date for delivery of the list, the Contract Term for completion shall be extended by the number of days the City exceeded the delivery date.

- (e) **Payments withheld.** The City may withhold or, on account of subsequently discovered evidence, nullify, in whole or in part, any payment to such an extent as may be necessary to protect the City from loss as a result of: (1) defective Work not remedied; (2) failure of Contractor to make payments when due to subcontractors or suppliers for materials or labor; (3) failure to maintain adequate progress in the Work; (4) damage to another contractor; or (5) any other material breach of this Agreement. Amounts withheld shall not be considered due and shall not be paid until the ground(s) for withholding payment have been remedied.

- (f) **Payments.** The City shall pay Contractor one hundred percent (100%) of each approved invoice.

- 9. **COST OF LIVING INCREASES.** A Consumer Price Index ("CPI") – based Cost Schedule increase may be requested in writing no later than three months before the contract renewal date. The increase will be limited to the lesser of five percent or the result of the CPI percentage increase calculation expressed below. The CPI percentage increase shall be calculated by using the Consumer Price Index for All Urban Consumers ("CPI-U") numbers provided by the Bureau of Labor Statistics. The CPI percentage increase shall be calculated by subtracting from the most recent May CPI-U number the CPI-U number for the previous May, then dividing the remainder by the previous May's number, and finally, multiplying the quotient by 100. Cost Schedule

increases shall be prorated based upon the number of calendar months in the City's fiscal year that the contract has been in effect. (For example, a cost schedule increase for renewal of a contract initiated in March (six months into the City's fiscal year), would be limited to the lesser of either one-half of the CPI percentage increase or 2.5 percent upon renewal in October.) In the event this contract includes a provision for fuel adjustment, and an upward fuel adjustment is made during the contract year, the CPI percentage increase shall be multiplied by the percentage of the Total Compensation allocated to non-fuel costs. For example, if it is determined that the cost of fuel is 20 percent of the Total Compensation, the CPI percentage increase shall be multiplied by 0.8.

10. **PAYMENT AND RELEASE** Contractor's acceptance of final payment shall constitute a release in full of all Contractor claims against the City arising from the performance of this Agreement, with the exception of any pending claims for additional compensation that have been documented and filed as required by this Agreement.
11. **INDEMNIFICATION** Contractor shall indemnify and hold harmless, release, and forever discharge the City, its public officers, employees, agents, representatives, successors, and assigns, from any and all liabilities, damages, losses, and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Contractor, its employees or sub-contractors, in the performance of the Work and resulting from damages to property, personal injury, or loss of life.
12. **INSURANCE AND PERMITS.** Contractor shall acquire and maintain, at its own expense, all permits, and licenses required by law and shall maintain the same in full force and effect. Contractor is responsible for conformance with all State and Federal regulations and requirements. City of St. Augustine permit fees shall be waived.

Contractor shall provide all insurance required by Exhibit B, Insurance Requirements, and shall not commence Work until it has provided Certificates of Insurance to the City as per Exhibit B. Receipt of Certificates of Insurance indicating less coverage than required does not constitute a waiver of the Insurance Requirements. Contractor waives its right of recovery against the City to the extent permitted by its insurance policies. Contractor's insurance shall be considered primary, and City insurance shall be considered excess, as may be applicable to Contractor's obligation to provide insurance.

13. **FUNDING CONTINGENCY.** This Agreement is at all times contingent upon funding availability, which may include a single source or multiple sources, including, but not limited to: (1) ad valorem tax revenues appropriated by the City's Commission; (2) annual appropriations by the Florida Legislature, or (3) appropriations from other agencies or funding sources. Agreements that extend for a period of more than one Fiscal Year are subject to annual appropriation of funds in the sole discretion and judgment of the City's Commission for each succeeding Fiscal Year. Should the Work not be funded, in whole or in part, in the current Fiscal Year or succeeding Fiscal Years, the City shall so notify Contractor and this Agreement shall be deemed terminated for convenience five (5) days after receipt of such notice, or within such additional time as the City may allow. For the purpose of this Agreement, "Fiscal Year" is defined as the period beginning on October 1 and ending on September 30.

14. **PROJECT MANAGEMENT AND PERSONNEL**

- (a) The Project Managers listed below shall be responsible for overall coordination and management of the Work. Either party may change its Project Manager upon three (3) business days prior written notice to the other party. Written notice of change of address

shall be provided within five (5) business days. All notices shall be in writing to the Project Managers at the addresses below and shall be sent by one of the following methods: (1) hand delivery; (2) U.S. certified mail; (3) national overnight courier; (4) e-mail or, (5) fax. Notices via certified mail are deemed delivered upon receipt. Notices via overnight courier are deemed delivered one (1) business day after having been deposited with the courier. Notices via e-mail or fax are deemed delivered on the date transmitted and received.

CITY

James Wheeler, P.E., Project Manager
City of St. Augustine
P.O. Box 210
St. Augustine, Florida 32085-0210
904-209-4276 (office)
904-209-4286 (fax)
E-mail: jwheeler@citystaug.com

CONTRACTOR

Brandt Curvel, Project Manager
Insituform Technologies, LLC
6966 Business Park Boulevard
Jacksonville, Florida 32256
904-838-0090 (cell)
904-292-3198 (fax)
E-mail: bcurvel@aegion.com

- (b) The City's Project Manager shall have sole and complete responsibility for transmitting instructions, receiving information, and communicating City policies and decisions regarding all matters pertinent to performance of the Work, and may approve minor deviations in the Work that do not affect the Total Compensation or Completion Date or otherwise significantly modify the terms of the Agreement. For Work Order-based contracts, the City may designate a "Work Order Manager" on the Work Order, who will serve as the Project Manager for that Work Order and shall have the same responsibilities as the City's Project Manager. The City's Project Manager may approve minor deviations in the Work that do not affect the Total Compensation or Completion Date or otherwise significantly modify the terms of the Agreement. The City's Project Manager and, as appropriate, other City employees, shall meet with Contractor when necessary in the City's judgment to provide decisions regarding performance of the Work, as well as to review and comment on reports.
- (c) Contractor shall provide efficient supervision of the Work, using its best skill and attention. Contractor shall keep on the worksite during its progress a competent superintendent, satisfactory to the City. The superintendent shall not be changed except with the City's consent, unless the superintendent proves to be unsatisfactory to Contractor and/or ceases to be in its employ. The superintendent shall represent Contractor in the absence of Contractor's Project Manager. All directions given to him shall be as binding as if given to Contractor. If the City produces documented evidence and informs the Contractor that any person on the job is incompetent, disorderly, or is working contrary to the Agreement or the City's instructions, that person shall thereupon be immediately dismissed from the project and shall not be given employment on any work connected with this Agreement. The City may request Contractor replace its Project Manager if said manager fails to carry the Work forward in a competent manner, follow instructions or specifications, or for other reasonable cause.
- (d) Contractor shall maintain an adequate and competent professional staff. Contractor's employees, subcontractors, or agents shall be properly trained to meet or exceed any specified licensing, training and/or certification applicable to their profession. Upon request, Contractor shall furnish proof thereof.

15. SCHEDULING AND WORK PLANNING; PROGRESS REPORTING

- (a) **Pre-work Conference.** Within ten (10) days after execution of this Agreement, Contractor shall schedule a pre-work conference with the City's Project Manager to discuss scheduling and other matters. Contractor shall provide a work plan for the City's approval not fewer than five (5) days prior to the pre-work conference. The City shall have ten (10) days to review the work plan. Not less than five (5) days prior to the pre-work conference, Contractor shall provide the City a list of each subcontract exceeding ten percent (10%) of the Total Compensation. The list shall include: (1) name, address, contract, phone number and email address of subcontractor, (2) description of subcontract work, and (3) estimated value of work.
- (b) **Progress Reports.** Contractor shall provide to the City the project schedule and update/status reports as provided in the Scope of Work. Reports will provide detail on progress of the Work and outline any potential issues affecting completion or the overall schedule. Reports may be submitted in any form agreed to by City's Project Manager and Contractor, and may include emails, memos, and letters.
- (c) **Daily Reporting.** The City may require Contractor to provide a daily report regarding the progress of the Work. The need for a daily report shall be determined at the pre-work conference. If required, a form shall be completed for each day any Work is performed until the project is accepted by the City. Completed forms shall be submitted to the City's Project Manager or other authorized representative by 9:00 a.m. of the following day.
- (d) **Progress Meetings.** The City may elect to conduct on-site progress meetings with Contractor on a frequency to be determined by the City. In such event, Contractor shall make available its Project Manager and/or superintendent and other appropriate personnel to discuss matters pertinent to the Work.
- (e) **Failure to Meet Schedule.** If progress of the Work falls five percent (5%) or more behind schedule, except as a result of City-approved delays, Contractor shall take all necessary steps to augment the work effort to get the project back on schedule. Should the progress of the Work fall ten percent (10%) or more behind schedule, the City may advise Contractor through a "cure" notice that this Agreement is subject to termination for cause if the failure is not cured within the time frame specified in said notice.

16. FORCE MAJEURE; DELAYS

- (a) **Force Majeure.** Contractor shall not be liable for failure to carry out the terms of this Agreement to the extent such failure is due to a Force Majeure event, except for failures that could have been reasonably foreseen and guarded against so as to avoid or reduce the adverse impact thereof. A Force Majeure event is hereby defined as the failure to carry out any of the terms of this Agreement due to any one of the following circumstances beyond the control of Contractor: (a) the operation and effect of rules, regulations, or orders promulgated by any commission, county, municipality, or governmental agency of the State of Florida or the United States, (b) a restraining order, injunction, or similar decree of any court of competent jurisdiction, (c) war, (d) flood, (e) earthquake, (f) fire, (g) severe wind storm, (h) acts of public disturbance, (i) quarantine restrictions, (j) epidemics, (k) strikes, (l) freight embargoes, or (m) sabotage. The times specified herein for performances include delays that can ordinarily be anticipated due to adverse weather conditions. The City is not obligated to grant an extension of time due to adverse weather conditions unless

such conditions rise to the level of Force Majeure.

- (b) **Delay.** Contractor shall not be compensated for delays caused by Contractor's inefficiency, rework made necessary by Contractor's error, failure to perform the Work as scheduled, or any other corrective or productivity measures made necessary by errors, omissions, or failures to properly perform the Work. Neither shall the Contractor be compensated for delays caused by events by force majeure as described in sub-para (a) above. Within ten (10) days after the onset of a delay, Contractor shall notify the City in writing of the delay, which shall provide: (1) a detailed description the delay and its probable duration, (2) the specified portion of the Work affected, and (3) an opinion as to the cause of the delay and liability (if any) for the delay. Notices provided more than ten (10) days after the inception of the delay shall only be effective as to additional time incurred during the ten (10) day period preceding receipt of such notice. In the case of continuing cause delay for the same cause, only one notice of delay is necessary. **Failure to provide this notice waives any claim for extension of time resulting from such delay.** If the delay is due to the failure of another City contractor to complete its work in a timely manner, changes ordered in the Work, a Force Majeure event, or any other cause which the City, in its sole judgment and discretion, determines to justify the delay, then the Completion Date may be extended as necessary to compensate for the delay. All time extensions shall be in the form of a written amendment signed by both parties.

17. MODIFICATION OF SPECIFICATIONS; CHANGE ORDERS; EMERGENCY CHANGES IN WORK

- (a) **Modification of Specifications.** No oral agreement or conversation with any officer, agent, or employee of the City after execution of this Agreement shall affect or modify any of its terms. No one is authorized to change any provision of the specifications without written authorization of the City. The presence or absence of a City inspector shall not relieve Contractor from any requirements of this Agreement.
- (b) **Change Orders**
 - (i) The City may alter, add to, or deduct from the Work by executing a Change Order without liability to Contractor, except for the reasonable cost of any additional Work. All such Work within Contractor's capacity to perform shall be performed pursuant to the Change Order. Any associated claim for extension of time will be adjusted when the Change Order is issued. The parties shall negotiate the cost of the Change Order on an equitable basis, which may be determined in one or more of the following ways: (1) estimate and acceptance of a lump sum, (2) unit prices named in the contract or subsequently agreed upon, (3) costs and percentage or by (4) cost and a fixed fee. If the parties cannot agree upon cost, Contractor shall implement the Change Order and shall maintain and present in such form as the City Project Manager may direct the correct amount of the net cost of labor and materials, together with vouchers. The Project Manager will certify the amount due Contractor, including reasonable allowances for overhead and profit. Pending a final determination of value, payments will be based upon the City Project Manager's certification. Final resolution of the amount due to Contractor shall be pursuant to the dispute resolution procedure.
 - (ii) For any Change Order requests submitted by Contractor, the City may determine that City instructions to correct deficient Work, to stop the Work due to

deficiencies in the Work, or any other matters that impose additional costs upon Contractor, do not warrant an increase in the Total Compensation or extension of the Completion Date. If Contractor disputes this determination, final resolution shall be pursuant to the dispute resolution procedure.

- (c) **Emergency Changes in Work.** In the event an emergency endangering life or property requires immediate action, the City may give Contractor an oral instruction to proceed with an emergency change in the Work, which will be confirmed in writing within five (5) days. Within fifteen (15) days after commencement of the emergency change in the Work, Contractor shall provide the City with a written estimate of any increased costs or delays as a result thereof. **Failure to so notify the City constitutes a waiver of any right to an extension of time or increase in compensation.** Within fifteen (15) days after receipt of Contractor's estimate, the parties shall negotiate a Change Order. If unable to reach agreement, disputed issues shall be resolved pursuant to the dispute resolution procedure. In no event shall Contractor decline to perform the emergency change in the Work.

18. TERMINATION AND SUSPENSION

- (a) **City Termination for Cause.** The Agreement may be terminated by the City for cause in the event of any breach hereof, including, but not limited to, Contractor's: (1) failing to carry forward and complete the Work as provided herein; (2) failing to comply with applicable laws, regulations, permits, or ordinances; (3) failing to timely correct defective Work; (4) making a general assignment for the benefit of its creditors; (5) having a receiver appointed because of insolvency; (6) filing bankruptcy or having a petition for involuntary bankruptcy filed against it; (7) failing to make payments when due to subcontractors, vendors, or others for materials or labor used in the Work; (8) making a material misrepresentation to the City regarding the Work, or (9) any other material breach of this Agreement. In such event, the City shall provide Contractor with written notice of its intention to terminate this Agreement, stating the nature of the deficiency and the effective date of termination. At the City's sole judgment and discretion, the City may afford Contractor an opportunity to cure said deficiency, in which event the notice shall specify the time allowed. Upon termination, the City may take possession of the premises and of all materials thereon and finish the Work by whatever means it deems expedient. In such event, Contractor shall not receive any further payment until the Work is completed by the City. Contractor shall be liable for all costs involved in completing the Work, including additional managerial and administrative services, which shall be offset against any amount due to Contractor.
- (b) **City Termination for Convenience.** Notwithstanding any other provision hereof, the City may at any time terminate this Agreement or any Work issued under it, in whole or in part, without cause, upon thirty (30) days written notice to Contractor. In such event, Contractor shall be compensated for any Work performed prior to the date of termination and for materials that were ordered prior to receipt of notice of termination that cannot be returned to the vendor, which shall become City property. Upon receipt of notice, Contractor shall discontinue the Work on the date and to the extent specified therein and shall place no further orders for materials, equipment, services, or facilities, except as needed to continue any portion of the Work not terminated. Contractor shall also make every reasonable effort to cancel, upon terms satisfactory to the City, all orders or subcontracts related to the terminated Work. Contractor may not claim any compensation not specifically provided for herein, including, but not limited to: loss of anticipated profits; idle equipment, labor, and facilities; any additional claims of subcontractors and vendors.

- (c) **City Suspension for Cause.** The City may issue a written partial or full Stop Work Notice in the event Contractor fails to comply with or is negligent in performing any provision hereof. All performance shall immediately cease as per such notice and no further billable costs shall be incurred. The City may terminate this Agreement if Contractor fails or refuses to comply with a Stop Work Notice.
 - (d) **City Suspension for Convenience.** The City may direct Contractor to stop Work, in whole or in part, whenever, in the City's sole judgment and discretion, such stoppage is necessary to ensure proper completion of the Work, avoid injury to third persons, or otherwise meet the City's objectives. The City shall provide Contractor not fewer than five (5) days written notice, except in emergency circumstances. Contractor shall immediately comply with such notice. Should such stoppage increase Contractor's cost, an equitable adjustment will be made by Change Order. The notice shall be effective until rescinded in writing, unless the period of suspension is stated in the notice.
 - (e) **Contractor's Right to Stop Work or Terminate Agreement**
 - (i) **Stop Work.** Contractor may stop work only under the following circumstances: (1) the Work is ordered temporarily discontinued by a court or other public authority; (2) it is necessary to stop work in order to protect the safety of Contractor or third persons; or (3) the City fails to pay Contractor when due any undisputed and adequately documented sum certified for payment by the City Project Manager. In such event, Contractor shall provide the City not fewer than seven (7) days prior written notice of its intention to stop work, except in emergency circumstances or when necessary to prevent injury to persons or property.
 - (ii) **Termination.** Contractor may terminate this Agreement under only the following circumstances: (1) the Work is ordered discontinued by a court or other public authority, through no act or fault of Contractor, for a period of not fewer than three months; (2) the City fails to pay Contractor when due any undisputed and adequately documented sum certified for payment by the City Project Manager. In such event, Contractor shall provide not fewer than twenty (20) days written notice of its intention to terminate and afford the City the opportunity to cure said deficiency within said time period.
 - (iii) **Duty to Perform.** Except as expressly provided above, in the event of any event, dispute, or other matter arising under this Agreement, Contractor shall fully perform the Work in accordance with the City's written instructions and may claim additional compensation as a Change Order, subject to the dispute resolution procedure.
19. **PROTECTION OF WORK.** Contractor shall protect and prevent damage to all finished and unfinished portions of the Work including, but not limited to, the protection of the same from damage by the elements, theft or vandalism. Restoration of such damage shall be the sole responsibility of Contractor and shall not be cause for an increase in the Contract Consideration nor any extension of the Term.
20. **TRENCH SAFETY.** In the performance of this contract, Contractor may be requested to supply cost estimates for trench excavation to a depth exceeding five feet. Section 553.62, F.S., incorporates the Occupational Safety and Health Administration's excavation safety standards, 29 CFR s. 1926.650 Subpart P, as the standard. Contractor shall separately estimate the cost of

compliance with those standards as required by Section 553.63, F.S. Such estimate shall be based on the linear feet of trench to be excavated and shall include written assurance of compliance with those standards and any applicable special shoring requirements.

21. **NO ASSIGNMENT.** The Contractor may not assign this Contract without the advance written approval of the City. For the purposes of this paragraph, assignment shall be interpreted to include any transfer of more than fifty (50%) percent of the ownership interests of the Contractor whether or not the Contractor is a sole proprietorship, partnership, corporation, limited liability company, limited partnership or any other business, organization or entity.

22. **COMPLIANCE WITH PUBLIC RECORDS ACT**

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Telephone:	(904) 825-1007
Email:	recordsrequest@citystaug.com
Mailing Address:	City of St. Augustine Darlene Galambos, City Clerk Public Records Custodian P.O. Box 210 St. Augustine, Florida 32085-0210

Pursuant to Chapter 119, Florida Statutes, the Contractor shall comply with the provisions of the Florida Public Records Act, specifically to:

1. Keep and maintain public records required by the City to perform the Work.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the City.
4. Upon completion of the contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.
5. A request to inspect or copy public records relating to the City's contract for services must be made directly to the City. If the City does not possess the requested records, the City shall immediately notify the Contractor of the request, and the Contractor must provide the

- records to the City or allow the records to be inspected or copied within a reasonable time.
6. If the Contractor does not comply with the City's public records request for records, the City shall consider such noncompliance a material default of the terms of the contract and shall seek such remedies for such default as provided in the contract or at law.
 7. A contractor who fails to provide the public records to the City within a reasonable time may be subject to penalties under F.S. 119.10.

23. NO WAIVER OF SOVEREIGN IMMUNITY. Nothing in this agreement shall be construed as a waiver of sovereign immunity beyond that provided in Section 768.28, F.S., nor shall anything in this Agreement be construed as increasing the limits of the sovereign immunity of the City as provided in Section 768.28, F.S.

24. ACCESS; WORK AREA; GATES

- (a) **Access.** The City will provide sufficient access to accomplish Work performed on City property. Contractor shall maintain all on-site roadways and paved and unpaved access roadways to and from the worksite in an acceptable and passable condition at no additional cost to the City, and shall, upon conclusion of the Work, return said roadways to City in their original condition. Land access to construction sites is restricted to the route designated by the City. Contractor is responsible for improvements and repairs to access routes required during construction. All access routes shall be used for the purpose of construction only. Contractor shall not disturb lands or waters outside the area of construction, except as may be found necessary and authorized by the City.
- (b) **Work Area.** All Work shall be confined to the designated work area(s). Contractor shall obtain written approval from the City before making any adjustments.

25. ASSIGNMENT AND SUBCONTRACTS

- (a) Contractor shall not sublet, assign, or transfer any Work involving more than fifteen percent (15%) of the total cost of the Work, or assign any monies due hereunder, without the City's prior written consent. As soon as practicable after signing this Agreement, but not fewer than seven (7) business days prior to the effective date of any subcontracts, Contractor shall notify the City's Project Manager in writing of the name of any subcontractor that has not been previously disclosed in the procurement process. Within five (5) business days, after the City receipt of said notification, the City shall indicate its approval or disapproval, which shall not be unreasonably withheld. Failure to timely provide such approval or disapproval shall constitute approval. Neither City approval of a subcontractor nor any other provision of this Agreement creates a contractual relationship between any subcontractor and the City. Contractor shall be allowed a maximum 10% markup of their subcontractor's work for oversight and management.
- (b) Contractor is responsible for fulfilling all work elements in any subcontracts and payment of all monies due. Contractor is fully responsible to the City for the acts and omissions of its subcontractors and persons directly or indirectly employed by them and shall hold the City harmless from any liability or damages resulting from any subcontract to the extent allowed by law.

26. AUDIT; ACCESS TO RECORDS. Until the expiration of three (3) years after expenditure of funds hereunder, the City or its duly authorized representatives shall have access to examine any

of Contractor's books and other records involving transactions related to this Agreement. Contractor shall preserve all such records for a period of not fewer than three (3) years. Contractor shall refund any payment(s) that are found to not constitute allowable costs based upon audit examination. All required records shall be maintained until an audit has been completed and all questions arising from it are resolved. Contractor will provide proper facilities for access to and inspection of all required records.

27. BONDS

Pursuant to Chapter 255.05 F.S., prior to commencing the work, the Selected Contractor shall execute and record in the public records of St. Johns County a payment and performance bond with a surety insurer authorized to do business in the State of Florida. A certified copy of the recorded bond shall be provided to the City prior to commencement of the work.

- (a) Payment Bond. A payment bond equal to the Total Compensation is required for fixed price contracts and fixed price Work Orders greater than \$100,000; provided, however, that the bond may be reduced by the City, in its sole judgment and discretion, to that amount necessary to ensure payment of all subcontractors and materialmen. The City may require, in its sole judgment and discretion, a payment bond for fixed price contracts and Work Orders of \$100,000 or less in which event the bonding requirement shall be disclosed in the Invitation for Bids or Work Order specifications.
- (b) Performance Bond. A performance bond equal to one hundred twenty-five percent (125%) of the Total Compensation is required for fixed price contracts and Work Orders greater than \$100,000. The City may require, in its sole judgment and discretion, a performance bond for fixed price contracts and Work Orders of \$100,000 or less in which event the bonding requirement shall be disclosed in the Invitation for Bids or Work Order specifications.
- (c) Completed bonds shall be delivered to and accepted by the City prior to commencement of the Work. Bond premiums shall be paid by Contractor. Bonds shall be (1) either in the reproduced form provided in the Bid Documents or in a form approved by the City, and (2) written through a licensed agency that fulfills the requirements of Section 287.0935, F.S.
- (d) **Qualification-Management and Strength.** The Surety executing a bond must be rated no less than "Excellent" for both financial strength and issuer credit, with a rating outlook of stable or positive for both, and must have a financial size rating of VII or better according to the latest information available from A.M. Best Company, Inc.'s rating and analysis web site.
- (e) In lieu of the bond, a Contractor may submit an alternative form of security in the form of cash, money order, certified check, cashier's check, irrevocable letter of credit, or other security acceptable to the City.

28. **CIVIL RIGHTS.** Pursuant to Chapter 760, F.S., Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, age, handicap, or marital status.

29. **CLEANUP; EQUIPMENT REMOVAL.** Upon expiration or termination of this Agreement, Contractor shall restore the worksite to its original condition, except for replacement of

vegetation, unless otherwise required by this Agreement. Contractor shall remove from City property and all public and private property all machinery, equipment, supplies, surplus materials, temporary structures, rubbish, and waste materials resulting from its activities. After twenty (20) days, the City may sell or dispose of any materials left at the worksite as it sees fit and deduct the cost of sale or disposal from any amounts due to Contractor. Any revenues obtained shall be applied toward costs incurred by the City, with excess revenues paid to Contractor.

30. COORDINATION WITH THE CITY AND OTHER CITY CONTRACTORS

- (a) The City may let other contracts in connection with the Work. Wherever work done by the City or another City contractor is contiguous to Contractor's Work, the respective rights of the various interests shall be established by the City so as to secure completion of the Work. Contractor shall arrange its Work so as not to interfere with the City or other City contractors and join its Work to that of others in a proper manner, and in accordance with the intent of the Scope of Work. Contractor shall perform its Work in the proper sequence in relation to that of other City contractors, as may be directed by the City. Contractor shall afford other City contractors' reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly conduct and coordinate its Work with theirs. Contractor shall take into account all contingent work to be done by others and shall not plead its want of knowledge of such contingent work as a basis for delay or non-performance. Contractor shall be liable for any damage it causes to the work performed by other City contractors.
- (b) If any part of the Work depends for proper execution or results upon the work of other City contractors, Contractor shall inspect and promptly report any defects in the other contractor's work that render it unsuitable for Contractor's Work. **Failure to so inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of its Work, except as to defects which may develop in the other contractor's work after execution of the Work.**

31. CORRELATION AND INTENT OF DOCUMENTS; QUESTIONS OR ISSUES REGARDING PERFORMANCE OF THE WORK

- (a) This Agreement and all attachments are complementary. What is called for by one is as binding as if called for by all. The intent is to include all labor and materials, equipment, transportation, and incidentals necessary for the proper and complete execution of the Work. Materials or work described in words, which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.
- (b) It is the City's intention to fully assist Contractor in the successful performance of the Work and to respond in a timely manner to questions or issues that arise. Contractor should discuss any questions or issues with the City's Project Manager and communicate such questions or issues in writing when required by this Agreement. The City shall respond through its Project Manager.

32. DISPUTE RESOLUTION.

- (a) **During the course of work.** In the event any dispute arises during the course of the Work, Contractor shall fully perform the Work in accordance with the City's written instructions and may claim additional compensation. Contractor is under a duty to seek clarification and resolution of any issue, discrepancy, or dispute by submitting a formal request for

additional compensation, schedule adjustment, or other dispute resolution to the City's Project Manager no later than fifteen (15) calendar days after the precipitating event. If not resolved by the Project Manager within five (5) business days, the Project Manager shall forward the request to the Office of the City Manager, which shall issue a written decision within fifteen (15) calendar days of receipt. This determination shall constitute final action of the City and shall then be subject to judicial review upon completion of the Work. **Contractor shall proceed with the Work in accordance with said determination. This shall not waive Contractor's position regarding the matter in dispute.**

- (b) **Invoices.** In the event the City rejects an invoice as improper, and the Contractor declines to modify the invoice, the Contractor must notify the City in writing within ten (10) calendar days of receipt of notice of rejection that the Contractor will not modify the invoice and state the reason(s) therefor. Within five (5) business days of receipt of such notice, if not informally resolved through discussion with the City Project Manager, the Project Manager shall forward the disputed invoice and the Contractor's written response to the Office of the City Manager. The matter shall then proceed as described in subsection (a), above.

- 33. **DIVERSITY REPORTING.** The City is committed to the opportunity for diversity in its procurement activities and encourages its prime vendors (contractors and suppliers) to make a good faith effort to ensure that women and minority-owned business enterprises (W/MBE) are given the opportunity for maximum participation as sub-contractors. The City will assist Contractor by sharing information on W/MBEs. Contractor shall provide with each invoice a report describing the company names for all W/MBEs, the type of minority, and the amount spent with each at all levels. The report will also denote if there were no W/MBE expenditures.

34. **DUTY TO INSPECT AND REPORT DEFICIENCIES IN PLANS AND SPECIFICATIONS**

- (a) For any Work that is dependent upon conditions at the worksite, Contractor's acceptance of contract award represents and warrants that Contractor has inspected and satisfied itself concerning the nature and location of the Work and general and local conditions, including, without limitation: (1) conditions affecting transportation, disposal, handling, and storage of materials; (2) availability and quality of labor; (3) availability and condition of roads; (4) climatic conditions and seasons; (5) hydrology of the terrain; (6) topography and ground surface conditions; (7) nature and quantity of surface materials to be encountered; (8) equipment and facilities needed preliminary to and during the Work; and (9) all other matters that can affect the Work and the cost thereof. Contractor's failure to acquaint itself with such conditions will not relieve it from its responsibility for properly estimating the time required or cost of performing the Work. Where the City has investigated subsurface conditions, this data may be provided to Contractor or is available upon request. Contractor must either seek clarification concerning the data or assume the responsibility for its interpretation.
- (b) If Contractor discovers hidden or subsurface conditions that differ materially from those normally expected or indicated in the technical specifications, Contractor shall immediately, and before such conditions are disturbed, notify the City in writing of: (1) subsurface or latent physical conditions differing materially from those indicated in the technical specifications, or (2) unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for herein. The City shall promptly investigate the conditions and

determine whether they materially differ so as to cause an increase or decrease in Contractor's cost. Where the differing site conditions materially impact Contractor's cost, an equitable adjustment shall be made and the Agreement modified accordingly. No claim will be allowed if Contractor fails to provide the required notice.

- (c) If Contractor in the course of the Work finds any defect in the plans and specifications, including, but not limited to, any discrepancy between the drawings and the physical conditions at the worksite, or any errors or omissions in the drawings or in the layout, as given by points and instructions, it shall immediately inform the City in writing, which shall be promptly verified by the City. Any Work done after such discovery, until authorized, will be done at Contractor's risk as to cost overruns and modifications necessary to correct deficiencies in the Work. To ensure the proper execution of its subsequent Work, Contractor shall measure Work already in place or completed and shall immediately report any discrepancy between the executed Work and the drawings or other specifications.

- 35. **GOVERNING LAW, VENUE, ATTORNEY'S FEES, WAIVER OF RIGHT TO JURY TRIAL.** This Agreement shall be construed according to the laws of Florida and shall not be construed more strictly against one party than against the other because it may have been drafted by one of the parties. As used herein, "shall" is always mandatory. In the event of any legal proceedings arising from or related to this Agreement: (1) venue for any state legal proceedings shall be in a court of competent jurisdiction located in St. Johns County; (2) venue for any federal legal proceeding shall be in the federal court for the Middle District of Florida, Jacksonville Division; (3) each party shall bear its own attorney's fees, including appeals; (4) for civil proceedings, the parties hereby consent to trial by the court and waive the right to jury trial.
- 36. **INTEREST IN THE BUSINESS OF CONTRACTOR; NON-LOBBYING.** Contractor certifies that no officer, agent, or employee of the City has any material interest, as defined in Chapter 112, F.S., either directly or indirectly, in the business of Contractor to be conducted under this Agreement, and that no such person shall have any such interest at any time during the term of this Agreement. Pursuant to Section 216.347, F.S., monies received from the City pursuant to this Agreement shall not be used to lobby the Florida Legislature or any other state agency.
- 37. **INDEPENDENT CONTRACTOR.** Contractor is an independent contractor. Neither Contractor nor Contractor's employees are employees or agents of the City. Contractor controls and directs the means and methods by which the Work is accomplished. Contractor is solely responsible for compliance with all labor, wage and hour and tax laws pertaining to it, its officers, agents, and employees, and shall indemnify and hold the City harmless from any failure to comply with such laws. Contractor's duties include, but not be limited to: (1) providing Workers' Compensation coverage for employees as required by law; (2) hiring employees or subcontractors necessary to perform the Work; (3) providing any and all employment benefits, including, but not limited to, annual leave, sick leave, paid holidays, health insurance, retirement benefits, and disability insurance; (4) payment of all federal, state and local taxes, income or employment taxes, and, if Contractor is not a corporation, self-employment (Social Security) taxes; (5) compliance with the Fair Labor Standards Act, 29 U.S.C. §§ 201, et seq., including payment of overtime as required by said Act; and (6) providing employee training, office or other facilities, equipment and materials for all functions necessary to perform the Work. In the event the City provides training, equipment, materials, or facilities to meet specific City needs or otherwise facilitate performance of the Work, this shall not affect Contractor's duties hereunder or alter Contractor's status as an independent contractor. This paragraph does not create an affirmative obligation to provide any employee benefits not required by law.

38. **INSPECTION AND TESTING OF WORK; REJECTION OF WORK AND MATERIALS; TOOLS, PLANT, AND EQUIPMENT; MATERIAL SUBSTITUTION**

- (a) **Standards for Quality and Workmanship.** All materials, equipment, and supplies furnished by Contractor for permanent incorporation into the Work shall be new and of the quality standards specified. Unless otherwise specified, all material and workmanship shall meet the requirements in the applicable standards specifications of the American Society for Testing and Materials. If two or more brands, makes of material, devices, or equipment are shown or specified, each should be regarded as the equal of the other. First-calls and the finished product shall be equal to the best-accepted standards of the trade class. The finished product shall be equal to the best-accepted standards of the trade for the category of Work performed. The City's intent is to obtain a high-quality job that will operate and function with the lowest possible maintenance costs. Inspection standards will be established to ensure that this objective is achieved.
- (b) **Materials and Equipment Schedules.** The City shall have the right of prior approval for all materials or equipment incorporated into the Work. Within ten (10) days after the date of contract award and before any material or equipment is purchased, Contractor shall submit to the City's Project Manager a complete list of materials or equipment to be incorporated into the Work. The list shall include catalog cuts, diagrams, drawings, and such other descriptive data as may be required. The use of materials or equipment not in accordance with this Agreement may be rejected.
- (c) **Inspection.** The Work and all materials or equipment used therefor are subject to inspection by the City at all times in order to ensure compliance herewith. Upon request, Contractor shall provide samples of the type and quantity of the various materials used in the Work, as determined and directed by the City. The City's Project Manager and inspector(s) shall be provided access to the Work wherever it is in preparation or progress. Contractor shall provide proper facilities for such access and inspection. Construction contractors shall maintain one complete copy of the drawings and specifications for the Work at the worksite, which shall be made available to the City upon request.
- (d) **Re-examination of Work.** The City may order re-examination of questioned Work and, if so ordered, the Work shall be uncovered by Contractor. If such Work is found to be in accordance with specifications, the City will pay the cost of re-examination and replacement. If such Work is found to be not in accordance with specifications, Contractor will pay such cost.
- (e) **Testing.**
 - (i) The City may require that materials be tested prior to incorporation in the Work. In some instances, it may be expedient to make these tests at the source of supply. Therefore, upon request, Contractor shall furnish the City with information identifying the source of supply before incorporating material into the Work. Upon request, Contractor shall furnish two (2) copies of the manufacturer's certificate of compliance with these specifications covering manufactured items. All tests performed by a laboratory to ascertain whether the material, as placed, meets the required specification will be paid for by Contractor. This paragraph does not obligate the City to perform tests for acceptance of material or relieve Contractor of its responsibility to furnish satisfactory material.

- (ii) If the specifications, the City's instructions, laws, ordinances, or any public authority require any Work to be specifically tested or approved, Contractor shall give the City's Project Manager timely notice of its readiness for inspection. If inspection is by an authority other than the City's Project Manager, Contractor's Project Manager shall supply the City's Project Manager with 72 hours prior notice of such inspection. Inspections by the City's Project Manager will be made promptly and, where practicable, at the source of supply. If any Work should be covered up without the prior approval of the City's Project Manager, it shall, if required by the City, be uncovered for examination at Contractor's expense.
 - (f) **Rejection of Work and Materials.** Contractor shall promptly notify the City of any defective material and shall not incorporate such material into the Work. The City may reject all Work and material that does not conform to this Agreement, which shall be removed and replaced with approved quality material at no additional cost to the City. If the City deems any portion of the Work unsatisfactory, Contractor shall rework those areas so that the total Work is completed in a manner satisfactory to the City. If disputed, Contractor may submit a Change Order, subject to the dispute resolution procedure.
 - (g) **Tools, Plant, and Equipment.** If at any time before commencement of or during progress of the Work, tools, plant, or equipment appear to the City to be insufficient, inefficient, or inappropriate to secure the quality of Work or the proper rate of progress, the City may order Contractor to increase its efficiency, to improve its character, or to augment the number of or substitute new tools, plant, or equipment, as the case may be. Contractor shall conform to such order. If Contractor maintains that any such order is not in conformance with this Agreement, is unnecessary, or requires Contractor to incur excessive costs or delays, Contractor may submit a Change Order, subject to the dispute resolution procedure. Failure of the City to make such demand shall not relieve Contractor of its obligation to secure the quality of the Work and the rate of progress necessary to timely complete the Work.
 - (h) **Material substitution.** Except where otherwise indicated, whenever a material or a piece of equipment required in the Work is shown in the specifications by using the name of the proprietary product or that of a particular manufacturer or vendor, any material, equipment, device, or article that will in the City's opinion at least equally perform the same duties imposed by the general design, considering quality, workmanship, economy of operation, and suitability for the purpose intended, may be considered "equal" and substituted for the material or piece of equipment originally specified. In the event Contractor desires the City to consider an item for substitution, Contractor shall submit a written request, which shall give all pertinent details and comparisons of the substitute with the item specified. The City will notify Contractor in writing of its acceptance or rejection. In all cases, new material shall be used. Contractor shall pay all costs resulting from inspection or testing of materials or equipment proposed for substitution.
39. **LAND AND WATER RESOURCES.** Contractor shall not discharge or permit the discharge, directly or indirectly, of any fuels, oils, calcium chloride, acids, insecticides, herbicides, wastes, toxic or hazardous substances, or other pollutants or harmful materials, onto any lands or into any surface or ground waters, including, but not limited to, streams, lakes, rivers, canals, ditches, or reservoirs. Contractor shall investigate and comply with all applicable federal, state, county, and municipal laws concerning toxic wastes, hazardous substances, and pollution of surface and ground waters. If any waste, toxic or hazardous substance, or other material that can cause pollution, as defined in Section 403.031, F.S., is dumped or spilled in unauthorized areas,

Contractor shall notify the City thereof within one (1) workday and thereafter shall remove the material and restore the area to its original condition. If necessary, contaminated ground shall be excavated and disposed of as directed by the City and replaced with suitable fill material, compacted and finished with topsoil, and planted as required to re-establish vegetation. All cleanup and disposal costs shall be borne by Contractor.

40. **LIENS.** Acknowledging that the City's property is not subject to liens, neither final payment nor payment of any part of the retainage shall become due until Contractor delivers to the City releases of all labor and material cost liens arising from Contractor's performance of the Work, including Contractor and any subcontractor(s), and an affidavit by Contractor stating that the releases and receipts include all labor and material costs for which a lien could be filed. If any subcontractor refuses to furnish Contractor a release or a receipt in full, Contractor may furnish to the City a bond satisfactory to the City, indemnifying the City against any such potential lien. If any lien or potential lien remains unsatisfied, the City may discharge the same forthwith and deduct the cost thereof from any amounts due to Contractor. In the event Contractor has been fully paid or the amount of such lien exceeds the amount due to Contractor, Contractor shall refund to the City all monies that the City paid in discharging such lien, including all costs and a reasonable attorney's fee. The discharging of such a lien by the City shall not constitute a waiver of any claims of defenses that Contractor may have against the lienor.
41. **NUISANCE.** Contractor shall exercise every reasonable means to avoid creating or continuing a public or private nuisance resulting from the Work, including, but not limited to: (1) excessive noise associated with radio or other forms of electronic entertainment for persons at the worksite; (2) dust from construction operations, and (3) the uncontrolled flow of surface waters.
42. **PERMITS AND LICENSES; COMPLIANCE WITH LAW.** Contractor shall comply with all applicable federal, state and local laws and regulations, including those pertaining to wages, health and safety. Contractor shall include this requirement in all subcontracts. All materials used and work performed must conform to the laws of the United States, the State of Florida and county and municipal ordinances. Contractor represents and warrants that it is duly licensed to perform the Work in accordance with the laws of the State of Florida and the county or municipality in which the Work is to be performed. For out-of-state contractors, Contractor warrants that it is authorized to do business within the state of Florida and registered with the Secretary of State. Unless otherwise provided in the Statement of Work, the responsibility of the parties for obtaining permits is apportioned as follows:
 - (a) The City shall procure all permits required from the Florida Department of Environmental Protection, the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers.
 - (b) Contractor shall procure any permits required by the county or municipality wherein the Work is located.
 - (c) Contractor shall: (i) give to the proper authorities all required notices relative to the Work; (ii) obtain and pay for all official permits and any professional or other licenses, code stamps, and inspections that are Contractor's responsibility; and (iii) furnish any bonds, security, or deposits required to permit performance of the Work; (iv) until the Work is accepted as substantially complete, comply with all conditions of governmental permits; and (v) resolve any issues resulting from a finding of noncompliance by any governmental agencies, including all costs for delays, litigation, fines, or other costs.
43. **PETROLEUM STORAGE TANKS.** Any petroleum storage tanks with a capacity of 55 gallons or greater that Contractor brings onto City property must be either double-walled or kept within

secondary containment that will contain 110% of the tank volume.

44. PROTECTION OF THE WORK, CITY EQUIPMENT, AND PROPERTY.

Contractor is responsible for the proper care of the Work and protecting the Work from damage until final acceptance by the City, whether or not the same has been covered by partial payments. Contractor is solely responsible for all City-owned equipment in its possession, if any. Contractor shall adequately protect and maintain all passageways, guard fences, lights, and other facilities as required by public authority or local conditions. Contractor shall conduct the Work so as to minimize damage to existing improvements, and shall restore, as nearly as practical, to its original condition, any such improvements damaged by its operations. In the event of temporary suspension of the Work, or during inclement weather, or whenever the City shall direct, Contractor shall carefully protect the Work from damage. If any Work is damaged due to Contractor's failure to so protect the Work, the loss shall be remedied at Contractor's expense. Contractor shall protect public and privately-owned property, structures, utilities, and work of any kind against damage or interruptions of service resulting from its activities. Contractor shall repair, replace, or restore any damage or loss to any public or private property to the City's satisfaction. Should Contractor fail to perform these obligations, the City may make good any such damage and deduct the cost thereof from Contractor's final payment.

- 45. PUBLIC ENTITY CRIME.** A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 F.S., for CATEGORY TWO (\$35,000) for a period of 36 months following the date of being placed on the convicted vendor list.

- 46. RELEASE OF INFORMATION.** Contractor shall not publish or release any information related to performance of this Agreement, or prepare, publish, or release any news or press release in any way related to this Agreement, without prior City review and written consent.

47. REMEDIES FOR NON-PERFORMANCE

- (a) **City Remedies.** The remedies enumerated herein are non-exclusive. In addition to the remedies set forth below, the City may avail itself of any statutory and/or common law remedies not set forth herein. In the event of a breach, the City may terminate this Agreement for cause. Alternatively, the City may allow Contractor to correct the deficiency, or may take such action as is necessary to correct such deficiency through City action or that of a third party. Delay or failure by the City to enforce any right or remedy hereunder shall not impair, or be deemed a waiver of, any such right or remedy, or impair the City's rights or remedies for any subsequent breach of this Agreement.
- (b) **Contractor Correction of Deficiencies.** The City shall provide Contractor with written notice of deficiency. At the City's sole judgment and discretion, the City may afford an opportunity to correct said deficiency, in which event the notice shall specify the time allowed to cure. If Contractor disputes that a failure of performance has occurred, Contractor shall, nevertheless, perform the corrective action and may submit a request for a Change Order subject to the dispute resolution procedure. Unless authorized through a Change Order, the Completion Date shall not be extended in order to correct deficiencies.

Contractor shall bear the cost of correcting all work of other contractors that is destroyed, damaged, or otherwise negatively impacted by its corrective action. Failure to take timely corrective action may result in termination for cause or the City pursuing alternative remedies, as provided herein.

- (c) **Alternative Remedies to Correct Deficiency.** If the City determines that it is not in its best interest for Contractor to correct incomplete or damaged Work caused by Contractor's failure of performance, the City may pursue any or all of the following remedies, in whole or in part: (1) accept the Work as is and deduct the reasonable value of the deficient Work from the Total Compensation; (2) complete the Work through the utilization of City employees and deduct the cost thereof from the Total Compensation; (3) contract with a third party to complete the deficient Work and deduct the cost thereof from the Total Compensation.
- (d) **City Technical Assistance.** The City may elect to provide technical assistance to Contractor in order to complete satisfactory performance of the Work. If the City is performing a function that Contractor is required to perform, the City may deduct the cost of providing such technical assistance from the Total Compensation. Prior to providing any such technical assistance, the City shall notify Contractor that it considers such assistance to be above and beyond its duties under this Agreement and that it intends to deduct the cost of providing such assistance from the Total Compensation. Contractor shall not be entitled to reject technical assistance when the City determines that such assistance is necessary to complete the Work.

- 48. **ROYALTIES AND PATENTS.** Contractor certifies that, to the best of its information and belief, the Work does not infringe on any patent rights. Unless provided otherwise herein, Contractor shall: (1) pay all royalties, patent, and license fees necessary for the Work; (2) defend all suits or claims for infringement of any patent rights, and (3) save and hold the City harmless from loss on account thereof; provided, however, that the City shall be responsible for any such losses when the utilization of a particular process or product of a particular manufacturer is specified by the City. If Contractor obtains information that the process or article so specified is a patent infringement, it shall be responsible for such loss unless it promptly so notifies the City.
- 49. **SAFETY.** For any Work that is to be performed on premises that are owned or controlled by the City (the Premises), Contractor has the sole and exclusive duty for the safety of the premises. Contractor shall provide and maintain sufficient protection for the safety of its employees and other persons who may utilize the Premises, and prevent damage to City property, materials, and equipment. Contractor shall at all times enforce strict discipline and good order among its employees and shall not employ any unfit person or anyone not skilled in the work assigned. Neither Contractor nor its subcontractors shall allow or cause to be allowed any hunting or any weapons, animals, alcohol, or drugs, on or from the Premises or adjacent property. Contractor employees shall not park their vehicles or store equipment or materials adjacent to roads where it may be a hazard to traffic. A clear distance of at least 30 feet from the edge of the pavement or right-of-way shall be kept free of any obstacles unless otherwise authorized by the City. Contractor shall ensure that only authorized personnel are allowed on the worksite and shall post notices warning both employees and the public of all safety hazards created by Contractor.
- 50. **SUBSTANTIAL COMPLETION; PUNCH LIST.** Contractor shall notify the City in writing when it considers the Work to be substantially complete. "Substantially complete" is the point when the City can beneficially occupy its property and use the Work for its intended purpose, with only minor items remaining in order for the Work to be fully complete. Within thirty (30) days of receipt

of such notice, the City shall review the Work and determine whether the Work is substantially complete. If the City agrees that the Work is substantially complete, the City shall, within said 30-day period, develop a list of items ("Punch List") required to render the Work complete, satisfactory, and acceptable in all respects. The Punch List shall be delivered to Contractor not later than five (5) days after it is developed. Contractor shall complete the Punch List items by the Completion Date; provided, however, that if the Completion Date is less than thirty (30) days after the date of delivery of the Punch List, the Completion Date shall be extended to thirty (30) days after delivery of the Punch List. Failure to include any corrective work or pending items not yet completed on the Punch List does not alter Contractor's responsibility to complete all construction services required by the Agreement. Upon completion of all Punch List items, Contractor may request payment of any remaining retainage. If the City disputes the completion of any items on the Punch List, it may withhold 150 percent of the estimated cost of completing any such items and shall return the remainder of the retainage to Contractor. Any disputed matters shall be resolved pursuant to the dispute resolution procedure of this Agreement.

51. **SURVEYS; PRESERVATION OF MONUMENTS; POINTS AND INSTRUCTIONS**

- (a) **Surveys.** When necessary to performance of the Work, unless otherwise provided in the Statement of Work, the City will furnish horizontal and vertical control necessary to lay out the Work, including horizontal reference point(s) and a vertical control benchmark within 200 feet of the site. The City will set the horizontal reference point(s) and vertical control only at the beginning of the job. Contractor is responsible for interim staking during the job and all staking and layout work not otherwise furnished by the City. Contractor shall furnish all construction layout of the Work, including layout, centerline, and grade stakes for access roadways. Contractor shall furnish all personnel, equipment, and materials to make such surveys as are necessary to determine the quantity of Work performed. Field notes and computations for estimates shall be verified by the City's Project Manager as to the quantities estimated.
- (b) **Preservation of Monuments.** Contractor shall maintain and preserve all new and existing benchmarks, monuments, markers, reference points, and stakes established by others and/or the City. Should any of the aforesaid be destroyed or damaged by Contractor, the same shall be replaced by Contractor's licensed land surveyor at no cost to the City. Contractor shall be responsible for the cost of any deficiencies in the Work caused by such loss or disturbance.
- (c) **Points and Instructions.** Contractor shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. Contractor shall not proceed until it has made a timely request to the City for, and has received, such points and instructions as may be necessary as the Work progresses. The Work shall be done in strict conformity with such points and instructions.

- 52. **USE OF COMPLETED PORTIONS OF THE WORK.** The City shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding the fact that the time for completing the entire Work or such portions may not have expired. Such taking of possession and use will not be deemed an acceptance of any Work not completed. If such possession and use increases the cost of or delays the Work, Contractor shall be entitled to a Change Order for extra compensation, or extension of time, as necessary, to offset the effect of such prior possession and use.

53. WARRANTY

- (a) Contractor warrants that the Work, workmanship and material furnished by Contractor shall be new and of specified quality, shall conform to the requirements of this Agreement, shall be free from defects, and shall be free from any security interest, lien, or other encumbrances. This warranty shall remain in effect for a period of twelve (12) months after completion of the Work, unless otherwise specified herein. Any defective Work, workmanship, or material corrected during the warranty period shall be similarly warranted for twelve (12) months following its correction or for such other period as specified herein. The express warranty set forth herein shall not be exclusive and shall not act as a limitation upon any statutory or other warranty of any kind, express or implied, including any implied warranty of merchantability or fitness for a particular purpose.
- (b) In the event of breach of this warranty, Contractor shall take the necessary actions to correct the breach in the most expedient manner as dictated by then-existing circumstances. All costs incidental to the repair, replacement, redesign, and testing incurred as a result thereof, including the removal, replacement, and reinstallation of equipment in place when the Work was started, shall be Contractor's responsibility. Upon written notification of a breach, Contractor shall promptly send the necessary personnel to the project site to assume responsibility for corrective action. Time is of the essence. Contractor shall be afforded necessary and reasonable access to perform warranty work. If Contractor fails to promptly correct the breach, the City may take corrective action without waiving any other rights or remedies it may have, and Contractor shall reimburse the City for all expenses reasonably incurred in performing such corrective action.

54. WORK ORDERS

- (a) The City reserves the right to award Work Orders based on the ability to perform in a timely manner, availability of required equipment, cost of required equipment, past performance on similar work, availability of qualified staff, and other factors deemed critical to the performance of each Work Order. The City may, at its sole discretion, request a "not to exceed" cost for any Work Order as a method of determining award. The City makes no guarantees of any amount of work to be awarded under the Agreement. The City reserves the right to directly purchase and provide to Contractor all or part of the equipment or materials to be incorporated in the Work.
- (b) Contractor shall not proceed with any Work prior to the receipt of a written Work Order and shall commence the Work under each Work Order within fourteen (14) days of receipt, unless an alternate date is stated in the Work Order. All Work shall be done to the satisfaction of the City's Project Manager or Work Order Manager and subject to the other terms of this Agreement. The Contractor must agree to the terms of the Work Order. Commencement of Work pursuant to a Work Order constitutes acceptance of all of the terms and conditions of the Work Order. A representative Work Order is attached as Exhibit C.
- (c) **Type of Work Order.** When services are needed, the City and Contractor shall agree upon the type of Work Order and the specifics of the Work Order.
 - (i) Generally, a time and materials Work Order involves projects where field conditions, environmental or cultural resource preservation issues, subsurface and other physical conditions, or other aspects of the Work cannot be accurately

defined. This often results in work being modified in the field by the City. Identification of the Work involved is typically concept level drawings with minimal details. The Work Order will describe the general nature of the Work, including specific deliverables, if applicable, along with the total number of hours, days, or weeks estimated for each task; the materials to be incorporated into the work, and the total authorized expenditure amount. If deliverables are specified and materials, equipment, or sub-contractors are necessary to complete the Work, the Work Order shall specify the estimated costs thereof. The City must approve the hiring of sub-contractors in order to ensure they are qualified to perform the Work and have been competitively procured. The Contractor is compensated for equipment and labor based upon the unit costs of this Agreement, and “Other Direct Costs” as defined in sub-paragraph (d)(iv), below. Invoices must be documented as to the number of hours worked and equipment and materials used sufficient for City audit in accordance with the unit costs of this Agreement and the Work Order. The City reserves the right to determine the means and methods of performing the Work and supplying materials.

- (ii) A fixed-price Work Order is issued when the extent and cost of the Work is agreed upon. It will describe with specificity the location, quantity, work limits, timeframes, deliverables, progress payments (if any), total cost, and any other matters pertaining to the Work. The fixed price includes all applicable permits, bonds, labor, equipment, supplies, project support, overhead and materials necessary to complete the Work. It is used when the scope of work can be clearly determined, such as when detailed design drawings and/or specifications and supporting documents are available and site conditions are known. It may include a detailed schedule of values, construction schedule, and any other necessary documents.
- (iii) A time and materials with not-to-exceed amount Work Order is utilized when a not-to-exceed cost is agreed upon for a time and materials Work Order. All of the terms of a time and materials Work Order apply, subject to the not-to-exceed amount. In addition, the deliverables must be described with the specificity of a fixed price Work Order.

(d) **Additional Provisions Applicable to Time and Materials and Time and Materials with Not-to-Exceed Work Orders.**

(i) **Additional equipment and services.**

- a. The City may issue a Work Order requiring the use of additional or specialized equipment not identified in the unit costs of the Agreement. The cost of such equipment may be identified separately and included in the specific Work Order to which it applies, or the Agreement may be amended through a Change Order with an amended cost schedule that includes such equipment. If deliverables are specified and sub-contractors are necessary to complete the Work, the Work Order shall specify the costs of the materials, equipment, and sub-contractors.
- b. After a Work Order is issued, the City may require the use of material, equipment and/or subcontracted services not included in the original Work Order. A Change Order will be issued if the cost exceeds the “not to

exceed” amount of the Work Order, or if the additional cost exceeds \$100,000.

- c. If due to an emergency, the City determines that material, equipment and/or subcontracted services that were not included in the original Work Order are required, the City may authorize procurement thereof in a manner that most efficiently and effectively minimizes public risk and economic loss.

- (ii) **Equipment substitution.** No provision hereof prohibits substitution of rented or leased equipment for unit cost equipment under the Agreement, or addition of rented or leased equipment not included in the Work Order or cost estimates, provided any such substitution or addition complies with the competitive procurement provisions of this paragraph and has been approved in advance in writing by the City. Should the Work require the use of individual equipment for longer than 30 days or 30 hours per week, the City may compare equipment weekly or monthly rental rates on the open market with the rates in the Cost Schedule and require Contractor to rent the equipment on the open market if the cost is lower than the Cost Schedule. The City will reimburse Contractor this rental cost (with allowable percentage markup in the Cost Schedule) plus the hourly rate for operator with fuel and operation and maintenance.

(iii) **Other Direct Costs.**

- a. Subject to prior written City approval, the City will reimburse Contractor for materials purchased by Contractor and incorporated into the Work, non-contract equipment, leases/rentals, subcontract work, bonds, and permits obtained by Contractor, including applicable sales tax (“Other Direct Costs”), plus the allowable percentage markup in the Cost Schedule, provided Contractor adheres to the following the competitive procedures:
 - Cost is \$2,500.01 - \$15,000 – three documented quotes – oral, written, or on line; or a written explanation to City Purchasing Manager and approval from the City’s Purchasing Manager for not receiving three quotes.
 - Cost is greater than \$15,000 – at least three written quotes, reviewed and approved by City procurement staff, or a written explanation to and approval from the City’s Purchasing Manager for not receiving three quotes.
 - Documentation of solicitations where cost exceeds \$2,500 shall be submitted with the Contractor’s cost estimate. If a cost exceeds \$15,000, documentation shall include a complete bidders list and the request for quotes that was sent to each prospective bidder.
- b. Temporary facilities and temporary use materials required for erosion control and dewatering operations may be considered as Other Direct Costs upon approval by the City.
- c. Only equipment or materials that are incorporated into the Work and contracted services directly related to the Work qualify for compensation

as Other Direct Costs. Compensation shall not be provided for any other costs associated with the Work not identified on the Cost Schedule or Work Order.

- (iv) The City reserves the right to reject any proposed subcontractors.
- (e) **Invoicing.** In addition to the general provisions in **PAYMENT OF INVOICES**, supporting documentation shall include:
 - (i) **Time and Material Work Orders:** (hourly billing for labor and/or equipment and materials):
 - a. Name of employee and/or type of equipment
 - b. Employee position title/job classification (if applicable)
 - c. Hours worked and/or equipment utilized on a daily basis, as documented by Contractor's Daily Record of Hours, signed by Contractor and City staff (attached hereto as revised by the City from time to time).
 - d. The approved charge rate for each classification of Contractor employee and/or equipment included in Cost Schedule, Attachment ____, and/or the Work Order authorizing the Work. In the absence of an individual rate in the Cost Schedule, the Contractor employee's general classification rate may be utilized.
 - e. If billed for use of equipment not in the Cost Schedule, documentation of prior authorization for equipment used, including cost and estimated quantities.
 - f. Documentation of any required competitive procurement for equipment, subcontractors, or materials.
 - g. Contractor's notarized affidavit shall be provided with the first invoice for those Work Orders not requiring a Payment Bond, stating that payment of subcontractors and materialmen shall be made pursuant to Section 218.735, F.S.
 - h. Proof of payment of subcontractors and materialmen for which Contractor has already received payment from the City. Proof may be in the form of (1) a cancelled check; (2) a receipt marked paid by subcontractor or materialman; (3) a waiver of claim executed by the subcontractor or materialman; (4) Contractor's sworn affidavit that all subcontractors and materialmen for which payment has been received from the City have been paid by the Contractor; or (5) any other form that has been pre-approved in writing by the City. For the final invoice purposes, proof of payment must be submitted not only as to amounts previously paid by the City, but also as to amounts included in the final invoice.
 - i. A copy of the original vendor invoice(s) for Other Direct Costs. Altered or amended vendor invoices shall be rejected. If a vendor's invoice is from a supplier other than the one providing the lowest quote, Contractor shall explain the reason for not using the lowest cost supplier. The City reserves the right to reduce the amount reimbursed if a competitive market analysis clearly demonstrates that the invoice exceeds market value. In no event shall Contractor charge the City for any subcontractor's work that exceeds the approved Cost Schedule.
 - j. Diversity Statement. If W/MBE subcontractors or suppliers are used, provide company names and amount spent with each. If no W/MBE subcontractors or suppliers are used, so indicate.

- k. Contractor may provide a detailed invoice with supporting information, or alternatively, may provide a summary invoice with the information provided from Contractor's payroll or other records as supporting backup material.

ii. **Fixed Price Work Orders:**

- a. Description of the Work that has been completed in accordance with the progress/payment schedule of the Statement of Work for the Work Order.
- b. Certification that the Work for which payment is requested has been completed in accordance with the Statement of Work for the Work Order, in a format approved by the City Project Manager.
- c. Proof of payment of subcontractors and materialmen as described above for Type 1 Work Orders.
- d. Diversity Statement. If W/MBE subcontractors or suppliers are used, provide company names and amount spent with each. If no W/MBE subcontractors or suppliers are used, so indicate.

iii. **Time and Materials with Not-to-Exceed Work Orders:**

- a. Description and certification of completion of the work as described above for Fixed Price Work Orders.
- b. Hourly billing information for Time and Materials Work Orders, as described above.
- c. Proof of payment of subcontractors and materialmen as described above for Time and Materials Work Orders.

55. **WORK SCHEDULE.** As per Scope of Work, Section 01001, Item 1.09 – Work Hours.

56. **CONTRACT INTERPRETATION.** In the event of a conflict between the terms of this Agreement and the General Conditions, the term of the General Conditions shall prevail.

57. **ENTIRE AGREEMENT.** The terms of this Agreement supersede any and all prior or contemporaneous understandings, agreements and representations and constitute the final and complete understandings of the parties.

ADDITIONAL PROVISIONS (In Alphabetical Order)

DEFINITIONS

ADDENDA: Written or graphic instruments issued prior to the opening of Bids which make additions, deletions, or revisions to the solicitation or contract documents.

AGREEMENT: The written contract between the City and Contractor covering the Work, which includes all documents attached to this Agreement or incorporated herein by reference. The words “contract” and “Agreement” are synonymous in these documents.

AMENDMENT: Any written change made to the terms and conditions of the Agreement.

BID: The written offer of Respondent (when submitted on the reproduced approved forms) to perform the Work and furnish the necessary materials in accordance with the provisions of this Agreement.

BID BOND: The security furnished with a Bid to guarantee that Respondent will enter into a contract and execute, deliver, and perform all other obligations described in the Invitation for Bids if Contractor receives a Notice of Intent to Award the contract from the City.

CHANGE ORDER: A written agreement of the parties after the Commencement Date to amend this Agreement so as to modify the Scope of Work or the Total Compensation or provide for an extension of time.

COMMENCEMENT DATE: The date upon which the Work is authorized to proceed.

COMPLETION DATE: The date by which the Work is required to be completed.

CONTRACTOR: Contractor, its officers, employees, agents, successors, and assigns.

CONTRACTOR’S PROJECT MANAGER: The individual designated by the Contractor to be responsible for overall coordination, oversight, and management of the Work for Contractor.

CONTRACTOR’S SUPERINTENDENT: Contractor’s representative who is present during the progress of the Work and authorized to receive and fulfill instructions from the Contractor’s Project Manager or the City.

CPM or CRITICAL PATH METHOD: The use of calculated task duration with no regard for probabilities. A path has no float and is the longest path through the project. A critical path encompasses those project activities that are crucial and cannot be shifted, having calculated task duration. They are the important activities driving the project. Float belongs to the City.

DAY: Each day shown on the calendar.

DELIVERABLES: All Work that is to be performed pursuant to the Scope of Work, in whole or in part, including, but not limited to, all equipment or materials that are incorporated within the Work.

CITY: The City of St. Augustine, its Commission, officers, agents, and employees.

CITY’S PROJECT MANAGER: The City employee designated by the City to be responsible for overall coordination, oversight, and management of the Work for the City.

CITY’S SUPPLEMENTAL INSTRUCTION: Instructions issued by the City’s Project Manager to make minor changes in the Work not affecting the Total Compensation or the Completion Date, and consistent with the purpose of the Work.

FINAL RELEASE OF LIENS: The instrument that is to be signed by Contractor and submitted to the City upon completion of the Work showing that all bills from subcontractors have been paid.

INSPECTOR: The City’s Project Manager or an authorized representative of the City who is assigned to inspect the Work.

PERFORMANCE AND PAYMENT BOND: The security furnished by Contractor and surety in either the form provided or in a form approved by the City as a guarantee that Contractor will perform all of its contractual obligations in accordance with the terms of the Agreement and pay in full all bills and accounts for material, labor, services, and supplies used directly or indirectly in the performing the Work.

PERSON: Any individual, partnership, society, association, joint stock company, corporation, estate, receiver, trustee, assignee, referee, or capacity, whether appointed by a court or others, and any combination of individuals.

PRINCIPAL: When used in a Bid, Performance and Payment Bond, the word “principal” means the same as the word “Contractor.”

REQUEST FOR BIDS: An advertised solicitation for sealed competitive Bids, with the title, date, and hour of the public opening designated. It includes a detailed description of the goods and/or services sought, the date for submittal of Bids, and all contractual terms and conditions.

RESPONDENT: Any person who submits a Bid in response to a Request for Bids or a proposal in response to a Request for Proposals.

SCOPE OF WORK: The City’s written directions, requirements and technical specifications for completing the Work. Standards for specifying materials or testing that are incorporated therein by reference shall have the same force and effect as if fully set forth therein.

SUBCONTRACTORS: Those persons having a direct contract with Contractor relating to performance of the Work, including one who furnishes material worked into a special design in accordance with the plans or specifications of the Work, but not including one who merely furnishes material.

SURETY: The entity bound by a bond to be liable for Contractor’s satisfactory performance of the Work and payment of all debts pertaining thereto.

TOTAL BID: The total cost to be paid to Contractor for completion of the Work.

TOTAL COMPENSATION: The total funds to be expended pursuant to this Agreement upon satisfactory completion of the Work.

WORK: All labor, materials, equipment, transportation, supporting documentation, and other products, services, or facilities necessary for complete performance of the Agreement.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in duplicate, each of which shall be deemed an original on the day and year first above written.

CITY OF ST. AUGUSTINE,
FLORIDA a municipal corporation

ATTEST:

Name: _____
Darlene Galambos, City Clerk

By: _____

Printed Name: _____

(SEAL)

Title: _____

Date: _____

INSITUFOM TECHNOLOGIES, LLC

Signed, sealed and delivered
in the presence of:

Witness

By: _____

Printed Name: _____

Printed Name: _____

Title: _____

Date: _____

Witness

Printed Name: _____

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

Isabelle C. Lopez, City Attorney

Exhibit A: Scope of Work/Technical Specifications
Exhibit B: Insurance Requirements
Exhibit C: Work Order Authorization (sample)
Exhibit D: Unit Price Schedule
Attachment #1 – Protection of Archeological and Historical Sites
Attachment #2 – Unexpected Discoveries

EXHIBIT A – SCOPE OF WORK

Section 01001 General Work Requirements

Section 01010 Summary of Work

Section 01101 Special Requirements (Gravity Inspections Only)

Section 01200 Project Meetings

Section 01300 Submittals

Section 01516 Collection Systems Bypass

Section 01570 Maintenance of Traffic

Section 02761 Cleaning Sanitary Sewer Systems

Section 02762 Televising Sanitary Sewer Systems

Section 02763 Televising Sanitary Sewer Laterals

Section 02766 Sanitary Sewer Obstructions Removal

Section 02771 Cure-in-Place Pipe for Sanitary Sewer Renewal

Section 02772 Cure-in-Place Pipe for Lateral Renewal

Section 02773 Service Lateral Clean-outs for Televising Access

Section 02959 Sewer Main and Lateral Connection Sealing By Chemical Grout

SECTION 01001 GENERAL WORK REQUIREMENTS

PART 1 - GENERAL

1.01 REQUIREMENT APPLICATION

- A. The requirements included in this Section apply to Sections 01010, 01101, 01200, 01300, 01516, 01570, 02761, 02762, 02763, 02766, 02771, 02772, 02773, and 02959.
1. Each of these contract Sections apply to every work order regardless of a specific reference.

1.02 MINIMUM CONTRACTOR QUALIFICATIONS

- A. The following requirements shall be met to qualify for the Cleaning, CCTV and CIPP work.
1. Company:
 - a. A minimum total of 500,000 LF of Sanitary Sewer mains shall be previously completed within the previous 8-years.
 - b. A minimum total of 10,000 LF of tuberculation descaling.
 - c. A minimum total of 500 Ea. hammer tap service connections removal.
 - d. A minimum total of 200 Ea. sectional CIPP liners including one piece main/lateral CIPP liners.
 - e. Documented company QA/QC plan and procedures
 2. Company equipment:
 - a. At least one (1) pan and tilt CCTV camera with rotating lights
 - b. At least one (1) push type lateral cameras with footage counter and ability to display footage on screen and/or lateral launch type lateral camera with footage counter and ability to display footage on screen
 - c. Digital video capture system capable of capturing MPEG or Windows Media Video files on board the camera truck
 - d. PACP compliant inspection data logging software
 - e. At least one (1) jetter/vacuum truck
- B. The Contractor's staff experience shall meet as a minimum the following requirements. The inability to document such experience may be grounds for rejecting the proposed installer's staff.
1. The proposed **Superintendent** must have a minimum of three (5) years of CIPP lining supervisory field experience on projects totaling a minimum of 300,000 LF of 8-inch or greater CIPP liner installation using the methods and materials proposed for this Work, as documented by verifiable references. Superintendent's resume of projects. Each reference project shall include the pipe dimensions, length of installation, size/type of flow control required to perform the Work, description of the actual work performed including installation method, owner's name, telephone number and contact person, date of installation. It is required that the Superintendent(s) named are the Superintendent(s) assigned to this project and on-site during construction. The Contractor is always required to have at least 1 qualified Superintendent on site during the construction activities. All referenced experience shall be for projects completed within the United States or Canada and shall have used the same installation method, CIPP liner and resin combination proposed for this project. References will be checked.
Subcontractors superintendent may represent the Contractor provided the superintendent has a minimum of five (5) years of experience with the work that they perform, possesses



all required safety training certifications, and if applicable, and has a current FDOT temporary traffic control certification. 06-08-2020 Conformed

2. **Installation Crew:** At least 1 person other than the Superintendent from the CIPP installation crew shall have a minimum of 3-year of CIPP experience totaling at least 20,000 lineal feet of 8-inch or greater installed liner. The crewmember with listed qualifications must be on the project site during all installation activities.
3. **Boiler Technician:** Contractor shall provide the name and information for the boiler technician who will perform the actual Work. The boiler technician must have a minimum of 5 projects totaling at least 50,000 lineal feet of CIPP lining in which a similar position was held.
4. **Lateral Cutter Technician:** Contractor shall provide the name and information for the technician who will perform the actual Work. The lateral cutter technician must have worked on a minimum of 5 projects totaling at least 2,000 service laterals that have been opened in sewer mains that have included CIPP lining.
5. **Lead CCTV inspector** shall be NASSCO PACP certified to report liner defects.
6. The final decision to accept or reject the product, manufacturer, and/or installer lies solely with the County. The named Manufacturer, Field Superintendent, CIPP Lead Installer, Boiler Technician, and Lateral Cutter must be employed to perform the Work, unless changes are specifically authorized by the County.

C. These qualifications shall include detailed descriptions of the following:

1. To be acceptable, the contractor must have a minimum of 1,500 lateral liner installations in Florida.
2. To be acceptable, the contractor must have had a minimum of 3-years active experience in the commercial installation of the lateral lining.

D. Chemical Root Treatment.

1. Treatment shall be performed by a licensed Certified Pesticide Applicator with the State of Florida. 06-08-2020 Conformed.



E. Chemical Grout Applicator.

1. Chemical sealant shall have documented service of successful performance in similar usage with a minimum of 12000 joints/pipe defects and 1000 lateral joints grouted.

1.03 WARRANTY

- A. The materials used for the project shall be certified by the manufacturer for the specified purpose. The Contractor shall warrant the liner material and installation for a period of one (1) year from the date of final payment for the respective Work Order. During the Contractor warranty period, any defect which may materially affect the integrity, strength, function and/or operation of the pipe, shall be repaired at the Contractor's expense in accordance with procedures in these specifications and as recommended by the manufacturer.
- B. On any work completed by the Contractor that is defective and/or has been repaired, the Contractor shall warrant this work for an additional one (1) year.

1.04 NOTICES

A. General

- A. All notices or other papers required to be delivered by the Contractor to the City shall be delivered to the City of St. Augustine, Public Works Department, 75 King Street, St. Augustine, FL 32084.

1.05 WORK TO BE DONE

- A. The Contractor shall furnish all labor, materials, equipment, tools, services, and incidentals to complete all work required by the contract specifications and included in the Work Order documents. Progress on the work shall be at a rate which will ensure completion of the Work by the end date defined in the respective Work Order.
- B. The Contractor shall perform the Work complete, in place, and ready for continuous service, and shall include repairs, renewals, testing, permits, clean up, replacements, and site restoration required as a result of damages caused during this construction.
- C. The Contractor shall comply with all City, County, State, Federal, and other codes, which are applicable to the proposed Work.
- D. All newly constructed Work shall be carefully protected from injury in any way. No premature loading or post work inspections shall not be allowed until the renewal is properly cured and can withstand internal and external loading. All portions damaged shall be reconstructed by the Contractor at his own expense.
- E. General Scope of Work: See Section 01010 "Summary of Work" and the Unit Price Schedule for work that will be included in an annual contract for cleaning and renewal of the City's sanitary sewers.

1.06 DRAWINGS AND PROJECT MANUAL

- A. The Work shall be performed in accordance with the Specifications prepared by the City. All work and materials shall conform to the specifications listed in Section 01010 and the City Public Works Standards and Specifications Design Manual and Details, latest edition or as indicated in the Work Order.
- B. The Contractor shall verify all field dimensions, quantities and details included in each Work Order or other data received from the City, and shall notify same, in writing, of all errors, omissions, conflicts and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory Work, faulty construction or improper operation resulting there from, nor from rectifying such conditions.
- C. All proposal requests are given with the best information available to the City. The scope of work included in Work Orders is what is anticipated but is subject to change based on field conditions.
- D. Intent:
 - 1. All Work called for in each Work Order applicable to this Contract, but not shown or referenced in the respective Work Order or contract shall be of like effect as if shown or mentioned in both. Work not specified either in the Work Order or in the Contract but involved in carrying out their intent or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described.
 - 2. Items of material, equipment, machinery, and the like may be specified in the Work Order and

- not in the Contract Specifications. Such items shall be provided by the Contractor in accordance standards referenced in the Contract.
3. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any Work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.
- E. The more detailed work requirement will take precedence of the Contract and Work Order documents.

1.07 PROTECTION AND RESTORATION

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every means of protection necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or the Contractor shall make good the damage in other manner acceptable to the City.
- B. Protection of Trees and Shrubs
 1. Protect with boxes or other barricades.
 2. Do not place excavated material to injure trees or shrubs.
 3. Install pipelines in short tunnels between and under root systems.
 4. Support trees to prevent root disturbance during nearby excavation.
- C. Tree and Limb Removal
 1. Tree limbs, which interfere with equipment operation and are approved for pruning, shall be neatly trimmed and the tree cut coated with tree paint.
 2. The City may order the Contractor, for the convenience of the City, to remove trees along the line or trench excavation. The Contractor shall obtain any permits required for removal of trees. Ordered tree removal shall be paid for under the appropriate Contract Items.
- D. Trees or shrubs destroyed by negligence of the Contractor or his employees shall be replaced by the Contractor with new stock of similar size and age, at the proper season and at the sole expense of the Contractor.
- E. Lawn Areas: All lawn areas disturbed by construction shall be replaced with like kind to a condition similar or equal to that existing before construction. Where sod is to be removed, it shall be carefully removed, and the same re-sodded, or the area where sod has been removed shall be restored with new sod in the manner described in the applicable section.
- F. Where fencing, walls, shrubbery, grass strips or area must be removed or damaged incident to the construction operation, the Contractor shall, after completion of the work, replace or restore to the original condition.
- G. The cost of all labor, materials, equipment, and work for restoration shall be deemed included in the appropriate Contract Item or items, or if no specific item is provided therefore, as part of the overhead cost of the Work, and no additional payment will be made, therefore.

H. Property Damage

1. The Contractor/Subcontractor shall immediately investigate all reports of sewage backing up, blow-back, into fixtures served by the sewer section that is being cleaned, televised or rehabilitated. 06-08-2020 Conformed
2. The Contractor/Subcontractor will be required to notify the City immediately if he causes any damage to private or public property caused by activities related to this contract. The Contractor shall make repairs and/or clean the property immediately in a timeframe that is acceptable to the Property Owner and the City. 06-08-2020
3. The Contractor shall notify and keep the City informed of any property damage claim that arise from blow-back or backup in properties served by the sewer collection system. 06-08-2020 Conformed

1.08 PUBLIC NUISANCE

- A. The Contractor shall not create a public nuisance including, but not limited to, encroachment on adjacent lands, flooding of adjacent lands, or excessive noise.
- B. Noise control shall be in accordance with the City of St. Augustine Code of Ordinances Chapter 11 article IV.
- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

1.09 WORK HOURS

- A. Weekday work hours will be from 7 AM to 7 PM and 10 AM and 6 PM on weekends. Unless specifically authorized in writing from the City.

1.10 MAINTENANCE OF SERVICE

- A. The Contractor shall, prior to interrupting any utility service (water, sewer, etc.) for the purpose of performing work, contact the City and make arrangements for the interruption which will be satisfactory to the City.
- B. Utilities that are damaged during construction shall be repaired by the Contractor and service restored within 4-hours of the damage. The City retains the option of repairing any damage to storm or Sanitary utility pipes in order to expedite service to the customers. The Contractor will remain responsible for all costs associated with the repair.

1.11 TRANSFER OF SERVICE

- A. When the City has accepted the rehabilitation of a manhole and placed it into operation, the transfer of service is complete. The Contractor may begin the work of removing the existing or temporary facilities.

1.12 LABOR

- A. Supervision: The Contractor shall supervise and direct the Work efficiently and with his best

skills and attention. The Contractor shall have a competent, English speaking superintendent or representative, who shall be on the site of the Project at all working hours, and who shall have full authority by the Contractor to direct the performance of the Work and make arrangements for all necessary materials, equipment, and labor without delay.

B. MANUFACTURER

1. All transactions with the manufacturers or Subcontractors shall be through the Contractor, unless the Contractor and the City request that the manufacturer or Subcontractor communicate directly with the City. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.
2. All workmanship and materials shall be of the highest quality. The equipment shall be the product of manufacturers who are experienced and skilled in the field with an established record of research and development. No equipment will be considered unless the manufacturer has designed and manufactured equipment of comparable type and size and have demonstrated enough experience in such design and manufacture.
3. No material shall be delivered to the Site without prior submittal approval from the City.
4. All apparatus, mechanisms, equipment, machinery, and manufactured articles for incorporation into the Project shall be the new (most current production at time of bid) and unused standard products of recognized reputable manufacturers.
5. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Any two or more pieces of material or equipment of the same kind, type or classification, and being used for identical types of service, shall be made by the same manufacturer.
 - d. Products shall be suitable for service conditions as specified and as stated by manufacturer.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - f. Do not use material or equipment for any purpose other than that for which it is designed or is specified.
 - g. All lining materials shall come from manufacturer's whose quality system is registered to ISO 9001. 06-08-2020 Conformed



1.13 MANUFACTURER'S SERVICE

- A. Where service by the manufacturer is specified to be furnished as part of the cost of the Sewer Rehabilitation products, the expense of the Work shall be at incorporated into the respective unit price. 06-08-2020 Conformed
- B. The services provided shall be by a qualified manufacturer's service representative to demonstrate the product to City personnel, check and verify the completed installation and approve the installed products. Such services cover the period of time and for the number of trips required to meet the technical specification requirements
- C. The services shall further demonstrate to the City complete satisfaction that the equipment will satisfactorily perform the functions for which it has been installed.



1.14 INSPECTION AND TESTING

A. General

1. All materials and equipment furnished by the Contractor shall be subject to the inspection, review and acceptance of the City and meet the requirements of the technical specifications, codes and standards. If in the testing of any material or equipment it is ascertained by the City that the material or equipment does not comply with the Contract, the Contractor shall be notified thereof, and the Contractor will be directed to refrain from delivering said material or products, or to remove it promptly from the Site or from the Work and not accepted by the City shall be replaced with acceptable material or products, without cost to the City.
2. The Contractor shall give notice in writing to the City sufficiently in advance of his intention to commence the preparation of materials or products for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the preparation or application of materials. Upon receipt of such notice, the City may arrange to have a representative present at such times during the preparation, application, or testing of the materials or products; or the City will notify the Contractor that the inspection will be waived.
3. When inspection is waived or when the City so requires, the Contractor shall furnish to the City authoritative evidence in the form of Certificates of Proper use, surface preparation and installation from the Manufacturer. This certificate will state that materials used in the Work have been manufactured, installed and tested in conformity with their instructions, applicable standards and in accordance with the Contract Specifications. These certificates shall be notarized and accompany results of physical tests and chemical analysis, where necessary, that have been made directly on the product or on similar products of the manufacturer.
4. The Contractor must comply with these provisions before acceptance of the applied material or products by the City. Such inspections or acceptance by the City shall not release the Contractor from the responsibility for furnishing materials meeting the requirements of the Contract Specifications.

B. Cost

1. Contractor shall employ and pay for the services of an independent testing laboratory to perform testing indicated in the Contract Specifications, or at the City's discretion to ensure conformity with the Contract Specifications.
2. The cost of field leakage and pressure tests and shop tests of materials and equipment specifically called for in the Contract Specifications shall be borne by the Contractor. Such costs shall be deemed to be included in the Contract unit price.
3. The Contractor shall notify the City a minimum of 48-hours in advance of scheduled field tests.
4. The Contractor shall pay for all work required to uncover, remove, replace, retest, etc., any work not tested due to the Contractor's failure to provide the 48-hours advance notice or due to failed tests.

C. Shop Testing

1. Each material or system for which pressure, duty, capacity, rating, performance, and function or special requirements are specified shall be tested in the shop of the manufacturer in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Specifications. No such material or products shall be shipped to the worksite until the City notifies the Contractor, in writing, that the results of such tests are acceptable.
2. The manufacturing company shall provide five (2) copies of the manufacturer's actual shop test data and interpreted results signed by a responsible official of the manufacturing company and

- notarized, showing conformity with the Contract Specifications as a prerequisite for the acceptance of any materials or products used in manhole rehabilitations. The cost of shop tests and of furnishing manufacturer's preliminary and shop test data shall be in the Contract unit price.
- D. Field Testing:
1. The City may at any time during the progress of the Work, request additional testing beyond that which is specified in the Contract Specifications. This testing will be at the City's expense. Contractor shall:
 - a. Arrange and have requested testing performed.
 - b. Secure and deliver to the laboratory adequate quantities of representative samples of materials proposed to be used and which require testing.
 - c. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes, which require control by the testing laboratory.
- E. Demonstration Tests: Upon completion of the Work and prior to final payment, all products installed under this Contract shall be subjected to acceptance or demonstration tests as specified or required to provide compliance with the Contract Specifications. The Contractor shall furnish all labor, fuel, energy, water and all other equipment necessary for the demonstration tests at no additional cost to the City.
- F. Final Inspection: Prior to preparation of the final payment application, a final inspection will be performed by the City to determine if the Work is properly and satisfactorily constructed in accordance with the requirements of the Contract Specifications.
- G. Inspection by Other Agencies: The Florida Department of Transportation, the Florida Department of Environmental Protection, and other authorized governmental agencies shall have free access to the site for inspecting materials and work, and the Contractor shall afford them all necessary facilities and assistance for doing so. Any instructions to the Contractor resulting from these inspections shall be given through the City. These rights of inspections shall not be construed to create any contractual relationship between the Contractor and these agencies.

1.15 PROJECT SITE AND ACCESS

A. RIGHT-OF-WAY AND EASEMENTS

1. The use of public streets and alleys shall be such as to provide a minimum of inconvenience to the public and to other traffic. Any earth or other excavated material shall be removed by the Contractor and the streets cleaned to the satisfaction of the City.
2. The Contractor shall not enter or occupy private land outside of easements, except by written permission of the property owner.
3. At the time of the Pre-Construction meetings, the Contractor shall become fully acquainted with the status of all easements.

B. ACCESS

1. Neither the material removed, nor the materials or equipment used in the construction of the Work shall be so placed as to prevent free access to all fire hydrants, valves, pumping stations or private utility facilities.
2. Access to businesses located adjacent to the project site must always be maintained. Contractor may prearrange the closing of business access with the business Owner. Such prearranged access closing shall not exceed two (2) hours. Property shall be restored, and all construction

debris removed within 48-hours of acceptance of each manhole rehabilitation.

3. Contractor agrees that representatives of the City and any governmental agents will have access to the Work wherever it is in preparation or progress and that the Contractor shall provide facilities for such access and inspection.

C. Hurricane Preparedness

1. During such periods of time as are designated by the National Weather Service, as being a hurricane alert, watch or warning the Contractor shall perform all precautions as necessary to safeguard the work and property, including the removal of all small equipment and materials from the site, lashing all other equipment and materials to each other and to rigid construction and any other safety measures as indicated below.
2. Upon Notification of a Hurricane Alert by the City Manager, all Contractors performing work within right-of-way of a designated evacuation route shall immediately secure their work within the right-of-way so that the route will accommodate unrestricted traffic flow.
 - a. Contractors performing work at all other locations shall remove all unnecessary debris, materials and equipment from the job site.
2. Upon Notification of a Hurricane Warning Contractors shall prepare to execute their approved Plan of Action on their specific projects.
3. Upon Notification of a Hurricane Watch Contractors shall implement their approved Plan of Action to protect the project and public.
 - a. For work within public right-of-ways, the Contractor will be notified by the City to suspend his construction operations.

1.16 UTILITIES

A. UTILITY CONSTRUCTION

1. Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes and all other appurtenances and facilities pertaining thereto, whether owned or controlled by governmental bodies or privately owned by individuals, firms or corporations, used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage or water. Other public or private property, which may be affected by the Work, shall be deemed included hereunder.
2. All open excavations associated with manhole rehabilitations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during rehabilitations shall be removed when no longer required.
3. If any excavation becomes a hazard, or if it excessively restricts traffic at any point, the City may require special construction procedures. As a minimum, the Contractor shall conform to the following restoration procedures:
 - a. Interim Restoration: All excavations shall be backfilled and compacted as specified by the end of each working day or proper barricades shall be in place before the end of the work-day. For excavations within existing paved areas; lime rock base or soil cement base (match existing) shall be spread and compacted to provide a relatively smooth surface free of loose aggregate material. At the end of each workweek, the asphaltic surface course shall be completed and opened to traffic. Contractor shall coordinate his construction activity including density tests and inspections to allow enough time to achieve this requirement. All driveway cuts shall be backfilled, compacted, and lime rock base spread and compacted immediately after installation. Contractor shall coordinate with the individual property owners prior to removing the driveway section.

- b. All materials and products shall be neatly stored in a location, which will cause the least disturbance to the public. All debris shall be removed and properly disposed of by the end of each working day.
- c. Final Restoration Overlay: After completing all installations, testing, and acceptance of the rehabilitation work by the City, final restoration shall be performed. Any additional restoration required after testing shall be repaired in a timely manner at no additional cost to the City.
- d. Maintenance of all restored facilities shall be the Contractor's responsibility. This maintenance shall be performed on an on-going basis during construction. The Contractor's Progress Schedule shall reflect the above restoration requirements.
- e. Additional Restoration for Work in Business, Commercial or Historic Districts: The Contractor shall restore all private property, damaged by construction, to its original condition. Access to businesses located adjacent to the project site must always be maintained. Contractor may prearrange the closing of business accesses with the business owner. Such prearranged access closing shall not exceed two (2) hours. Property drainage and grading shall be restored within 24-hours of backfilling trench.

B. EXISTING UTILITIES

- 1. The locations of all existing underground piping, structures and other facilities are not provided in Work Orders. The Contractor will need to be requested "one call" for locates as needed for rehabilitation work. It is the Contractor's responsibility to verify all existing underground piping, structures and other facilities.
- 2. The Contractor shall, at all times, employ acceptable methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage or destruction of existing utility installations and structures; and shall, at all times in the performance of the Work, avoid unnecessary interference with, or interruption of, utility services; and shall cooperate fully with the owners thereof to that end.
- 3. When existing facilities are found to conflict with the Work, the City reserves the right to modify the scope of work in the respective Work Order to avoid interference with existing facilities and associated delays.
- 4. All utilities, which do not interfere with the work, shall be carefully protected against damage. Any existing utilities damaged in any way by the Contractor shall be restored or replaced by the Contractor at his expense as directed by the City. Any existing facilities, which require operation to facilitate repairs, shall be operated only by the owner of the respective utility.
- 5. It is the responsibility of the Contractor to ensure that all utility and/or poles, the stability of which may be endangered by the proximity to rehabilitation work, be temporarily stayed and/or shored in position while work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice of any such excavation.

C. NOTICES

- 1. All governmental utility departments and other owners of public utilities, which may be affected by the Work, will be informed in writing by the Contractor one (1) week after the execution of the Work Order covering the Work. Such notice will be sent out in general and directed to the attention of the governmental utility departments and other owners of public utilities for such installations and structures as may be affected by the Work.
 - a. Property owners shall be notified by the Contractor with door hangers at least 3 days prior to the shutdown of any main or lateral services adjacent to the respective property(s). The door hanger shall be approved by the City. The notice will include work will begin, expected date of completion, type of work, and contact person for any questions about the work or door hangers. When it is necessary to shut down a private sewer lateral while

work is in progress and before the laterals are reconnected, the owner shall be notified by the Contractor.

- b. A written record of these notifications shall be maintained by the Contractor and submitted to the City prior to service shut off.
2. The Contractor shall comply with Florida Statute 553.851 regarding protection of underground gas pipelines. Evidence of notification to the gas pipeline owner shall be furnished to the City within one (1) week after the execution of the Work Order.
3. It shall be the Contractor's responsibility to contact utility companies at least 72-hours in advance of any excavations required to perform manhole rehabilitations in any area so maintenance personnel can locate and protect facilities, if required by the utility company.
4. The Contractor shall give a minimum five (5) working day notice to utility personnel prior to interrupting a utility service (water, sewer, etc.).
5. Contractor shall notify the City a minimum of 4-work days prior to performing any inspection work.
6. Note that notification requirements associated with manhole rehabilitations are included in other Sections that are part of this contract.
7. Traffic changes.
 - a. The Contractor will notify individual owners, owner's agents, and tenants of buildings affected by construction, with copies to the City, 72-hours in advance of any construction activities.
 - b. The Contractor shall notify residents and pedestrians via message boards no later than 10 days prior to the closure of any road lane or pedestrian thoroughfare.
 - c. The Contractor shall notify Emergency Management Services agencies, St. Johns County EOC no less than 7 days prior to such closures or whenever roads are impassable.
 - d. Implement closing of vehicle or pedestrian thoroughfare in accordance with construction drawings and the approved Traffic Control Plan.
 - e. The Contractor will immediately notify the City of any vehicular or pedestrian safety or efficiency problems incurred as a result of the construction of the Project.

1.17 RELATED CONSTRUCTION REQUIREMENTS

A. PUBLIC INFORMATION OFFICER

1. The Contractor shall provide community interaction and coordination through Work Order Manager (WOM). The WOM will provide resolution to complaints and problems from community members affected by the construction for the entire project duration. The City maintains a 24-hour phone number for citizens to call in cases of emergency. The City will field these calls, provide answers to questions, research issues with the project team or appropriate agencies and follow up each complaint in a timely manner. The WOM will maintain a daily diary of call and/or interactions with the community, as well as a complaint log chronicling all issues and proposed resolutions.
2. The WOM shall attend the project progress meetings and provide the project team with a report of public issues since the last progress meeting. The WOM will also disseminate roadway closures, temporary and permanent restoration and other relevant construction information to the community, as well as, when appropriate, to the media, emergency services personnel and other interested agencies.
3. The designated WOM shall have previous experience in providing similar services.

B. TRAFFIC MAINTENANCE

1. Refer to Section 01570 – Maintenance of Traffic

C. BARRIER AND LIGHTS

1. The Contractor shall exercise extreme care in the conduct of the Work to protect health and safety of the workmen and the public. The Contractor shall provide all protective measures and devices necessary, in conformance with applicable local, state and federal regulations. Protective measures shall include but are not limited to barricades, warning lights/flashers and safety ropes.
2. All equipment and vehicles operating within 10-feet of the roadway shall have flashing strobe lights attached.

D. DUST AND EROSION CONTROL

1. The Contractor shall prevent dust nuisance from his operations or from traffic.
2. Contractor is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.
3. Refer to the City of St. Augustine Standards and Specifications Design Manual and Standards Storm Water Pollution Prevention Plan Sheet N-1 for erosion control requirements associated with manhole rehabilitation work.

E. LINES AND GRADES

1. Maintain existing lines and grades of the rehabilitated manholes. Where frames and covers are replaced refer to grade requirements in Section 02775, Wastewater Manhole Rehabilitation paragraph 3.19.

F. TEMPORARY CONSTRUCTION

1. Temporary fences: If, during the Work, it is necessary to remove or disturb any fencing, the Contractor shall at his own expense, provide a suitable temporary fence which shall be maintained until the permanent fence is replaced.
2. Responsibility for Temporary Structures: In accepting the Contract, the Contractor assumes full responsibility for the sufficiency and safety of all temporary structures or work and for any damage which may result from their failure or their improper construction, maintenance or operation.

G. DAILY REPORTS

1. The Contractor shall submit to the City's Representative daily reports of construction activities excluding non-workdays. The reports shall be complete in detail and shall include the following information:
 - a. Days from Work Order commencement date.
 - b. Weather information
 - c. Work activities, including manpower, equipment and daily production quantities.
 - d. Major deliveries
 - e. Visitors to site
 - f. Test records
 - g. New problems, and
 - h. Other pertinent information
2. A similar report shall be submitted for/by each Subcontractor.
3. The report(s) shall be submitted to the City Representative within 2 days of the respective report date. Each report shall be signed by the Contractor's Superintendent or Project Manager.
4. If a report is incomplete, in error, or contains misinformation, a copy of the report shall be returned by the City Representative to the Contractor's Superintendent or Project Manager with corrections noted. When chronic errors or omissions occur, the Contractor shall correct the procedures by which the reports are produced.

H. CLEANING

1. During Construction

- a. During construction of the Work, the Contractor shall, at all times, keep the Site free from material, debris and rubbish as practicable and shall remove the same from any portion of the Site if, in the opinion of the City, such material, debris, or rubbish constitutes a nuisance or is objectionable.
- b. Provide on-site containers for the collection of waste materials, debris and rubbish and remove such from the Site periodically by disposal at a legal disposal area away from the Site.
- c. The Contractor shall remove from the site all surplus materials and temporary structures when no longer necessary to the Work at the direction of the County.

2. Final Cleaning

- a. At the conclusion of the Work, all equipment, tools, temporary structures and materials belonging to the Contractor shall be promptly taken away, and the Contractor shall remove and promptly dispose of all water, dirt, rubbish or any other foreign substances. Employ skilled workmen for final cleaning. Thoroughly clean all installed equipment and materials to a bright, clean, polished and new appearing condition. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- b. The Work site surrounding the rehabilitated manhole shall be returned to the pre-construction condition documented by video and photographs. The condition is to be equal or better than what existed before the Work.
- c. Prior to final completion, or City beneficial occupancy, Contractor shall conduct an inspection of interior and exterior surfaces, and all work areas to verify that the entire Work is clean. The City will determine if the final cleaning is acceptable. or political subdivision having jurisdiction.

I. RESPONSIBILITY FOR OVERFLOWS AND SPILLS

- 1. It shall be the responsibility of the Contractor to schedule and perform his work to result in no overflows or spills of sewage from the system. If sewage flows are such that they interfere with the Contractor's ability to perform work, the Contractor shall be responsible for scheduling his work during low flow periods or provide bypass pumping. Bypass pumping shall be provided only with the specific written approval of the City.
- 2. In the event of overflows caused by the Contractor's work activities, the Contractor shall immediately take appropriate action to contain and stop the overflow, clean up the spillage, and disinfect the area affected by the spill. The Contractor shall also notify the City Utility Manager immediately upon becoming aware of the discharge. They will provide instructions on this notification during and after normal business hours, nights, weekends and holidays.
- 3. The Contractor will reimburse the City for all sampling, testing and analysis necessary to document that the contamination caused by overflows or spills associated with their work has been eliminated.
- 4. In the City's opinion, if the Contractor has not taken immediate actions necessary when a spill or overflow occurs the City will provide the labor, equipment, materials and related costs to

- stop the overflow, clean up the spillage and disinfect the area. The Contractor will be responsible to reimburse the City for all documented costs incurred as a result of spills and overflows related to the Contractor's work.
5. Immediate actions are to be taken to stop the overflow and eliminate the potential public health hazard. Actions to address overflows is a condition precedent to all work.
 6. All overflows, regardless of quantity will needed to be documented on a Sanitary Sewer Overflow (SSO) Report and submitted to the Florida Department of Environmental Protection Northeast District Office.
 7. Contractor will indemnify and hold harmless the City for any fines or third-party claims for personal or property damage arising out of a spill or overflow that is fully or partially the responsibility of the Contractor. Should fines subsequently be imposed as a result of any overflow for which the Contractor is fully or partially responsible, the Contractor shall pay all such fines and all of the City's legal, engineering, and administrative costs in defending such fines and claims associated with the overflow or spill.
- J. CHEMICAL ROOT TREATMENT OF SANITARY SEWER LINES
1. The Contractor shall provide Pollution Liability Insurance in addition to all other insurances required by the City.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01010

SUMMARY OF WORK

PART 1 - WORK COVERED BY CONTRACT DOCUMENTS

1.01 General

- A. This Contract is for the Cleaning and Renewal of Sanitary Sewer mains and laterals as described in the sections in the contract documents.
- B. The Work consists of cleaning and inspections, reports and repair recommendations for sewer mains, laterals, and connections/taps.
- C. Upon approval of repair recommendations, a request for proposal will be made for the agreed renewals procedures. Upon the City of acceptance of the main and lateral renewals a request for a proposal will be issued.
- D. Upon the City's approval of the renewal proposal a work order will be issued to renew designated main and lateral segments and/or sections.
- E. Contract Documents
 - 1. Section 01001 General Work Requirements
 - 2. Section 01010 Summary of Work
 - 3. Section 01101 Special Requirements (Gravity Inspections only)
 - 4. Section 01200 Project Meetings
 - 5. Section 01300 Submittals
 - 6. Section 01516 Collection System Bypass
 - 7. Section 01570 Maintenance of Traffic
 - 8. Section 02761 Cleaning Sanitary Sewer Systems
 - 9. Section 02762 Televising Sanitary Sewer Systems
 - 10. Section 02763 Televising Sanitary Sewer Laterals
 - 11. Section 02766 Sanitary Sewer Obstruction Removal
 - 12. Section 02771 Cured-In-Place Pipe for Sanitary Sewer Renewal
 - 13. Section 02772 Cured-In-Place Pipe for Lateral Renewal
 - 14. Section 02773 Service Lateral Cleanouts for Televising Access
 - 15. Section 02959 Sanitary Sewer Main and Lateral Connection Sealing by Chemical Grout
 - 16. City of St. Augustine (COSA) Standards and Specifications Design Manual and Details.
 - 17. Unit Price Schedule.
- F. Work that is covered with rehabilitations of the City sanitary sewers:
 - 1. All submittals in accordance with section 01300 and listed in the technical specifications.
 - 2. Attending and participating in work order pre-work and progress meetings in accordance with section 01200.
 - 3. Submitting and periodically updating work schedules.
 - 4. Audio- Visual documentation of sanitary sewer mains and lateral services both pre and post rehabilitation.
 - 5. Maintenance of Traffic in accordance with section 01570.
 - 6. Collection system bypassing in accordance with section 01516.
 - 7. Distribute notices, door hangers, to all residents and businesses in the location of work.
 - 8. Site security and safety.
 - 9. System type product application demonstrations for City personnel prior to application. These demonstrations will only apply to the first time the system or products use for renewal is proposed.

10. Interior surface preparation.
11. Point repairs with CIP sectional liners of sewer mains, laterals, service connections including end seals.
12. Point repairs with chemical grout of sewer mains, laterals, or at service to main fittings.
13. CIPP sewer main segments with or without pre-liners and end seals.
CIPP sewer laterals to the right-of-way line or point of service with end seals where they apply.
14. All restorations and cleanup.

3.01 SEQUENCE OF WORK

- A. The Contractor shall establish his work sequence based on the use of crews to facilitate completion of construction and testing within the specified Contract Time.
- B. The Contractor shall submit a schedule and work sequence to the Owner at least five (5) days prior to the Notice to Proceed. Work on all utility lines shall be accomplished so that all facilities will stay in operation.

PART 4 - PRODUCTS (NOT USED)

PART 5 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01101

SPECIAL REQUIREMENTS (GRAVITY INSPECTION ONLY)

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. The Contractor shall meet these minimum qualifications for closed circuit televising (CCTV) inspections of gravity sewers. Attend coordination meeting, provide proper notifications, and maintain an accurate weekly schedule. Contractor shall abide by the causes for rejection of Work in this section and other provisions described in other sections.

1.02 PRE-WORK

- A. Site conditions to be documented through video or still photographs prior to inspections. This documentation needs to include the location, date, time of day that the conditions were documented.

1.03 SUBMITTALS

- A. The qualifications of the cleaning and CCTV Contractor shall be submitted and shall include detailed descriptions of the following:
 - 1. Name, business address and telephone number of the CCTV Contractor
 - 2. Name(s) of all supervisory personnel to be directly involved with this Project
 - 3. NASSCO PACP certification of on-site operator performing inspections or subject to City approval, resume of proposed CCTV operator displaying similar inspection experience
 - 4. The Contractor shall sign and date the information provided and certify that to the extent of his knowledge, the information is true and accurate, and that the supervisory personnel will be directly involved with and used on this Project. Substitutions of personnel and/or methods will not be allowed without written authorization of the City.
 - 5. Specialty technicians shall be certified by the equipment manufacturer and/or its authorized representative. Certifications shall be submitted to the City.
- B. The inspection Contractor must have an internal quality assurance/quality control program in place and all inspection data shall be subjected to the procedures prior to submittal to the City. The City will perform QA/QC audits on submitted data.
 - a. QA/QC shall be performed by NASSCO PACP certified personnel.
- C. Refer to Technical Specifications Sections for submittals specific to each phase of the work.
- D. The CCTV Inspection Contractor shall submit a completed qualification form with the required information (see Table A - CCTV Inspection Contractor Qualification Form).

E. Previous Work Products:

1. The Contractor shall submit one (1) example of previous Pre and Post sewer renewal closed circuit televising (CCTV) inspections gravity sewers work for approval. The approved sample will establish the quality of deliverable to be expected on the project. The submitted example shall be the work of the field supervisor or foreman to be used on this Project.
2. The Contractor shall provide a minimum of 5 references for lining and grouting work performed. The references are to include the date when the work was performed, owner name, owner's representative name and phone number and type of work performed.

F. All submittals are due as scheduled Work will not proceed until all submittals are received and approved. The City reserves the right to adjust the due dates of the submittals based on Contractors performance. The Contractor shall label each submittal indicating what is represented, name of Contractor, and project number. All submittals identified as being in error shall be re-performed and corrected at the Contractor's expense. The City will have two workdays to review and status each submittal.

1. Qualifications of personnel.
 - a. State licensed
 - b. OSHA certified for confined space entry
 - c. FDOT MOT trained.
2. **Company safety and site-specific plan.**
3. Name of the project manager and site superintendent with resumes.
4. Documentation of NASSCO PACP certification for all CCTV operators, database and software.
5. Sample of pre-work notices to property owners.
6. FDOT MOT training certificates.
7. Sample of pre-work notices to property owners.

TABLE - A
CITY OF ST. AUGUSTINE PUBLIC WORKS DEPARTMENT
CCTV INSPECTION CONTRACTOR
QUALIFICATION FORM

<i>Company Reference Projects</i>		<i>Total Footage</i>	<i>Project Completed</i>	<i>Client Company</i>	<i>Contact Name</i>	<i>Contact (Phone Number and/or E-mail Address)</i>
<i>Listing of Company Management Personnel</i>	<i>PACP (Certification #)</i>	<i>MACP (Certification #)</i>	<i>Years of Experience in CCTV</i>	<i>Years of Experience as Supervisor</i>	<i>QA/QC Mgmt Supervisor (Y or N)</i>	<i>Position Title</i>
<i>Company Equipment Item</i>	<i>Manufacturer</i>	<i>Model No.</i>	<i>Description</i>			
Main Line CCTV Camera						
Lateral Camera (push type)						
Lateral Camera (launch type)						
Video Capture System						
PACP-Compliant Inspection Data Logging System						
Combination Jetter/Vacuum Truck						

(Rev.June/2018)

PART 2 - PRODUCTS (NOT USED)**PART 3 - EXECUTION****3.01 CONTRACT COORDINATION MEETING**

- A. Refer to Section 01200 for meeting requirements.

3.02 GENERAL PROGRESSION OF WORK

- A. Contractor shall submit an updated schedule of inspection and lining activities on a weekly basis if changes have been made to the original or updated project schedule.

- B. Contractor shall notify the City of work scheduled in accordance with Section 01001 General Work Requirements paragraph 1.16.C.
- C. All work shall be performed in an orderly, organized fashion, progressing through the project area(s) in a systematic manner. Contractor shall adhere to submitted and communicated schedules.

3.03 QUALITY ASSURANCE

- A. The Contractor shall have a QA/QC plan and procedures to ensure accurate data collection, documentation and submittal.
- B. The City has adopted the NASSCO PACP quality control procedures as the minimum standard to be applied to all submitted CCTV Inspection data. All submitted data shall be quality checked in accordance with these procedures.
- C. Cleaning operations shall be conducted by experienced personnel who have previously been engaged in cleaning operations of similar community systems is preferred. Cleaning experience in coastal community systems is preferred.
- D. The City will perform QA/QC checks on a minimum 5% of submitted inspection data.
- E. All submitted data will be subject to City QA/QC following the same procedures set forth herein following in paragraph 3.04 "CCTV Inspection QA/QC Procedures."

3.04 CCTV INSPECTION QA/QC PROCEDURES

- A. The Contractor shall determine the approximate number of inspections performed by each inspection field supervisor/foreman that submitted data on a weekly basis to determine the quality control sampling population. A review of a minimum of 5% of the total inspections is required.
- B. The Contractor shall number the inspection reports in the order they were inspected.
- C. The Contractor shall utilize a random number generator to determine the inspection report numbers for review.
- D. Each inspection report that corresponds to the random numbers will be marked for review, the inspection report printed, and the video copied to the QA/QC directory.
- E. Each selected inspection report will be reviewed in detail against the inspection digital video.

- F. Each field that is populated and those that should have been populated will be counted to produce a "number of fields checked" for the required header information and detailed inspection information. The fields with errors, or missing data, regardless of the error will be totaled to determine the "error count". The accuracy level will then be calculated as follows: $100 - ((\text{error count} / \text{number of fields checked}) * 100) = \text{accuracy percentage}$.
- G. The percentage accuracy shall be entered onto a graph so that the on-going accuracy of each supervisor (operator) can be seen.
- H. The accuracy of each field supervisor/foreman's data shall exceed 90%.
- I. The Contractor shall submit, along with the inspection deliverables, quality control forms that include a hard copy print out of the inspection reports checked with errors and omissions clearly marked.
- J. The Contractor shall enter the accuracy level calculations in each supervisor (operator) quality control log.

3.05 REJECTION OF WORK

- A. Failure of City QA/QC checks will result in a "quality deficiency" notification to request from the Contractor how the rejected Work shall be addressed.
- B. Failure to notify City prior to field work being performed in accordance with the City notification procedures may constitute rejection of Work that was performed without notification.
- C. Payment shall be withheld for inspection work not passing the City QA/QC check, until such time that the data is re-submitted and verified accurate.
- D. Subsequent failures of City QA/QC checks may result in the City requiring a change in field supervisor.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Contractor participation in pre-work conferences, and by exception progress, planning and demonstration meetings.
- B. Progress and planning meeting exceptions. Progress and planning meetings may be held on a by-weekly frequency for work orders extending 8 calendar weeks or more. Demonstration meetings will be held when new system type products are proposed for renewal work. System type products are those materials that has multiple components.

1.02 MEETINGS CALLED BY THE CITY

- A. The City will schedule and administer a pre-work conference, and by exception progress meetings and specific topic meetings throughout the progress of the Work. The City will:
 - 1. Prepare and distribute a notification of the meeting to required attendees.
 - 2. Establish, prepare and distribute an agenda with the notification.
 - 3. Make physical arrangements for the meetings.
 - 4. Preside at meetings.
 - 5. Prepare and distribute minutes of meetings including significant proceedings and decisions, within 15 working days after each meeting. Minutes will be forwarded to all participants and to parties affected by decisions made at the meeting.
- B. Representatives of the Contractor, Subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The pre-work meeting location will be held at the 4th floor of City Hall in the Public Works Conference Room and any progress or specialty meetings may be held at the City Field Operations Facilities. All contractor employees may obtain parking passes for the meeting at City Hall. The parking at the operations facilities is informal.

1.03 PRE-CONSTRUCTION CONFERENCE

- A. Attendance:
 - 1. City
 - 2. Contractor and superintendent
 - 3. Subcontractors as appropriate to the agenda
 - 4. Representatives of suppliers and manufacturers as appropriate to the agenda
 - 5. Other agency representatives (FDOT, SJC, etc.)
 - 6. Others as requested by the City or Contractor
- B. Prior to commencing field activities, the Contractor shall attend a Coordination Meeting with the City. Contractor shall be prepared to discuss the following agenda items:

1. Project contacts
2. City notification procedures
3. Public notification requirements
4. Inspection QA/QC
5. Deliverables
6. Schedule

1.04 PROGRESS MEETINGS

- A. See pre-work meeting paragraph 1.03. The Contractor's representative is to attend meetings and have the authority to act on behalf of the entity represented on field related matters. Contractor's representative is to study previous meeting minutes and current agenda items, in order to be prepared to discuss pertinent topics and provide specific information on the agenda.
- B. Revision to Minutes:
 1. A draft of the meeting notes will be distributed to the attendees. A time frame will be provided for any suggested changes. Meeting notes will be issued at the end of this time period or when all changes or content is finalized.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01300**SUBMITTALS****PART 1 - GENERAL**

- A. Work completed without approved Shop Drawings and/or samples shall be considered installed at the Contractor's risk.

1.01 SHOP DRAWINGS AND DATA

- A. Contractor's drawings, certifications, samples, proposed equipment, plans, data sheets and forms shall be clearly marked with specification title and numbers to identify pertinent materials. Delete information which is not applicable to the Work by striking or cross-hatching.
- B. If Shop Drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in the letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, the Contractor shall not be relieved of the responsibility for executing the Work in accordance with the Contract, even though such Drawings have been reviewed.
- C. All submittals are to be in conformance with applicable standards or codes.
- D. Submittals may be provided electronically via portable hard drives, ftp web sites or similar.

1.02 REVIEW OF SHOP DRAWINGS AND SAMPLES

- A. The City /Professional's review of submittals and samples as submitted by the Contractor will be to determine if the items(s) generally conform(s) to the information in the Contract Documents.
- B. The review of submittals will be general, and shall not be construed:
 - 1. As permitting any departure from the Contract Documents
 - 2. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials
 - 3. As approving departures from details furnished by the City/Professional, except as otherwise provided herein
- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract Documents which the City/Professional finds to be in the interest of the City and to be so minor as not to involve a change in Contract Price or Contract Time, the City/Professional may return the reviewed drawings without noting an exception.
- D. "Approved as Noted": Contractor shall incorporate City/Professional's comments into the submittal before release to manufacturer. The Contractor shall send a letter to the City/Professional acknowledging the comments and their incorporation into the Shop Drawing.
- E. "Amend and Resubmit": Contractor shall resubmit the Shop Drawing to the City. The resubmittal shall incorporate the City's comments highlighted on the Shop Drawing.

- F. "Rejected": Contractor shall correct, revise and resubmit Shop Drawing for review by City.
- G. "Record Copy" will be accepted for record purposes only.
- H. Resubmittals will be handled in the same manner as first submittals. For resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by City on previous submissions. The Contractor shall make any corrections required by the City.
- I. When the Shop Drawings have been completed to the satisfaction of the City/Professional, the Contractor shall carry out the Construction in accordance therewith and shall make no further changes therein except upon written instructions from the City.

1.03 **PRODUCT DATA**

- A. Submit not less than 1 electronic or 2 -copies, unless approved by the City. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to the Work.

1.04 **SAMPLES**

- A. Submit the number of samples specified in the respective Specification section, but no less than two (2). After review one (1) will be retained by the City. Reviewed samples that may be used in the Work are indicated in the Specification Section.
- B. Samples shall be of sufficient size to clearly illustrate:
 - 1. Each sample shall have a label indicating:
 - a. Name of Project
 - b. Name of Contractor and Subcontractor
 - c. Material or equipment represented
 - d. Place of origin
 - e. Location in Project
 - f. Specification title and number
 - g. Submittal number

1.05 **DRAWINGS, PRODUCT DATA AND CERTIFICATES**

- A. Each letter of transmittal shall identify every item transmitted by title, drawing number, revision number and date.
- B. The following is applicable to submitted videos, plans, drawings, and certificates:
 - 1. Each submittal shall identify applicable Standards.
- C. When resubmission is required, the City will return only one (1) marked up copies. A third submission from the same manufacturer will not be accepted.

1.06 SUBSTITUTIONS

- A. The substitution requirements of this Section are in addition to the requirements of the General Conditions.
- B. When a product is specified or called for, it is intended and shall be understood that the proposal tendered by the Bidder includes those products in his Bid. Substitutions will only be considered in cases where original materials are unavailable or in an instance where substitute can be proven superior in its planned application
- C. The intent of these specifications is to provide the City with a quality facility without discouraging competitive bidding. For products specified only by reference standards, performance and descriptive methods, without naming manufacturer's products, the Contractor may provide the products of any manufacturer complying with the Contract Documents, subject to the review of product data by the City as specified herein.
- D. The City's approval is required for substitutions.
- E. The Contract is based on the materials, equipment and methods described in the Contract Documents.
- F. Do not substitute materials, equipment or methods unless such substitution has been specifically approved for this Work by the City in writing. The Contractor must provide a submittal per this Section specifically requesting approval of the substitution. Failure to specifically identify the requested substitution may invalidate approval of a submittal.

1.07 AVAILABILITY OF SPECIFIED ITEMS

- A. Verify prior to bidding that all specified items will be available in time for installation during Construction for orderly and timely progress of the Work.
- B. If specified items will not be available, notify the City prior to receipt of proposals.

PART 2 - PRODUCTS (NOT USED)**PART 3 - EXECUTION****3.01 SUBMITTAL PROCEDURES**

- A. On resubmittals, direct specific attention in writing or on the revised Drawings or sample to revisions other than the corrections required by City on previous submissions.
- B. All drawings, schematics, manufacturer's product data, certifications and other drawing submittals required for a system specification shall be submitted at one time as a package to facilitate interface checking.

- C. All Shop Drawings shall be accompanied with a transmittal letter providing the following information:
1. Project Title and Contract Number
 2. Date
 3. Contractor's name and address
 4. The number of each Shop Drawing, project data, and sample required
 5. Notification of Deviations from Contract Documents
 6. Submittal Log Number conforming to specification section numbers
 - a. Submit each specification section separately.
 - b. Identify each Shop Drawing item required under respective specification section.
 - c. Identify resubmittal using specification section followed by A (first resubmittal), B (second resubmittal) ...etc.

3.02 CITY'S REVIEW

- A. Corrections or comments made on Submittals during review do not relieve the Contractor from compliance with the requirements of the Specifications and standards. This check is only for review of general conformance. Any substitutions or changes shall be properly noted.
- B. Review Time:
1. On a normal basis, each submittal will be returned to the Contractor within 2 working days of the date it is received. CCTV videos will be an exception.
 2. If, for any reason, the above schedule cannot be met, the Contractor will be so informed within a reasonable period.

END OF SECTION

SECTION 01516

COLLECTION SYSTEM BYPASS

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. SEWER BYPASSING AND DEWATERING

1. Contractor shall provide all isolation and bypass operations: The Contractor's objective of flow bypass and/or diversion pumping is to maintain an efficient and uninterrupted level of service to wastewater collection system users while maintenance or construction operations (including rehabilitation, repair or replacement) are being performed on the segment(s) being bypassed and/or from which flow is being diverted by:
 - a. Ensuring that bypass and diversion pumps are adequately fueled, lubricated and maintained.
 - b. Ensuring backup spare parts are expeditiously applied to the flow bypass and/or diversion pumping system in the event of component breakdown.
 - c. Ensure an emergency backup plan is smoothly implemented in the event of system failure.
 - d. Preventing backup, spillage, flooding or overflow onto streets, yards and unpaved areas or into building, adjacent ditches, storm water mains and waterways while flow bypass or diversion pumping takes place.
 - e. Ensuring that installation, startup and subsequent disassembly of the flow bypass and diversion pumping system is smoothly transitioned.
2. Flow bypass and diversion pumping shall be done in such a manner so as not to damage private or public property or create a nuisance or public menace. The pumped sewage shall be in an enclosed hose or pipe that is adequately protected from traffic and shall be redirected into the wastewater collection system. After the work is completed, flow shall be returned to the sewer and all temporary equipment removed. The pumped storm water shall be in an enclosed hose or pipe that is adequately protected from traffic and shall be redirected into the storm water system. After the work is completed, flow shall be returned to the storm water mains and all temporary equipment removed.
3. When pumps are operating, an experienced bypass/diversion pump maintenance operator/mechanic and/or deputy shall continuously be on site to monitor the operation of the entire bypass/diversion system. The operator/mechanic shall comprehensively, methodically and continuously:
 - a. Adjust pump speed as appropriate so as not to adversely impact upstream or downstream flow condition levels.
 - b. Check that the effectiveness and security of bulkheads, dams, diaphragms, plugs, valves, weirs and all other flow control devices are working effectively and according to plan.

- c. Check the integrity of hoses and couplings along the entire bypass/diversion system.
 - d. Monitor lubrication levels and top off as necessary.
 - e. Facilitate minor repairs as required.
 - f. Report to City on problems arising.
4. The Contractor shall be solely responsible for planning and executing sewer flow control, bypass and diversion pumping operations. The Contractor shall be entirely liable for damages to private or public property that may result from his/her operations and for all cleanup, disinfection, damages, and resultant fines in the event of spillage, flooding or overflow.
 5. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.
 6. Once by-pass pumping is underway at any given site, work shall be completed as efficiently as possible without interruption.
 7. The level of noise emitted from pumps must be within regulations/ordinance parameters.
 8. On all sewer mains which have sags or dips, to an extent that the television camera lens becomes submerged during the television inspection, the Contractor shall use a high pressure cleaner to draw the water out of the pipe, or other means, to allow inspection of the pipe and identification of pipe defects, cracks, holes and location of service connections.

1.02 SUBMITTALS

- A. Prior to implementation of any bypass, the Contractor will submit and receive City acceptance of a bypass plan. The Contractor will submit to the City a comprehensive written plan for approval and acceptance that describes the intended bypass for the maintenance of flows during construction. The Contractor will also provide a sketch showing the location of bypass pumping equipment for each pump station or line segment(s) around which flows are being bypassed. The plan will include proposed tanker(s), pump(s), bypass piping, backup plan and equipment, work schedule, monitoring log for bypass pumping, monitoring plan of the bypass pumping operation, and maintenance of traffic plan.
- B. Provide prior notice to City for start-up and shutdown of bypass operations. Notice may be given by phone conversation  or text message to designated City representative. 06-08-2020 Conformed
- C. Spill response plan. 06-08-2020 Conformed 

PART 2 - PRODUCTS

2.01 GENERAL

- A. The Contractor will provide and maintain adequate equipment, piping, tankers, and other necessary appurtenances in order to maintain continuous and reliable wastewater service in all wastewater lines as required for construction. The Contractor will have tankers, backup pump(s), piping, and

appurtenances ready to deploy immediately.

- B. All piping will be designed to withstand at least twice the maximum system pressure or a minimum of 50-psi, whichever is greater.
- C. When bypassing a pump station, one (1) back-up pump equal to the primary unit will be provided by the Contractor. Bypass pumps shall have a maximum rating of 55 decibels for sound attenuation.

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall have all materials, equipment and labor necessary to complete the repair, replacement, or rehabilitation on the job site prior to isolating the gravity main segment, manhole, or pump station. The Contractor will demonstrate that the temporary bypass pumping system is in good working order and is sufficiently sized to successfully handle flows by performing a test run for a period of 24-hours prior to beginning the Work.
- B. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.
- C. Perform pre-test of bypass prior to beginning construction. Notify the City representative of when this testing is scheduled. 06-08-2020 Conformed 

3.02 TRAFFIC CONSIDERATIONS

- A. The Contractor shall locate bypass pumping suction and discharge lines to not cause undue interference with the use of streets, private driveways, and alleys, to include the possible temporary trenching of piping at critical intersections. Additional traffic maintenance requirements are found in Section 01570 "Maintenance of Traffic".

3.03 BYPASS OPERATION

- A. The Contractor shall submit a bypass plan to the City and the bypass plan must be approved before the bypass is operational to perform the Work. Contractor shall maintain the wastewater system flow and no surcharging will be allowed to occur out of the system.
- B. Where Work requires the main or pump station to be taken out service after normal working hours and bypass pumping is being used; the Contractor shall be responsible for monitoring the bypass operation 24-hours per day, 7-days per week. Any electronic monitoring in lieu of on-site monitoring must be detailed in the comprehensive written bypass plan.
- C. The Contractor shall ensure that no damage will be caused to private property as a result of bypass pumping operations. The Contractor will complete the Work as quickly as possible and pass all tests and inspections before discontinuing bypassing operations and returning flow to the wastewater manhole, main, or pump station.
- D. During bypassing, no wastewater will be leaked, dumped, or spilled in or onto, any area outside of the existing wastewater system.

- E. The Contractor shall immediately notify the City should a sanitary sewer overflow (SSO) occur. The Contractor shall take the necessary action to wash down, clean up and disinfect the spillage area to the satisfaction of the City or other governmental agency.
- F. The Contractor shall cease bypass operations and return flows to the new and/or existing sewer when directed by the City. When bypass operations are complete, all bypass piping shall be drained into the wastewater system prior to disassembly.

3.04 CONTRACTOR LIABILITY

- A. The Contractor shall be responsible for all required pumping, equipment, piping, and appurtenances to accomplish the bypass and for any and all damage that results directly or indirectly from the bypass pumping equipment, piping and/or appurtenances. The Contractor shall also be liable for all City personnel labor and equipment costs, penalties and fines resulting from sanitary sewer overflows. It is the intent of these specifications to require the Contractor to establish adequate bypass pumping as required regardless of the flow condition.

END OF SECTION

SECTION 01570 MAINTENANCE OF TRAFFIC

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes identifying safety hazards and then furnishing all necessary labor, materials, tools, and equipment including, but not limited to, signs, barricades, traffic drums, cones, flashers, construction fencing, flag persons, variable message boards, uniformed police officers, warning devices, temporary pavement markings, temporary sidewalk, delineators, etc., to maintain vehicular and pedestrian traffic through and adjacent to the project area. These measures and actions shall be taken to safely maintain the accessibility of public and construction traffic by preventing potential construction hazards. All materials, work and incidental costs related to Maintenance of Traffic will be paid for at the contract lump sum price.

1.02 REQUIREMENTS

- A. The Traffic Control Plan shall conform to the following standards:
 - 1. Standard Specifications for Road and Bridge Construction, latest edition including all subsequent supplements issued by the Florida Department of Transportation, (FDOT).
 - 2. Manual on Uniform Traffic Control Devices for Streets and Highways by U.S. Department of Transportation, Federal Highway Administration.
 - 3. All references to the respective agencies in the above referenced standards shall be construed to also include the municipality as applicable for this Work.
- B. Sequence the Work in a manner that will minimize disruption of vehicular and pedestrian access through and around the construction area.
- C. Traffic planning and control for the maintenance and protection of pedestrian and vehicular traffic affected by the Contractor's Work includes, but is not limited to:
 - 1. Construction and maintenance of any necessary detour equipment and facilities.
 - 2. Providing necessary facilities for access to residences and businesses.
 - 3. Furnishing, installing, and maintenance of traffic control and safety devices (e.g. signage, barricades, barriers, message boards, etc.), and flag persons as appropriate during Construction.
 - 4. Control of water runoff, dust and any other special requirements for safe and expeditious movement of traffic.
- D. Planning, maintenance and control of traffic shall be provided at the Contractor's expense. The Contractor will bear all expense of maintaining the vehicle and pedestrian traffic throughout the work area.
- E. The Contractor will ensure all personnel involved in traffic control are and capable of communicating with the public. The Contractor may be required to hire off-duty uniformed police officers, in addition to flag persons, to direct and maintain traffic. Locations and conditions requiring such uniformed police officers shall be as directed by the City. The Contractor shall be required to utilize uniformed police officers for work within FDOT maintained ROW, road closures affecting

school traffic and during all night work involving a road closure or crossing on nonresidential roads.

- F. The Contractor will remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions.
- G. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

1.03 SUBMITTALS

- A. Submit at Contractor's own expense a Traffic Control Plan for approval by the controlling roadway agency (FDOT, St. John's County Public Works or other local government) having jurisdiction over the road for approval.
 - 1. The Traffic Control Plan will detail procedures and protective measures proposed by the Contractor to provide for protection and control of traffic affected by the Work consistent with the following applicable standards:
 - a. Standard Specifications for Road and Bridge Construction, latest edition including all subsequent supplements issued by the Florida Department of Transportation, (FDOT Spec.).
 - b. Manual of Traffic Control and Safe Practices for Street and Highway Construction, Maintenance and Utility Operations, FDOT.
 - c. Right-of-Way Utilization Regulations, St. John's County, Florida, latest edition.
- B. All references to the respective agencies in the above referenced standards shall be construed to also include the municipality as applicable for this Work.
- C. The Traffic Control Plan will be signed and sealed by a Professional Engineer registered in the state of Florida and shall include proposed locations and time durations of the following, as applicable:
 - 1. Pedestrian and public vehicular traffic routing.
 - 2. Lane and sidewalk closures, other traffic blockage and lane restrictions and reductions anticipated to be caused by construction operations. Show and describe the proposed location, dates, hours and duration of closure, vehicular and pedestrian traffic routing and management, traffic control devices for implementing pedestrian and vehicular movement around the closures, and details of barricades.
 - 3. Location, type and method of shoring to provide lateral support to the side of an excavation or embankment parallel to an open travel-way.
 - 4. Allowable on-street parking within the immediate vicinity of worksite.
 - 5. Access to buildings immediately adjacent to worksite.
 - 6. Driveways blocked by construction operations.
 - 7. Temporary traffic control devices, temporary pavement striping and marking of streets and sidewalks affected by construction
 - 8. Temporary commercial and industrial loading and unloading zones.
 - 9. Construction vehicle reroutes, travel times, staging locations, and number and size of vehicles involved.
- D. Obtain and submit prior to erection, or otherwise impacting traffic, all required permits from all authorities having jurisdiction, excluding City of St. Augustine Public Works, if applicable.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. The Contractor shall furnish, erect, and maintain all necessary traffic control devices, including flag person, in accordance with the Manual of Uniform Traffic Control Devices for Streets and Highways published by the U.S. Department of Transportation, Federal Highway Administration.

1. FLAG PERSONS

- a. All flag persons used on this Project will adhere to the following requirements:
- b. Any person acting as a flag person on this Project will have attended a training session taught by a Contractor's qualified trainer before the start date of this Contract.
- c. The Contractor's qualified trainer will have completed a "Flag person Train the Trainer Session" in the 5-years previous or before the start date of this Contract and will be on file as a qualified flag person trainer.
- d. The flag person trainer's name and Qualification Number will be furnished by the Contractor at the Pre-Construction meeting. The Contractor will provide all flag persons with the Flag Person Handbook and will observe the rules and regulations contained therein. This handbook will be in the possession of all flag person while flagging on the Project.
- e. Flag persons will not be assigned other duties while working as authorized flag persons.
- f. Any person replacing flag person for break shall have the same training.

PART 3 - EXECUTION

3.01 NOTIFICATIONS

- A. Refer to Section 01001, General Work Requirements paragraph 1.16 for notification requirements.

3.02 GENERAL TRAFFIC CONTROL

- A. The Contractor will sequence and plan construction operations and will generally conduct Work in such a manner as not to unduly or unnecessarily restrict or impede normal traffic.
- B. Unless otherwise provided, all roads within the limits of the Work will be kept open to all traffic by the Contractor. The Contractor will keep the portion of the project being used by public traffic, whether it is through or local traffic, in such condition that traffic will be adequately accommodated.
- C. The Contractor will be responsible for installation and maintenance of all traffic control devices and requirements for the duration of the construction period. Necessary precautions for traffic control will include, but not be limited to, warning signs, signals, lighting devices, markings, barricades, canalizations, and hand signaling devices.
- D. The Contractor will provide and maintain in a safe condition temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages and farms.
- E. The Contractor will always provide emergency access to all residences and businesses. Residential and business access will always be restored and maintained outside of the Contractor's normal

working hours.

- F. Traffic is to be maintained on one section of existing pavement, proposed pavement, or a combination thereof. Alternating one-way traffic may be utilized and limited to a maximum length of 500-feet during construction hours. Lane width for alternating one-way traffic will be kept to a minimum width of 10-feet, or as directed by the City.
- G. Travel lanes and pedestrian access will be kept reasonably smooth, dry, and in a suitable condition at all times.
- H. The Contractor will make provisions at all "open cut" street crossings to allow for free passage of vehicles and pedestrians, either by bridging or other temporary crossing structures. Such structures will be of adequate strength and proper construction and will be maintained by the Contractor in such a manner as not to constitute an undue traffic hazard.
- I. The Contractor will keep all signs in proper position, clean, and legible at all times. Care will be taken so that weeds, shrubbery, construction materials, equipment, and soil are not allowed to obscure any sign, light, or barricade. Signs that do not apply to construction conditions should be removed or adjusted so that the legend is not visible to approaching traffic.
- J. The City may determine the need for, and extent of, additional striping removal and restriping.
- K. Excavated material, spoil banks, construction materials, equipment and supplies will not be located in such a manner as to obstruct traffic, as practicable. The Contractor will immediately remove from the site all demolition material, exercising such precaution as may be directed by the City. All material excavated shall be disposed of to minimize traffic and pedestrian inconvenience and to prevent damage to adjacent property.
- L. During any suspension, the Contractor will make passable and open to traffic such portions of the Project and/or temporally roadways as directed by the City for accommodation of traffic during the anticipated period of suspension. Passable conditions will be maintained until issuance of an order for the resumption of construction operations. When Work is resumed, the Contractor will replace or renew any Work or materials lost or damaged because of such temporary use in every respect as though its prosecution had been continuous and without interferences.

END OF SECTION

SECTION 02761

CLEANING SANITARY SEWER SYSTEMS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Work covered in this section consists of cleaning sewer and sanitary lateral lines prior to the internal television inspection(s) for new or existing Storm and wastewater systems.
- B. Sanitary Gravity Main and Service Lateral Cleaning: The intent of gravity main cleaning is to remove debris that may be causing a reduction in flow capacity, potential sewer backups, or that limits the ability to evaluate the structural condition of the pipe segment. On all sewers, the Contractor shall perform sewer-cleaning work to an acceptable level as necessary to perform a thorough television inspection of the sewer. An acceptable level is defined as the removal of all debris throughout the pipe segment cleaned. If the pipe condition is such that cleaning may cause a potential collapse, then the pipe shall be televised without attempting to clean it pending approval by the City.
- C. Water for Cleaning: The City shall provide access to water via fire hydrants for cleaning and other work items requiring water. The Contractor will be responsible for obtaining a transient water meter and paying for water used during course of cleaning. Additional compensation will be scheduled for extending water for cleaning greater than 500 feet from the main section to be cleaned.
- D. Recovering of Equipment: The Contractor will be responsible for recovering any equipment that becomes lodged or lost in the pipeline. The Contractor will be responsible for all costs associated with required evacuation, restoration of roads and easements, and repairs to pipes and manholes as needed to restore the pipeline and appurtenances back to their original conditions.
- E. Maintenance of Traffic (MOT)
Refer to General Requirements Section 01570, Maintenance of Traffic requirements.
- F. Existing Utilities: The Contractor must take the necessary precautions for the protection of any utility encountered on the project or the restoration of any utility damaged during the work.
 - 1. If an excavation is required, the Contractor shall notify, at least 48 hours before breaking ground, all public or private service corporations having wire, poles, pipes, conduit, manholes, or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans. Owners of underground utilities, which are members of the state's one call service, can be notified by calling. Non-member underground utility Owners must be called directly.
 - 2. All maintenance, repair, and replacement of existing utilities shall be in accordance with the rules and regulations of the various utility companies having jurisdiction.
 - 3. All existing storm sewers, driveway drains, surface drainpipes and other property, removed or damaged during work to clean and inspect the sewers shall be repaired and reconnected by the Contractor as directed by the City at no additional cost to the City.

G. Request for Supplementary Information

1. It shall be the responsibility of the Contractor to make timely requests of the City for supplemental information, which should be furnished by the City under the terms of this contract, and as required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved to avoid delay.
2. B. Each request shall be in writing and list the various items and the latest day by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after contract award and shall be as complete as possible at that time. The Contractor shall, if required, furnish promptly any assistance and information the City may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for all delays arising from failure to comply with this section.

H. Use of Premises

1. The Contractor shall not trespass upon or in any way disturb private property without first obtaining written permission from the property Owner and/or Owner or Prime Contractor as appropriate to do so. A copy of such written permission shall be furnished to the City prior to accessing the site.
2. It shall be the Contractor's responsibility to work equipment around poles, trees, or other obstructions and to do so at his own expense.
3. If the Contractor finds it necessary to obtain additional working area, it shall be the Contractor's responsibility for its acquisition.
4. The Contractor shall, at no additional expense, restore such property to the original condition in the sole and unfettered opinion of the property Owner. The Contractor must take photographs and/or videos of existing properties prior to disturbance of each property and make a copy available to the City.
5. All items within the street right-of-way or sewer easement shall be removed, or removed and replaced, or restored as directed by the City.
6. The Contractor shall ensure all employees have a badge or visible identification during any time that they on the project site or within private property. This identification must be worn so that it is readily recognized and readable to the public.

I. Protection of Trees

1. The Contractor shall avoid any unnecessary damage to trees. Branches which overhang the project limits, and which interfere with the operation of equipment shall be tied back to avoid damage, if possible. Where injury to branches is unavoidable, the branches shall be sawed off neatly at the trunk or main branch, and the cut area shall be protected with approved pruning spray immediately. The Contractor at no additional expense shall remove any trees damaged beyond saving and make restitution to the Owner (public or private).

J. Fencing

1. Any fences, including hedge and shrubs, that need to be removed to facilitate the work shall be replaced, in kind or with repairs satisfactory to the Owner, at the Contractor's expense. Replacement of fences, hedges, and shrubs shall be considered incidental to the contract and not measured for payment.

K. Restoration

1. All roadway berms and drainage ditches disturbed by the work shall be restored, reshaped, and graded to drain.
2. Pavement restoration, if necessary, shall conform to the City, County, or State standards and

specifications depending upon who has jurisdiction for the street. Trench backfill and compaction shall be in conformance with the local street restoration jurisdiction.

3. The remediation of sunken trenches caused by activities conducted in this contract shall be the Contractor's responsibility. Sunken areas shall be backfilled and compacted to meet adjoining grades; the surface shall be re-seeded or resurfaced with asphalt or concrete matching the existing surfacing.
4. The Contractor shall restore unpaved areas by seeding and mulching. No direct payment will be made for seeding and mulching.
5. Driveways shall be restored in accordance with Owner's regulations, or the Owner's Specifications depending upon who has jurisdiction for the driveway.
6. All disturbed areas shall be restored as nearly as possible to their original condition.
7. All restoration shall be completed in strict accordance with the appropriate items of the standards, specifications or matching the pre-work conditions as directed by the Owner.
8. The cost of all restoration of streets, drives, walks; sod, etc. shall be incidental to the contract and not measured for payment.
9. Restoration shall be kept current with the project work. Failure to keep restoration of these items completed reasonably close shall result in a stop work notice and delay of payment until such restoration is completed to the satisfaction of the Owner.

L. Cleanup

1. The Contractor shall keep the work area in an uncluttered condition by the frequent removal of debris. The Contractor shall remove all debris and unused material and leave the area in a condition similar to the condition of the area before any work was performed.

M. Property Damage

1. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

N. Access to Municipal Water Supplies

1. The City will make available a construction hydrant meter for cleaning water supply.

O. Reference Technical Specification 02766, Sanitary Sewer Obstruction Removal for requirements related to protruding taps and other obstructions and for further requirements regarding root removal.

P. Responsibility for Overflows and Sills

1. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.

Q. Installer Experience and Qualifications

1. Refer to Section 01001 General Work Requirements paragraph 1.02.B for minimum lining work experience. 06-08-2020 Conformed



1.02 CLEANING EQUIPMENT

A. Hydraulically Propelled Equipment:

1. The equipment used shall be of a movable dam type and be constructed in such a way that a portion of the dam may be collapsed at any time during the cleaning operation to protect against

flooding of the sewer. The movable dam shall be equal in diameter to the pipe being cleaned and shall provide a flexible scraper around the outer periphery for grease removal. Special precautions to prevent flooding of the sewers and public or private property shall always be taken. Storm/Sewer cleaning balls or other such equipment which cannot be collapsed instantly to provide an immediate unobstructed flow-way during emergency conditions will not be considered as acceptable cleaning equipment. The movable dam shall be of equal diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of the grease of obstruction.

B. High-Velocity Jet (Hydro-Cleaning) Equipment:

1. All high velocity hydraulic sewer cleaning equipment shall be truck mounted. The equipment shall have a minimum of 500 feet of $\frac{3}{4}$ inch I.D. high pressure hose with a selection of two or more high velocity nozzles. The nozzles shall have a capacity of 30 GPM at a minimum working pressure of 1000 psi. The nozzles shall be capable of producing a scouring action of 15 to 45 degree in the direction of cleaning and perpendicular to the sewer axis in all size lines designated to be cleaned. Equipment shall also include a high velocity gun for washing and scouring manhole walls and floor. The gun capacity shall equal 3.5 to 27 GPM at between 200 and 800 psi. The gun shall be capable of producing flows from a fine spray to a long-distance solid stream. The equipment shall carry its own 1200-gallon (minimum) water tank capable of holding corrosive or caustic cleaning, sanitizing or degreasing chemicals if required by the City, auxiliary engines and pumps, and hydraulically driving hose reel. All controls shall be located so that the equipment can be operated underground.

C. Mechanically Powered Equipment:

1. Bucket machines shall be in pairs with each machine powered by a minimum of a 16-horsepower engine to ensure sufficient pulling power. Machines shall have an overload device. Machines with direct drive that could cause damage to the pipe will not be used. The belt clutch gear reduction shall be a combination of approximately 83 to 1 reduction in low speed and 55 to 1 in high speed. The power rodding machine shall be either a sectional or continuous rod type capable of holding a minimum of 750-feet of rod. The rod shall be specially heat-treated steel, designed for the purpose intended. The machine shall have a positive rod drive and produce a 2,000-pound rod pull. To ensure safe operation, the machine shall be fully enclosed body and an automatic safety throw-out clutch or relief valve. The final pass shall be with a brush large enough to assure that the line has been cleaned sufficiently. This brush shall be mechanically driven, with the power mechanism properly sized. All electrical drops required by the Contractor shall be arranged by the Contractor.

D. Vacuum machines:

1. May be used for removal of materials from manholes when other cleaning equipment is used to dislodge and transport material to the access point.

E. Combination Cleaner:

1. For cleaning small and large diameter sewer, the Contractor may use a combination hydraulic high-volume water and solids separation system. Water volume of up to 250-gpm at or above 2,000-psi will move solids to the downstream manhole in high flow conditions. The separation system will dewater solids to 95 % (passing a paint filter test) and transfer them to a dump truck, if needed, for transport to a water reclamation facility, approved landfill, or other location specified by the County or designee. Wash water will be filtered to a point where it can be used in the pump for continuous cleaning. No bypassing of sewer flows will be necessary. The

unit shall be capable of 24-hour operation and the unit shall not leave the manhole until a section is fully cleaned.

1.03 CAPTURE AND REMOVAL OF DEBRIS:

- A. The Contractor shall furnish equipment, either specialized or stand in the industry, for the purpose of preventing debris from being washed past the manhole, inlet, or outfall downstream of the line segment being cleaned, and for removing the debris from the structure before any damage is caused to the system performance and or system equipment such as pump/lift stations, check valves, flowways, etc. The cost of all system downtime and repairs to restore operational status resulting from construction debris damage that in the City's opinion was reasonably preventable will be borne by the Contractor.

1.04 QUALIFICATIONS

- A. Refer to Section 01001 General Work Requirements paragraph 1.01.A for sewer cleaning minimum qualifications.

1.05 SHOP DRAWINGS AND SUBMITTALS

- A. Submittals shall be submitted to the City for review and acceptance prior to cleaning.
 - 1. Schedule of work:
 - a. Work Schedule. This schedule shall outline the sequence in which the Contractor proposes to conduct his operations and shall be submitted to the City two weeks in advance of performing work and provide the City a reasonable opportunity to observed and inspect work. The Contractor shall use a time-scaled format listing each segment of sewer to be cleaned. The level of detail of activities shall provide clear, concise communication of the plan of work. At a minimum, activities showing initial mobilization, start-up, and cleaning.
 - b. Original and updated schedules must be provided to the City in writing. The software used for producing the schedules must have the capability to tailor the form and format of schedules, and accompanying reports, may be use of Microsoft excel, project with similar formats.
 - c. The City may require additional updates to the schedule as changes occur. These additional updates will be submitted to the City within 24 hours of the request. Changes to the schedule are subject to approval of the City.
 - d. Schedule is to be updated weekly
 - 2. Proposed cleaning equipment.
 - 3. SDS for chemical cleaning products to be used.
 - 4. **Cleaning log** in a format acceptable to the City for purposes of recording pertinent information relative to the storm water main and sanitary sewer main and structures being cleaned.
 - 5. Chemical root control agent shall be registered with the EPA and the State Department of Agriculture as a General Use Herbicide and shall be labeled for use in sanitary sewers to control tree roots.
- B. Post Cleaning submittal.
 - 1. Cleaning log including any pertinent information observed during cleaning.
 - a. A daily log shall be maintained to record the location of the manholes and sewer
 - b. lines, lengths of the lines cleaned, method of cleaning, line sizes, identify type of
 - c. cleaning (light, medium, or heavy), and type of debris moved. Observations are to be
 - d. recorded on a cleaning report form.

PART 2 - PART 2 - PRODUCTS – NOT USED

PART 3 - PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall furnish and maintain, in good condition, all cleaning and equipment necessary for proper execution of the work.
- B. Maintaining Flow: It will be the responsibility of the Contractor, throughout the tenure of this contract, to provide and always maintain sufficient flow to pass any flash of storm flow of drainage ditches and prevent any backwater flooding due to obstruction caused by cleaning equipment.
- C. Refer to Section 01001, General Work Requirements paragraph 1.16.C for
 - 1. Notification of Public or Customers. No sewer or water service is to be shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained so that the business remains open. No sewage from the services or main line shall be discharged on the ground or in waterways.

3.02 SITE VISIT:

- A. The Contractor shall be responsible for conducting a physical reconnaissance of the area to be cleaned in order to verify the location of known and/or accepted manholes or inlets.
- B. The Contractor shall utilize a magnetic locator to attempt to identify the location of buried manhole covers and notify the City representative so that City personnel can excavate and bring the manhole up to grade prior to cleaning. Under no circumstances shall the Contractor excavate buried manholes without prior authorization from the City.

3.03 QUALITY ASSURANCE:

- A. Refer to Section 01101 article 3.03 and 304 for quality assurance and inspection requirements.

3.04 ISOLATION AND BYPASS OPERATIONS

- A. Refer to Section 01516 Collection System Bypass article 1.01 Scope of Work for sewer bypass requirements.

3.05 CLEANING PRECAUTIONS

- A. All necessary precautions shall be taken to protect the sewer from damage during all cleaning and preparation operations. Precautions shall also be taken to ensure that no damage is caused to public or private property adjacent to or served by the sewer or its branches. The Contractor shall pay for and restore, at no additional costs to the City, any damage caused to public or private property because of such cleaning and preparation operations.
- B. Satisfactory precautions shall be taken in the use of cleaning equipment. When hydraulically propelled cleaning tools (which depend upon water pressure to provide their cleaning force) or tools

which retard the flow in the sewer line are used, precautions shall be taken to ensure that the water pressure created does not damage or cause flooding of public or private property being served by the sewer. No fire hydrant shall be obstructed in case of a fire in the area served by the hydrant. All requirements shall be met when accessing a fire hydrant including but not limited to meters, backflow preventers, and properly trained personnel. It shall be the Contractor's responsibility to meet all state and local requirements.

3.06 HYDRAULIC CLEANING METHODOLOGY:

- A. High Velocity Cleaning Methodology: High velocity hydro-cleaning shall consist of cleaning and flushing of the sewer line by means of water pumped into the line at a high velocity. This shall be accomplished using approved equipment to deliver water to a self-propelled nozzle to do the necessary cleaning and flushing. As many passes as necessary shall be made to sufficiently clean the sewer line. 06-08-02020 Conformed 

3.07 MECHANICAL CLEANING METHODOLOGY:

- A. Rodding: Cleaning shall be with a power-driven continuous steel rod of sufficient length and gauge with the proper cleaning heads or augers, to loosen all solids or other materials. It shall also provide a means to thread a cable for the power winch.
- B. Bucket Machine: Removal of all solids, materials and other debris shall be by means of a clam-shell type bucket and/or other appliance dragged through storm water main or sewer line with power winches of suitable size and horsepower.
- C. Supplemental Cleaning: After all material has been removed by mechanical cleaning, a minimum of one pass using hydraulic cleaning methods shall be performed to ensure complete removal of material from the walls of the pipe. Any damage to pipes will be repaired.

3.08 SPECIAL CLEANING REQUIREMENTS FOR CAST IRON PIPE:

- A. After cleaning pipe of normal sewage deposits such as sand and grease by methods above, the pipe shall be cleaned of tuberculation, including rust build-up and mineral deposits. For pipe diameters greater than 24-inch, the Contractor may choose any equipment necessary to remove the tuberculation, such as a "pig" or rodder; For pipe diameters less than or equal to 24-inch, all tuberculations shall be removed using either a high pressure water blaster capable of delivering a minimum 40 gallons per minute at a pressure of 10,000 psi, mechanically or hydraulically driven chain flail, grinding chain cutters or other suitable means of removal of tuberculation. However, no equipment shall be used which may damage the pipe, manholes, street, or downstream pump stations without arranging emergency provisions to repair or replace the main being cleaned.

3.09 CLEANING

- A. If cleaning of an entire sewer section cannot be successfully performed from one manhole, the equipment shall be set up on the other manhole and cleaning attempted again. If results of the cleaning are favorable, the Contractor will proceed with the TV inspection. All sludge, dirt, sand, rocks, and other solid or semisolid materials resulting from the cleaning operation shall be removed from the downstream manhole of the section being cleaned. The Contractor shall not be responsible for removing mortar or other material that is securely attached to the pipe walls or joints.

- B. Materials shall be disposed of from the site at least once at the end of each workday. The Contractor will be responsible for the disposal of materials removed from the sewer system. All sewer-cleaning efforts shall require documentation of all quantities and types of materials removed during cleaning.
- C. The designated sewer main shall be cleaned using hydraulically propelled, high-velocity jet, or mechanically powered equipment approved by the City. Cleaning shall consist of normal hydraulic jet cleaning to facilitate the internal CCTV inspection.
- D. Types of cleaning of sanitary sewers:
 1. Light cleaning of sewers consists of a maximum of 1 pass of the jet nozzle. Light cleaning of laterals will consist of flushing water into a cleanout. Resulting in removal of $\frac{1}{4}$ pipe diameter depth or less of sand and/or debris from a section of pipe. The removal of roots, barnacles/oysters and/or tuberculation would be considered a separate item.
 2. Medium cleaning of sewers consists of 2 to 4 passes of the jet nozzle. Medium cleaning of laterals will consist of 1 to 4 passes with a jet nozzle. Resulting in removal of greater than $\frac{1}{4}$ and up to and including $\frac{1}{2}$ pipe diameter depth of sand and/or debris from a section of pipe. The removal of roots and/or tuberculation would be considered a separate item.
 3. Heavy cleaning consists of 5 or more passes of the jet nozzle such as removing heavy grease and debris. Resulting in the removal of greater than $\frac{1}{2}$ pipe diameter depth of sand and/or debris from a section of pipe. The removal of roots and/or tuberculation would be considered a separate item. 06-08-2020 Conformed
 4. Descaling of Ductile/Cast Iron pipe: Multiple passes with mechanical equipment to remove scale build up to restore pipe to original inside diameter.
- E. Selection of the equipment used shall be based on the conditions of lines at the time the Work commences. The equipment and methods selected shall be satisfactory to the City. The equipment shall be capable of removing dirt, grease, rocks, sand, debris, other materials, and obstructions from the sewer lines, laterals, and manholes.
- F. If cleaning of an entire section cannot be successfully performed from one manhole, the equipment shall be set up on the other manhole and cleaning again attempted. The intent of preparatory cleaning is to provide sufficient cleaning to ensure camera passage and the internal conditions of the pipeline can be fully assessed.
- G. If the City establishes that a section of the pipeline cannot be adequately cleaned due to broken, collapsed, or void areas, then the inspection will be attempted up to the obstruction.

3.10 ROOT REMOVAL

- A. Roots shall be removed in the designated sections where root intrusion is a problem and where authorized by the City. Special attention should be used during the cleaning operation to remove roots from the joints. Any roots that could prevent the proper application of chemical sealants or could prevent the proper seating and application of cured-in-place liners shall be removed. Procedures may include the use of mechanical equipment such as, rodding machines, bucket machines, winches using root cutters, porcupines, chain-cutter, saw blade and equipment such as high-velocity jet cleaners. Chemical root treatment shall be used before or following the root removal operation, depending on the manufacturer's recommendation. The Contractor shall capture and remove all roots from the line. Reference Technical Specification 02766, Sanitary Sewer Obstruction Removal for further requirements regarding root removal. 06-08-2020 Conformed

3.11 CHEMICAL ROOT TREATMENT

- A. To aid in the removal of roots, main sections that have root intrusion shall be treated with an acceptable herbicide. The application of the herbicide to the roots shall be done in accordance with the manufacturer's recommendations and specifications in such a manner to preclude damage to surrounding vegetation. Any damaged vegetation, so designated by the City, shall be replaced by the Contractor at no additional cost to the City. All safety precautions as recommended by the manufacturer shall be adhered to for handling and application of the herbicide. 06-08-2020 Conformed
- B. The Contractor must always have a State Certified Pesticide Applicator on site when doing chemical applications.
- C. The Contractor shall take all steps necessary and appropriate to prevent adverse effect on wastewater treatment plant processes during the application process.
 - 1. The active ingredient shall not adversely affect wastewater treatment plant processes.
- D.

3.12 STORM DRAIN OUTFALL BARNACLE/OYSTER REMOVAL

- A. Removal of barnacle, oyster or similar build up at the end of stormwater pipes shall be removed at the face of the stormwater outfall (i.e. Headwall) and up into the stormwater pipe a distance at least two times the existing pipe diameter. Additionally, all outfall pipe cleaning shall include cleaning of the headwall structure 24-inches around all pipe sizes. For example, a 36-inch stormwater pipe would be cleaned from barnacle, oyster or similar build up at least 72-inches into the pipe itself, and 24-inches around the outfall pipe on the headwall structure.

3.13 MATERIAL REMOVAL AND DISPOSAL

- A. All sludge, dirt, sand, rocks, grease, roots, and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Contractor shall provide appropriate screening to stop passing of materials into downstream sewers. All solid or semisolid materials dislodged during cleaning operations shall be removed from the sewer by Contractor at the downstream manhole of the sewer section being cleaned. The passing of dislodged materials downstream of the sewer segment being cleaned shall not be permitted. In such an event, as observed or detected by the City or any third party, Contractor shall be responsible for cleaning the affected downstream sewers in their entirety, at no additional cost to the City.
- B. The Contractor shall be responsible for the disposal of all waste materials and shall transport waste materials to the nearest City Wastewater Treatment Plant for processing. City shall approve all waste material disposal schedules. The selected Contractor(s) shall be responsible for all waste material spills and clean-up in the loading, hauling and unloading of the Contractors equipment.
- C. The contractor shall be responsible for conforming to any and all requirements regarding hauling and disposal of waste from each work site in accordance with OSHA regulations and those that may be mandated by federal, state, or local governments. The contractor shall ensure that all waste material transporters possess all required federal, state and local regulations, including but without limitation, 40 CFR Part 263, "Standards Applicable to Transporters of Hazardous Waste" and Chapter 17-730, Part 3 Florida Administration Code, as may be amended from time to time.

- D. The Contractor shall keep his haul route and work area(s) neat, clean, and reasonably free of odor, and shall bear all responsibility for the cleanup of any spill.

3.14 ACCEPTANCE OF CLEANING OPERATION

- A. Acceptance of sanitary sewer and storm water pipe and structure cleaning shall be made upon the successful completion of the television inspection and shall be to the satisfaction of the City. If television inspection shows the cleaning to be unsatisfactory, the Contractor shall be required to re-clean and re-inspect the sewer line at no additional cost until the cleaning is shown to be satisfactory.
- B. In addition, on all sanitary sewers which have sags or dips, to an extent that the television camera lens becomes submerged during the television inspection, the Contractor shall use a high pressure cleaner to draw the water out of the pipe, or other means, to allow the full circumferential view of the pipe and identification of pipe defects, cracks, holes, and location of service connections.

END OF SECTION

SECTION 02762

TELEVISIONING SANITARY SEWER SYSTEMS

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The Work covered within this Section is for the internal closed-circuit television (CCTV) inspection of sanitary sewer pipes. The Contractor shall perform sewer-televising work as necessary to thoroughly document the condition of all sewers, service lateral connections, service laterals, and to a minimal extent manhole corbel, barrel and cone-sections in the study area. The sanitary sewer and service laterals shall be carefully inspected to determine alignment, grade variations, separated joints, location and extent of any deterioration, breaks, obstacles, obstructions, debris, quantities of infiltration/inflow and the locations of service connections. 06-08-2020 Conformed
- B. The quality of all Work specified in this Section shall meet or exceed the requirements of the National Association of Sewer Service Companies (NASSCO) Recommended Specifications for Sewer Collection System Rehabilitation (latest edition), except as described in this Section. Applicable portions of this Section that inadvertently fall below those standards shall be corrected and maintained at the NASSCO standards as a minimum requirement, at no additional cost to the City.

1.02 REQUIREMENTS

- A. The Contractor shall inspect the sewer interior using a color closed circuit television camera (CCTV) and document the inspection on a digital recorder. All inspection video shall be captured in either MPEG or Windows Media Video (.WMV) file format and saved portable hard drives for submittal. Each inspected main line sewer segment referenced manhole to manhole, manhole to inlet, inlet to inlet, inlet or manhole to outfall, and each inspected sewer lateral referenced to the property address and corresponding sewer main should have an associated MPEG or WMV file. Digital photographs (.JPG files), inspection reports (.PDF files) and any handwritten inspection logs or field maps shall accompany the video inspections for each sewer reach (manhole-to-manhole) or lateral inspected.
- B. Contractor shall provide inspection video, data and reports in accordance with the requirements specified herein. Contractor shall provide all video on portable hard drive as specified. All Work will conform to current NASSCO Pipeline Assessment Certification Program (PACP) coding conventions and all software used by the Contractor will be PACP compliant. An electronic database will be provided by the Contractor in a PACP exported format approved by the City.
- C. The Contractor shall provide comments as necessary to fully describe the existing condition of the sewer on the inspection forms.
- D. Contractor shall be responsible for modifications to equipment and/or inspection procedures to achieve report material of acceptable quality.
- E. No Work shall commence prior to approval of the submitted material by the City. Once accepted, the report material shall serve as a standard for the remaining Work.

- F. Site to be restored to pre-inspection conditions.
- G. Contractor shall ensure that employee's vehicles display company logo on side doors and company phone numbers. No personal vehicles are to park at the job site.
- H. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

1.03 RESPONSIBILITY FOR OVERFLOWS AND SPILLS

- A. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.

1.04 QUALIFICATIONS AND QUALITY

- A. Refer to Section 01101 General Work Requirements paragraph 1.01.A minimum CCTV work qualifications.

1.05 SUBMITTALS

- A. Submittals shall be provided to the City for review and acceptance prior to construction as listed and described in the individual General Requirements and Technical Specification sections. Work performed for which a submittal or shop drawing is required that has not been reviewed by the City or responsible agencies shall be considered installed at the Contractor's risk.
- B. Submittals associated with this section submitted under another Section.
 - 1. Refer to Section 01516 for by-pass pumping plan submittal.
 - 2. Refer to Section 02761 for SDS submittal.
 - 3. Work schedule refer to Section 02761, Cleaning Sanitary Systems, and article 1.05 for requirements.
 - 4. Maintenance of Traffic is covered in General Requirements Section 01570.
 - 5. Refer to Section 01101 paragraph 1.03 for CCTV video sample requirement.
- C. Submittals under this section.
 - 1. PACP certificate copies of all operators.
 - 2. Footage calibration report for each camera used.
 - 3. Work schedule refer to Section 02761, Cleaning Sanitary and Storm Sewer Systems, and article 1.05 for requirements.
 - 4. Maintenance of Traffic is covered in General Requirements Section 01570.
- D. The following deliverables shall be submitted on a portable hard drive at the completion of inspection:
 - 1. Sanitary sewer main and lateral pre- and post- work inspection videos saved in MPEG format or Windows Media video format
 - 2. Electronic version (.pdf) of the pipe inspection reports
 - 3. PACP export pipe inspection database (.mdb)
 - 4. Inspection digital photographs in JPEG format
 - 5. Map of sub area depicting area inspected, inspection status, asset identification numbers and mark ups

- 6. QA/QC report.
 - 7. Main and Lateral defect repair recommendations for each pipe segment.
- E. The above deliverables shall be submitted monthly, or shorter frequency depending on the duration of the work order, to the City for approval. Application for payment shall be made after review and approval by the City.
- F. The sewer inspection video, report documents, and sewer inspection database shall be in accordance with City data standards and NASSCO PACP.

1.06 NOTIFICATION

- A. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained that the business is open. No sewage from the services or main line shall be discharged on the ground or in waterways.

PART 2 - PRODUCTS

2.01 EQUIPMENT

- A. Closed Circuit Television Camera: The television camera used for the inspection shall be one specifically designed and constructed for sanitary sewer inspection. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe. The camera shall be operative in 100 % humidity/submerged conditions. The CCTV camera equipment will provide a view of the pipe ahead of the equipment and of features to the side of the equipment through turning and rotation of the lens. The camera shall be capable of tilting at right angles along the axis of the pipe while panning the camera lens through a full circle about the circumference of the pipe. The lights on the camera shall also be capable of panning 90° (degrees) to the axis of the pipe.
- B. The radial view camera must be solid-state color and have remote control of the rotational lens. The camera shall be capable of viewing the complete circumference of the pipe and manhole structure, including the cone-section or corbel. Cameras incorporating mirrors for viewing sides or using exposed rotating heads are not acceptable. The camera lens shall be an auto-iris type with remote controlled manual override.
- C. If the equipment proves to be unsatisfactory, it shall be replaced with adequate equipment. The camera unit shall have sufficient quantities of line and video cable to inspect 2 complete, consecutive sewer reaches with access approximately 750-feet apart.
- D. The camera, television monitor, and other components of the video system shall be capable of producing picture quality to the satisfaction of the City. The television camera, electronic systems and monitor shall provide an image that meets the following specifications, or approved equal:
 - 1. The gray scale shall show equal changes in brightness ranging from black to white with a minimum of five stages.
 - 2. With the monitor control correctly adjusted, the 6-colors; Yellow, Cyan, Green, Magenta, Red, and Blue, plus black and white shall be clearly resolved with the primary colors in order of decreasing luminance. The gray scale shall appear in contrasting shades of gray

- with no color tint.
- 3. The picture shall show no convergence or divergence over the whole of the picture. The monitor shall be at least 13-inches diagonally across the picture tube.
- 4. The live picture on the CCTV monitor shall be capable of registering a minimum of 500 lines horizontal resolution and be a clear, stable image with no interference.
- 5. Lighting intensity shall be remote controlled and shall be adjusted to minimize reflective glare. Lighting and camera quality shall provide a clear in-focus picture of the entire inside periphery of the sewers and laterals for all conditions except submergence. Under ideal conditions (no fog in the sewer) the camera lighting shall allow a clear picture up to 5 pipe diameter lengths away for the entire periphery of the sewer. The lighting shall provide uniform light free from shadows or hot spots.
- 6. The camera light head shall include a high-intensity side viewing lighting system to allow illumination of internal sections of lateral sewer connections.
- 7. Camera focal distance shall be remotely adjustable through a range of 6-inches to infinity.
- 8. Picture quality and definition shall be to the satisfaction of the City.
- 9. The monitor and software shall also be able to capture and save screen images of typical sewer details and all defects. Screen images shall be embedded into the pipe inspection report document submitted with the inspection video.
- 10. The video camera shall be capable of displaying on screen data as specified in paragraph 3.08 herein.
- 11. Depth gage: The camera shall have a depth gage or approved method to measure deflection in the pipe and joint separation approved by the City. The camera shall have zoom capabilities to be able to view the entire depth of a 20-foot deep manhole from the bottom during inspection.
- 12. The camera lens shall be kept clear of condensation and debris during the CCTV inspection.
- 13. Camera equipment must have independent lab approval for use in Class 1, Group 0 Hazardous locations per NFPA.

E. Lateral Video Camera

- 14. Refer to Technical Specification Section 02763, Television Sanitary Sewer Laterals, article 1.04 for equipment requirements.
- 2. Lateral cameras may be push type or launched from the sewer main line. Lateral cameras shall be color, shall be self-leveling, and equipped with a footage counter to provide on-screen display of footage measurement. Monitor resolution shall be as in accordance with paragraph 1.04 of Section 02763 or approved equal

F. Video Capture System

- 1. The video and audio recordings of the sewer inspections shall be made using digital video equipment. A video enhancer may be used in conjunction with, but not in lieu of, the required equipment. The digital recording equipment shall capture sewer inspection on hard drive, with each sewer reach inspection recorded as an individual movie file (.MPEG, .MPG, or .WMV) or approved equal. The video files will be named in accordance with the City file naming convention contained in paragraph 3.11 herein.
- 2. The video file names will be referenced in the inspection database and in an inspection, report generated in PDF format. The pipeline collection and real time video capture and data acquisition systems shall be provided.
- 3. The system shall use the most current PACP compliant application software and shall be fully object oriented or approved equal. It shall be capable of printing pipeline inspection

reports with captured images of defects or other related significant visual information on a standard color printer.

4. The imaging capture system shall store digitized color picture images and be saved in digital format on a hard drive or approved equal. Also, this system shall have the capability to supply the City with inspection data reports for each line segment.
5. The Contractor shall have the ability to store the compressed video files in industry standard and approved City format and be transferable with the PACP compliant inspection database.
6. The Contractor's equipment shall have the ability to "Link". "Linking" is defined as storing the video time frame code with each observation or defect with the ability to navigate from/to any previously recorded observation or defect instantaneously.
7. The system shall be able to produce data reports to include, at a minimum, all observation points and pertinent data. All data reports shall match the defect severity codes in accordance with PACP naming conventions
8. The data-sorting program shall be capable of sorting all data stored using generic sort key and user defined sort fields.
9. Camera footage, date & manhole numbers shall be maintained in real time and shall be displayed on the video monitor as well as the video character generators illuminated footage display at the control console. All manhole references will be based on the Cities Facility ID number.
10. Digital video shall be defined as ISO-MPEG Level 1 (MPEG-1) coding having a resolution of 352 pixels (x) by 240 pixels (y) (minimum) and an encoded frame rate of 29.97 frames per second. The digital recording shall include both audio and video information that accurately reproduces the original picture and sound of the video inspection. The video portion of the digital recording shall be free of electrical interference and shall produce a clear and stable image. The audio portion shall be sufficiently free of background and electrical noise to produce an oral report that is clear and discernible.
11. Inspection software shall be PACP compliant versions of CUES Granite XP, WinCan, Flexidata, or approved equal.
12. The CCTV equipment/software shall be capable of producing digitized images of all sewer line defects, manhole defects, and sewer line service connections in .jpeg format. Contractor shall plan to take digital still images of each defect, construction features and service connection to clearly depict it. More images may be necessary depending upon the condition of the pipe.

2.02 DIGITAL CAMERA FOR REMOTE INSPECTIONS

- A. All manhole photographs required as part of this specification shall be obtained using a minimum 4-megapixel digital camera with strobe flash capable of producing digital images with minimum resolution of 2240 x 1680.

2.03 REPORTING CAPABILITIES

- A. The CCTV system shall be capable of printing pipeline inspection reports with pipeline schematics and captured images of defects and other related significant visual information. The system shall have the ability to display any combination of the following formats and features simultaneously.
- B. The following information is mandatory for all inspections:

- 2.03.1.1 Inspection Information: Refers to the area of pipe to be inspected between 2 man-holes or the address of the lateral to be inspected.
 - 2.03.1.1.1 Project Name
 - 2.03.1.1.2 Surveyed by (Operator/Surveyor's name)
 - 2.03.1.1.3 Operator/Surveyor Certificate number
 - 2.03.1.1.4 System Owner
 - 2.03.1.1.5 Date
 - 2.03.1.1.6 Main segment number. Segment numbers will be provided with each proposal request.
 - 2.03.1.1.7 Drainage Area (tributary pump station number)
 - 2.03.1.1.8 Time
 - 2.03.1.1.9 Sheet number (report sheet number)
 - 2.03.1.1.10 Street Name and Number
 - 2.03.1.1.11 Locality (City of St. Augustine (COSA))
 - 2.03.1.1.12 Additional Location Information (e.g. backyard, parking lot, etc.)
 - 2.03.1.1.13 Upstream Manhole Number (City standard Facility ID Number)
 - 2.03.1.1.14 Upstream MH rim to invert (depth)
 - 2.03.1.1.15 Downstream Manhole Number (City standard Facility ID Number)
 - 2.03.1.1.16 Downstream MH rim to invert (depth)
 - 2.03.1.1.17 Direction of inspection (Upstream or Downstream)
 - 2.03.1.1.18 Flow control (e.g. plugged, lift station, bypassed, not controlled)
 - 2.03.1.1.19 Type of Pipe
 - 2.03.1.1.20 Pipe Height
 - 2.03.1.1.21 Pipe Width
 - 2.03.1.1.22 Pipe Shape
 - 2.03.1.1.23 Pipe Material
 - 2.03.1.1.24 Lining Material (for lined sewers)
 - 2.03.1.1.25 Pipe Joint Length
 - 2.03.1.1.26 Purpose of Inspection (Condition evaluation, new line, CIP R/R project, etc.)
 - 2.03.1.1.27 Pre-Cleaning (jetter, heavy cleaning, no pre-cleaning)
 - 2.03.1.1.28 Media Number (Video file name)
 - 2.03.1.1.29 Weather
 - 2.03.1.1.30 Additional information/Comments
- 2.03.1.2 Observation Data: Refers to the portion of pipe where an observation is discovered. Observations shall be noted by text descriptions and defect code number using PACP defects codes, still frame pictures and video clips captured and recorded. Each observation shall include the following:
 - 2.03.1.2.1 Actual observation footage
 - 2.03.1.2.2 Video reference
 - 2.03.1.2.3 Location of defect; clock position
 - 2.03.1.2.4 Code (Group/Descriptor/Modifier/Severity)
 - 2.03.1.2.5 Whether it is a continuous defect
 - 2.03.1.2.6 Whether the defect occurs at a joint
 - 2.03.1.2.7 Severity level
 - 2.03.1.2.8 video counter location
 - 2.03.1.2.9 Final footage
 - 2.03.1.2.10 Video clip ID for each observation
 - 2.03.1.2.11 Image reference (file name of photos)
 - 2.03.1.2.12 Remarks (as appropriate or needed)
- 2.03.1.3 Formats: Standard and/or custom designed reports shall have the following formats available and shall be able to be produced in hard copy or viewed on the monitor.

- 2.03.1.3.1 Site Observation: Displays detailed site observation reports in landscape or portrait views.
- 2.03.1.3.2 Directory Report: Displays a list of all the projects sorted by pump station number and manhole number.
- 2.03.1.3.3 Picture Reports: Displays site data and include full size single photos or half size double photos of discrepancies.
- 2.03.1.3.4 Pipe Run: Displays a graphical display of the site indicating footage, observations, and comments.
- 2.03.1.3.5 Project Data: Displays the project, client, and Contractor information.
- 2.03.1.3.6 Custom Sort: Creates user-defined reports of selected site, project, and observation data.

PART 3 - EXECUTION

3.01 GENERAL

- A. Work notices are to be provided to property owners 48 hours prior to beginning work. A copy of the notices will also be provided to the City at the time they are provided to property owners.
- B. Prior to inspection the Contractor shall obtain pipe and manhole asset identification numbers from the City to be used during inspections. Inspections performed using identification numbers other than the City assigned numbers will be rejected.
- C. Inspection shall not commence until the sewer section to be televised has been completely cleaned in conformance with Specification Section 02761 "Cleaning Sanitary Sewer Systems."
- D. Inspection of newly installed sewers (not yet in service) shall not begin prior to completion of the following:
 - 1. Pipe air testing
 - 2. All manhole work, including installation of inverts
 - 3. Installation of all lateral services
 - 4. Vacuum tests of all manholes
- E. After the sewer main and/or lateral cleaning operation is completed, the line sections shall be visually inspected internally by means of color closed-circuit television. The television inspection shall be performed one-line segment at time.
- F. CCTV inspection shall require a minimum of 1 certified personnel with PACP certifications.
 - 1. One (1) person shall have PACP certification that will lead or supervise each field CCTV crew for inspection and a minimum of 2-years in the role of a lead person.
 - 2. This person shall also have experience in the role as a QA/QC management supervisor
- G. Contractor shall perform sewer-televising work within 24-hours of said sewer being cleaned. If said sewer is not televised within the required 24-hour time limit, the sewer shall be re-cleaned prior to televising at no additional expense to the County.
- H. The Contractor shall also inspect and document all manholes included in this Work. The video recording shall begin as the camera is lowered down the manhole all the way to the preset footage and continuously throughout the pipe reach until the downstream manhole is reached.

- I. The Contractor shall lower the camera into the start manhole and record the camera entry into the sewer, observing the manhole as the camera enters.
- J. Main diameter is to be physically measured in the up or downstream manhole and documentation of this is to be included in the CCTV video record.
- K. The camera shall pan the periphery of the start and finish manhole from casting to invert. To achieve this, the CCTV camera operator shall pan and zoom the manhole to obtain the best possible image of the manhole, including the wall, cone and chimney section(s).
- L. The depth of each manhole shall be measured to the nearest 1/10th of a foot and documented on the inspection forms. Estimates of manhole depths will not be accepted.
- M. The CCTV camera shall be positioned as close to the spring line as possible while maintaining the required equipment stability.
- N. Wherever possible the inspections shall be performed in the upstream to downstream direction. All sewer segments shall be recorded in a logical order in the same direction they are cleaned and televised.
- O. If access to some manholes is restricted, permission may be granted by the City to direct the camera through the sewer in an upstream direction, against the flow.
- P. When sewer conditions prevent forward movement of the camera, the camera shall be withdrawn, and Contractor shall televise the line from the opposite direction.
- Q. The camera shall be directed through the sewer in a downstream direction, with the flow, at a uniform, slow rate. In no case will the video camera record while moving at a speed greater than 30-feet per minute. If, during the Project, the inspection is rejected due to camera speeds exceeding 30-feet per minute, the inspection recordings shall be redone, at no additional cost to the City.
- R. If a new manhole is discovered in the field that was not on current maps, a new manhole identification number will be assigned by City. The City shall assign the manhole the next number above the highest manhole number within the sub area. The data / video files shall then be re-named to include the new MH ID, and a new CCTV inspection shall be started from the new MH ID. Contractor shall consult with the City for assignment of new manhole identification numbers. Contractor shall note in the inspection form comments that a new manhole ID has been assigned as well as provide a marked-up map indicating the newly found manhole and assigned manhole ID.
- S. Flow levels within existing sewers to be inspected shall not exceed 5% of the pipe diameter. If water levels prevent adequate televising of the sewer, then conducting the Work during low flow periods or other methods like plugging and bypass pumping shall be implemented.
- T. For inspection of new sewers (not yet in service), the Contractor shall introduce clean water into the upstream manhole and keep water flowing until flow is observed at the downstream manhole location.
- U. The survey unit shall be slowed, stopped, or backed up to perform detailed inspections of significant features. The camera shall be stopped at all defects, changes in material, water level, size, side connections, manholes, junctions, or other unusual areas. When stopped at the defect or feature,

the operator shall pan the camera to the area and along the circumference of the pipe. Recording shall document broken sections, root intrusion, miss-aligned joints and other defects for a minimum of 5 seconds.

- V. The camera unit shall be paused long enough at areas suspected of leaking to determine if a leak exists currently or if deposits have occurred.
- W. The operator shall also record audio of the type of defect or feature, clock position, footage, extent or other pertinent data.
- X. Digital photographs or screen captures shall be taken at all laterals; defects and general condition photographs shall be taken at least every 200-feet.
- Y. At the Contractor's discretion or direction of the City, the camera shall be stopped or backed up (when conditions allow) to view and analyze conditions that appear to be unusual or uncommon for a sound sewer. The lens and lighting shall be readjusted, if need be, in order to ensure a clear, distinct, and properly lighted feature.
- Z. Audio shall be recorded during each inspection by the operating technician, electronic voice text recognition or approved equal on the inspection video as the sewer is inspected and shall include the sewer location, identification of beginning and terminating manholes including location (address or cross streets), inspection direction, length of inspection, side sewer identification, flow information, complete descriptions of the sewer line conditions as they are encountered, description of the rehabilitation work, reason for termination, and other relevant commentary to the inspections. Voice descriptions should be made:
 - 1. At points of pipe failure or weakness
 - 2. At points of infiltration
 - 3. At the location of service connections
 - 4. At points where unusual conditions are noted, and
 - 5. At points where digital still photos are taken.
- AA. In addition, the audio reports shall include the distance traveled on the specific run, a description of abnormal conditions in the sewer and side sewer connections as they are encountered, explanations for pausing, backing up, or stopping the survey, and the final measured center to center distances between consecutive manholes. The audio portion of the composite video shall be sufficiently free from electrical interference and background noise to provide complete intelligibility of the oral report. Audio dubbing after the inspection is prohibited.
- BB. Video recordings shall include a continuous video display/readout of similar information, as described in paragraph 3.08 herein. A separate digital video file shall be made for each pipe reach inspected. To the extent practical there should be one video recording per segment. Multiple videos will only be accepted when pipe condition along the entire length of segment requires extensive defect documentation.
- CC. Contractor shall coordinate with the City prior to commencement of Work to ensure inspection is accomplished in a manner acceptable to the City.
- DD. If the video and/or audio recording is of poor quality, the City has the right to require a re-submittal of the affected sewer sections and no payment will be made until an acceptable video and audio recording is made, submitted to, and accepted by the County.

- EE. Measurement for location of defects and actual length of pipe shall be by means of a calibrated meter on the camera with a digital readout on the video monitor. This readout shall be included in the video recording. Marking on cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Measurement will be accurate to 1-foot per 100-feet of inspected pipe.
- FF. The distance shall be measured between the exit of the start manhole and the entrance of the finish manhole for a true measurement of the length of the pipe segment, as required by PACP. It shall be recorded in standard units and the video display readout shall display units to one-tenth of a foot.
- GG. The Contractor inspection units shall be equipped with adequate back up equipment and spare parts so field repairs to equipment can be made and down time is minimized.
- HH. The Contractor shall be responsible for all traffic control measures required to perform the Work.
- II. Lateral inspections shall be performed from the main line using a lateral launch camera or shall be pushed from cleanouts to the sewer main using sewer rods. Lateral camera travel measurements shall be displayed on screen and on the captured video.
- JJ. If lateral inspections are performed from the sewer main as part of the main line inspection, the lateral shall be logged in the main line inspection report per PACP requirements and the "comment" field of the main line inspection report shall be used to document the lateral identification number, defects observed, footage of all lateral defects, connecting pipes and clean outs. If lateral inspections are not performed as part of the main sewer inspection, a separate PACP pipe inspection record shall be created for each lateral. Refer to paragraph 3.10 for numbering requirements.

3.02 QUALITY ASSURANCE

- A. Refer to Section 01101 article 3.03 and 304 for quality assurance and inspection requirements.

3.03 PRE-CONSTRUCTION INSPECTION

A. Procedure

1. Prior to any repair work, the entire sewer line (from manhole to manhole) shall be televised. The pre-construction inspection shall be used to determine whether the line has been cleaned sufficiently; to confirm the location and nature of defects; and to confirm that the proposed method of repair is proper method for the defects observed.
2. The camera shall be moved through the line in either direction at a moderate rate, stopping when necessary to permit documentation of the sewer's condition. In no case will the television camera be pulled at a speed greater than 30-feet per minute. Manual winches, power winches, TV cable, and power rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation, the television camera will not pass through the entire manhole section, the Contractor shall set up his equipment so that the inspection can be performed from the opposite manhole (reverse set-up).
3. When manually operated winches are used to pull the television camera through the line, telephones, radios or other suitable means of communication shall be set up between the 2

manholes of the section being inspected to insure good communication between members of the crew.

4. The importance of accurate distance measurements is emphasized. The location of defects shall be within ± 1 feet.
5. During the internal inspection the television camera shall be temporarily stopped at each defect along the line. The Contractor shall record the nature and location of the defect. Where defects are also active infiltration sources, the rate of infiltration in gallons per minute shall be estimated by the Contractor and recorded. The camera shall also be stopped at active service connections where flow is discharging. Flows from service connections that are determined to be infiltration/inflow shall also be recorded.
6. Suspect Lateral Connections to Mainline.
 - a. Pan and tilt all service lateral connections to the mainline. Locate clean-out by property line, and if found record the addresses. Identify service connection locations, e.g. left, right, crown, and record lateral distances from the entry manhole in the mainline.
 - b. Used the Pan and Tilt camera to inspect each service lateral connection and document and visible service connection defects from mainline.
 - c. Check for flow in each service lateral connection. If flow is detected in the service lateral connection, follow steps d. to h. If no flow is detected in the service lateral proceed to the next service lateral survey.
 - d. Wait 3 to 5 minutes.
 - e. If flow is clear and does not subside, follow steps f to i. If flow subsides or is murky proceed to step g.
 - f. Check the water meter. If meter is running, proceed to step g. If the meter is not running proceed to step h.
 - g. Domestic Flow – Calculate flow from water meter reading and make entry in CCTV Video log.
 - h. Suspect Service Lateral – Estimate flow, make entry in the CCTV video log.
 - i. Continue mainline inspection.

B. Documentation of Television Inspection

1. Television Inspection Logs: Printed location records shall be kept by the Contractor and will clearly show the location in relation to an adjacent manhole of each infiltration point observed during inspection. In addition, other points of significance such as locations of building sewers, unusual conditions, roots, storm sewer connections, broken pipe, presence of scale and corrosion, and other discernible features will be recorded, and a copy of such records will be supplied to the City. The Contractor shall record all visuals observations on a "Television Inspection Report" form.
2. Once recorded, the digital data shall be labeled and become the property of the City. The Contractor shall have all readings and necessary playback equipment readily accessible for review by the City during the Project.

3.04 POST CONSTRUCTION INSPECTION

A. Procedure

1. After the sewer line rehabilitation has been completed, the entire sewer line from manhole to manhole shall be televised. The post construction inspection shall be used to determine whether all the approved sewer line defects and infiltration sources previously located have been fully repaired to the satisfaction of the City.
2. The camera shall be moved through the line in either direction at a moderate rate, stopping

when necessary to permit documentation of the sewer's condition. In no case will the television camera be pulled at a speed greater than 30-feet per minute. Manual winches, power winches, TV cable, power rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation, the television camera will not pass through the entire manhole section, the Contractor shall set up his equipment so that the inspection can be performed from the opposite manhole or direction. (reverse setup)

3. When manually operated winches are used to pull the television camera through the line, telephones, radios or other suitable means of communication shall be set up between the 2 manholes of the section being inspected to insure good communication between members of the crew.
4. The importance of accurate distance measurements is emphasized. The location of defects shall be within 1-foot.
5. During the internal inspection the television camera shall be temporarily stopped at each repair. The camera shall also be stopped at any unnoticed or non-repaired point source of infiltration.

3.05 SEWER BYPASSING AND DEWATERING

9. Refer to General Requirement Section 01516, Collection System Bypass, article 1.01 Scope of Work for sewer bypass requirements.

3.06 LINEAR MEASUREMENT

- A. The CCTV camera location footage counter shall be zeroed at the beginning of each inspection. The survey unit location entered on the footage counter at the start of the inspection shall allow for the distance from the accepted start of the length of the sewer to the initial point of observation of the camera (pre-set footage). In the case of resuming an inspection at an intermediate point within a sewer reach, the footage counter shall be set to start at the distance from the upstream maintenance hole to that point, as previously recorded by the counter. The Contractor shall ensure that the footage counter starts to register immediately when the survey unit starts to move.
- B. The lateral camera shall be pushed from cleanouts to the sewer main and be equipped with a footage counter to display and record inspection footage. Maximum rate of travel shall be 30-feet per minute when recording.
- C. Prior to commencing inspections, the Contractor shall demonstrate compliance with the linear measurement tolerance specified below:
- D. The equipment shall measure the location of the camera unit in 1-foot increments from the beginning (upstream end) of each continuous section. This footage location must be displayed on the CCTV monitor and recorded on the videotapes.
- E. The accuracy of the measured location shall be within + 0.5% of the actual length of the sewer-reach being surveyed, or 1-foot, whichever is greater.

3.07 MEASUREMENT OF SAGS

- A. The CCTV camera shall be equipped with a measuring device capable of accurately measuring the depth of standing water up to 3-inches. The measuring device shall be mounted to the front of the unit and be capable of being read as the unit advances through the pipe.

3.08 CCTV MONITOR DISPLAY

- A. The images displayed on the CCTV monitors will be a view of the pipe above the water surface as seen by the CCTV camera as the unit is conveyed through the sewer.
- B. The camera lighting shall be fixed in intensity prior to commencing the survey and the white balance set to the color temperature emitted. In order to ensure color constancy, no variation in illumination shall take place during the survey.
- C. The video equipment shall be checked using an approved test card with a color bar prior to commencing each day's survey. The camera shall be positioned centrally and parallel to the test card at a distance where the full test card just fills the monitor screen. The card shall be illuminated evenly and uniformly without any reflection.

3.09 DATA DISPLAYS

- A. The CCTV images shall include an initial data display that identifies the sewer reach being surveyed and a survey status display that provides continuously updated information on the location of the survey unit as the survey is being performed. These data displays shall be in alphanumeric form. The size and position of the data shall not interfere with the main subject of the monitor picture.
- B. The on-screen display should be white during inspections where the background behind the display is dark and, conversely, black where the background is light.
- C. At the beginning of each reach of sewer being inspected, the following information shall be electronically generated and displayed on the CCTV monitors as well as included in the audio track:
 1. Date of survey
 2. Inspection company name and inspector
 3. Street name or location
 4. Manhole number to manhole number (in order of inspection)
 5. Direction of survey (upstream or downstream)
 6. Time of start of survey
- D. During inspections, the following information shall be electronically generated, automatically updated, and displayed on the CCTV monitors:
 1. Survey unit location in the sewer line in feet and tenths of feet from adjusted zero
 2. Sewer diameter
 3. Upstream and downstream manholes reference numbers as per approved Drawings or City GIS.
 4. During Lateral inspections the video display shall contain the lateral location and the footage of the camera within the lateral.

3.10 PHOTOGRAPHS

- A. During CCTV inspections, screen captures will be taken from the monitor images and saved electronically by the in-sewer inspection crew of typical conditions every 200-feet and at all defects, construction features, manholes and laterals. The screen capture shall have the pipe reach (identified by the upstream and downstream manholes), survey direction, footage, and date when photograph was taken. The annotation shall be clearly visible and in contrast to its background, shall have a figure size no greater than 1/4-inch, and shall be type-printed. The annotation shall be positioned on the front of the photograph to not interfere with the subject of the photograph. Photograph files shall be named by the video capture system and automatically referenced to the logged defect.
- B. The image of the sewer shall fill the photographic image. Photographs must clearly and accurately show what is displayed on the monitor, which shall be in proper adjustment. Where significant features exist within 6-feet of each other, 1 photograph shall be made to record these features. Where there is a continuous feature, photographs shall not be taken at intervals of less than 6-feet unless necessary to show a change in the feature.
- C. JPEG images shall be captured at a minimum resolution of 1024X768 pixels.
- D. The images shall be kept electronically, copied to a hard drive, and submitted with the inspection videos, database and reports.

3.11 MANHOLE NUMBERING, INSPECTION FORMS AND DEFECT CODES

- A. The Contractor will be required to use the manhole numbering as shown on sewer maps provided by the City when performing the inspections for this project. These numbers are based on the Facility ID the City maintains in their graphics database.
- B. Inspection forms, defect codes, inspection database and inspection protocols used for documentation of CCTV work shall be in accordance with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP).
- C. When lateral inspections are performed as part of the main sewer inspection, lateral numbers shall be referenced in the "comment" field of the main sewer PACP report. The lateral number shall be as follows:
- D. When lateral inspections are not performed as part of the main sewer inspection, the main sewer inspection shall be performed first to obtain the footage and clock positions needed to identify the lateral.

3.12 DELIVERABLES

- A. The Contractor will be required to submit the following deliverables at the completion of the post construction video inspection. The pre-construction video inspection deliverables shall be as defined in 3.03 of this specification.
- B. Inspection Reports to include:
 - 1. Inspection session header information (see required fields above)
 - 2. Defect log report including photo captures from CCTV video

3. Schematic drawing of pipe showing defects
4. Format:
 - a. Adobe Acrobat PDF files: 1 report PDF per pipe
 - b. Main sewer inspection report file name:

<From MH ID>_<To MH ID>_<Date (year_mo_day format)>.PDF

Example: 30060002_30060001_2018_01_16.pdf

- c. Lateral inspection report file name:

<Upstream MH ID>_<footage>_<clock position>_<L>_<Date (year_mo_day format)>.PDF_

Example: 30060002_210_02_L_2010_02_16.pdf

- C. Inspection video files on portable hard drive, typed labels shall be attached to the face of each hard drive. The typed index labels shall include the following information:

1. Content (CCTV)
2. Contractor name
3. Purpose of Survey
4. Tributary Pump station number
5. Reaches included (from Manhole Number ## to Manhole Number ##)
6. Date of survey
7. Contract Number / Delivery Order Number (if applicable)

- D. Main sewer video files shall be MPEG or Windows Media File named according to the following standard:

<Upstream MH ID>_<Downstream MH ID>-<Inspection>_<Date (year month day)>.wmv

Example: 39540008-39540007_20090805.wmv

- E. In instances where a reverse set up is necessary to perform or complete the inspection the file name shall incorporate a "R" at the end of the file name to indicate "reverse" direction. Using the file example above, if the inspection from the upstream end was halted due to an obstruction and the pipe was televised from the opposite end, the video file from the downstream to upstream direction would be assigned the following file name:

Example: 39540008-39540007_20090805_R.wmv

- F. Lateral connection inspection video files shall be MPEG or Windows Media File named according to the following standard:

<Upstream MH ID>_<footage>_<clock position>_<L>_<date (year_mo_day format)>.wmv

Example: 39540008_145_10_L_2009_08_05.wmv

- G. Electronic Inspection Data stored and exported in a NASSCO Pipeline Assessment and Certification Program (PACP) compliant Microsoft Access database (.MDB) version 4.4 or newer delivered on portable hard drive.

- H. Inspection photograph digital files (jpeg) indexed to NASSCO PACP compliant database.

- I. Map of sub area depicting area inspected, inspection status, asset identification numbers and mark ups,
- J. Acceptable media for the video recordings portable hard drive.
- K. Inspection data noted above shall be provided to the City weekly throughout the inspection work.
- L. Contractor Quality Control report detailing data validation performed, pipe inspection records reviewed and results.
- M. All inspection data shall be submitted on a portable hard drive. Each hard drive shall be filled with as much data as practical to minimize the number of hard drives submitted. Sections of a single segment of sewer main shall not be recorded to more than 1 hard drive. Video footage of recorded segments shall be grouped by area and shall be submitted in sequential order relating to the area mapping designation.
- N. Upon approval by the City of all, or portions of, the data delivered via the portable hard drives, the approved CCTV data shall be delivered to the City on a portable hard drive labeled with project information. The hard drive shall clearly indicate the date of the inspection, the designated segment(s) of sewer mains(s) contained on the disk, the name of the project, the project CIP number, the pump station number, and Contractor name. The hard drive shall contain separate digital files for each manhole-to-manhole section.
- O. The database shall be comprehensive for the entire project, and additional data shall be added to the database each week.

3.13 ACCEPTANCE

- A. Inspection deliverables will be validated to check conformance with the specified requirements for file names, formats, quantity, and resolution, data table references, in addition to checks for null fields, asset numbers, duplicate records, connectivity, material, size, and depth. Any data not passing the data validation checks will be returned to the Contractor for resubmittal.
- B. Inspection submittals will be reviewed for quality control. A minimum of 5% of the submitted inspections will be randomly reviewed. A quality control check will be performed for each CCTV operator and each operator must exceed 90% accuracy. Reference Section 01101 "Special Requirements (Gravity Inspection Only)."
- C. Throughout the duration of the project, should the City discover inaccuracies in data or quality issues with any of the videos, Contractor shall re-inspect those segments at no additional cost to the City. The City will provide comments regarding acceptance of the data within 21-days of receiving the data from the Contractor. Neither the CCTV inspections nor the WORK inspected is accepted by the City until such time that an acceptance letter is issued by the City.

END OF SECTION

SECTION 02763 TELEVISIONING SANITARY SEWER LATERALS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Work consists of furnishing all labor, materials, accessories, equipment, tools, transportation, services and technical competence for performing all operations required to execute the internal closed-circuit television (CCTV) inspection to inspect service lateral after lateral clean outs have been installed.
- B. The CCTV inspection shall show all defects and determine amount of infiltration entering the service laterals.
- C. The post CCTV lateral inspection shall also be performed for any laterals after the laterals have been lined or replaced.

1.02 GENERAL

- A. After cleaning as specified in Section 02761 "Cleaning Sanitary Systems" (including special cleaning involving the mechanical removal of roots, grease, and/or tuberculation where authorized), and before and after repair/replacement work, the lateral shall be visually surveyed by means of closed-circuit television. The CCTV inspection shall be performed 1 lateral at a time.
- B. Pre and post construction survey video shall be delivered to the City on a portable hard drive accompanied with the corresponding TV logs for sewer laterals surveyed. The video shall be direct from a live video source into a video file, MPEG or Windows Media File format and of good quality for viewing. The recording of multiple laterals on a single hard drive is acceptable.
- C. RESPONSIBILITY FOR OVERFLOWS AND SPILLS
 - 1. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.
- D. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

1. SOFTWARE

- A. The Contractor shall utilize a NASSCO Pipeline Assessment Certification Program (PACP compliant software to capture the lateral inspections), unless otherwise approved by the City.

1.04 EQUIPMENT

- A. The television camera used for the lateral survey shall be one specifically designed and constructed for such survey. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions. The camera, television monitor, and other components of the video system shall be capable of producing a minimum 700-line resolution color video picture. The Contractor shall always maintain the camera in clear focus. Picture quality and definition shall be to the satisfaction of the City, and if unsatisfactory, equipment shall be removed and replaced with adequate equipment at no additional cost to the City.
- B. The camera used from a cleanout shall be able to be launched from the cleanout and travel down to the sewer mainline up to 100-feet. The camera system shall be able to inspect 3, 4, and 6-inch lateral connections.
- C. The video camera shall include a titling feature capable of displaying on the video the following information.
 - 1. City
 - 2. Date/Time
 - 3. Contractor's Name
 - 4. Collection Basin and main segment number.
 - 5. Pipe Size (Diameter) and Material
 - 6. Lateral ID by property address or subdivision and parcel number.
 - 7. On-going Footage Counter

1.05 QUALIFICATIONS

- A. Refer to Section 01001 General Work Requirements paragraph 1.01.C for lateral CCTV work minimum requirements.

1.06 SHOP DRAWINGS AND SUBMITTALS

- A. Submittals shall be submitted to the City/Professional for review and acceptance prior to construction in accordance with article 1.05 of Specification 02761, Cleaning Sanitary Sewer Systems.
- B. The Contractor's submittals shall include description of the software to be used and a sample of the video titles to be used, along with a sample of the television survey log to be used.

1.07 NOTICES

- A. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained so that the business remains open. No sewage from the services or main line shall be discharged on the ground

or in waterways.

2. PRODUCTS

2.03 MATERIALS

- A. All inspection information and data (including video) shall be written to digital media (portable hard drive).
- B. All inspection information and data (including video) shall be written to digital media (DVD or portable hard drive).

PART 3 - EXECUTION

3.01 QUALITY ASSURANCE:

- A. Refer to Section 01101 articles 3.03 and 3.04 for quality assurance and inspection requirements.

3.02 ISOLATION AND BYPASS OPERATIONS

- A. Refer to General Requirements Section 01516, Collection System Bypass for isolation and bypass requirements.

3.03 PRE-CONSTRUCTION SURVEY

- A. A. Procedure
 - 1. Prior to any repair work, the entire service lateral (from mainline to property line or cleanout, whichever is farther from the mainline) shall be televised.
 - 2. Measurement for location of defects shall be above ground by means of a meter, roll-a-tape, or other suitable device. Linear footage shall be shown on screen during recording.
 - 3. Movement of the television camera shall be temporarily halted for a minimum of 10-seconds at each visible defect or point of flow until the source and flow rate from that point are determined.
 - 4. The inspection shall be performed from either the main sewer or the cleanout with the proper equipment.
 - 5. Suspect Service Lateral Protocol refer to Section 02762 paragraph 3.03.A.6 suspect lateral inspection from mainline.
 - a. If it is determined that the lateral is suspect based on the results of the inspected conducted under Section 02762 proceed with the follow lateral protocol.
 - b. Suspect Lateral Protocol – Use lateral camera to inspect suspect lateral from either the mainline to the property line or from the clean-out at the property line, if found, to the mainline. Record all observations such as presence of roots, breaks, infiltration, tuberculation, corrosion, collapsed pipes and any other defects within the line. Include the video of this survey with the

B. B. Field Documentation

1. Television CCTV Logs: The Contractor shall provide lateral identification numbers using either the property address or subdivision and parcel number. All inspection logs shall reference the applicable lateral ID. In addition, the upstream manhole number, distance from the upstream manhole, lateral connection to the main line (left, center or right), and address of the customer serviced by the lateral shall be noted on the television survey log. Inspections shall be recorded in NASSCO PACP/Lateral Assessment Certification Program compliant software unless otherwise approved by the City. Reports shall be generated from the software. Printed and electronically stored location records shall be kept by the Contractor and will clearly show the location in relation to the cleanout or the mainline of each infiltration point observed during survey. Footage shall be shown on the log. In addition, other points of significance such as unusual conditions, roots, broken pipe, presence of scale and corrosion, and other discernible features will be recorded, and a copy of such records will be supplied to the City.
2. Photographs: Digital photographs of the television picture of problems shall be taken by the Contractor upon request of the City.
3. Video Recordings: Individual video files shall be created for each lateral inspected. Each file shall be in MPEG or Windows Media video format. Video files shall be named with the lateral ID and date of inspection. Video files shall be submitted on a portable hard drive. The purpose of video recording shall be to supply a visual and audio record of problem areas in the lines which may be replayed. Once recorded, the video shall become the property of the City.
4. Audio: All lateral inspection videos shall have an audio record. As a preamble, at the beginning of the inspection, the Contractor shall state the following "(Contractor's Name) is performing a pre/post TV survey of laterals for (each sub area)". State date, time, operator's name, area, pipe size and material, upstream City asset manhole number (Facility ID), and depth. The Contractor shall verbally state the position of the lateral with respect to the upstream manhole and describe defects. At the end of each line, state: "end of line and total linear footage".

3.04 POST CONSTRUCTION SURVEY

A. A. Procedure

1. The same procedure shall be used as indicated in sub-section "3.03 Preconstruction Survey."
2. In addition, the Contractor shall stop the camera at all point repairs and inspect entire repaired pipe sections.
3. The Contractor shall invert white foreground to black as needed in line sections with light background.
4. In the case of a post liner survey, the Contractor shall fully televise both ends of the liner so that the fit of the liner to the host pipe can be evaluated.
5. The post liner and/or replaced lateral and/or point repaired lateral CCTV inspection shall be done within 2-weeks of installation.

B. B. Documentation

1. The same documentation shall be provided as indicated in paragraph 3.03 "Preconstruction Survey" of these specifications.

END OF SECTION

SECTION 02766 SANITARY SEWER OBSTRUCTION REMOVAL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section includes clearing obstructions from the sewer main and lateral by remote device.
- B. Obstruction removal by remote device
 - 1. To remove protruding taps (service lines that protrude greater than 1-inch into the sewer)
 - 2. To remove other obstructions
 - 3. Removal of roots.
- C. The intent of the sewer line cleaning is to remove foreign materials from the lines and restore the sewer main and lateral so that CCTV clearly shows pipe and connection defects. It is recognized that there are some conditions such as broken pipe and major blockages that prevent obstruction removal from being accomplished or where additional damage would result if removal were attempted or continued. Should such conditions be encountered, the Contractor shall notify the City's Representative of their concern and the Representative will provide written confirmation that the obstruction will not be required to be removed from those respective sewer and lateral pipe segments. The representative's confirmation will be provided for each workday in which prohibitive conditions are encountered.
- D. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained so that the business remains open. No sewage from the services or main line shall be discharged on the ground or in waterways.
- E. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.
- F. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.
- G. Refer to Section 01001 General Work Requirements paragraph 1.01.A for minimum obstruction removal work qualifications.
- H. Refer to Section 01001 General Work Requirements paragraph 1.17.J for insurance coverage required for Chemical Root Treatment.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 LINE OBSTRUCTIONS REMOVAL:

- A. The Contractor shall remove any obstructions from within the sewer main and lateral that can be removed without excavation or compromising the integrity of the existing main or service lateral. Obstructions requiring excavation for removal shall be reported to and performed by the City.

3.02 OBSTRUCTION REMOVAL BY REMOTE DEVICE:

- A. This method of obstruction removal shall be performed during cleaning of the main and lateral. When CCTV of sanitary main or lateral identifies an obstruction, which constricts the flow carrying capacity of the sewer main, it shall be removed. The Contractor shall ask and receive the City Representative's written approval before proceeding with the obstruction removal.

3.03 CUT PROTRUDING TAPS:

- A. For break-in service connections that protrude more than one inch into the sewer, the CONTRACTOR shall remove the protruding portion of the tap in preparation to complete cleaning and CCTV of the sewer main and lateral. Cutters used shall be power-driven cutting devices (lateral cutters) designed to remove protruding taps. Cutters shall be capable of slicing laterally through cast iron, 3/4" rebar and anchors, clay tile, and concrete protruding into sewer lines. The CONTRACTOR shall cut protruding taps so that protrusions are no greater than 1/2 inch. While using a protruding tap cutter, slow RPM will cut more effectively than rapid RPM. The CONTRACTOR shall maintain a steady flow and RPM while cutting and shall flush out broken pieces in the line from the tap. If a protruding tap cannot be removed by the cutting device, then the City's Representative shall be notified to determine if a point repair will be necessary.
- B. In the event damage to the existing sewer line or service line occurs, a repair shall be done at the Contractor's expense and only a payment for the remote obstruction removal will be made. If the Contractor is unable to remove the protruding tap by this means, then a point repair may be performed by the City.

3.04 REMOVAL OF OTHER OBSTRUCTIONS:

- A. Removal of other obstructions includes items such as hanging gaskets, fixed debris, stabilized sand, hardened mineral deposits but excludes removal of tuberculation in cast or ductile iron pipes and grease.
- B. To remove other obstructions a remote device shall be utilized. The device(s) shall be pulled or driven from manhole to manhole up to a continuous length of 700-feet using a solid steel mandrel, porcupine, bucket, etc. to remove the obstruction. The device shall be adequately sized to remove the obstruction to the satisfaction of the City's Representative. Damage to the existing sewer main or service lateral must be repaired by the Contractor and only a payment for remote

obstruction removal will be made. The mechanical cleaning method may also be used to remove the obstruction when approved in writing by the City Representative. Damage to the existing sewer line, service line or tap must be repaired by the Contractor at his expense. The cleaning grease and normal solids from the pipe in preparation for CCTV of the sewer main or service lateral is not considered obstruction removal.

3.05 ROOT CUTTING:

- A. Notify the City when in the opinion of the contractor cutting is required.
- B. This section covers the preparatory cleaning and root removal from sanitary sewer mains and laterals prior to the internal inspection of the sewer lines by closed-circuit television. Root cutting shall be required where it has been determined that root growth is substantial and cutting would be required to facilitate a thorough and complete examination of the condition of the sewer through internal closed-circuit color television inspection. Caution needs to be observed with root removal. The Contractor needs to advise the City if it appears that cutting will compromise the integrity of the main or lateral. The City will review and instruct the Contractor on whether to proceed or not with cutting.
- C. The City reserves the right to deny payment for “Root Removal” if the City Representative or City work order manager were not informed of the need to cut roots.
- D. Root cutting tools shall be the industry standard concave saws, flat saws, water blasters or chain knockers and shall be carefully selected to ensure no damage is caused to the sewer main or any portion of the lateral including protruding laterals. Extreme caution should be taken when operating root cutters in the sewer and a video inspection shall always be on the root cutter to ensure damage is not caused from root cutting.
- E. All roots shall be captured and removed from the main and lateral line segments.
- F. Refer to Section 02761 paragraph 3.11 for chemical root treatment.

3.06 ACCEPTANCE OF THE OBSTRUCTION REMOVAL OPERATION:

- A. Acceptance of sewer line obstruction removal shall be made upon the successful completion of the CCTV inspection. If the CCTV inspection shows the removal to be unsatisfactory, the Contractor shall be required to complete the removal meeting the requirements of this section. Re-inspect of the sewer line will be required until the obstruction removal is shown to be satisfactory.

3.07 METHOD OF MEASUREMENT AND PAYMENT:

- A. Protruding tap or other obstructions removal by remote device will be paid on a unit price basis for each tap or obstruction removed within a manhole segment.

- B. A mobilization charge is to be included in the unit price for each manhole segment where obstructions are removed and shall include all obstructions removed within that manhole segment.
- C. Root cutting will be paid on a unit price per linear foot of removal.
 - 1. The total quantity of removal shall be the measured straight-line distance in Linear Feet of roots approved for removal. Measurement will begin at the first point in the line where roots have been approved for removal and end where designated by the City Representative and agreed to by the Contractor. Should root removal extend in the line segment to the upstream manhole the measurement will extend to the centerline of this manhole.
 - 2. The total linear feet of removal will be agreed upon prior to commencing removal by both the City Representative and Contractor.
- D. The cost of the following items of work are included in the unit prices for tap, other obstruction and root removal by remote device:
 - 1. Cleaning of Sewer mains or laterals of removal debris.
 - 2. Post television inspection of the removal.
 - 3. Hauling away and lawful disposal of excess excavated material and debris.
 - 4. All other necessary work to complete.
- E. Payment will not be made for obstruction removal if the existing sewer line, service line or tap is damaged, and a point repair is required.

END OF SECTION

SECTION 02771 CURE-IN-PLACE PIPE FOR SANITARY SEWER RENEWAL

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. The Work within this Section consists of the installation and testing cured-in-place pipe (CIPP). The CIPP shall provide a structurally sound, joint-less and water-tight new pipe within a pipe. The Contractor is responsible for proper, accurate and complete installation of the CIPP using the system selected by the Contractor.
- B. The finished liner shall extend over the installation length in a continuous, tight fitting, watertight pipe-within-a-pipe and shall be fabricated from materials which, when installed, will be chemically resistant to withstand internal exposure to domestic sewage.
- C. Neither the CIPP system, nor its installation, shall cause adverse effects to any of the City's facilities or processes. The use of the product shall not result in the formation or production of any detrimental compounds or by-products at the treatment facilities. The Contractor shall test and monitor the levels of by-products produced as a result of the installation operations. The Contractor shall conduct installation operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians, businesses, and property owners or tenants.
- D. All contractors and employees' vehicles on the project site for the City shall clearly and boldly display their full name, address, and phone number.
- E. Maintenance of Traffic (MOT)
Refer to General Requirements Section 01570, Maintenance of Traffic requirements.

1.02 INSTALLER EXPERIENCE AND QUALIFICATIONS

- A. Refer to Section 01001 General Work Requirements paragraph 1.02.B for minimum lining work experience. 06-08-2020 Conformed



1.03 PERFORMANCE WORK STATEMENT

- A. The Contractor shall submit, before any lining WORK is performed, to the City a Performance Work Statement (PWS) which clearly defines the CIPP product delivery in conformance with the requirements of these contract documents. The PWS shall contain at a minimum the following:
 - 1. Contractor's certificate of compliance that clearly indicates that the CIPP will conform to the project requirements as outlined in Specification Section 01010 Summary of Work and as delineated in these specifications.
 - 2. A detailed installation plan describing:

- a. All preparation work (cleaning operations, pre-CCTV inspections, by-pass pumping, and traffic control)
 - b. Liner wet-out procedure. 06-08-2020 Conformed 
 - c. Installation procedure, medium and method of curing. 06-08-2020 Conformed
 - d. Service reconnection
 - e. Quality control and testing to be performed
 - f. Post-CCTV inspection
 - g. Warrantees
 - h. Description of the proposed CIPP lining technology.
3. A detailed plan for identifying all active service connections during mainline installation.
 4. The qualifications of the Contractor.

Name, business address and telephone number

Personnel names, experience, and certifications for Field Superintendent, CIPP lead Installer, Lateral Cutter, Boiler Technician, and Lead CCTV NASSCO PACP Certified Inspector to be directly involved with this project. The Contractor shall sign and date the information provided and “certify that to the extent of his knowledge, the information is true and accurate, and that the supervisory personnel will be directly involved with and used on this project”. Substitutions of personnel and/or methods will not be allowed without written authorization of the City. Specialty technicians shall be certified by the equipment manufacturer and/or its authorized representative. Certifications shall be submitted to the City/Professional.
 5. Proposed manufacturer’s technology data shall be submitted for all CIPP products and all associated technologies to be furnished.
 6. All tools and equipment required for a complete installation of the CIPP.

Clearly describe all equipment including proposed back-up equipment to be furnished for this project.

Identify redundant tools and equipment to be kept on the job site in the event of equipment breakdown.

The Contractor shall outline the mitigation procedure to be implemented in the event of key equipment failure during the installation process for the CIPP.
 7. A detailed description of the Contractor’s proposed procedures for the removal of any existing blockages in the pipeline that may be encountered during the cleaning process.
 8. Detailed public notification plan for stage notification to residences affected by the CIPP installation.
 9. An odor control plan that will ensure that project specific odors will be minimized at the project site and surrounding area.
 10. Outline specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Repair or replacement procedures shall be as recommended by the CIPP system manufacturer and shall be submitted prior to any Work.
 - a. Repairable defects that may occur in the installed CIPP shall be specifically defined by the Contractor based on the manufacturer’s recommendations, including a detailed step-by-step repair procedure, resulting in a finished product meeting the requirements of the specifications.

- b. Un-repairable defects that may occur to the CIPP shall be clearly defined by the Contractor based on the manufacturer's recommendations, including a recommended procedure for the removal and replacement of the CIPP.

1.04 REFERENCES

A. Codes, Specifications, and Standards

1. Codes, specifications, and standards referred to by number or title shall form a part of this specification to the extent required by the references thereto. Latest revisions shall apply, unless otherwise shown or specified.
2. All American Society for Testing and Materials (ASTM) Standards noted below shall be to the latest revised version.
 - D543 – Standard and Practice for Evaluating the Resistance of Plastics to Chemical Reagents
 - D638 – Standard Test Method for Tensile Properties of Plastics
 - D790 – Standard Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials
 - D792 – Standard Test Methods for Density and Specific Gravity of Plastics by Displacement
 - D2122 – Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
 - D2837 – Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
 - D2990 – Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics
 - D3567 – Standard Practice for Determining Dimensions of Fiberglass (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings
 - D3681 – Standard Test Method for Chemical Resistance of “Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Pipe and Fittings
 - D5813 – Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe
 - F1216 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Inversion and Curing of a Resin-impregnated Tube
 - F1743 – Standard Practice for Rehabilitation of existing pipelines and conduits by pulled-in-place installation of cured-in-place thermo setting resin pipe
 - F2019 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)
 - F2561 - Standard Practice for Rehabilitation of a Sewer Service lateral and Its Connection to the Main Using a One-Piece Main and Lateral Cured-in-Place Liner
 - F2599 – Standard Practice for the Sectional Repair of Damaged Pipe by Means of An Inverted Cured -In-Place Liner

1.05 PRE-TREATMENT OF REGULATED CHEMICALS TO DISCHARGE INTO SEWER

- A. CIPP liner systems using resins containing styrene or other regulated chemicals that will be discharged into the wastewater system shall be required to reduce the concentration of Styrene in the cure water prior to discharge to the sanitary sewer. The discharge limits are

as follows:

	Discharge Limits	
	Maximum Styrene Concentration Limit for Discharge (PPM)	Maximum Total Pounds per Day of Styrene to be Discharged (Pounds/Day)
< 500,000	7	29
< 250,000	14	29
< 100,000	35	29

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1. A single day's or line segment water discharge in excess of 500,000 gallons per day shall require approval by the City's Environmental Compliance Section for separate concentration limit evaluation and approval."
 2. Discharge concentrations will be reduced based on the collection system distance from the City's Wastewater Treatment plant.
- B. After curing, the Contractor shall obtain a post-treatment cure water sample from the first segment lined in each Work Order and submit for laboratory analysis. 06-08-2020 Conformed
1. The following laboratory analysis is required:
 - a. One (1) sample to be collected from the treated water line segment and analyzed for "Styrene" using EPA Method 8260.
 - b. One (1) "Trip Blank" sample, analyzed for "Styrene" using EPA Method 8260.
 2. The Contractor shall submit the analytical report to the City for approval.
 3. The Contractor shall be responsible for all costs related to laboratory analytical testing of the water samples collected.
 4. Once the sample results demonstrate that the discharge limits have been met the Contractor shall follow similar styrene reduction procedures for subsequent lining segments, but sampling will not be required. 06-08-2020 Conformed
 5. The City reserves the right to obtain samples at any site on any line segment to ensure compliance with the discharge limits."

1.06 RESPONSIBILITY FOR OVERFLOWS AND SPILLS

- A. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.

1.07 PROPERTY DAMAGE

- A. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

1.08 SHOP DRAWINGS AND SUBMITTALS

- A. Submittals shall be submitted to the City for review and acceptance prior to construction in accordance with the General Conditions and specifications Section 01300 "Submittals." Submittals shall include the following:

1. Performance Work Statement shall be provided with a table of contents and tabbed sections.

2. Product:

a. A list of projects from the Manufacturer that total a minimum of 500,000 linear feet of liner installed in the United States. An Excel spread sheet shall be included listing as a minimum the name of projects, linear footage of main, completion date, contract amount, name of owner, address, contact person, and phone number.

b. Fabric tube – manufacturer and description of product components

c. Flexible membrane (coating) material and recommended repair (patching) procedure if applicable

d. Raw resin data – manufacturer and description of product components

e. Manufacturer's shipping, storage and handling recommendations for all components of the CIPP system

f. All MSDS sheets for all materials to be furnished.

g. Pre-Liner.

h. Hydrophilic end seals for manhole penetrations.

i. Tube wet-out and cure method including:

(1) A complete description of the proposed wet-out procedure for the proposed technology

(2) The manufacturer's recommended cure method for each diameter and thickness of CIPP liner to be installed including the curing medium and the method of application

(3) Method of cure and means to minimize quantity of styrene discharge back into the wastewater collection system.

(4) Method to minimize the safety risk to workers and the from exposure to hazardous chemicals associated with CIPP curing process.

3. Quality Control Plan

a. Defined responsibilities of the Contractor's personnel for assuring that all quality requirements are met. These will be assigned by the Contractor to specific personnel.

b. Proposed procedures for quality control, product sampling and testing shall be defined and submitted as part of the Plan.

c. Proposed methods for product performance controls, including the method of and frequency of product sampling and testing both in raw material form and cured product form.

d. Inspection forms and guidelines for quality control inspections shall be prepared in accordance with the standards specified within this specification.

e. The manufacturer shall furnish a check list containing key elements of the CIPP installation criteria that is important for the City to ensure that quality control and testing requirements are performed in accordance with these specifications.

4. Engineering design calculations shall be submitted in a timely fashion prior to construction, in accordance with the Appendix of ASTM F-1216, for each length of liner to be installed including the thickness of each proposed CIPP. It will not be acceptable for the Contractor to submit a design for the most severe line condition and apply that design to all the line sections. All calculations shall include data that conforms to the requirements of these specifications.

a. These calculations shall be performed and certified by a Professional Engineer registered in the State of Florida.

b. The manufacturer shall certify as to the compliance of its materials to the values used in the calculations.

5. The liner manufacturer shall submit a tabulation of time versus temperature. This tabulation shall show the lengths of time that exposed portions of the liner will endure without self-initiated cure or other deterioration beginning. This tabulation shall be at 5°F (degrees Fahrenheit) increments ranging from 70°F to 100°F. The manufacturer shall also submit his analysis of the progressive effects of such "pre-cure" on the insertion and cured properties of the liner

6. Certified copies of test reports of factory tests required by the applicable standards and this Section.

7. Manufacturer's installation instructions and procedures.

8. CIPP Installation Record (Shot Record) to include shot number and corresponding manhole to manhole pipe reaches for each scheduled installation, design thickness, actual thickness delivered to the site, pipe diameter, reach length, total length of shot, and number of laterals.

9. Wastewater pre-treatment plan including data, measurements, assumptions, calculations and procedures for the pre-treatment of CIPP process wastewater containing regulated chemicals.

10. Manufacturer's detailed procedures for repairing liners that have been installed incorrectly or that have failed during installation.

11. Contractor's procedures and materials for service renewal including time and duration of sewer service unavailability and a complete description of the methods he intends to use to reconnect the existing laterals.

12. Sampling procedures and locations for obtaining representative samples of the finished liner.

13. Sampling tests for compliance by an independent laboratory shall be made according to the applicable ASTM specification and the manufacturer's quality control program.

B. A final certificate of compliance with this specification shall be provided by the manufacturer for all lining material furnished.

1.09 WARRANTY

- A. Refer to Section 01001 General Work Requirements paragraph 1.03.A for all warranties covering CIPP work.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. The Contractor shall be responsible for the delivery, storage, and handling of products. No products shall be shipped to the job site without the approval of the City.
- B. Keep products safe from damage. Promptly remove damaged products from the job site. Replace damaged products with undamaged products.
- C. The wet-out facility shall write the Shot number, total wet-out length, thickness, pipe width, and resin type on each bag delivered to the project.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The materials used shall be designed, manufactured, and intended for sanitary sewer pipe relining and the specific application in which they are used. The materials shall have a proven history of performance in sewer relining and rehabilitation.
- B. Pipe lining products pre-approved by the City include: Insituform Technologies (CIPP Liner), National Liner (CIPP Liner), LMK Enterprises (Performance Liner), Stevens Technologies (CIPP Liner 2 part 100% epoxy), Inner Cure Technologies (Reichold/Dion CIPP Liner), Lanzo Lining Services (Lanzo CIPP Lining System), and Premier Pipe (Premier Pipe CIPP Lining System), Layne Inliner (CIPP Liner), Service Connection Seal + Lateral Brim & Full Wrap Lateral Liner BLD Services (Main/Lateral Connection Liner) and Miller Pipeline (CIPP Liner). All products must meet the specification herein and will require approval prior to installation. 06-08-2020 Conformed 
- C. Pre-Liner:
 - 1. Griffolyn as manufactured by Reef Industries, Inc. or pre-approved equal.
- D. Hydrophilic End Seals by LMK Enterprises or pre-approved equal.
- E. All materials, shipped to the project site, shall be accompanied by test reports certifying that the material conforms to the ASTM listed herein. Materials shall be shipped, stored, and handled in a manner consistent with written recommendations of the CIPP system manufacturer to avoid damage. Damage includes, but is not limited to, gouging, abrasion, flattening, cutting, puncturing, or ultra-violet (UV) degradation. On site storage locations, shall be approved by the City. All damaged materials shall be promptly removed from the project site at the Contractor's expense and disposed of in accordance with all current applicable agency regulations.

- F. The finished pipe liner in place shall be fabricated from materials which when complete are chemically resistant to and will withstand internal exposure to domestic sewage having a pH range of 5 to 11 and temperatures up to 150°F.
- G. Take all necessary field measurements of the existing pipe (including diameter, ovality and length) prior to manufacturing liners.
- H. The minimum length shall be that deemed necessary by the Contractor to effectively span the distance from the inlet to the outlet of the respective manholes unless otherwise specified. The Contractor shall verify the lengths in the field before manufacturing.
- I. Segment liner design will be based on a safety factor of 2, soil modulus of 1000 psi, soil density of 120 pcf, H2O live load, in place depth of cover, groundwater 3 ft. less than the depth of cover, and ovality of 2%.
- J. Point repair liner segments shall not begin or end at a pipe joint.
- K. Point repair section liners shall have a minimum length of 3-ft. Section liners shall extend a minimum of 1-ft. beyond the pipe defects at each end of the repaired section. Length of each required repair shall be verified in the field prior to installation. 06-08-2020 Conformed 
- L. All cured-in-place point repairs shall be one piece. Separately fabricated or installed point repairs shall not have butted ends or overlaps.

2.02 STRUCTURAL REQUIREMENTS

- A. Each CIPP shall be designed to withstand internal and/or external loads as dictated by the site and pipe conditions. The CIPP design shall assume no bonding to the original pipe wall.
- B. The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his company. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. The long-term modulus shall not exceed 50 percent of the short-term value for the resin system and shall be verifiable through testing. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.
- C. The Contractor shall submit, prior to installation of the lining materials, certification of the compliance with these specifications and/or the requirements of the CIPP system. Certified material test results shall be included that confirm that all materials conform to these specifications. Materials not complying with these requirements will be rejected.

- D. The design thickness of the CIPP shall be arrived at using standard engineering methodology as found in ASTM F1216 and the physical properties. In no case shall the finished thickness of the cured liner be less than 4.5 millimeters nominal. The required cured structural CIPP wall thickness shall be based, as a minimum, on the physical properties described in TABLE 02771 - 1 Minimum Physical Properties and per the design of the Professional Engineer and in accordance with the design equations in ASTM F 1216 Appendix X1 and the following design parameters:

Design Considerations	Criteria
Tube Design	ASTM F 1216 Appendix X1
Hydrostatic Buckling	ASTM F 2561 Section 6.1 and 6.1.1
Design Safety Factor	2.0
Retention Factor for Long Term Flexural Modulus to be used in Design	50 % of the short-term value of the resin system
Ovality	2 %
Groundwater Depth*	100% depth from pipe invert to surface
Soil Depth*	As indicated on the plans
Lining enhancement factor (K)	7
Soil Modulus**	1,000 psi
Soil Density**	120 pcf
Live Load**	One (1) H20 passing truck
Design Condition	Fully deteriorated
Minimum Long-Term Life	50 years

*Denotes multiple line segments may require a table of values

**Denotes information required for fully deteriorated design conditions

TABLE 02771-1
Minimum Physical Properties

Property	Standard	Cured Composite per ASTM F1216 (PSI)
Flexural Strength (short term)	ASTM D790	4,500
Flexural Modulus of Elasticity (short term)	ASTM D790	250,000

- E. When multiple layers are present, the layers of the finished CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or such that the knife blade moves freely between the layers. If separation of the layers occurs during testing of the field samples, new samples will be cut from the work. The composite of the materials will, upon installation inside the host pipe, exceed the minimum test standards specified by the American Society for Testing Methods. Any reoccurrence may be cause for rejection of the work.

TABLE 3-1 Typical Liner Thickness			
SEWER DIAMETER	PIPE INVERT DEPTH UP TO 10'	PIPE INVERT DEPTH UP TO 10-15'	PIPE INVERT DEPTH 15' AND OVER
6"	4.5 mm	4.5 mm	4.5 mm
8"	6.0 mm	6.0 mm	6.0 mm
10"	6.0 mm	6.0 mm	7.5 mm
12"	6.0mm	7.5 mm	9.0 mm
15"	7.5 mm	9.0 mm	10.5 mm
18"	9.0 mm	12.0 mm	13.5 mm
21 "	10.5 mm	13.5 mm	15.0 mm
25"	12.0 mm	15.0 mm	16.5 mm
30"	15.0 mm	18.0 mm	21.0 mm
36"	16.5 mm	21.0 mm	24.0 mm
42"	22.5 mm	24.5 mm	28.5 mm
48"	22.5 mm	28.5 mm	33.0 mm

2.03 CURED-IN-PLACE LINER

A. Fabric

1. The Contractor shall determine the minimum tube length necessary to effectively span the designated run between manholes. The Contractor shall verify the lengths in the field prior to ordering and prior to impregnation of the tube with resin, to ensure that the tube will have sufficient length to extend the entire length of the run. The Contractor shall also measure the inside diameter of the existing pipelines in the field prior to ordering liner so that the liner can be installed in a tight-fitted condition.
2. The sewn tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F-1216, ASTM F1743, or ASTM D5813. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.
3. The wet-out tube shall have a relatively uniform thickness that when compressed at installation pressures will equal or exceed the calculated minimum design CIPP wall thickness.

- 1) All pipes to be considered fully deteriorated.
- 2) All pipes shall be subjected to soil load of 120 lbs./c.ft., with applicable live load, and water table two (2) feet below the top of the ground.
- 3) All pipes shall have a minimum of 2% ovality in the circumference
- 4) The above liner thicknesses shall be maintained as a minimum.

4. The flexible tube shall be fabricated to a size that when installed will neatly fit (minimum 99.75%) the internal circumference of the existing sanitary sewer lines (including services). Allowance shall be made for circumferential stretching during insertion so that the final cured product is snug against the wall of the host pipe.
5. The outside layer of the tube shall be coated with an impermeable, flexible membrane that will contain the resin and allow the resin impregnation (wet out) procedure to be monitored.
6. The tube shall contain no intermediate or encapsulated elastomeric layers. No material shall be included in the tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.
7. The wall color of the interior pipe surface of CIPP after installation shall be a relatively light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.
8. Seams in the tube shall be stronger than the non-seamed felt material.
9. The tube shall be marked for a distance at regular intervals along its entire length, not to exceed five feet. Such markings shall include the Manufacturers name or identifying symbol.
10. Unless otherwise specified, the Contractor will use a polyester filter felt tube and a resin and catalyst system compatible with the inversion process and having the minimum physical properties for the cured pipe identified in Table 02771 - 1 Minimum Physical Properties.

B. Resin

1. The resin system shall be a corrosion resistant polyester or vinyl ester resin and catalyst system or epoxy and hardener system that when properly cured within the tube composite, meets the minimum requirements of ASTM F1216 as tested in accordance with ASTM D543, ASTM F1743 or F2019, the physical properties given herein these specifications Section 02771 and those, which are to be utilized in the design of the CIPP for this project. 06-08-2020 Conformed 
2. The resin used shall not contain non-strength enhancing fillers.
3. The Contractor shall submit the resin characteristics, including filler identification, to the City for approval prior to lining activities.
4. The resin shall produce a CIPP that will comply with the structural and chemical resistance requirements of the specification.

C. Point Repair CIPP Sectional Liners

1. Starting point, anywhere within main run.
2. Length as needed to provide a 1 ft. margin from the defect.
3. Time for cure, 2 hours.
4. End thickness to taper down to 5mm for main line sleeves.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Prior to any lining of a pipe so designated.

1. It shall be the responsibility of the Contractor to remove all internal debris and clean the existing sewer line and/or lateral in accordance with the recommendations of the liner manufacturer prior to installation of the liner and in accordance with Section 02761 "Cleaning Sanitary Sewer Systems." Both mainline and lateral line shall be cleaned.
 - a. Preparation of the interior surface shall be accomplished by a thorough high-pressure water-jet cleaning. The pipe shall be left free of all loose sand, rock, or other deleterious materials. Any roots in the pipe shall be either removed or cut off flush with the interior.
 - b. If conditions such as broken pipe and major blockages are found that will prevent proper cleaning or where additional damage would result if cleaning is attempted or continued, the Contractor shall notify the City immediately. The City will determine what course of action will be taken to complete the project.
 - c. Precautions shall be taken by the Contractor to ensure that no damage or flooding of public or private property is caused by the cleaning operation.
 - d. The City shall inspect the prepared pipe for cleanliness and smoothness before the Contractor is authorized to proceed with pipe lining operations.
 - e. Mains or laterals that had roots prior to cleaning shall receive chemical root treatment.
2. Certified PACP personnel trained in locating breaks, obstacles and service connections by closed circuit television shall perform inspection of existing sewer lines. The interior of the line shall be carefully inspected in accordance with Section 02762 "Televising Sanitary Sewer Systems" to determine the location of laterals in any condition that may prevent proper installation of the liner pipe into the lines. Such conditions shall be noted so they can be corrected. A digital data video and a suitable log shall be prepared by the Contractor during the Work and provided to the City a minimum of two weeks prior to liner installation.
3. The Contractor shall provide for the flow of sewage around the section or sections of pipe designated for lining as specified in Section 01516 "Collection System Bypass."
 - a. Flow control shall be exercised as required to ensure that no flowing sewage comes into contact with sections of the sewer under repair.
 - b. A sewer line plug shall be inserted into the sewer upstream from the section to be repaired. The plug shall be so designed that all or any portion of the sewage flows can be released. During the review, testing and installation portion of the operation, flows shall be shut off in order to properly install the cured-in-place pipe lining. The upstream manholes shall be constantly monitored for degree of surcharging. After the installation is complete, flows shall be restored to normal level.
 - c. Wherever lines are blocked off and the possibility of backing up the sewage and causing harm to public and private property is foreseen, it shall be the Contractor's responsibility to bypass flow from manhole to manhole.
 - d. Bypassing shall be accomplished using sewer plugs with pump connections, by pumping down surcharged manholes, or by other methods acceptable to the City. All bypassed flow must be discharged to a sanitary sewer. Bypassed flow shall not be allowed to enter any storm line, drainage ditch or street gutter.

- e. During a bypass operation, the pump shall be manned continuously; the Contractor shall maintain the pump and bypass equipment; and shall be responsible for any damages to public or private property due to the malfunction of same.
- 4. The Contractor shall clear the line of obstructions such as solids, dropped joints, protruding service connections or collapsed pipe that will prevent the insertion of the liner pipe. If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, then the City shall be notified immediately.
- 5. If, in the opinion of the CIPP liner manufacturer, the rate of infiltration in the sewer segment is high enough to risk washout of the resin then the Contractor shall perform measures, such as grouting or installation of a pre-liner, as required to minimize infiltration prior to installation. If during the pre-CCTV inspection any infiltration conditions are observed, the Contractor shall submit, in writing for approval by the Owner, the methods and materials for mitigating any adverse impacts from infiltration.
- 6. Do not install liner if ground water temperatures and/or ambient temperatures are excessive for the product installation procedures.
- 7. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained so that the business remains open. No sewage from the services or main line shall be discharged on the ground or in waterways.
- 8. Contractor shall coordinate pump stations, force main and sanitary sewer operation, bypass and shutdown control with the City
- 9. Traffic Control: The Contractor shall provide all traffic control measures required for the safety of the public, workers and equipment during the Work and in accordance with FDOT and the City.
- 10. The Contractor shall provide critical backup equipment to ensure that the lining operation progresses without interruption. Required backup equipment shall include at a minimum 1 additional lateral cutter system and 1 additional CCTV camera system.

3.02 INSTALLATION OF LINER

- A. The CIPP liner shall be installed and cured in the host pipe per the manufacturer's specifications as described and submitted in the Performance Work Statement. CIPP installation shall be in accordance with the applicable ASTM Standards with the following modification:
 - 1. Prior to installation and as recommended by the manufacturer remote temperature gauges or sensors shall be placed inside the host pipe to monitor the temperatures during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
 - 2. Verify liner end seals are in-place in the wetted liner.
 - 3. The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing heat source. Another such gauge shall be placed between the impregnated reconstruction tube and the pipe invert at the remote manhole to determine the temperatures during cure. The resin manufacturer shall recommend temperature in the line during the cure period.

4. The wet-out tube shall be positioned in the pipeline using the method specified by the manufacturer. Care should be exercised not to damage the tube as a result of installation. The tube shall be inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point. Sufficient excess resin will be provided to ensure excretion into cracked pipe and/or joints of the host pipe after curing.
5. After inversion is completed, the Contractor shall supply suitable heat source and recirculation equipment. The equipment shall be capable of delivering the heat source throughout the section uniformly to raise the temperature above the temperature required to affect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed. Temperatures shall be monitored and recorded throughout the installation process to ensure that each phase of the process is achieved at the manufacturer's recommended temperature levels. Copies of these records shall be given to the City at the completion of each installation.
6. Curing shall be accomplished by utilizing the appropriate medium in accordance with the manufacturer's recommended cure schedule. The curing source input and output temperatures shall be monitored and logged during the cure cycles if applicable. The manufacturer's recommended cure method and schedule shall be used for each line segment installed in consideration of the existing conditions and in accordance with applicable ASTM Standards. 06-08-2020 Conformed
7. For heat cured liners, if any temperature sensor or multiple sensors do not reach the temperature as specified by the manufacturer to achieve proper curing or cooling, the installer can make necessary adjustments to comply with the manufacturer's recommendations. The system computer should have an output report that specifically identifies each installed sensor station in the length of pipe, indicates the maximum temperature achieved and the sustained temperature time. Each sensor should record both the maximum temperature and the minimum cool down temperature and comply with manufacturer's recommendations.
8. For UV cured liners, all light train sensor readings, recorded by the tamper proof computer, shall provide output documenting the cure along the entire length of the installed liner. The cure procedure shall be in accordance with the manufacturer's recommendation as included in the performance work statement.
9. Temperatures and curing data shall be monitored and recorded by the Contractor throughout the installation process to ensure that each phase of the process is achieved as approved in accordance with the CIPP system manufacturer's recommendations.
10. The Contractor shall immediately notify the City of any delays taking place during the insertion operation. Such delays shall possibly require sampling and testing by an independent laboratory of portions of the cured liner at the City's discretion. The cost of such test shall be borne by the Contractor and no extra compensation will be allowed. Any failure of sample tests or a lack of immediate notification of delay shall be automatic cause for rejection of that part of the Work at the City's discretion.
11. Initial cure shall be deemed to be completed when inspection of the exposed portions of cured pipe appear to be hard and sound and the remote temperature sensor indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the cured-in-place inversion process, during which time the recirculation of the heat source

and cycling of the heat exchanger to maintain the temperature continues. Contractor shall retain a resin-impregnated sample (wick) to provide verification of the curing process taking place in the host pipe.

12. The Contractor shall cool the hardened pipe to a temperature below 100°F before relieving the static head in the inversion standpipe. Cool-down may be accomplished by the introduction of cool water into the inversion standpipe to replace water being drained and disposed per the approved pre-treatment plan. Care shall be taken in the release of the static head so that a vacuum will not be developed that could damage the newly installed pipe.

13. Seal the area where the line enters or leaves each manhole. Finish the inside of the manhole with a quick set cement grout to raise the invert to the grade of the liner pipe. Also use this grout to dress up around the end of the liner. This space may be sealed with a mechanical seal, chemical seal, or combination of both. The Contractor shall seal the liner at all manhole reconnections with an approved product, compatible with the liner, to completely seal any annular space present.

14. If the pipe liner fails to make a tight seal due to broken or misaligned pipe at the manhole wall or other reason, the Contractor shall apply a seal at that point.

15. The temperature of water discharged to the sewer system from processing liners shall not exceed 100°F maximum or the level allowed by State or Local standards. When draining water, care shall be exercised not to create a vacuum in the line.

16. After the liner has been installed, all active, existing services shall be temporarily reinstated. This shall be done without excavation in pavement areas, and in the case of non-man-entry pipes, from the interior of the pipeline by means of a 360° (degree) television camera and a cutting device that re-establishes the service connection. When a remote cutting device is used and a cleanout is available, then a mini camera down the service may also be used to assist the operator in cutting or trimming. All coupons shall be recovered at the downstream manhole and removed.

17. The cost for maintaining sanitary sewer service for the property owners shall be included in the prices bid and no additional compensation will be allowed.

3.03 POST INSTALLATION

A. Service Lateral Renewal

1. The number of service connections on some sewer segments may exceed the number of buildings served. It is the Contractor's responsibility to determine through dye testing, or other acceptable methods, the services that are live and require reinstatement prior to commencing lining of the sewer main.

2. Inactive services to vacant parcels shall be renewed, unless otherwise directed by the City.

3. The exact location and number of service connections or side sewers shall be verified during the initial television inspection. It shall be the Contractor's responsibility to accurately field locate all existing service connections or side sewers and establish means for access for flow control. The Contractor shall reconnect all service connections or side sewers to the liner pipe as indicated in accordance with the Contract Documents.

4. The Contractor shall be responsible for restoring/correcting, without any delay, all

missed or faulty reconnections, as well as any damage caused to property owners for not reconnecting the services soon enough or for not giving notice to the property owners.

5. Any lateral not initially reinstated by the Contractor that proves to be active shall be reinstated by the Contractor at no additional cost to the City and the Contractor shall be responsible for any resulting property damage of floods.

6. All existing service connections shall be reconnected by a remote-controlled cutting device directed internally by a television camera or by internal manual cutting. Cuts shall be made by experienced operators so that no blind attempts or holes are made in the liner pipe. Locations shall be verified carefully to match earlier tapes for accurate lateral location, especially where dimples are not well defined. The City reserves the right to require service connection by excavation at the Contractor's expense at any location if the quality of workmanship of the cut is not satisfactory.

7. A 2-pass process of utilizing a cutter to open the lateral followed by wire brush (or similar) attachment to complete the cutting flush with the lateral walls should be utilized or approved alternate. It shall be properly aligned, invert to invert, to the existing connection with no obstructions to the flow. Resin slugs shall be removed as necessary from reinstated service connections. Any mis-cuts shall be repaired at no cost to the City and shall be performed utilizing an additional thinner liner to prevent water from entering behind the liner to the full satisfaction of the City. All coupons cut from the liner for reopening of lateral connections shall be retrieved from the sewer, accounted for by the Contractor, and turned over to the City.

8. Service connections shall be reinstated to at least 95% of the original area as it enters the host pipe.

9. All service connections and side sewers to be reconnected to the main sewer, shall be cleaned up to a length of 1-foot from the inside face of the existing wall of the main pipe. All deposits within the first foot of the service connection or side sewer in the service connections shall be removed and laterals reinstated.

10. Contractor shall provide a sound, smooth transition from laterals/side sewers to the main sewer. Contractor shall submit for approval a detailed repair plan for the permanent repair of any gaps between the installed liner and the face of the lateral/side sewer connections.

11. For PVC laterals or laterals that have been previously lined with cured-in-place pipe the Contractor shall take care during the reinstatement to avoid damage to the lateral pipe.

B. Each pipelined shall be post-CCTV inspected in accordance with Section 02762 "Televising Sanitary Sewer Systems" as soon as practical after processing to assure complete curing.

1. The Contractor shall not reactivate any section of lined sewer pipe until authorized to do so by the City. Segments not fully conforming to these Specifications must be immediately brought to the City's attention with a proposed method of correction.

2. Immediately prior to conducting the post-lining CCTV, the Contractor shall thoroughly clean the newly installed liner removing all debris and build-up that may have accumulated, at no additional cost to the City.

3. The post-CCTV inspection documentation shall be submitted within 15 working

days of the liner installation. The City may at its discretion suspend any further installation of CIPP until the post-installation documentation is submitted.

- a. As a result of this suspension, no additional working days will be added to the contract, nor will any adjustment be made for increase in cost. 06-08-2020 Conformed 

C. Defects

1. The liner shall be continuous and free of all visual and material defects except those resulting from pre-lined conditions (such conditions shall be brought to the attention of the City prior to lining).
2. There shall be no damage, deflection, holes, delaminating, uncured resin or other visual defects in the liner.
3. The liner surface shall be smooth and free of waviness throughout the pipe.
4. No visible leakage through the liner or at manhole or service lateral connections will be allowed.
5. Any defects located during the inspection shall be corrected by the Contractor to conform to the requirements of the specifications and to the satisfaction of the City.
6. Defects in the installed CIPP shall be identified and defined as specified in Section 02762 Televising Sanitary Sewer Systems.
7. Repairable defects that may occur in the installed CIPP shall be specifically defined by the Contractor based on manufacturer's recommendations, including a detailed step-by-step repair procedure, resulting in a finished product meeting the requirements of these contract specifications.
8. Un-repairable defects that may occur to the CIPP shall be clearly defined by the Contractor based on the manufacturer's recommendations, including a recommended procedure for the removal and replacement of the CIPP.

D. Manhole Connections

1. Where liners of any type are installed in 2 or more continuous manhole segments, the liner invert through the intermediate manholes shall be left intact. Final finishing of the installation in those intermediate manholes shall require removal of the top of the exposed liner and neat trimming of the liner edge where it touches the lip of the manhole bench.
2. Reinstate openings for all manhole drop assemblies after relining mainline sewer
 - a. Outside drop assemblies shall be lined with a cured-in-place liner compatible with the mainline liner, for the full length of the drop assembly and bend.
 - b. Inside drop assemblies are not required to be relined.
3. A seal consisting of a resin mixture or hydrophilic seal compatible with the installed CIPP shall be applied at manhole/wall interface in accordance with the CIPP system manufacturer's recommendations.

- E. Portions of any piece of liner material removed during installation shall be available for inspection and retention by the City.

3.04 TESTING

- A. The physical properties of the installed CIPP shall be verified through field sampling and

laboratory testing. All testing shall be furnished by the Contractor. All materials testing shall be performed at the Contractor's expense, by an independent third-party laboratory selected by the City as recommended by the CIPP manufacturer. All tests shall be in accordance with applicable ASTM test methods to confirm compliance with the requirements in these documents.

- B. The Contractor shall pay for all testing included in this section
- C. The Contractor shall provide samples for testing from the actual installed CIPP liner. The Contractor shall determine sampling location and procedures to ensure representative samples are obtained from the finished liner, subject to the approval by the City. The contractor shall provide removable sizing sleeves, when possible, to collect liner samples, which accurately replicate the host pipe diameter. 06-08-2020 Conformed 
 - 1. A minimum of 1 sample shall be taken of the first segment installed or as directed by the City.
 - 2. A minimum of 2 samples shall be taken for each 2,500 lineal feet of liner material installed or for each manufacturing lot, if less, or as directed by the City.
 - 3. A minimum of 6 samples per project shall be taken for each type of liner furnished or as directed by the City.
 - 4. A sample shall be cut from a section of cured liner that has been inverted or pulled through a like diameter pipe which has been held in place by a suitable heat sink such as sandbags.
 - 5. All curing, cutting, and identification of samples shall be witnessed by the City.
- D. Tests of the samples shall be conducted in accordance with ASTM standards
 - 1. Short term flexural properties: The initial tangent flexural modulus of elasticity and flexural strength shall be measured in accordance with test methods in ASTM D790.
 - 2. Fiber reinforced flexural properties: specimens should be sampled in accordance with ASTM F1743, section 8.1.2 and flexural properties shall be determined in accordance with ASTM F1743, section 8.1.3 along the longitudinal and circumferential axis of the install CIPP.
 - 3. Fiber reinforced tensile properties: Where the CIPP is reinforced with oriented continuous or discontinuous fibers to enhance the physical properties of the CIPP, specimens shall be sampled in accordance with ASTM F1743, section 8.1.2 and tensile properties shall be determined in accordance with ASTM D3039 and tested along the longitudinal axis and circumferential axis of the installed CIPP.
 - a. One random tensile test will be taken on each Work Order. The segment from which this test sample is taken will be selected by the City. 06-08-2020 Conformed 

4. CIPP wall thickness shall be determined in a manner consistent with ASTM D5813, section 8.1.2. Thickness measurements shall be made in accordance with the practice in ASTM D3567 for ASTM D5813, section 8.1. Deduct from the measured values the thickness of any plastic coating or CIPP layer not included in the structural design of the CIPP. The average thickness shall be calculated using all measured values and shall meet or exceed the minimum design thickness. The minimum wall thickness at any point shall not be less than 87.5% of the approved specified thickness.
- E. The installed CIPP thickness shall be measured for each liner shipment to the job site. If the CIPP thickness does not meet that specified in the contract and submitted as the approved design by the Contractor, then the liner shall be repaired or removed. The samples shall be made by core drilling 2-inch diameter test plugs at random locations selected by the City. As an alternative the Contractor may use industry proven, non-destructive methods for confirming the thickness of the installed CIPP if it can be shown the calibrated thickness is the same as core test plugs.

3.05 ACCEPTANCE

A. Liner

1. It is the intent of these specifications that the completed liner with all appurtenances shall be essentially equivalent in final quality and appearance to new sewer installation.
 2. The finished liner shall be continuous over the entire segment between manholes and homogenous throughout.
 3. The finished liner shall be fully rounded and as free as commercially practicable from visible defects, including but not limited to damage, deflection, holes, delamination, ridges, cracks, uncured resin, foreign inclusions or other objectionable defects.
 4. Where a defect in the liner requires removal of a section of the liner in the City's opinion, the Contractor shall make all repairs as required by the City and shall install a segmental liner, compatible with the liner, to accomplish a continuous finished liner.
 5. The pipe shall be neatly and smoothly cut off at each manhole. The manhole trough shall be raised to the invert of the liner to preclude snagging and shoaling of debris.
- B. Defects: Any defect which will or could affect the structural integrity, strength of the lining, flow impairment, or leaks shall be repaired as outlined below or in accordance with the approved repair or replacement procedures as recommended by the CIPP system manufacturer. The repair or replacement of the defects will be at the Contractor's expense.
1. Leaks
 - a. There shall be no visible infiltration through the liner, around the liner at manhole connections, at lined service connections or in lined services. Contractor shall repair any visible leaks and the repair method shall be approved by the City.
 2. Wrinkles/Fins
 - a. Wrinkles outside the flow line of the pipeline:
 - (1) Wrinkles/fins in height up to a maximum of 5% of the inside diameter of the host pipe are acceptable
 - (2) Wrinkles/fins over 5%, particularly those of a longitudinal configuration, may be acceptable and should be evaluated, by the project engineer for acceptance, on a case-by-case basis.

- b. Wrinkles in the flow line:
 - (1) Wrinkles/fins projecting more than 5% into the flow that are generally longitudinal in their orientation may be deemed acceptable by the City on a case-by-case basis by considering any potential operation and maintenance issues that would result from their being left in place.
 - (2) Wrinkles/fins in the lower third or flow line of the finished CIPP (based upon the depth of flow) that are generally circumferential in their orientation should not exceed 0.5-inches, whichever is smaller. Acceptability of larger wrinkles/fins meeting this characterization shall be, on a case-by-case basis by the City with consideration given to potential operations and maintenance issues that would result from their being left in place.
- c. Repair when wrinkles/fins are removed:
 - (1) Wrinkles should be fully cured, tight and the resin should be homogeneous across the full width of the wrinkle.
 - (2) In most cases, when wrinkles/fins are removed from the installed CIPP, the resin in the liner pipe is fully cured and homogeneous and no further repair is required. If a repair is required, the manufacturer should be contacted for the correct repair procedure.
- 3. Blisters should be probed and punctured to determine the existence of water behind the blister.
 - a. No action required unless the pipe is leaking at the blisters.
- 4. Lifts in Liner
 - a. Soft lifts should be re-processed by the Contractor to fully cure the CIPP.
 - b. Hard lift shall be removed, and a new short liner as required being equivalent to the original installed CIPP.
- 5. A bulge in the invert caused by residual debris left in the pipe that impedes the flow characteristics of the pipeline should be cut out.
 - a. Cut out the section of the bulge and replace with a new short liner equivalent to the original product or as recommended by the manufacturer.
- 6. Pinholes: the area where the liner has pinholes should be patched with a short-liner repair or the liner removed and replaced as recommended by the manufacturer.
- 7. Soft spot in liner needs to be reheated and hardened or cut out and replaced or as recommended by the manufacturer.
- 8. Dry tube or white spots are not acceptable and shall be removed and a patch repair shall be performed or as recommended by the manufacturer.
- 9. Liner surface peeled off
 - a. Cut out a representative sample of the CIPP
 - b. Test physical properties and remaining CIPP thickness to verify that the contract design requirements are met.
 - c. Replace liner or as recommended by the manufacturer
- 10. Hole in the liner is not acceptable
 - a. Small holes can be repaired with epoxy
 - b. Short liner installed over larger holes or as recommended by the manufacturer
- 11. Cracks in liner are unacceptable and shall be repaired
- 12. Loose liner seam tape shall be removed to prevent potential hang-up of debris.
- 13. Annular space between host pipe and liner at manhole

- a. If leaking between the host pipe and the CIPP, inject a hydrophilic type grout to stop the leakage.
- b. If the pipe is located in groundwater, inject a hydrophilic type grout to stop possible future leakage.
- c. If the pipe is not in groundwater, a cementitious grout can be used to fill the space.
- 14. Liner delamination
 - a. Cut out the section of delaminated liner and replace with a new short liner equivalent to the original product or as recommended by the manufacturer.
- 15. CIPP discoloration
 - a. Obtain a sample for testing the CIPP physical properties. Follow manufacturer's recommendations for repair.
 - b. Remove and replace the CIPP physical if the physical properties do not meet the contract minimum requirements.
 - c. No action required if the tested samples meet the physical properties.
- 16. Improper repair of CIPP: duct tape is not an acceptable repair for any situation.
- 17. The CIPP should fit tight inside the host pipe.
 - a. If the CIPP does not fit tightly against the original pipe at its termination point(s), the full circumference of the CIPP exiting the existing host pipe should be sealed by filling with a resin mixture compatible with the CIPP.
- 18. Overcut connection not allowed
 - a. Opening cut to match bottom of service pipe to eliminate debris build-up
 - b. If an overcut is made, grout the interface between the connection and the mainline
 - c. Install a connection hat
 - d. Install a short liner, then re-cut the service connection opening
- 19. Leakage between CIPP and host pipe at service connection
 - a. Leakage shall be stopped
 - b. Grout the interface between the connection and the mainline
 - c. Install a one piece main and lateral CIPP liner with end seals.
- 20. Connection hat issue
 - a. Coating from mainliner not removed before installing the hat
 - b. Loose material shall be removed
 - c. Remove and replace the connection hat as recommended by the manufacturer
- 21. Undercut service connection
 - a. Finish cut with brush to create a smooth opening
- 22. Resin slug in service connection
 - a. If not blocking the flow from the service connection and slug does not impede more than 20% of the connection opening, no action required
 - b. If blocking the flow, remove slug or dig up and replace the connection
- C. Service Connections
 - 1. The CIPP lateral lining shall not inhibit the CCTV post video inspection of the mainline or service lateral pipes.
 - 2. Reinstatement of all lateral connections shall be done neatly and smoothly.

3.06 CLEAN-UP AND RESTORATION

- A. The Contractor shall not allow the site of the Work to become littered with trash and waste material but shall maintain the site in a neat and orderly condition throughout the construction period.
- B. On or before completion, the Contractor shall clean and remove from the site of the Work all surplus and discarded materials, temporary structures, stumps and portions of trees, and debris of any kind. He shall leave the site of work in a neat and orderly condition, similar or equal to that prior to construction.
- C. All private and public property along or adjacent to the Work disturbed by construction operations shall be restored to a condition similar or equal to that existing prior to construction.
- D. Before final acceptance by the City, the Contractor shall replace and/or restore any water, sewer, drain, and gas lines and appurtenances; electrical, telephone, telegraph conduits and wires, both underground and aboveground, and appurtenances; traffic signals, fire and police alarm systems and appurtenances; sidewalks, curbs, gutter, drainage ditches and pavements and all other public utility facilities and appurtenances along or adjacent to the Work that may have been disturbed by construction operations.
- E. Conditions permitting, property cleanup and restoration shall begin and be prosecuted to completion on a timely basis as set forth herein.

3.07 PROGRESSIVE CIPP INSTALLATION RECORD (SHOT RECORD)

- A. The Contractor shall provide a progressive CIPP Installation Record (Shot Record) with monthly application for partial payments. The progressive shot record shall indicate quantities actually installed and deviations to the parameters included in the shot record (i.e. shot number and corresponding manhole to manhole pipe reaches for each scheduled installation, design thickness, actual thickness delivered to the site, pipe diameter, reach length, total length of shot, and number of laterals).
- B. Monthly partial payments will not be approved without prior approval of the progressive CIPP Installation record (Shot Record) including verification and acceptance of all quantities by the City.

3.08 WARRANTY INSPECTION

- A. The City may conduct the warranty television inspection within 1-year following completion of the project. If it is found that any of the CIPP has developed abnormalities since the completion of the project, the abnormalities shall be repaired and/or replaced by the Contractor promptly as per these specifications and as recommended by the manufacturer.

END OF SECTION

SECTION 02772

CURE-IN-PLACE PIPE FOR LATERAL RENEWAL

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Renewal of existing sanitary sewer laterals by installation of a resin impregnated flexible felt tube into the existing lateral line utilizing a vertical inversion standpipe and hydrostatic head, pulled in place, or other approved method and curing by circulating hot water or other approved means to produce a hard, impermeable pipe.
- B. Work shall include the installation of cleanouts to access laterals to CCTV specific laterals listed in the Drawings. Contractor shall perform a pre-CCTV inspection of the laterals per Section 02763, "Televising Sanitary Sewers Laterals". City will determine upon review of the CCTV inspection which laterals will be renewed or replaced.
- C. Post CCTV inspection after renewal as per Section 02763 "Televising Sanitary Sewers Laterals."

1.02 REFERENCES

- A. Refer to Section 02771 Cured-In-Place Pipe for Sanitary Sewer Renewal paragraph 1.04 for applicable compliance standards. Include with these standards ASTM F2561, Standard Practice for Rehabilitation of a Sewer Service Lateral and Its Connection to the Main using a One Piece main and Lateral Cured-In-Place Liner.

1.03 INSTALLER EXPERIENCE AND QUALIFICATIONS

- A. Refer to Section 01001 General Work Requirements paragraph 1.01.C for minimum lateral work qualifications.

1.04 RESPONSIBILITY FOR OVERFLOWS AND SPILLS

- A. Refer to Section 01001 General Work Requirements paragraph 1.17.i for responsibility of overflows and spills.

1.05 SUBMITTALS

- A. Submittals shall be submitted to the City for review and acceptance prior to construction in accordance with the General Conditions and specifications Section 01300 "Submittals."
- B. Submit the following:
 - 1. The Qualifications of the installer shall be submitted 1-week prior to Pre-Construction

conference.

- a. Name: business address and telephone number of the Contractor
- b. Name(s) of all supervisory personnel to be directly involved with this project
- c. The Contractor shall sign and date the information provided and certify that to the extent of his knowledge, the information is true and accurate, and that the supervisory personnel will be directly involved with and used on this project. Substitutions of personnel and/or methods will not be allowed without written authorization of the City.
- d. Specialty technicians shall be certified by the equipment manufacturer and/or its authorized representative. Certifications shall be submitted to the City.
- e. The Contractor shall provide his references of previous project lists going back 3-years including his customer's names, owner's contact name, phone number, owner's project number, City's project name and the list must include the number of laterals rehabilitated as well as the number and type of connection seals installed.

1. Product:

- (a) Fabric tube – manufacturer and description of product components
 - (b) Flexible membrane (coating) material and recommended repair (patching) procedure if applicable
 - (c) Raw resin data – manufacturer and description of product components
 - (i) Certificate of Conformity for resins that are used in CIPP lateral lining process. 06-08-2020 Conformed
 - (d) Manufacturer's shipping, storage and handling recommendations for all components of the CIPP system
 - (e) All MSDS sheets for all materials to be furnished.
2. Certified copies of test reports of factory tests required by the applicable standards and this Section.
 3. Manufacturer's installation instructions and procedures.
 4. Method of cure and means to minimize quantity of styrene discharge back into the wastewater collection system.
 5. Method to minimize the safety risk to workers and the from exposure to hazardous chemicals associated with CIPP curing process.
 6. Contractor's procedures and materials for service renewal including time and duration of sewer service unavailability
 7. Interface seal or alternative seal.
 8. The thickness calculations signed and sealed by a Professional Engineer registered in the State of Florida and certified by the manufacturer as to the compliance of his materials to the values used in the calculations shall be submitted to the City prior to CIPP installation.
 9. Sampling procedures and locations for obtaining representative samples of the finished liner.
 10. Both a pre-lining and post-lining digital data video shall be submitted for review and approval. The digital data video shall be clearly and properly labeled. A digital data video and suitable log shall be prepared by the Contractor during the Work and provided for review.

- C. A final certificate of compliance with this specification shall be provided by the manufacturer for all lining material furnished. Tests for compliance by an independent laboratory shall be

made according to the applicable ASTM specification and the manufacturer's quality control program.

- D. As part of the design calculation submittal, the liner manufacturer shall submit a tabulation of time versus temperature. This tabulation shall show the lengths of time that exposed portions of the liner will endure without self-initiated cure or other deterioration beginning. This tabulation shall be at 5°F increments ranging from 70°F to 100°F. The manufacturer shall also submit his analysis of the progressive effects of such "pre-cure" on the insertion and cured properties of the liner. This information shall be submitted in a timely fashion prior to construction. The minimum liner thickness is for materials with characteristics as shown. Bidders with materials with other characteristics must supply complete information in their bids of the values as listed for ascertaining minimum thickness.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. The Contractor shall be responsible for the delivery, storage, and handling of products. No products shall be shipped to the job site without the approval of the City.
- B. Keep products safe from damage. Promptly remove damaged products from the job site. Replace damaged products with undamaged products.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The system proposed (materials, methods, workmanship) must be proven through previous successful installations to an extent and nature satisfactory to the City that is consistent with the size of the project being proposed. Since CIPP is intended to have a minimum 50-year service life, only products deemed to have this performance will be accepted.
- B. All CIPP lining products shall comply with the latest versions of ASTM D5813, ASTM F1216 and F2561, including appendices.
- C. Lateral connections to main shall be one piece main and lateral cured-in-place liners.

2.02 STRUCTURAL REQUIREMENTS

- A. The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit to be repaired as specified by the City.
- B. The minimum required structural CIPP wall thickness shall be based on the physical properties described above and in accordance with the design equations in the appendix of ASTM F 1216, and the following design parameters:

Design Considerations	Criteria
Tube Design	ASTM F 1216 Appendix X1
Design Safety Factor	2.0
Retention Factor for Long Term Flexural Modulus to be used in Design	50 %
Ovality	2 %
Groundwater Depth = Pipe Depth (above invert) *	100% depth from pipe to surface
Lining enhancement factor	7 maximums
Soil Modulus	1,000 psi
Soil Density	120 pcf
Live Load	One (1) H20 passing truck
Design Condition	Fully deteriorated

C. Each CIPP shall be designed to withstand internal and/or external loads as dictated by the site and pipe conditions. When not specified by the City in the contract documents, the design thickness of the CIPP shall be arrived at using standard engineering methodology as found in ASTM F1216. In no case shall the finished thickness of the cured liner be less than three millimeters. The long-term modulus shall not exceed 50 percent of the short-term value for the resin system and shall be verifiable through testing. The thickness calculations, signed and sealed by a professional engineer registered in the State of Florida, shall be submitted to the City prior to CIPP installation.

D. When multiple layers are present, the layers of the finished CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or such that the knife blade moves freely between the layers. If separation of the layers occurs during testing of the field samples, new samples will be cut from the work. The composite of the materials will, upon installation inside the host pipe, exceed the minimum test standards specified by the American Society for Testing Methods. The CIPP design for the lateral tube shall assume no bonding to the original pipe, in accordance with ASTM F1216. Any reoccurrence may be cause for rejection of the work. The cured liner shall meet TABLE 02772 - 1 Minimum Physical Properties.

TABLE 02772- 1
Minimum Physical Properties

Physical Characteristics	Test Procedure	Minimum Value
Flexural Strength	ASTM D790	4,500-psi
Flexural Modulus	ASTM D790	250,000-psi
Flexural Modulus (50-year)	ASTM D790	125,000-psi

2.03 MATERIALS

A. Lateral Liner Tube

1. The sewer service lateral liner shall be a single piece liner that lines the lateral and be a contiguous part of the mainline. The tube shall consist of 1 or more layers of a flexible needled felt or an equivalent non-woven or woven material, or a combination of non-woven and woven materials, capable of carrying resin, withstanding installation pressures and curing temperatures. The tube should be compatible with the resin system to be used on this project. The material should be able to stretch to fit irregular pipe sections and negotiate bends. Projected changes in groundwater level, temperature and other loading factors shall cause no significant changes in the service characteristics or service life of the sewer pipe liner. The liner will be continuous in length and the wall thickness shall be uniform. The tube will be capable of conforming to offset joints, bells, and disfigured pipe sections. The mainline liner will be flat with one end overlapping the second end and sized accordingly to create a circular lining equal to the diameter of the mainline pipe. The resin will be polyester or vinyl ester with proper catalysts as designed for the specific application. The cured-in-place pipe shall provide a smooth bore interior. Installation will be accomplished remotely using air or water for inversion and curing. The cured pipe repair system shall be watertight and shall conform to the existing pipe and eliminate any leakage or connection to the outside of the host pipe/service.
2. The liner shall be polyester fiber felt tubing saturated with an epoxy vinyl ester or polyester resin prior to insertion which when cured, will be chemically resistant to reagents as defined in ASTM F1216, ASTM F1743, and ASTM D543 as applicable.
3. The system proposed (materials, methods, workmanship) must be proven through previous successful installations to an extent and nature satisfactory to the City that is consistent with the size of the project being proposed. Since CIPP is intended to have a minimum 50-year service life, only products deemed to have this performance will be accepted.
4. The lateral liner shall be fabricated under controlled conditions to a size that, when installed, will tightly fit the internal circumference and the length of the original conduit. Allowances should be made for the longitudinal and circumferential stretching that occurs during placement of the tube. Maximum stretching allowances shall be as defined in ASTM F1216 or ASTM F1743. The Contractor shall verify the lengths in the field before cutting the liner to length. The finished pipe liner in place shall be fabricated from materials which when complete are chemically resistant to and will withstand internal exposure to domestic sewage having a pH range of 5 to 11 and temperatures up to 150°F.
5. All CIPP lining products shall comply with the latest versions of ASTM D5813, ASTM F1216 and F2561, including appendices.
6. The tube shall be uniform in thickness and when subjected to the installation pressures shall meet or exceed the designed wall thickness
7. Any plastic film applied to the tube on what will become the interior wall of the finished CIPP shall be compatible with the resin system used, translucent enough that the resin is clearly visible, and shall be firmly bonded to the felt material.

8. At time of manufacture, each lot of liner shall be inspected and certified to be free of defects. The tube shall be marked for distance at regular intervals along its entire length, not to exceed 5-feet. Such markings shall also include the Manufacturer's name or identifying symbol.
9. Liners may be made of single or multiple layer construction where any layer must not be less than 1.5-mm thick and total minimum thickness is 3.0-mm. A suitable mechanical strengthener membrane or strip may be placed in between layers where required to control longitudinal stretching.

B. Resin Components

1. The resin system shall be a corrosion resistant epoxy vinyl ester or polyester that when properly cured within the tube composite meets the minimum requirements given herein or those that are to be utilized in the design of the CIPP for this project. The catalyst system may be accelerated to promote curing.
2. The resin used shall not contain non-strength enhancing fillers.
3. The Contractor shall submit the resin characteristics, including filler identification, to the City for approval prior to lining activities.

C. Interface Seal

1. The interface seal shall be a polyester impregnated, corrosion resistant fiberglass insert. The seal shall be of 1-piece construction and shall be designed such that when expanded shall tightly fit both T and Y connections at the interface between the mainline and lateral sewer. The seal shall extend into the mainline a minimum of 4-inches and shall provide a minimum of a 3-inch overlap inside the mainline pipe and be of equal thickness as the lateral liner at the interface.
2. An epoxy sealant rated for piping applications shall be applied to the seal to ensure that any gap between the interface of the mainline pipe and the CIPP lateral lining is air and watertight.
3. Alternative interfaces seals will be considered by the City. Only seamless type gaskets with a minimum profile of 2.5mm will be considered. Type of seals that will be considered are Hydrophilic End Seals compression gaskets (as referenced in F2561).

PART 3 - EXECUTION

3.01 DETERMINATION OF LATERALS TO BE LINED OR REPLACED

- A. Install cleanouts to access laterals for CCTV inspection for the specific laterals listed in the Drawings.
- B. Contractor shall perform a pre-CCTV inspection of the laterals per Section 02762, "Televising Sanitary Sewers". City will determine upon review of the CCTV inspection the quantity of laterals which will be renewed.
- C. After completing the video inspection, the Contractor shall provide the CCTV videos to the City for review and to determine which laterals requires renewal or replacement.

3.02 GENERAL

- A. The Contractor shall carry out his operations in strict accordance with all OSHA, State, local, and manufacturer's safety requirements. Particular attention is drawn to those safety requirements involving entering confined spaces. Curing with pressurized steam creates additional safety concerns regarding high temperatures, quick burn times, potential blow offs, etc. Contractors shall take additional precautions to ensure the safety of everyone nearby curing mechanisms.
- B. It is the intent of this specification to provide for the renewal of sewer service laterals by the installation of a resin-impregnated flexible tube and a mainline/lateral connection seal. The tube is either inverted or pulled into the original service lateral through a newly installed cleanout and then expanded to fit tightly against the lateral using water or air pressure. The resin system shall then be cured by elevating the temperature of the fluid (water/air) used for the inflation to a sufficient enough level for the initiators in the resin to affect a reaction. The finished pipe shall be such that when the thermosetting resin cures, the total wall thickness shall be a homogeneous and monolithic felt and resin composite matrix that will be chemically resistant to withstand internal exposure to domestic sewage.
- C. The system shall be provided with a seal at the mainline/lateral interface. The finished seal shall be such that when the thermosetting resin cures, the seal bonds to the lateral liner forming an airtight and watertight interface and will provide chemical resistance to domestic sewage.
- D. The Contractor shall deliver the liner to the site and provide all equipment required to insert the liner into the host pipe and cure it in place. The Contractor shall designate a location where the tube will be vacuum impregnated prior to installation. The Contractor shall notify the City at least 72-hours prior to wet out to allow the City to observe the materials and wet out procedure. All procedures to prepare the liner for installation will be in strict accordance with the manufacturer's recommendations. Any material not properly prepared shall be rejected and replaced with acceptable materials at the Contractor's expense.
- E. The liner shall be impregnated with resin and stored according with manufacturer recommendations.

3.03 PREPARATION

- A. Refer to Section 01001, general work requirements paragraph 1.16.c for notification of public or customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the contractor provides substitute services for the residents. Commercial sewer services shall always be maintained so that the business remains open. No sewage from the services or main line shall be discharged on the ground or in waterways.

- B. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.
- C. The Contractor shall notify all residents affected by this construction at least 24-hours prior to any service disruption affecting their service connection. The mainline sewer shall be kept in operation during the lateral lining operations. Customers shall be notified by the Contractor with door hanger advising the customers of when the Work will begin, expected date of completion, the type of work and contact person for any questions.
- D. The Contractor shall install a cleanout at the respective right-of-way line, property line or easement line prior to or immediately after the lining procedure. Cleanouts shall be installed per the City's requirements as shown on the drawings and specified herein.
- E. The Contractor shall perform cleaning of the lateral and affected areas of the existing sewer line in accordance with the liner manufacturer's recommendations, videotaping, and inspection prior to installation of the CIPP lateral. The Contractor, when required, shall remove all internal debris out of the pipeline that will interfere with the installation of the CIPP. The Contractor shall provide an appropriate dumpsite for all debris removed during the cleaning operations. Precautions shall be taken by the Contractor to ensure that no damage or flooding of public or private property is caused by the cleaning operation.
- F. If, in the opinion of the CIPP liner manufacturer, the rate of infiltration in the sewer segment is high enough to risk washout of the resin then the Contractor shall perform measures, such as grouting or installation of a pre-liner, as required to minimize infiltration prior to installation. If during the pre-CCTV inspection any infiltration conditions are observed, the Contractor shall submit, in writing for approval by the Owner, the methods and materials for mitigating any adverse impacts from infiltration.
- G. It shall be the responsibility of the Contractor to notify the City of line obstructions, offset joints, or collapsed pipe that will prevent the insertion of the tube or significantly reduce the capacity of the lateral. The City with input from the Contractor shall determine the method of pipe repair required and shall address these concerns on a case-by-case basis.
- H. Protruding laterals or services shall be trimmed flush with the inside of the main sewer wall prior to lining. Trimming shall not cause damage to the lateral or service beyond the inside face of the main sewer.

3.04 PRETREATMENT OF REGULATED CHEMICALS TO DISCHARGE INTO SEWER

- A. CIPP liner systems using resins containing styrene or other regulated chemicals that will be discharged into the wastewater system may require a pretreatment plan to remove the regulated chemicals to acceptable levels prior to discharge. The discharge limits are as follows:

	Discharge Limits	
	Maximum Styrene Concentration Limit for Discharge (PPM)	Maximum Total Pounds per Day of Styrene to be Discharged (Pounds/Day)
Total Gallons of Discharge Including Water Added for cool down		
< 500,000	7	29
< 250,000	14	29
< 100,000	35	29

- (2) A single day's or line segment water discharge in excess of 500,000 gallons per day shall require approval by the City's Environmental Compliance Section for separate concentration limit evaluation and approval."
- (3) Discharge concentrations will be reduced based on the collection system distance from the City's Wastewater Treatment plant.
- B. A post-treatment cure water testing program will not be required for lateral renewal work unless the total gallons of discharge from curing exceed 50,000 gallons per day. Refer to paragraph 3.04.C should this volume of discharge be exceeded.
- C. After curing, the Contractor shall obtain a post-treatment cure water sample from the first segment lined in each Work Order and submit for laboratory analysis.
1. The following laboratory analysis is required:
 - a. One (1) sample to be collected from the treated water line segment and analyzed for "Styrene" using EPA Method 8260.
 - b. One (1) "Trip Blank" sample, analyzed for "Styrene" using EPA Method 8260.
 2. The Contractor shall submit the analytical report to the City for approval.
 3. The Contractor shall be responsible for all costs related to laboratory analytical testing of the water samples collected.
 4. Once the sample results demonstrate that the discharge limits have been met the Contractor shall follow similar styrene reduction procedures for subsequent lining segments, but sampling will not be required.
 5. The City reserves the right to obtain samples at any site on any line segment to ensure compliance with the discharge limits." 06-08-2020 Conformed 

3.05 BYPASS PUMPING

- A. When the flow demand on the lateral dictates that bypass pumping is required, the Contractor shall furnish all necessary pumping equipment, conduit, etc. to adequately and safely divert sewage flow around the Work in a manner approved by the City and as set forth in Section 01516 "Collection System Bypass." No flow shall be discharged on the surface, into storm sewers, in ditches, or in waterways.
- B. During a bypass operation, the pump shall be manned continuously: The Contractor shall maintain the pump and bypass equipment and shall be responsible for any damages to public or private property due to the malfunction of same.

3.06 CLEANING SEWER LINES

- A. Prior to any lining of a pipe so designated, it shall be the responsibility of the Contractor to remove all internal debris and clean the existing sewer line and/or lateral in accordance with Section 02761 "Cleaning Sanitary Sewer Systems." Both mainline and lateral line shall be cleaned.
 - 1. Preparation of the interior surface shall be accomplished by a thorough high-pressure water-jet cleaning. The pipe shall be left free of all loose sand, rock, or other deleterious materials. Any roots in the pipe shall be either removed or cut off flush with the interior.
 - 2. If conditions such as broken pipe and major blockages are found that will prevent proper cleaning or where additional damage would result if cleaning is attempted or continued, the Contractor shall notify the City immediately. The City will determine what course of action will be taken to complete the project.
 - 3. Precautions shall be taken by the Contractor to ensure that no damage or flooding of public or private property is caused by the cleaning operation.
 - 4. The City shall inspect the prepared pipe for cleanliness and smoothness before the Contractor is authorized to proceed with pipe lining operations.
- B. Pipe Preparation: The liner method must be compatible with the existing mainline pipes interior coatings or materials that could cause a separation or a natural joint because of the lack of adhesion.

3.07 PRE AND POST TELEVISION INSPECTION

- A. Television survey shall be performed in accordance with Section 02763 "Televising Sanitary Sewer Laterals", including Pre-construction and Post-construction Surveys. The Contractor shall provide television equipment capable of properly documenting the conditions as found within the lateral. The camera equipment shall be capable of launching into the full length of each lateral and providing an accurate picture of the lateral to be lined. Lighting for the camera shall illuminate the entire periphery of the lateral.
- B. Both a pre-lining and post-lining digital data video shall be submitted to the City for approval. The Contractor shall launch into each lateral connection on both pre and post inspections. The digital data video shall be clearly and properly labeled. A digital data video

and a suitable log shall be prepared by the Contractor during the Work and provided to the City.

- C. The liner shall be continuous and free of all visual and material defects except those resulting from pre-lined conditions (such conditions shall be brought to the attention of the City prior to lining). There shall be no damage, deflection, holes, delaminating, uncured resin or other visual defects in the liner. The liner surface shall be smooth and free of waviness throughout the pipe. No visible leakage through the liner or at manhole or service lateral connections will be allowed. Any defects located during the inspection shall be corrected by the Contractor to conform to the requirements of the specifications and to the satisfaction of the City. The Contractor shall not reactivate any section of lined sewer pipe until authorized to do so by the City.

3.08 CIPP LINER INSTALLATION

- A. The CIPP shall be installed in accordance with the practices given in ASTM F1216 (for direct inversion installations) and ASTM F2561 (for one piece main and lateral cured-in-place liners). The quantity of resin used for the tube's impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances being made for polymerization shrinkage and the loss of any resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used in conjunction with a roller system to achieve a uniform distribution of the resin throughout the tube.
- B. The resin-impregnated tube shall be installed into the host pipe by methods approved by the manufacturer and proven through previous successful installations. The insertion method shall not cause abrasion or scuffing of the tube. Hydrostatic or air pressure shall be used to inflate the tube and mold it against the walls of the host pipe. There will be no use of sewage in place of clean water for insertion of the tube, or for the curing of the liner.
- C. The tube is to be installed at a rate sufficient to cause controlled installation of the tube into the conduit. The tube shall be installed in such a manner that no damage is done to the tube.
- D. Should there be any difference between the referenced requirements, the more stringent shall govern. Prior to construction, the Contractor shall submit to the City such written information which shall include, but not be limited to, storage and handling of lateral liner before installation, preparing liner for installation, installing the liner in the sewer lateral, temperature and pressure requirements for inverting and setting the liner, curing and cool down procedures, end seals and service restore.
- E. The Contractor shall always have on hand, for use by his personnel and the City, a digital thermometer or other means of accurately and quickly checking the temperature of exposed portions of the liner.

3.09 CURING

- A. Curing shall be accomplished by utilizing the appropriate medium in accordance with the manufacturer's recommended cure schedule. The curing source input and output temperatures shall be monitored and logged during the cure cycles if applicable. The manufacturer's recommended cure method and schedule shall be used for each lateral line segment or sectional installed in consideration of the existing conditions and in accordance with applicable ASTM Standards. 06-08-2020 Conformed 
- B. After inversion is completed the Contractor shall supply suitable heat source and recirculation equipment. The equipment shall be capable of delivering heat throughout the section to uniformly raise the temperature above the temperature required to affect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed.
- C. The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing heat supply. Thermocouples shall be placed between the tube and the host pipe to determine the liner temperature during cure. The water or air temperature in the pipe during the cure period shall be as recommended by the resin manufacturer.
- D. Initial cure shall be deemed to be completed when inspection of the exposed portions of cured pipe appear to be hard and sound and the remote temperature sensor indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the installation process, during which time the recirculation and cycling of the heat exchanger to maintain the temperature continues. The heat source shall be shut down during the post cure.
- E. Temperatures shall be monitored and recorded throughout the installation process to ensure that each phase of the process is achieved at the manufacturer's recommended temperature levels. Copies of these records shall be given to the City at the completion of each installation.

3.10 COOL DOWN

- A. Cool down may be accomplished by the introduction of cool water or air into the installation standpipe to replace the initial heating agent. The Contractor shall cool the hardened pipe to a temperature below 100°F before relieving the pressure in the pressure apparatus. A minimum period of post cure shall be maintained under a static head to provide a minimum hoop tension on the tube felt. Care shall be taken in the release of the static head so that a vacuum will not be developed.

3.11 INTERFACE SEAL INSTALLATION

- A. The interface seal between the mainline and the lateral shall be installed by remote device from inside of the sewer main. The seal shall be properly expanded with air pressure to

tightly fit the lateral interface.

- B. Seal installation shall be installed in strict accordance with the manufacturer's written specifications, recommendations and these specifications.
- C. The finished seal shall be continuous over the entire interface and be as free as commercially practical from visual defects such as foreign inclusions, dry spots and pinholes. The seal shall be homogeneous, impervious, and free of any leakage from the surrounding ground to the inside of the lined pipe. The interface seal shall not inhibit the post video televising of the mainline or the service lateral pipes.
- D. During the warranty period, any defects which will affect the integrity or strength of the seal, collect solids, or reduce hydraulic flow capabilities of the product shall be repaired at the Contractor's expense in a manner mutually agreed upon by the City and the Contractor.

3.12 CLEANUP

- A. After the installation work has been completed and all testing acceptable, the Contractor shall cleanup the entire project area. The Contractor shall dispose of all excess material and debris not incorporated into the permanent installation. The work area shall be left in a condition equal to or better than prior condition.

3.13 WARRANTY

- A. Refer to Section 01001 General Work Requirements paragraph 1.03.A for all warranties covering CIPP work.

END OF SECTION

SECTION 02773
SERVICE LATERAL CLEAN-OUTS FOR TELEVISION ACCESS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Scope of Work: The Contractor shall install service lateral cleanouts on gravity mains, not being replaced, to perform the CCTV inspection of the service laterals. All costs of material, equipment, labor and other costs due to the unspecified field conditions shall be borne by the Contractor.
- B. Record Information: The Contractor shall submit to the City the locations and elevations of the clean-out tops.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All material supplied shall be one of the products specified in Appendix A "List of Approved Products" which is part of COSA Standards and Specifications appended to these technical specifications.

2.02 MATERIALS

- A. Polyvinyl Chloride Pipe and Fittings: Polyvinyl Chloride (PVC) Pipe shall meet the requirements of Section 15064 "Polyvinyl Chloride Pipe and Fittings."
- B. Concrete and Reinforcing Steel: Concrete and reinforcing steel shall conform to the requirements of Division 3 - Concrete. Concrete classes for the various purposes shall be as follows:
 - 1. Manhole bottoms, Class A
 - 2. Precast manholes, Class A (4,000-psi)
 - 3. Pipe and riser encasement, Class C
 - 4. Protective slabs, Class C
- C. Cement Mortar: Cement mortar for manhole construction shall comply with ASTM Designation C 270, Type M, except that the cement shall be Portland Type II only. No mortars that have stood for more than 1-hour shall be used.

PART 3 - EXECUTION

3.01 PREPARATION

- A. The interior of all pipe shall be thoroughly cleaned of all foreign material before being installed and shall be kept clean.
- B. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained so that the business remains open. No sewage from the services or main line shall be discharged on the ground or in waterways.
- C. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.
- D. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

3.02 INSTALLATION

A. Sewer Pipe

1. PVC Pipe

- a. Handling PVC pipe: The handling of PVC pipe shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Sections of pipe with deep cuts and gouges shall be removed and discarded at no expense to the City.

2. Building Laterals/Service Connections

- a. Service lateral connections shall be constructed in accordance with the details as indicated on the Drawings.
- b. All connections and changes of direction shall be made using standard fittings designed for that purpose.
- c. Locator balls shall be placed under all sanitary sewer service cleanouts.
- d. On curbed streets, the exact location for each service connection shall be marked by etching or cutting an "S" in the concrete curb. Where no curb exists or is planned, locations shall be marked by a method approved by the City.

3.03 FIELD QUALITY CONTROL

A. Workmanship: Clean-outs shall be built watertight.

B. Closed Circuit Television Inspection

- 1. Internal gravity sewer video inspection shall be performed by the Contractor to check for alignment and deflection. The television inspection shall also be used to check for cracked, broken, or otherwise defective pipe and overall pipe integrity.

SECTION 02959
SEWER MAIN AND LATERAL CONNECTION SEALING BY CHEMICAL GROUT

PART 1 GENERAL

1.01 DESCRIPTION

- A. Section includes requirements for rehabilitation of defective mainline joints, circumferential mainline cracks, other small mainline defects and defective lateral-mainline interfaces by application of chemical grout material.
- B. Provide all labor, materials, tools, equipment and incidentals as shown, specified, and required for testing sewer pipe joints by applying a positive air pressure to the joints, monitoring and recording the pressure in the void. The intent of joint & connection testing is to identify those sewer joints, lateral connections and laterals that are not watertight and that can be successfully sealed by packer injection grouting. This document can be utilized for the following applications:
 - 1. Test all joints in a mainline segment
 - 2. Test all service lateral connections from the sewer main to a predetermined distance up the sewer lateral.
 - 3. Test all joints within a predetermined distance in laterals directly connected to manholes.
- C. Provide all labor, materials, tools, equipment, and incidentals as shown, specified, and required to grout pipeline joints, joints in laterals connected to manholes and lateral connections to the mains using the packer injection method.
 - 1. Packer injection grouting is used to reduce the infiltration within the pipeline, seal annular space between liners and host pipes at lateral connections, seal pipe joints that have failed the joint test criteria, provide external pipe support, but not a structural rehabilitation, by stabilizing soils outside the pipe and prevent further loss of pipe bedding into the pipe.
 - 2. Packer injection grouting shall be accomplished by pressure injection of chemical grout into the soils encompassing the exterior of pipe joint. Chemical grouts shall be designed to be injected into the soil surrounding the pipe, which stabilizes the soil and forms a permanent impermeable seal called a grout/soil ring, and into the annular space between liners and host pipes. Adequate volumes of grout must be injected to form an effective seal. Adequate amounts of grout are based generally upon pipe size and field conditions. This application will be through structurally sound joints and lateral connections through penetrations from within the pipe by using the packer method in tandem with a closed-circuit television (CCTV) inspection system.
- D. All contractors and employees' vehicles on the project site for the City shall clearly and boldly display their full name, address, and phone number.
- E. Maintenance of Traffic (MOT)
 Refer to General Requirements Section 01570, Maintenance of Traffic requirements.
- F. All contractors and employees' vehicles on the project site for the City shall clearly and

boldly display their full name, address and phone number.

1.02 DEFINITIONS

- A. Mainline: Sewer Main.
- B. Lateral: Service pipe from property line to mainline.
- C. Lateral-Mainline Interface: Lateral connection to mainline.
- G. Lateral-Mainline Interface Seal: Watertight seal between lateral and mainline.

1.03 QUALITY ASSURANCE REQUIREMENTS

- A. Follow:
 - 1. ASTM F2304 Standard Practice for Rehabilitations of Sewers using Chemical Grouting, latest revision.
 - 2. ASTM F2454 Standard Practice for Sealing Lateral Connections and lines from the Mainline Sewer Systems by Lateral Packer Method, Using Chemical Grouting, latest revision.
- B. Commercially Proven Products:
 - 1. Minimum 12,000 mainline joints and 1,000 lateral-mainline interfaces successfully grouted and documented in the United States and Internationally.
 - 2. Translate international installations into English to Engineers approval.
- C. Personnel involved in sealing of joints and lateral connections: Certified by grout manufacturer they have successfully completed training in handling, mixing and application of grout for sanitary sewer line, joint and lateral connection sealing.
 - 1. Refer to Section 01001 General Work Requirements paragraph 1.02.E for grouting qualification requirements.
- D. Third-Party Inspector: Minimum of 5 years' experience in Chemical grouting applications and have no financial or directorial link to grout manufacturer or Contractor.
- E. Engineer may inspect and test grout at factory, before delivery to site, while in storage, or prior to use.
- F. Internally CCTV inspect host pipe prior to grouting, during grouting and post grouting.

1.04 SUBMITTALS

- A. Submit following Section 01300.
 - 1. Catalog data showing manufacturer's clarifications and updates, ASTM references, material composition, specifications, and physical and chemical properties of grout.
 - a. Chemical Grout Information:

- 1) Description of chemical grout materials.
 - 2) Description of proposed additives to be used.
 - 3) Manufacturers recommended procedures for storing, mixing, testing, and handling of chemical grouts.
 - 4) SDS sheets for all materials to be used.
 - b. Identify the manufactures & models of the packers to be utilized on the project.
2. Calculations of expected volumes of annular space between packer and pipe wall, to be used in calculating required gel times.
 3. Manufacturer's recommended procedures for handling, storing, mixing and injecting grout.
 4. Method of Construction.
 - a. Access manholes and site locations.
 - b. Work dimensions.
 - c. Size of working area.
 - d. Impacted portions of existing sewer.
 - e. Site access points.
 - f. Bypass pumping plan: Following Section 01516.
 5. Emergency plan detailing procedures to be followed in event of health and safety emergency, pump failures, sewer overflows, service backups, and sewage spillage. Maintain copy on site for duration of project.
 - a. Address dangers associated with sewer rehabilitation work.
 - b. Identify Health and Safety officer. (i.e. crew chief)
 - c. Designated Health and Safety officer:
 - 1) Responsible for providing health and safety oversight of personnel participating on project team.
 - 2) Perform and document routine work area inspections, conduct safety meetings, and provide safety orientations for team members.
 - 3) Have in easily accessible location, the following contact information
 - a) Non-emergency number.
 - b) Contractor's health and safety representative name and number.
 - c) Occupational health clinic number(s).
 - d. Submit for review the following;
 - 1) List of critical rehabilitation equipment, to be inspected on daily basis.
 - 2) Recently completed (previous month) monthly maintenance log.
- B. Submit following Section 01300.
1. Grout manufacturer's certification that Contractor is approved installer of their system. Certificates of training in handling, mixing, and application of grout for sanitary sewer line and joint and lateral connection sealing for grout truck operator and at least one crewmember involved in sealing process.
 2. Third party lab test results for field installations in United States of same grout system as proposed for actual installation.
 - a. Test results must verify grout physical and chemical properties specified herein have been achieved in previous field applications.

3. CCTV inspection reports and electronic downloads following 02762 and 02763 before and following sewer joint sealing. Furnish original copies of CCTV inspections color DVDs to Engineer within 10 days.
4. Documentation for Products and Installers: Engineer's approval required before acceptance or injection of grout.
5. Proof of grout manufacturer's product liability insurance, if requested by Engineer.
6. Pump calibration information.
7. Field sealing records.
8. Certification of accuracy and calibration of pressure sensing/monitoring equipment by independent testing firm within one month before use of equipment.
9. Upon completion of each pipe segment, submit a report showing the following data for each joint and/or lateral connection tested, grouted or attempted to be grouted in accordance with NASSCO PACP.
 - a. Identification of the sewer pipe section tested by assigned sewer ID (if available) and length.
 - b. Type of pipe material, diameter & depth of pipe to the surface at manholes.
 - c. Length of pipe sections between joints.
 - d. Test pressure used and duration of test.
 - e. Pass/fail results for each joint/connection tested.
 - f. Location stationing of each joint/connection tested, and location of any joints/connections not tested with an explanation for not testing.
 - g. Volume of grout material used on each joint or connection.
 - h. Gel set time used (cup test results from tanks)
 - i. Grout mix record of the batches mixed including amount of grout and catalyst, additives, temperature of the grout solution in tanks.
 - j. Operator conducting testing and sealing shall be noted on the reports.
 - k. Video recordings
 - 1) Video recording shall include testing and sealing operations for each joint/lateral (including inflation and deflation over the joint/lateral) displaying the final air test of joints or laterals.
 - 2) Additional final recording, if specified, shall include inspection of the pipe or lateral after all grouting work is complete.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect, store, and handle grout or other material during transportation and delivery, while stored on-site, and during installation following manufacturer's recommendations.
- B. Grout Material found defective or damaged due to manufacture or shipment:
 1. Remove from Contract site and replace, following Engineer's direction, at no cost to the Commission.

PART 2 - PRODUCTS

2.01 TESTING EQUIPMENT & GROUTING EQUIPMENT

- A. The basic equipment used for mainline pipe joints and for laterals connected to the mainline shall consist of a remotely operated color television camera capable of pan and tilt, joint testing device (referred to hereafter as a packer), and test monitoring equipment. The equipment shall be constructed in such a way as to provide means for introducing air under pressure into the void area created by the expanded ends of the packer against the host pipe and a means for continuously measuring, viewing and recording the actual static pressure of the test medium and grout within the void area only. The packer shall be of a size less than the diameter of the host pipe, with the cables at either end used to pull it through the line and may always be constructed in such a manner as to allow a restricted amount of sewage to flow. Packer shall be expanded by air pressure. Packers shall be of low void space construction with void volume given by the packer manufacturer.
- B. The device for testing lateral connections shall consist of inflatable mainline end elements and a lateral grouting plug that creates a void area extending beyond the main connection. Whenever possible, use a lateral grouting plug sized to match the diameter of the lateral being grouted with an effective sealing length of at least PREDETERMINED DISTANCE BY ENGINEER. Where the lateral is capped, utilize alternate lateral grouting plug or equipment sized appropriately for the capped lateral. In cases where the lateral transitions from 6" to 4" in diameter, use a 4" lateral grouting plug. However, it is possible that due to physical restrictions the lateral plug may not launch and thus the service may not be able to be grouted.
- C. The basic equipment for 4-inch and 6-inch laterals connected to manholes shall consist of a flexible push-type packer and mini-push camera. The device for testing lateral pipe connected to the manhole shall be capable of testing the joints within PREDETERMINED DISTANCE BY CITY of the lateral or to the cleanout, whichever comes first, from the manhole toward the building. If the lateral contains a transition, CONTRACTOR may change out diameters of push packer or grout lateral using only a 4-inch push packer.
- D. Void pressure data shall be transmitted from the void area to the monitoring equipment or video picture of a pressure gauge mounted on the packer and connected to the void area. All test monitoring shall be above ground and, in a location, to allow for simultaneous and continuous observation of the televising monitor and test monitoring equipment.
- E. Grouting equipment shall consist of the packer, appropriate pumping and hosing systems capable of supplying an uninterrupted flow of sealing materials to completely fill the voids. Grout pumping system shall be sized to deliver a mixed volume of grout at a minimum of 3 gpm and 30 gallons of uninterrupted flow within 10 minutes.
- F. Volume of mixed grout pumped must be capable of being measured and recorded for each grouted joint/connection. Generally, the equipment shall be capable of performing the specified operations in sewers where flows do not exceed 25 percent of pipe diameter unless permitted by CITY.

- G. Connection and lateral service sealing shall be accomplished using the lateral grouting plugs and push packers specified above. Always provide back-up bladders for each packer on-site during grouting procedures.
- H. Equipment for cleaning lateral blockages shall be readily available while any lateral grouting work is being performed.

2.2 MATERIALS

A. Grouts - General

1. While being injected, the grout must be able to react /perform in the presence of water (groundwater).
2. The ability to increase grout mix viscosity, density and gel strength by increased concentration of constituents or the use of approved additives.
3. The cured grout must withstand submergence in water without degradation.
4. The resultant grout formation must be homogeneous and prevent the passage of water (infiltration) through the pipe joint.
5. The grout must not be biodegradable.
6. The cured grout should be chemically stable and resistant to organics found in sewage.
7. Residual grout shall be easily removable from the sewer line to prevent blockage of the sewage flow.
 - a. Handle, mix, and store grout in accordance with the manufacturer's recommendations. The materials shall be delivered to the site in unopened original manufacturer's containers.

B. Grouting.

1. Properties and Characteristics.
 - a. Will perform in presence of infiltrating water (groundwater), during injection.
 - b. Packaged for field storage, handling requirements with minimum spillage and worker safety.
2. Cured grout:
 - a. Submergible in water without degrading.
 - b. Not biodegradable.
 - 1) Additives may be used to meet this requirement, without effecting long-term strength.
 - c. Chemically stable and resistant to concentrations of acids, alkalis, and organic materials found in normal sewage.
3. Composition.
 - a. Acrylamide gel:
 - 1) Minimum of 10 percent acrylamide base material by weight in total grout mix.
 - 2) Higher concentration percent of acrylamide base material (maximum 20%) may be used to increase strength or offset dilution during injection.
 - 3) Able to tolerate some dilution and react in moving water during injection.
 - 4) Approximately 2 centipoise viscosity. Can be increased with additives.
 - 5) Constant viscosity during reaction period.
 - 6) Controlled reaction time from 10 seconds to 1 hour.

- 7) Curing reaction producing a homogenous, chemically stable, non-biodegradable, firm, flexible gel.
 - 8) Able to prevent dehydration and increase-mix viscosity, density and gel strength by use of additives.
 - a) Diatomaceous earth (Celite 209 or equal) can be added to concentration of five percent.
 - b) Use of other additives following manufacturer's recommendation and Engineer's approval.
 - 9) Root control additive 2, 6-Dichlorobenzonitrile, may be added following manufacturer's recommendation and Engineer's direction.
- b. Urethane gel:
- 1) Ratio: One-part urethane prepolymer mixed with 5 to 10 parts water by volume.
 - a) Recommended mix ratio: 1-part urethane prepolymer to 8 parts of water (11 percent prepolymer).
 - 2) Liquid prepolymer:
 - a) Solids content: 77 to 83 percent.
 - b) Specific Gravity: 1.04 (8.65 pounds per gallon)
 - c) Flash Point: 20 degrees F.
 - d) Viscosity: 600 to 1,200 centipoises water at 70 degrees F.
 - 3) Water for reacting prepolymer: pH of 6.5 to 8.
 - 4) Curing reaction:
 - a) Produces chemically stable, non-biodegradable, tough, flexible gel.
 - b) Able to increase mix viscosity, density, gel strength and resistance to shrinkage by using additives in water component of grout.
 - c) Minimum 15 percent shrink control agent supplied by the same manufacturer.
- c. Acrylate gel:
- 1) Minimum 10 percent acrylate base material by weight or as specified by the manufacturer.
 - a) In total grout mix, a higher concentration (percent) of acrylate base material may be used to increase strength or offset dilution during injection.
 - b) If acrylate base material is in 40 percent solution 27.5 percent by weight of total grout mix: 11 percent base material.
 - 2) Able to tolerate some dilution and react in moving water during injection.
 - 3) Viscosity: Approximately 2 centipoises.
 - a) Can be increased with additives.
 - 4) Constant viscosity during reaction period.
 - 5) Controlled reaction time: 10 seconds to 1 hour.
 - 6) Curing reaction producing homogeneous, chemically stable, non-biodegradable, flexible gel.
 - 7) Able to prevent dehydration and to increase-mix viscosity, density and gel strength by use of additives.
 - a) Diatomaceous earth (Celite 209 or equal) can be added to concentration of five percent, by volume.
 - b) Use of other additives following manufacturer's recommendations and Engineer's approval.

- 8) Root control additive 2, 6-Dichlorobenzonitrile, may be added following manufacturer's recommendation and Engineer's direction.

C. Additives

1. At the CONTRACTOR'S discretion and according to field conditions, additives may be selected and used within the manufacturers recommended quantities.
2. Strengthening Agents
 - a. For joint grouting, a latex or "diatomaceous earth" additive may be added to increase compressive and tensile strength. The quantity of strengthening agent additive shall be as recommended by the manufacturer and approved by ENGINEER. Product Manufacturer:
3. Root Inhibitor
 - a. When roots are present, for joint and lateral connection joint grouting, a root deterrent chemical shall be added to control root re-growth. The quantity of inhibitor shall be as recommended by the manufacturer and approved by ENGINEER.
4. Dye - A manufacturer approved water soluble dye without trace metals may be added to the grout tank(s) for visual confirmation.
5. Gel Time Modifier - A gel time extending agent may be used in accordance with the manufacturer's recommendations to extend gel time as necessary.
6. Freeze/Thaw - In those lines where the grouting material may be exposed to a freeze-thaw cycle, ethylene glycol or other ENGINEER approved additive shall be used to prevent chemical grout cracking once set.
7. When using non soluble additives the grout tanks must have mechanical mixing devices to keep the additives in suspension and maintain a uniform solution of grout and additive.

2.2 EQUIPMENT

A. General.

1. CCTV system, necessary chemical grout containers, pumps, regulators, valves, hoses, joint sealing packers for various sizes of sewer pipes, and lateral bladders.
2. Air pressure monitoring system:
 - a. Configured with no valves on air line between measuring point and pressure sensing device.
 - b. Digital readouts located at control panel in grouting truck.

B. Grouting packer:

1. Diameter less than pipe size, with cables attached at each end to pull it through the line.
2. Designed to allow restricted amount of sewage to flow through device, in mainlines where sewage flows do not exceed maximum depth for joint testing/sealing following manufacturer's recommendation and following ASTM F2304 and ASTM F2454.
3. Approved Manufacturers:
 - a. Logiball, Inc.
 - b. Cues, Inc.
 - c. Or Equal.

PART 3 - EXECUTION

3.1 PUBLIC NOTIFICATION

- A. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained that the business is open. No sewage from the services or main line shall be discharged on the ground or in waterways.

2.

3.2 PREPARATION

A. Access.

1. Chemical grout sealing of mainline sewers: Through existing manholes.
4. Chemical grout sealing of lateral-mainline connections: Through mainline sewers.

B. Sewer Cleaning and Surface Preparation.

1. Cleaning of Main Line Sewers and Laterals.
 - a. Hydraulic high-pressure jetting of reaches is permitted.
 - b. Before sealing work, lightly clean each line section.
 - c. Remove sludge, dirt, sand, grease, root, and other materials from pipe and collect and remove resulting debris from downstream manhole of sewer section being cleaned.
 - a. Collect debris and remove from site. Following jurisdictional requirements and Engineers' approval.
 - e. Sewers damaged as result of improper use of cleaning equipment: Promptly repaired at no additional cost to the Commission.
1. Clean sewer main within 72 hours before chemical grouting of sewer lateral connections.

C. Pre-sealing CCTV Inspection.

1. After cleaning, perform CCTV inspection to ensure main is sufficiently clean to perform sealing operations. Document protruding taps and structural defects found during the CCTV inspection.
 - a. If Engineer finds main is not sufficiently cleaned, remove CCTV and sealing equipment and re-clean at no additional cost to the Commission.
 - b. If light cleaning is not sufficient, heavy clean sewer following Section 02761.

D. Pre-sealing Reaming.

1. Ream or trim protruding taps following Section 02766.

F. Bypass Pumping: Before pre-sealing CCTV inspection, and joint testing and sealing can be performed, depth of flow should be at or below levels shown in table.

1. If necessary, bypass pump to bring flow levels down to acceptable levels.

Pipe Diameter (inches)	Maximum Depth of Flow (as % of Pipe Diameter)
6 to 10	20
12 to 24	25
27 or greater	30

G. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.

H. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

3.3 TESTING

A. Performance Test Demonstrations.

1. Before start of work, verify accuracy and repeatability of void pressure meter and fluid pumping equipment.
2. If test demonstrations fail to show accuracy of +/-0.5 psi for void pressure repeatability and +/- 0.1 gallon of chemical pumped into measured container or bucket, make required repairs or adjustments to equipment and gauges and retest until results meet Engineers satisfaction.
3. Test may be required at commencement of each work shift during sealing operations.
4. Perform demonstration testing may be performed each day of grouting. This testing may be waved by the City. 06-08-2020 Confirmed

B. Mainline Joint Pressure Air Testing.

1. Before testing, perform control tests at ground surface to verify accuracy, integrity, and reliability of testing equipment following ASTM F2304.
2. After entering each pipe segment through manhole, and immediately before joint pressure air testing, perform an intermediate test on pipe between joints following ASTM F2454.
3. Maintain joint testing air pressure of 3 psi higher than groundwater pressure outside the pipe, up to maximum of 10 psi. If groundwater pressure data is not available, use joint testing pressure of 0.5 psi per vertical foot of pipe depth or 10 psi, whichever is greater.
4. Perform testing following ASTM F2304. Seal joints that do not maintain void pressure drop of less than 1 psi in 15 seconds.
5. When the joints are longitudinally cracked, fractured or broken testing will not be required. 06-08-2020 Confirmed

C. Lateral Connection Pressure Air Testing.

1. Before lateral connection testing, perform control tests at ground surface to verify accuracy, integrity and reliability of testing equipment following ASTM F2454.

2. Maintain joint testing air pressure of 3 psi higher than groundwater pressure outside the pipe, up to maximum 6 psi. If groundwater pressure data is not available, use joint testing pressure of 0.5 psi per vertical foot of pipe depth or 6 psi whichever is greater.
3. Perform lateral connection testing following ASTM F2454. Seal joints that do not maintain void pressure with pressure drop of less than 2 psi in 15 seconds.
4. If the service lateral connection at the main is longitudinally cracked, fractured or broken pre-testing will not be required. 06-08-2020 Conformed 

3.4 BASIC REQUIREMENTS

A. General.

1. Seal joints, defects or leaking lateral connections that failed air testing or show sign of visible leaks, by internal chemical methods, as directed by Engineer.
2. Grouting of service lateral is prohibited if the grouting location cannot be inspected before and after the sealing procedures.
3. Service laterals cannot be sealed from the mainline when the packer cannot be seated.
4. Protruding laterals are to be cut back within 5/8" prior to sealing.
2. After sealing of joint, defect or connection, perform post air test per ASTM F2304 or ASTM F2454 for mainline sewer sealing and lateral sealing, respectively.
3. Sewer that Engineer deems damaged as a result of Contractor's operations, will be promptly repaired to Engineer's satisfaction at no cost to the Commission.
5. Grouting materials that set to a hard, rigid product capable of intrusion into sewer lines are not acceptable unless specifically approved by Engineer on a case by case basis.
6. Post sealing flow verification is to be made to document the lateral service has been returned to service with unrestrained flow.
7. Provide qualified, independent third-party inspector to observe grouting mixing process, chemical grouting injections process and post grouting pressure testing. Report findings to Engineer.

B. Grout Preparation.

1. Follow the manufacturer's recommendations for the mixing and safety procedures.
2. Adjust gel time as necessary to compensate for changes in temperature in grout component tanks or hoses. The addition of dilution water to extend gel times is not acceptable unless resulting base grout tank only material exceeds 20% by weight for solution grouts.
3. During the grouting process, the Grouting Technician shall monitor the grout component tanks to make sure that proper ratios are being pumped. If unequal levels are noted in the tanks, repeat the pump test as described above and correct any defective equipment.
4. Gel times shall be calculated using the following formula unless CONTRACTOR experience and/or field conditions dictate otherwise. Any alterations of the gel time formula shall be approved by the City.

$$\text{Gel Time} = (\text{Volume of Pipe/Packer Void Space (gal)}/\text{Pumping Rate (gpm)}) (60 \text{ Sec}/1 \text{ Min}) + 20 \text{ Sec (+/- 5sec)}$$

5. Packer/Pipe void shall be defined as the volume between the inflated packer and the inside pipe wall when the packer is inflated per manufacturer recommendations. For example: an 8" pipe with a packer void space of 0.3 gallons and a 3 gpm pumping rate would provide

$$\text{Gel Time} = (.3 \text{ (gal)}/3 \text{ (gpm)}) (60\text{sec}/1 \text{ Min}) + (20 \text{ sec}) = 26\text{sec} (+/- 5\text{sec})$$

C. Grouting General.

1. Grout all joint and lateral connections that failed the pressure test by the injection method. This shall be accomplished by forcing grout through a system of pumps and hoses into and through the joints of the sewer from the packer within the sewer pipe. Remove excess grout from pipe and laterals. Excess grout shall be defined as a thickness of grout that given its location, size and geometry, could cause a blockage. Flush or push forward to the next downstream manhole, remove from the sewer system, and properly dispose of excess grout.

D. Application Procedures for Joint Sealing and Lateral Connection Sealing.

1. Force chemical grouting material into or through faulty joints, defects or lateral connection by system of pumps, hoses, and sealing packers.
 - a. Position packer over faulty joint or lateral connection by means of measuring device and CCTV camera in line.
 - b. For mainline sewers, expand packer end bladders using controlled pressure. For lateral connections use lateral packer equipped with lateral bladder and rotating mechanism.
 - 1) Obtain a tight seal. If a tight seal is not obtained, remove equipment and make adjustments.
 - 2) Pump grout material through hose system at controlled pressures high enough to overcome external pressures such as groundwater pressures.
2. Design pumping unit, metering equipment, and packer devices so proportions and quantities of materials can be regulated following type and size of leak being sealed.
3. Set chemical pumping rates and mixing ratios as specified herein, following manufacturer's recommendations and Engineer's adjustments.
4. Determine appropriate gel set times.
 - a. To estimate gel set times, divide estimated volume of annular space (in gallons) by grout pumping rate (in gallons per minute), then add between 15 to 25 seconds. Adjust estimate by considering temperature of grout tanks, temperature of hoses, temperature of groundwater, amount of groundwater present and other field conditions.
 - b. The gel set time is typically between 20 and 40 seconds. Gel set times of less than 20 seconds may be required in presence of high filtration.
 - c. Monitor induction periods and gel characteristics through daily gel time tests for each sealing vehicle. Check each new batch once. If only one batch is used, check at least twice per day.
 - d. Perform new gel time test when grout additives are modified to change gel times, at beginning of new setup with new starting manhole, or when temperature in tanks and hoses changes by more than 10 degrees F from previous gel time test.

- e. Use water with known and controlled pH that will be used during actual grouting operations.
- f. Allow grout mixture to settle to remove entrained oxygen, before testing gel time.
- g. Use plastic or stainless-steel tanks. Do not use tanks that contain iron or copper.
- 5. During seal operations, operate void pressure monitoring equipment, described herein.
- 6. Integrate CCTV, grout pumping, and air pressure monitoring equipment so proportions, quantities, and void pressure for materials and sealing can be instantly monitored and regulated following type and size of joint, break, or leak.
- 7. Amount of chemical being pumped: Based on number of pumped strokes delivered for each sealed sewer main joint, defect or leaking connection.
 - a. Record and provide results to Engineer.
- 8. If large voids are encountered on outside of sewer, including the possibility of “piping” holes to ground surface, which could cause excessive use of grout material, at Engineer’s direction change operating pressures and pumping rates as follows.
 - a. Reduce pressures and pumping rates, such that intervals between pump strokes are shorter than gel time.
 - b. Pump first stage of grout, and then stop pumping until temporary gel of the grout is obtained on outside of pipe.
 - c. Increase pressure and pumping rate to pump the second stage and form a second layer.
 - d. Repeat this cycle until refusal conditions are reached, or until the inspector judges the grout consumption to be excessive.
 - e. Avoid sealing inner surface of pipe from inside before building up layers on the outside.
- 9. Grout injection complete: When chemical grout is pumped to refusal as defined in ASTM F2304.
 - a. If chemical grout cannot be pumped to refusal, within a volume less than or equal to 0.5 gallons per inch of pipe diameter due to latent physical conditions, do not perform additional work until Engineer grants authorization.
 - b. Lateral connections: When back pressure of grout in void at mainline level drops from 8 psi to 6 psi in greater than 20 seconds after cessation of grout pumping, following ASTM F2454.
 - 1) If using stage grouting, grout injection is complete when refusal pressure of 8 psi is achieved.
- 10. Sealed Defects.
 - a. Remove excess grout gel ring if obtrusive and impedes air testing and CCTV inspection of work as required. If excess grout gel ring cannot be removed by use of packer, jet clean pipe prior to testing seal.
 - b. Air test each sealed joint.
 - 1) If defect or connection fails air test after grout injection, reseal failed joints and air test again.
 - 2) After lateral connection has been sealed successfully as confirmed by post air test, break lateral packer seal and test service to assure grout has not blocked lateral connection further upstream.

- a) In the event sewage back-up occurs and enters a dwelling, respond within 2 hours of being notified and be responsible for cleanup, repair, property damage costs and claims.
 - c. After all pipe joints and lateral connections have been grouted, retest all previously unsealed pipe joints and lateral connections. Seal any pipe joints and lateral connections that do not pass the air pressure test.
 - d. Payment for post testing of grout sealed joints is to be included in the grouting unit price. 06-08-2020 Confirmed
 - 11. Flush or push forward excess grouting material to next downstream manhole and remove from sewer system.
 - a. Dispose of debris following grout manufacturer's recommendation, and jurisdictional regulations.
 - b. Excess grout material from upstream section(s) will not be allowed to accumulate in sewer.
 - 12. Provide approved plug and/or by-pass pumping if grouting operations restrict or prevent simultaneous sewage flow passage.
 - a. Refer to Section 01516 Collection System Bypass article 1.01 Scope of Work for sewer bypass requirements.
- E. Joint, Defect or Lateral Connection Sealing Verification.
- 1. Mainline joints and defects.
 - a. Deflate packer bladders after completing each seal until zero void pressure (± 0.5 psi) is shown on the monitoring equipment.
 - b. If zero void pressure (± 0.5 psi) is not achieved, clear residual grout material from packer or make needed equipment adjustments allowing true pressure reading.
 - 2. Re-test joint, defect or lateral connection as described herein.
 - a. Re-seal joints, defects, or connections that do not meet specified test criteria and re-test until test criteria are met, or Engineer determines that joint defect, or lateral connection cannot be sufficiently sealed.
 - b. Additional testing and sealing will be at no additional cost to the City.
- F. Residual Sealing Material.
- 1. Leave no residual grout material capable of reducing pipe diameter or restricting flow greater than 5 percent pipe capacity.
- G. Obstructions.
- 1. During course of sealing operations obstructions may be encountered preventing travel of packer and camera.
 - a. Should obstruction not be passable, begin sealing operations from opposite end of sewer reach.
 - 2. If additional obstructions are encountered after re-employment and no means are available for passing obstructions without damage to equipment, remaining sections of sewer main not sealed may be temporarily excluded from work requirements of Contract, until point repair is completed.

3.5 FIELD DOCUMENTATION

A. Records.

1. Keep complete, accurate, and legible records of operation for each joint, defect or connection sealed.
 - a. Include on Record of Operation for each joint or lateral mainline interface tested and/or routed or attempted to be grouted:
 - 1) Identification of work site, complete component, address, county page & grid, 200-foot sheet.
 - 2) Date and time.
 - 3) Station of each seal measured from upstream manhole.
 - 4) Location of any joints not tested and reason for not testing.
 - 5) Grout mixture formation, including additives and catalyst mixture.
 - 6) Test pressures and durations of tests maintained for each joint passing the air test.
 - 7) Ambient outside air temperature at time of grout injection.
 - 8) Grout tank temperatures.
 - 9) Gel time and time last verified.
 - 10) Verified address of lateral.
 - 11) Estimated visible leakage (gpm) from joint/defect connection or lateral.
 - 12) Number of pump strokes and amount of grout in place.
 - 13) Beginning, ending, pressure losses, re-test pressures.
 - 14) Verification lateral is clear after sealing process.
 - 15) Remaining leakage and location after seal (gpm).
2. Work site will not be accepted until Engineer receives original record.
 - a. Failure to fill out logs completely will result in non-payment for the questioned mainline joint, defect or connection.

3.6 WARRANTY

- A. Provide twelve month performance and workmanship warranty for the seals from date of acceptance and final Work Order invoice payment.
- B. Perform CCTV inspections during the first wet weather season after initial sealing, to evaluate quality of the initial sealing.
- C. CCTV inspect initial retest area consisting of 10 percent of grouted joints and 10 percent of grouted lateral connections following Sections 02762 and 02763.
- D. Provide qualified, independent third-party inspector to review CCTV inspection videos to verify integrity of seals.
- E. Reseal all joints sealed under this Contract that inspector finds defective within warranty period, at no additional cost to the City.
 1. Defective seals include, but not limited to those with root penetration, signs of infiltration, and cracks in pipe or grouting material.

- F. If failure rate of retested joints and lateral connections is 5 percent or less of joints and lateral connections retested, work shall be considered satisfactory and no further retesting will be required. If the failure rate of retested joints and lateral connections is greater than 5 percent, the Engineer shall randomly select another retest area consisting of another 10 percent of the initially sealed joints and lateral connections. Continue this additional retesting and resealing until a failure rate of less than 5 percent is met.

3.7 ACCEPTANCE

- A. When sealed joint, defect, and lateral connections pass the post air test.

PART 4 MEASUREMENT AND PAYMENT

4.1 PERFORMANCE DEMONSTRATION TESTING

- A. Measurement: Equipment calibration demonstrated.
- B. Payment: Unit price line item TS1. 06-08-2020 Conformed 

4.2 TEST AND SEAL MAINLINE JOINT OR DEFECT

- A. Measurement: By each joint pre-tested.
- B. Payment: Unit price line item TS2.
 - 1. Payment includes all work necessary to perform testing.
- C. Measurement: By each joint grouted, post-testing.
- D. Payment: Included in each GSx line item unit price.

4.3 TEST AND SEAL LATERAL CONNECTION

- A. Measurement: By each lateral connection pre-tested.
- B. Payment: Unit price line item TS3.
- C. Measurement: By each connection grouted, post-testing.
- D. Payment: Included in Unit price line items GS1.

4.4 SEALING MATERIAL

- A. Measurement: By gallon of grout used, over initial two gallons per joint or lateral connection.
- B. Payment: At unit price listed in Unit Price Schedule.

1. Payment includes materials, additives, storage, calculations, mixing, testing for in-place percentage and gel time tests.

4.5 RETESTING SEALED JOINTS UNDER WARRANTY

- A. Measurement: By unit price for each required item of work.
- B. Payment: At contingent price listed in Unit Price Schedule.
 1. Payment includes work related to retesting of sealed joints including cleaning, CCTV inspection, and air testing in the initial retest area only.
 - a. No compensation will be provided for resealing joint that fails air testing or any additional testing beyond initial retest area.

06-08-2020 Conforme 

END OF SECTION

EXHIBIT B - INSURANCE REQUIREMENTS

Contractor shall acquire and maintain until completion of the Work the insurance coverage listed below, which constitutes primary coverage. Contractor shall not commence the Work until the City receives and approves Certificates of Insurance documenting required coverage. Contractor's General Liability policy shall include Endorsement CG 20101185, or equivalent, naming the City of St. Augustine ("City") as Additional Insured. All required policies shall include: (1) endorsement that waives any right of subrogation against the City for any policy of insurance provided under this requirement or under any state or federal worker's compensation or employer's liability act; (2) endorsement to give the City no less than thirty (30) days notice in the event of cancellation or material change. Certificates of Insurance must be accompanied by copies of the requested endorsements.

Any deductibles or self-insured retentions above \$100,000 must be declared to and approved by the City. Approval will not be unreasonably withheld. Contractor is responsible for any deductible or self-insured retention. Insurance must be placed with insurers having an A.M. Best rating of A-V or greater. City receipt of insurance certificates providing less than the required coverage does not waive these insurance requirements.

- (a) **Workers' Compensation Insurance.** Workers' compensation and employer's liability coverage, including maritime workers compensation, if applicable, in not less than the minimum limits required by Florida law. If Contractor claims an exemption from workers' compensation coverage, Contractor must provide a copy of the Certificate of Exemption from the Florida Division of Workers' Compensation for all officers or members of an LLC claiming exemption who will be participating in the Work. In addition, Contractor must provide a completed City "Affidavit (Non-Construction)" for non-construction contracts. Contractor is solely responsible for compliance with any Federal workers' compensation laws such as Jones Act and USL&H Act, including any benefits available to any workers performing work on this project.
- (b) **General Liability.** Commercial General Liability Insurance on an "Occurrence Basis," with limits of liability not less than \$1,000,000/\$2,000,000, for personal injury, bodily injury, and property damage. Coverage shall include: (1) contractual liability, (2) products and completed operations, (3) independent contractors, and (4) property in the care, control, or custody of the Contractor. Extensions shall be added or exclusions deleted to provide the necessary coverage.
- (b) **Automobile Liability.** Minimum limits of \$100,000/\$300,000/\$50,000

**EXHIBIT C – SAMPLE WORK ORDER
WORK ORDER AUTHORIZATION**

Contract Number: _____ **Contract Name:** _____

Work Order Number: _____ **Project Name:** _____

Encumbrance Number: _____

Work Order Amount: _____

To: _____

From: _____, Project Manager

Work Order Manager:

Name: _____

Phone: _____

Email: _____

Description of Work: All work shall be accomplished in accordance with the attached Scope of Work, Exhibit “A” – Scope of Work. Invoices shall reference the Contract Number, Work Order Number and Encumbrance number; include the information required; and be submitted to the Project Manager.

Special note: _____

Commencement Date: Work is authorized to proceed on the date this Work Order is executed by the City. **Commencement of the work authorized herein prior to execution of this Work Order by Contractor constitutes acceptance of all terms and conditions of this Work Order.** Payment will not be made until this Work Order has been signed by Contractor and received by the City.

Completion Date: All work pursuant to this Work Order shall be completed by (Completion Date). The Completion Date, if extended pursuant to the above-referenced contract governing this Work Order, shall not be extended beyond the current City fiscal year, ending on September 30, 20__.

Department Director:

Date

Contractor

Date

EXHIBIT D – UNIT PRICE SCHEDULE

Unit Price Schedule				
City of St. Augustine Florida				
Contract PW2020-06				
Sanitary Sewer Cleaning, Inspection and Renewal				
Item	Description	Approximate Qty.	Unit	Unit Cost
Cleaning and Inspection of Sanitary Sewers				
Light Cleaning				
LC1	Lateral Service from Main	5	0 to 40 Ft.	167.50
LC2	Lateral Service from Main	5	≥ 40 Ft.	55.80
LC3	Lateral Service from Cleanout	5	0 to 40 Ft.	167.50
LC4	Lateral Service from Cleanout	5	≥ 40 Ft.	55.80
LC5	6" Diameter	500	LF	3.20
LC6	8 and 10" Diameter	5000	LF	2.40
LC7	12" Diameter	800	LF	3.20
LC8	15" Diameter	100	LF	5.00
LC9	16" Diameter	100	LF	7.10
LC10	18" Diameter	100	LF	8.40
LC11	20" Diameter	50	LF	9.50
Medium Cleaning				
MC1	Lateral Service from Main	5	0 to 40 Ft.	167.50
MC2	Lateral Service from Main	5	≥ 40 Ft.	55.80
MC3	Lateral Service from Cleanout	5	0 to 40 Ft.	167.50
MC4	Lateral Service from Cleanout	5	≥ 40 Ft.	55.80
MC5	6" Diameter	500	LF	3.70
MC6	8" & 10 Diameter	5000	LF	2.90
MC7	12" Diameter	800	LF	3.70
MC8	15" Diameter	100	LF	5.60
MC9	16" Diameter	50	LF	7.70
MC10	18" Diameter	50	LF	9.00
MC11	20" Diameter	50	LF	10.10
Heavy Cleaning				
HC1	Lateral Service from Main	5	0 to 40 Ft.	167.50
HC2	Lateral Service from Main	5	≥ 40 Ft.	55.80
HC3	Lateral Service from Cleanout	5	0 to 40 Ft.	167.50
HC4	Lateral Service from Cleanout	5	≥ 40 Ft.	55.80

HC5	6" Diameter	1000	LF	4.20
HC6	8 and 10" Diameter	6000	LF	3.40
HC7	12" Diameter	2000	LF	4.20
HC8	15" Diameter	100	LF	6.10
HC9	16" Diameter	50	LF	8.20
HC10	18" Diameter	50	LF	9.50
HC11	20" Diameter	50	LF	10.50
Protruding Taps Removal				
CT1	6" Diameter	1	Ea.	390.90
CT2	8" Diameter	50	Ea.	223.40
CT3	10" Diameter	50	Ea.	251.30
CT4	12" Diameter	50	Ea.	279.20
CT5	15" Diameter	1	Ea.	390.90
CT6	16" Diameter	1	Ea.	418.80
CT7	18" Diameter	1	Ea.	446.80
CT8	20" Diameter	1	Ea.	502.60
Root Removal				
RC1	Service Lateral from Main	200	LF	5.60
RC2	Service Lateral from Cleanout	100	LF	5.60
RC3	6" Diameter	300	LF	1.10
RC4	8" Diameter	4000	LF	1.10
RC5	10" Diameter	1000	LF	1.30
RC6	12" Diameter	800	LF	1.40
RC7	15" Diameter	100	LF	2.20
RC8	16" Diameter	50	LF	3.90
RC9	18" Diameter	50	LF	4.20
RC10	20" Diameter	50	LF	5.60
Root Treatment				
RT1	Service Lateral from Main	50	LF	5.60
RT2	Service Lateral from Cleanout	50	LF	5.60
RT3	6" Diameter	300	LF	1.90
RT4	8" Diameter	4000	LF	1.90
RT5	10" Diameter	1000	LF	2.10
RT6	12" Diameter	800	LF	2.30
RT7	15" Diameter	100	LF	3.20
RT8	16" Diameter	50	LF	3.20
RT9	18" Diameter	50	LF	4.50
RT10	20" Diameter	50	LF	5.60

Tuberculation Cleaning				
DS1	Service Lateral from Main	100	LF	16.80
DS2	Service Lateral from Cleanout	100	LF	16.80
DS3	6" Diameter	200	LF	17.90
DS4	8" Diameter	2000	LF	17.90
DS5	10" Diameter	1000	LF	18.40
DS6	12" Diameter	1000	LF	18.70
DS7	15" Diameter	300	LF	24.00
DS8	16" Diameter	50	LF	24.00
DS9	18" Diameter	50	LF	26.20
DS10	20" Diameter	50	LF	30.70
CCTV Inspection				
TV1	Lateral Service from Main	300	0 to 40 Ft.	167.50
TV2	Lateral Service from Main	5	≥ 40 Ft.	55.80
TV3	Lateral Service from Cleanout	50	0 to 40 Ft.	167.50
TV4	Lateral Service from Cleanout	5	≥ 40 Ft.	55.80
TV5	6" Diameter	3000	LF	1.40
TV6	8 and 10" Diameter	10000	LF	1.40
TV7	12" Diameter	1500	LF	1.40
TV8	15" Diameter	100	LF	1.70
TV9	16" Diameter	100	LF	1.70
TV10	18" Diameter	150	LF	2.20
TV11	20" Diameter	50	LF	3.40
General Services				
By-Pass Pumping				
BP1	6" Diameter Main	1	Linear Feet (LF)	\$2.20
BP2	8" Diameter Main	500	LF	\$2.20
BP3	10" Diameter Main	3000	LF	\$2.20
BP4	12" Diameter Main	1000	LF	\$4.50
BP5	15" Diameter Main	100	LF	\$22.30
BP6	16" Diameter Main	100	LF	\$22.30
BP7	18" Diameter Main	100	LF	\$25.70
BP8	20" Diameter Main	50	LF	\$36.90
Plug Installation & Removal (Includes Minimum Weekly Rental) for:				
P1	4" To 8" Diameter Main	20	Weeks	11.20
P2	8" to 16" Diameter Main	20	Weeks	16.80

P3	12" To 24" Diameter Main	20	Weeks	111.70
Sanitary Sewers Renewal				
Sanitary Main CIPP Lining				
L1a	6" Diameter, 4.5mm Nominal thickness with end seals	2000	LF	30.4
L1b	Price for each 1.5mm thickness increase exceeding 4.5mm, 6" dia.	1	LF	5.60
L2a	8" Diameter, 6mm nominal thickness with end seals	5000	LF	24.00
L2b	8" Diameter, 7.5mm nominal thickness with end seals	3000	LF	26.10
L2c	Price for each 1.5mm thickness increase exceeding 7.5mm, 8" dia.	1	LF	2.20
L3a	10" Diameter, 6mm nominal thickness with end seals	4000	LF	28.30
L3b	10" Diameter, 7.5mm nominal thickness with end seals	2000	LF	30.60
L3c	Price for each 1.5mm thickness increase exceeding 7.5mm, 10" dia.	1	LF	2.80
L4a	12" Diameter, 6mm nominal thickness with end seals	2000	LF	31.40
L4b	12" Diameter, 7.5mm nominal thickness with end seals	1000	LF	33.90
L4c	Price for each 1.5mm thickness increase exceeding 7.5mm, 12" dia.	1	LF	3.40
L5a	15" Diameter, 6mm nominal thickness with end seals	300	LF	38.10
L5b	15" Diameter, 7.5mm nominal thickness with end seals	200	LF	51.60
L5c	Price for each 1.5mm thickness increase exceeding 7.5mm, 15" dia.	1	LF	3.90
L6a	16" Diameter, 7.5mm nominal thickness with end seals	200	LF	52.20
L6b	16" Diameter, 9mm nominal thickness with end seals	200	LF	64.30
L6c	Price for each 1.5mm thickness increase exceeding 9mm, 16" dia.	1	LF	4.50
L7a	18" Diameter, 7.5mm nominal thickness with end seals	150	LF	58.70
L7b	18" Diameter, 9mm nominal thickness with end seals	150	LF	67.60

L7c	Price for each 1.5mm thickness increase exceeding 9mm, 18" dia.	1	LF	5.60
L8a	20" Diameter, 10.5mm nominal thickness with end seals	100	LF	91.80
L8b	20" Diameter, 12mm nominal thickness with end seals	100	LF	99.90
L8c	Price for each 1.5mm thickness increase exceeding 12mm, 20" dia.	1	LF	6.70
L9a	8 & 10" Main, 4" Lateral reinstatement	50	Ea.	104.80
L9b	8 & 10" Main, 6" Lateral reinstatement	300	Ea.	104.80
L9c	12" Main, 6" Lateral reinstatement	200	Ea.	104.80
L9d	15" Main, 6" Lateral reinstatement	10	Ea.	250.00
L9e	16" Main, 6" Lateral reinstatement	10	Ea.	250.00
L9f	18" Main, 6" Lateral reinstatement	5	Ea.	300.00
L9g	Cutting and Brushing Lateral Connection, for fold-and-form lined piping.	1	EA	390.9
L10a	6" Pre-Liner Installation	1000	LF	1.50
L10b	8" Pre-Liner Installation	2000	LF	1.90
L10c	10" Pre-Liner Installation	1000	LF	2.40
L10d	12" Pre-Liner Installation	1000	LF	2.60
L10e	15" Pre-Liner Installation	300	LF	2.80
L10f	16" Pre-Liner Installation	200	LF	3.00
L10g	18" Pre-Liner Installation	150	LF	3.20
Sanitary Sewer Service Lateral CIPP Lining				
LL1a	6" diameter, Lateral, One-piece main/lateral connection, nominal 4.5 mm, with a 16" main and lateral insertion not to exceed 20 feet both with end seals.	300	EA	3183.20
LL1b	6" diameter Lateral, one-piece main/lateral connection, price for each additional foot that is inserted into lateral beyond 20 feet.	100	LF	55.80
LL2a	6" diameter lateral lining, 4.5mm nominal thickness with end seals	200	LF	83.80
LL2b	Price for each 1.5 mm thickness increase exceeding .5 mm nominal, 6" diameter	1	LF	27.9
L3a	4" diameter lateral lining, 4mm nominal thickness with end seals	200	LF	83.80

L3b	Price for each 1 mm thickness increase exceeding 4mm nominal, 4" diameter	1	LF	27.90
LL3c	Price for each 1.5 mm thickness increase of the One-piece main/lateral connection (LL1a) exceeding 4.5 mm nominal, 6" dia.	1	EA	111.70
LL4a	4" diameter Lateral, One-piece main/lateral connection, nominal 4 mm, with a 16" main and lateral insertion not to exceed 20 feet both with end seals	100	EA	3183.20
LL4b	Price for each 1 mm thickness increase of the One-piece main/lateral connection (LL4) exceeding 4 mm nominal, 4" diameter	1	EA	111.70
LL5a	6" Diameter Lateral, One-piece main/lateral connection, nominal 4.5mm with Brim Style and Lateral up to 24" both with end seals	1	EA	2457.20
LL5b	4" Diameter Lateral, One-piece main/lateral connection, nominal 4.5mm with a Brim Style and lateral up to 24" both with end seals	1	EA	2457.20
LL6a	6" Diameter Lateral, One-piece main/lateral connection nominal 4.5mm with 16" man and lateral up to 24" both with end seals	1	EA	2457.20
LL6b	4" Diameter Lateral, One-piece main/lateral connection, nominal 4.5mm with 16" main and lateral up to 24" both with end seals	1	EA	2457.20
Sanitary Sewer Sectional CIPP Lining				
SL1	6" Diameter, 4.5mm nominal with end seals typ.			
1a	3 Foot Section	1	EA	2233.80
1b	6 Foot Section	1	EA	2680.60
1c	10 Foot Section	1	EA	2904.00
SL2	8" Diameter, 6mm nominal with end seals typ.			
2a	3 Foot Section	1	EA	2680.60

2b	6 Foot Section	1	EA	3015.70
2c	10 Foot Section	1	EA	3350.70
SL3	10" Diameter, 6mm nominal with end seals typ.			
3a	3 Foot Section	1	EA	2904.00
3b	6 Foot Section	1	EA	3239.00
3c	10 Foot Section	1	EA	3574.10
SL4	12" Diameter Sewer, 6mm nominal with end seals typ.			
4a	3 Foot Section	1	EA	3574.10
4b	6 Foot Section	1	EA	4244.30
4c	10 Foot Section	1	EA	4691.00
4x	Price for each 1.5mm thickness increase exceeding 6mm	1	EA	837.70
SL5	15" Diameter, 7.5mm nominal with end seals typ.			
5a	3 Foot Section	1	EA	4132.60
5b	6 Foot Section	1	EA	4691.00
5c	10 Foot Section	1	EA	5249.50
5x	Price for each 1.5mm thickness increase exceeding 7.5mm	1	EA	949.40
SL6	16" Diameter, 7.5mm nominal with end seals typ.			
6a	3 Foot Section	1	EA	4244.30
6b	6 Foot Section	1	EA	4802.70
6c	10 Foot Section	1	EA	5361.20
6x	Price for each 1.5mm thickness increase exceeding 7.5mm	1	EA	949.40
SL7	18" Diameter, 7.5mm nominal with end seals typ.			
7a	4 Foot Section	1	EA	5584.60
7b	8 Foot Section	1	EA	6366.4
7c	10 Foot Section	1	EA	7148.20
7x	Price for each 1.5mm thickness increase exceeding 7.5mm	1	EA	1340.30

SL8	20" Diameter, 10.5mm nominal with end seals typ.			
8a	4 Foot Section	1	EA	6701.50
8b	8 Foot Section	1	EA	7818.40
8c	10 Foot Section	1	EA	8935.30
8x	Price for each 1.5mm thickness increase exceeding 10.5mm	1	EA	1675.40
Sanitary Sewer Main and Lateral Connection Sealing by Chemical Grout				
GS1	Grout seal Main/Lateral Connection	1	EA	325.00
GS2	6" Diameter Main Pipe Joint, fracture or break	1	EA	27.90
GS3	8" Diameter Main Pipe Joint, fracture or break	1	EA	33.50
GS4	10" Diameter Main Pipe Joint, fracture or break	1	EA	39.10
GS5	12" Diameter Main Pipe Joint, fracture or break	1	EA	50.30
GS6	15" Diameter Main Pipe Joint, fracture or break	1	EA	55.80
GS7	16" Diameter Main Pipe Joint, fracture or break	1	EA	61.40
GS8	18" Diameter Main Pipe Joint, fracture or break	1	EA	72.60
GS9	20" Diameter Main Pipe Joint, fracture or break	1	EA	78.20
GS10	Grout > Initial 2 Gal./Joint, fracture or break	1	Gallon	17.90
Sanitary Sewer Cleanout				
LCO1	Lateral Cleanout Detail SS-19, 20, 21, and 25 Includes Fernco Ultra-Rib Coupling with Stainless Steel Bands (0 to 3 VLF) 4" service to 6" cleanout.	1	EA	1340.30
LCO2	Lateral Cleanout price beyond > 3 VLF Depth	1	EA Added VLF	418.80
Sidewalk				
SW1	Remove and Replace Sidewalk Section, 4" Thick, Matching existing width. Detail PD-07A. (3000 psi concrete)	1	Sq. Ft.	53.60

SW2	Same as SW1 except use detail PD-07B, Side Walk Adjacent to Curb.	1	Sq. Ft.	76.00
SW3	Same as SW1 except use detail PD-07D, monolithic curb/sidewalk.	1	Sq. Ft.	86.00
SW4	Same as SW1 except cast with Coquina mix.	1	Sq. Ft.	113.90
SW5	Same as SW2 except cast from Coquina Mix.	1	Sq. Ft.	136.30
SW6	Same as SW3 except cast from Coquina Mix.	1	Sq. Ft.	160.80
Maintenance of Traffic (St. Johns County & FDOT)				
TM1	Traffic Control – MOT Index 601 or 602	1	Day	446.80
TM2	Traffic Control – MOT Index 603	1	Day	670.10
TM3	Traffic Control – MOT Index 604 or higher	1	Day	893.50
TM4	Traffic Control – MOT Index 601 or 602	1	Week	2233.80
TM5	Traffic Control – MOT Index 603	1	Week	3350.70
TM6	Traffic Control – MOT Index 604 or higher	1	Week	4467.70
TM7	Flagman	1	Each Day	692.50
TM8	Variable Message Board (per week)	1	Week	2233.80
Testing				
TS1	Grout Performance Demo Test	2	EA.	275.00
TS2	Main Jt. Test	20	EA.	55.80
TS3	Lateral connection Test	20	EA.	275.00
TS4	CIPP cure water test	1	EA.	1116.90
TS5	CIPP Liner Test	3	EA.	279.20
24 Hr. Emergency Services (3 Hr. Response Window)				
E1	Video Truck with work crew, Weekdays	1	Hourly Rate	279.20
E2	Video Truck with work crew, Holidays and Weekends	1	Hourly Rate	363.00
E3	Mobilization of Vector and Video Truck	1	LS	558.50
E4	Vector and Video Equipment Trucks with work crew, Weekdays	1	Hourly Rate	474.70
Mobilization				

M1	Mobilization for 20 work day period	1	Each	4746.90
M2	Mobilization for work periods 20 to 40 work day period	1	Each	3630.00
M3	Mobilization for work periods greater than 40 work days.	1	Each	1955.70
M4	Emergency Mobilization Less than 1 week	1	Each	5863.80
Bond				
B	Contract Performance and Payment Bond Cost Not to Exceed 2%	NA	Ea.	1.5%
Warranty Inspections				
WI1a	Warranty Inspection 6" Lateral from main	1	LF	16.80
WI1b	Warranty Inspection 6" Lateral from cleanout	1	LF	11.20
WI2	Warranty Inspection 8 & 10" Main	1	LF	2.50
WI3	Warranty Inspection 12" Main	1	LF	3.00
WI4	Warranty Inspection 15" Main	1	LF	3.30
WI5	Warranty Inspection 16" Main	1	LF	3.90
WI6	Warranty Inspection 18" Main	1	LF	4.70
WI7	Warranty Inspection 20" Main	1	LF	6.10
WI8	Warranty Inspection Mobilization	1	EA.	5500.00
Stormwater System				
Item	Description	Annual Est. Qty.	Unit	Unit Cost
Clean and Inspection of Storm Water Mains				
Light Cleaning & Inspection				
A1	8" Diameter	1	LF	\$3.90
A2	10" Diameter	1	LF	\$4.00
A3	12" Diameter	1	LF	\$4.40
A4	15" Diameter	1	LF	\$5.10
A5	18" Diameter	1	LF	\$6.20
A6	21" Diameter	1	LF	\$7.20
A7	24" Diameter	1	LF	\$8.40
A8	30" Diameter	1	LF	\$11.60
A9	36" Diameter	1	LF	\$13.10
A10	42" Diameter	1	LF	\$17.50

A11	48" Diameter	1	LF	\$21.80
A12	54" Diameter	1	LF	\$36.40
A13	60" Diameter	1	LF	\$43.60
Medium Cleaning& Inspection				
A14	8" Diameter	1	LF	\$4.10
A15	10" Diameter	1	LF	\$4.30
A16	12" Diameter	1	LF	\$4.70
A17	15" Diameter	1	LF	\$5.40
A18	18" Diameter	1	LF	\$6.50
A19	21" Diameter	1	LF	\$7.60
A20	24" Diameter	1	LF	\$9.50
A21	30" Diameter	1	LF	\$13.00
A22	36" Diameter	1	LF	\$14.50
A23	42" Diameter	1	LF	\$20.40
A24	48" Diameter	1	LF	\$27.60
A25	54" Diameter	1	LF	\$40.70
A26	60" Diameter	1	LF	\$50.90
Heavy Cleaning & Inspection				
A27	8" Diameter	1	LF	\$4.40
A28	10" Diameter	1	LF	\$4.60
A29	12" Diameter	1	LF	\$5.10
A30	15" Diameter	1	LF	\$6.20
A40	18" Diameter	1	LF	\$7.10
A41	21" Diameter	1	LF	\$8.70
A42	24" Diameter	1	LF	\$10.90
A43	30" Diameter	1	LF	\$13.80
A44	36" Diameter	1	LF	\$17.50
A45	42" Diameter	1	LF	\$24.70
A46	48" Diameter	1	LF	\$33.40
A47	54" Diameter	1	LF	\$50.90
A48	60" Diameter	1	LF	\$61.10
Outfall and Headwall Barnacle/Oyster Cleaning				
A49	8" Diameter	1	Each	\$195.50
A50	10" Diameter	1	Each	\$206.60
A51	12" Diameter	1	Each	\$217.80
A52	15" Diameter	1	Each	\$223.40
A53	18" Diameter	1	Each	\$229.00
A54	21" Diameter	1	Each	\$251.30

A55	24" Diameter	1	Each	\$262.50
A56	30" Diameter	1	Each	\$279.20
A57	36" Diameter	1	Each	\$335.10
A58	42" Diameter	1	Each	\$385.30
A59	48" Diameter	1	Each	\$474.70
A60	54" Diameter	1	Each	\$558.50
A61	60" Diameter	1	Each	\$670.10
Stormwater Sectional CIPP Liner				
A62	8" Diameter, 6.0 mm finished thickness	1	LF	\$893.53
A63	8" each additional 1.5 mm thickness	1	LF	\$27.90
A64	10" Diameter 6.0 mm finished thickness	1	LF	\$968.00
A65	10" each additional 1.5 mm thickness	1	LF	\$33.50
A66	12" Diameter 6.0 mm finished thickness	1	LF	\$1,191.00
A67	12" each additional 1.5 mm thickness	1	LF	\$83.70
A68	15" Diameter 6.0 mm finished thickness	1	LF	\$1,377.33
A69	15" each additional 1.5 mm thickness	1	LF	\$94.94
A70	18" Diameter 7.5 mm finished thickness	1	LF	\$1,661.53
A71	18" each additional 1.5 mm thickness	1	LF	\$134.03
A72	21" Diameter 7.5 mm finished thickness	1	LF	\$1,998.79
A73	21" each additional 1.5 mm thickness	1	LF	\$167.50
A74	24" Diameter 9.0 mm finished thickness	1	LF	\$2,281.90
A75	24" each additional 1.5 mm thickness	1	LF	\$193.80
A76	30" Diameter 9.0 mm finished thickness	1	LF	NO BID
A77	30" each additional 1.5 mm thickness	1	LF	NO BID
A78	36" Diameter 10.5 mm finished thickness	1	LF	NO BID
A79	36" each additional 1.5 mm thickness	1	LF	NO BID
A80	42" Diameter 10.5 mm finished thickness	1	LF	NO BID
A81	42" each additional 1.5 mm thickness	1	LF	NO BID
A82	48" Diameter 10.5 mm finished thickness	1	LF	NO BID
A83	48" each additional 1.5 mm thickness	1	LF	NO BID

A84	54" Diameter 13.5 mm finished thickness	1	LF	NO BID
A85	54" each additional 1.5 mm thickness	1	LF	NO BID
A86	60" Diameter 13.5 mm finished thickness	1	LF	NO BID
A87	60" each additional 1.5 mm thickness	1	LF	NO BID
Plug Installation & Removal				
A88	24" to 42" Diameter	1	Each Day	\$1,005.20
A89	48" to 72" Diameter	1	Each Day	\$1,340.30
Stormwater Sewer CIPP Lining				
	8" Diameter, 6mm nominal thickness		LF	\$56.90
	8" each additional 1.5 mm thickness		LF	\$1.70
	10" Diameter, 6mm nominal thickness		LF	\$65.20
	10" each additional 1.5 mm thickness		LF	\$2.20
	12" Diameter, 7.5mm nominal thickness		LF	\$71.80
	12" each additional 1.5 mm thickness		LF	\$2.80
	15" Diameter, 9 mm nominal thickness		LF	\$109.30
	15" each additional 1.5 mm thickness		LF	\$3.40
	16" Diameter, 9 mm nominal thickness		LF	\$117.80
	16" each additional 1.5 mm thickness		LF	\$3.90
	18" Diameter, 10.5 mm nominal thickness		LF	\$127.50
	18" each additional 1.5 mm thickness		LF	\$4.50
	20" Diameter, 10.5mm nominal thickness		LF	\$137.70
	20" each additional 1.5 mm thickness		LF	\$5.00
	21" Diameter, 10.5mm nominal thickness		LF	\$177.40
	21" each additional 1.5 mm thickness		LF	\$5.60
	24" Diameter, 12 mm nominal thickness		LF	\$208.50
	24" each additional 1.5 mm thickness		LF	\$6.10
	27" Diameter, 12 mm nominal thickness		LF	\$216.30
	27" each additional 1.5 mm thickness		LF	\$6.70

	30" Diameter, 13.5 mm nominal thickness		LF	\$238.60
	30" each additional 1.5 mm thickness		LF	\$7.30
	36" Diameter, 15 mm nominal thickness		LF	\$293.50
	36" each additional 1.5 mm thickness		LF	\$7.80
	42" Diameter, 16.5 mm nominal thickness		LF	\$335.10
	42" each additional 1.5 mm thickness		LF	\$8.40
	48" Diameter, 18 mm nominal thickness		LF	\$390.30
	48" each additional 1.5 mm thickness		LF	\$8.90
	54" Diameter, 21 mm nominal thickness		LF	\$506.20
	54" each additional 1.5 mm thickness		LF	\$9.50
	60" Diameter, 24 mm nominal thickness		LF	\$613.20
	60" each additional 1.5 mm thickness		LF	\$10.10

CONFORMED 09-15-2020

ATTACHMENT #1
PROTECTION OF ARCHAEOLOGICAL AND HISTORICAL SITES

Where historical remains, antiquity or any other object of cultural or archaeological importance are discovered during construction the following procedures shall be applied:

- 1) Stop construction activities;
- 2) Delineate the discovered site area;
- 3) Secure the site to prevent any damage or loss of removable objects;
- 4) Notify the City Archaeologist within one (1) business day who in turn shall notify the responsible authorities of the State if necessary.
- 5) The City Archaeologist is responsible for protecting and preserving the site before deciding on the proper procedures to be carried out;
- 6) An evaluation of the finding will be performed by the City Archaeologist where the significance and importance of the findings will be assessed according to various criteria relevant to cultural heritage including aesthetic, historic, scientific or research, social and economic values;
- 7) Decision on how to handle the findings will be reached based on the above assessment and could include changes in the project layout, conservation, preservation, restoration or salvage; and
- 8) Construction work may resume only when permission is given from the City Archaeologist or the responsible authorities of the State (if necessary).

In case of delay incurred in direct relation to the Archaeological findings not stipulated in the contract (and affecting the overall schedule of works), the Contractor may apply for an extension of time. However, the Contractor will not be entitled for any kind of compensation or claim other than what is directly related to the execution of the archaeological findings, works and protections.

ATTACHMENT #2 – UNEXPECTED DISCOVERIES

A. General Procedures

The Selected Contractor shall notify the City within one (1) business day if it appears that the project will affect a previously unidentified property which may be an historic property, including human remains, or affect a known historic property in an unanticipated manner.

If any archaeological deposits are identified that contain human remains the City Archaeologist shall notify the State Historic Preservation Officer (SHPO). The Selected Contractor shall ensure work immediately stops in the vicinity of such a discovery and will take all reasonable measures to avoid, minimize harm and protect the discovery until the City Archaeologist concludes the consultation with all appropriate parties. For non-human remain discoveries, decisions will be determined by City Archaeologist for other significant archaeological deposits (e.g., trash pits, wells, building remnants, etc.).

If human remains are discovered, the City Archaeologist shall inform SHPO who will then notify the parties of any time constraints and all parties will mutually agree upon timeframes for consultation on the discovery. Following consultation, SHPO will provide all consulting parties with written recommendations which take into account the effects of the undertaking. If the consulting parties do not object to SHPO's recommendations for the treatment of the discovery within the agreed upon timeframe, SHPO will require the City to modify the project scope of work to implement SHPO's recommended action. If there is a timely objection to SHPO's recommended action, SHPO will consult further with the objecting party.

B. Human Remains

If human remains are discovered during construction, all project construction activities shall cease immediately. The City shall notify the local Police Department and the Medical Examiner's Office via telephone within one (1) business hour of the stop work and SHPO via email within one (1) business day. Construction activities shall not resume until the disposition of the human remains has been resolved in accordance with all applicable local, state and Federal laws.

1. If the human remains are determined by the Medical Examiner's Office to be of recent, non-Native American origin, then the City shall ensure that the remains are removed and the discovery area is treated in accordance with all applicable local, state and Federal Laws. Construction may resume upon notification from the City.
2. If the human remains are of archaeological interest or Native American, SHPO shall take the lead in working with all parties to ensure compliance with the applicable local, state and Federal laws. Construction may resume upon notification from SHPO to the City.
 - a. SHPO shall follow policy presented in the Advisory Council on Historic Preservation (ACHP)'s *Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects* (February 23, 2007).
 - b. SHPO will conduct an in-person meeting in St. Augustine with representatives of the appropriate Indian Tribes, ACHP and other consulting parties as needed to determine the disposition of the remains. This meeting will include a site visit if requested by any Indian Tribe, SHPO or ACHP.

SECTION 02959 SEWER MAIN AND LATERAL CONNECTION SEALING BY CHEMICAL GROUT

PART 1 GENERAL

1.01 DESCRIPTION

- H. Section includes requirements for rehabilitation of defective mainline joints, circumferential mainline cracks, other small mainline defects and defective lateral-mainline interfaces by application of chemical grout material.
- I. Provide all labor, materials, tools, equipment and incidentals as shown, specified, and required for testing sewer pipe joints by applying a positive air pressure to the joints, monitoring and recording the pressure in the void. The intent of joint & connection testing is to identify those sewer joints, lateral connections and laterals that are not watertight and that can be successfully sealed by packer injection grouting. This document can be utilized for the following applications:
 - 1. Test all joints in a mainline segment
 - 2. Test all service lateral connections from the sewer main to a predetermined distance up the sewer lateral.
 - 3. Test all joints within a predetermined distance in laterals directly connected to man-holes.
- J. Provide all labor, materials, tools, equipment, and incidentals as shown, specified, and required to grout pipeline joints, joints in laterals connected to manholes and lateral connections to the mains using the packer injection method.
 - 1. Packer injection grouting is used to reduce the infiltration within the pipeline, seal annular space between liners and host pipes at lateral connections, seal pipe joints that have failed the joint test criteria, provide external pipe support, but not a structural rehabilitation, by stabilizing soils outside the pipe and prevent further loss of pipe bedding into the pipe.
 - 2. Packer injection grouting shall be accomplished by pressure injection of chemical grout into the soils encompassing the exterior of pipe joint. Chemical grouts shall be designed to be injected into the soil surrounding the pipe, which stabilizes the soil and forms a permanent impermeable seal called a grout/soil ring, and into the annular space between liners and host pipes. Adequate volumes of grout must be injected to form an effective seal. Adequate amounts of grout are based generally upon pipe size and field conditions. This application will be through structurally sound joints and lateral connections through penetrations from within the pipe by using the packer method in tandem with a closed-circuit television (CCTV) inspection system.
- K. All contractors and employees' vehicles on the project site for the City shall clearly and boldly display their full name, address, and phone number.

L. Maintenance of Traffic (MOT)

Refer to General Requirements Section 01570, Maintenance of Traffic requirements.

M. All contractors and employees' vehicles on the project site for the City shall clearly and boldly display their full name, address and phone number.

1.02 DEFINITIONS

A. Mainline: Sewer Main.

B. Lateral: Service pipe from property line to mainline.

C. Lateral-Mainline Interface: Lateral connection to mainline.

N. Lateral-Mainline Interface Seal: Watertight seal between lateral and mainline.

1.03 QUALITY ASSURANCE REQUIREMENTS

D. Follow:

1. ASTM F2304 Standard Practice for Rehabilitations of Sewers using Chemical Grouting, latest revision.
2. ASTM F2454 Standard Practice for Sealing Lateral Connections and lines from the Mainline Sewer Systems by Lateral Packer Method, Using Chemical Grouting, latest revision.

E. Commercially Proven Products:

8. Minimum 12,000 mainline joints and 1,000 lateral-mainline interfaces successfully grouted and documented in the United States and Internationally.
9. Translate international installations into English to Engineers approval.

F. Personnel involved in sealing of joints and lateral connections: Certified by grout manufacturer they have successfully completed training in handling, mixing and application of grout for sanitary sewer line, joint and lateral connection sealing.

2. Refer to Section 01001 General Work Requirements paragraph 1.02.E for grouting qualification requirements.

- E. Third-Party Inspector: Minimum of 5 years' experience in Chemical grouting applications and have no financial or directorial link to grout manufacturer or Contractor.
- F. Engineer may inspect and test grout at factory, before delivery to site, while in storage, or prior to use.
- G. Internally CCTV inspect host pipe prior to grouting, during grouting and post grouting.

1.04 SUBMITTALS

- B. Submit following Section 01300.
 - 2. Catalog data showing manufacturer's clarifications and updates, ASTM references, material composition, specifications, and physical and chemical properties of grout.
 - c. Chemical Grout Information:
 - 5) Description of chemical grout materials.
 - 6) Description of proposed additives to be used.
 - 7) Manufacturers recommended procedures for storing, mixing, testing, and handling of chemical grouts.
 - 8) SDS sheets for all materials to be used.
 - d. Identify the manufactures & models of the packers to be utilized on the project.
 - 10. Calculations of expected volumes of annular space between packer and pipe wall, to be used in calculating required gel times.
 - 3. Manufacturer's recommended procedures for handling, storing, mixing and injecting grout.
 - 4. Method of Construction.
 - g. Access manholes and site locations.
 - h. Work dimensions.
 - i. Size of working area.
 - j. Impacted portions of existing sewer.
 - k. Site access points.
 - l. Bypass pumping plan: Following Section 01516.
 - 5. Emergency plan detailing procedures to be followed in event of health and safety emergency, pump failures, sewer overflows, service backups, and sewage spillage. Maintain copy on site for duration of project.
 - d. Address dangers associated with sewer rehabilitation work.
 - e. Identify Health and Safety officer. (i.e. crew chief)
 - f. Designated Health and Safety officer:
 - 4) Responsible for providing health and safety oversight of personnel participating on project team.
 - 5) Perform and document routine work area inspections, conduct safety meetings, and provide safety orientations for team members.
 - 6) Have in easily accessible location, the following contact information

- d) Non-emergency number.
 - e) Contractor's health and safety representative name and number.
 - f) Occupational health clinic number(s).
 - d. Submit for review the following;
 - 3) List of critical rehabilitation equipment, to be inspected on daily basis.
 - 4) Recently completed (previous month) monthly maintenance log.
- B. Submit following Section 01300.
- 1. Grout manufacturer's certification that Contractor is approved installer of their system. Certificates of training in handling, mixing, and application of grout for sanitary sewer line and joint and lateral connection sealing for grout truck operator and at least one crewmember involved in sealing process.
 - 2. Third party lab test results for field installations in United States of same grout system as proposed for actual installation.
 - a. Test results must verify grout physical and chemical properties specified herein have been achieved in previous field applications.
 - 11. CCTV inspection reports and electronic downloads following 02762 and 02763 before and following sewer joint sealing. Furnish original copies of CCTV inspections color DVDs to Engineer within 10 days.
 - 12. Documentation for Products and Installers: Engineer's approval required before acceptance or injection of grout.
 - 13. Proof of grout manufacturer's product liability insurance, if requested by Engineer.
 - 14. Pump calibration information.
 - 15. Field sealing records.
 - 16. Certification of accuracy and calibration of pressure sensing/monitoring equipment by independent testing firm within one month before use of equipment.
 - 17. Upon completion of each pipe segment, submit a report showing the following data for each joint and/or lateral connection tested, grouted or attempted to be grouted in accordance with NASSCO PACP.
 - a. Identification of the sewer pipe section tested by assigned sewer ID (if available) and length.
 - b. Type of pipe material, diameter & depth of pipe to the surface at manholes.
 - c. Length of pipe sections between joints.
 - d. Test pressure used and duration of test.
 - e. Pass/fail results for each joint/connection tested.
 - f. Location stationing of each joint/connection tested, and location of any joints/connections not tested with an explanation for not testing.
 - g. Volume of grout material used on each joint or connection.
 - h. Gel set time used (cup test results from tanks)

- i. Grout mix record of the batches mixed including amount of grout and catalyst, additives, temperature of the grout solution in tanks.
- j. Operator conducting testing and sealing shall be noted on the reports.
- k. Video recordings
 - 3) Video recording shall include testing and sealing operations for each joint/lateral (including inflation and deflation over the joint/lateral) displaying the final air test of joints or laterals.
 - 4) Additional final recording, if specified, shall include inspection of the pipe or lateral after all grouting work is complete.

1.05 DELIVERY, STORAGE, AND HANDLING

- B. Protect, store, and handle grout or other material during transportation and delivery, while stored on-site, and during installation following manufacturer's recommendations.
- B. Grout Material found defective or damaged due to manufacture or shipment:
 - 8. Remove from Contract site and replace, following Engineer's direction, at no cost to the Commission.

PART 2 - PRODUCTS

2.01 TESTING EQUIPMENT & GROUTING EQUIPMENT

- I. The basic equipment used for mainline pipe joints and for laterals connected to the mainline shall consist of a remotely operated color television camera capable of pan and tilt, joint testing device (referred to hereafter as a packer), and test monitoring equipment. The equipment shall be constructed in such a way as to provide means for introducing air under pressure into the void area created by the expanded ends of the packer against the host pipe and a means for continuously measuring, viewing and recording the actual static pressure of the test medium and grout within the void area only. The packer shall be of a size less than the diameter of the host pipe, with the cables at either end used to pull it through the line and may always be constructed in such a manner as to allow a restricted amount of sewage to flow. Packer shall be expanded by air pressure. Packers shall be of low void space construction with void volume given by the packer manufacturer.
- J. The device for testing lateral connections shall consist of inflatable mainline end elements and a lateral grouting plug that creates a void area extending beyond the main connection. Whenever possible, use a lateral grouting plug sized to match the diameter of the lateral being grouted with an effective sealing length of at least PREDETERMINED DISTANCE BY ENGINEER. Where the lateral is capped, utilize alternate lateral grouting plug or equipment sized appropriately for the capped lateral. In cases where the lateral

transitions from 6" to 4" in diameter, use a 4" lateral grouting plug. However, it is possible that due to physical restrictions the lateral plug may not launch and thus the service may not be able to be grouted.

- K. The basic equipment for 4-inch and 6-inch laterals connected to manholes shall consist of a flexible push-type packer and mini-push camera. The device for testing lateral pipe connected to the manhole shall be capable of testing the joints within PREDETERMINED DISTANCE BY CITY of the lateral or to the cleanout, whichever comes first, from the manhole toward the building. If the lateral contains a transition, CONTRACTOR may change out diameters of push packer or grout lateral using only a 4-inch push packer.
- L. Void pressure data shall be transmitted from the void area to the monitoring equipment or video picture of a pressure gauge mounted on the packer and connected to the void area. All test monitoring shall be above ground and, in a location, to allow for simultaneous and continuous observation of the televising monitor and test monitoring equipment.
- M. Grouting equipment shall consist of the packer, appropriate pumping and hosing systems capable of supplying an uninterrupted flow of sealing materials to completely fill the voids. Grout pumping system shall be sized to deliver a mixed volume of grout at a minimum of 3 gpm and 30 gallons of uninterrupted flow within 10 minutes.
- N. Volume of mixed grout pumped must be capable of being measured and recorded for each grouted joint/connection. Generally, the equipment shall be capable of performing the specified operations in sewers where flows do not exceed 25 percent of pipe diameter unless permitted by CITY.
- O. Connection and lateral service sealing shall be accomplished using the lateral grouting plugs and push packers specified above. Always provide back-up bladders for each packer on-site during grouting procedures.
- P. Equipment for cleaning lateral blockages shall be readily available while any lateral grouting work is being performed.

2.2 MATERIALS

- B. Grouts - General
 - 2. While being injected, the grout must be able to react /perform in the presence of water (groundwater).
 - 3. The ability to increase grout mix viscosity, density and gel strength by increased concentration of constituents or the use of approved additives.
 - 10. The cured grout must withstand submergence in water without degradation.
 - 11. The resultant grout formation must be homogeneous and prevent the passage of water (infiltration) through the pipe joint.
 - 12. The grout must not be biodegradable.

13. The cured grout should be chemically stable and resistant to organics found in sewage.
14. Residual grout shall be easily removable from the sewer line to prevent blockage of the sewage flow.
 - b. Handle, mix, and store grout in accordance with the manufacturer's recommendations. The materials shall be delivered to the site in unopened original manufacturer's containers.

D. Grouting.

1. Properties and Characteristics.

- a. Will perform in presence of infiltrating water (groundwater), during injection.
- b. Packaged for field storage, handling requirements with minimum spillage and worker safety.

2. Cured grout:

- a. Submergible in water without degrading.
- b. Not biodegradable.
 - 1) Additives may be used to meet this requirement, without effecting long-term strength.
- d. Chemically stable and resistant to concentrations of acids, alkalis, and organic materials found in normal sewage.

3. Composition.

a. Acrylamide gel:

- 3) Minimum of 10 percent acrylamide base material by weight in total grout mix.
- 4) Higher concentration percent of acrylamide base material (maximum 20%) may be used to increase strength or offset dilution during injection.
- 4) Able to tolerate some dilution and react in moving water during injection.
- 5) Approximately 2 centipoise viscosity. Can be increased with additives.
- 6) Constant viscosity during reaction period.
- 7) Controlled reaction time from 10 seconds to 1 hour.
- 8) Curing reaction producing a homogenous, chemically stable, non-biodegradable, firm, flexible gel.
- 9) Able to prevent dehydration and increase-mix viscosity, density and gel strength by use of additives.
 - c) Diatomaceous earth (Celite 209 or equal) can be added to concentration of five percent.
 - d) Use of other additives following manufacturer's recommendation and Engineer's approval.
- 10) Root control additive 2, 6-Dichlorobenzonitrile, may be added following manufacturer's recommendation and Engineer's direction.

b. Urethane gel:

- 1) Ratio: One-part urethane prepolymer mixed with 5 to 10 parts water by volume.
 - e) Recommended mix ratio: 1-part urethane prepolymer to 8 parts of water (11 percent prepolymer).
- 2) Liquid prepolymer:
 - b) Solids content: 77 to 83 percent.

- f) Specific Gravity: 1.04 (8.65 pounds per gallon)
 - g) Flash Point: 20 degrees F.
 - h) Viscosity: 600 to 1,200 centipoises water at 70 degrees F.
- 3) Water for reacting prepolymer: pH of 6.5 to 8.
- 4) Curing reaction:
 - d) Produces chemically stable, non-biodegradable, tough, flexible gel.
 - e) Able to increase mix viscosity, density, gel strength and resistance to shrinkage by using additives in water component of grout.
 - f) Minimum 15 percent shrink control agent supplied by the same manufacturer.
- c. Acrylate gel:
 - 5) Minimum 10 percent acrylate base material by weight or as specified by the manufacturer.
 - c) In total grout mix, a higher concentration (percent) of acrylate base material may be used to increase strength or offset dilution during injection.
 - d) If acrylate base material is in 40 percent solution 27.5 percent by weight of total grout mix: 11 percent base material.
 - 6) Able to tolerate some dilution and react in moving water during injection.
 - 7) Viscosity: Approximately 2 centipoises.
 - c) Can be increased with additives.
 - 8) Constant viscosity during reaction period.
 - 6) Controlled reaction time: 10 seconds to 1 hour.
 - 8) Curing reaction producing homogeneous, chemically stable, non-biodegradable, flexible gel.
 - 9) Able to prevent dehydration and to increase-mix viscosity, density and gel strength by use of additives.
 - b) Diatomaceous earth (Celite 209 or equal) can be added to concentration of five percent, by volume.
 - d) Use of other additives following manufacturer's recommendations and Engineer's approval.
 - 9) Root control additive 2, 6-Dichlorobenzonitrile, may be added following manufacturer's recommendation and Engineer's direction.

E. Additives

- 2. At the CONTRACTOR'S discretion and according to field conditions, additives may be selected and used within the manufacturers recommended quantities.
- 9. Strengthening Agents
 - b. For joint grouting, a latex or "diatomaceous earth" additive may be added to increase compressive and tensile strength. The quantity of strengthening agent additive shall be as recommended by the manufacturer and approved by ENGINEER.
- Product Manufacturer:
- 10. Root Inhibitor

- b. When roots are present, for joint and lateral connection joint grouting, a root deterrent chemical shall be added to control root re-growth. The quantity of inhibitor shall be as recommended by the manufacturer and approved by ENGINEER.
- 11. Dye - A manufacturer approved water soluble dye without trace metals may be added to the grout tank(s) for visual confirmation.
- 12. Gel Time Modifier - A gel time extending agent may be used in accordance with the manufacturer's recommendations to extend gel time as necessary.
- 13. Freeze/Thaw - In those lines where the grouting material may be exposed to a freeze-thaw cycle, ethylene glycol or other ENGINEER approved additive shall be used to prevent chemical grout cracking once set.
- 14. When using non soluble additives the grout tanks must have mechanical mixing devices to keep the additives in suspension and maintain a uniform solution of grout and additive.

2.2 EQUIPMENT

A. General.

- 1. CCTV system, necessary chemical grout containers, pumps, regulators, valves, hoses, joint sealing packers for various sizes of sewer pipes, and lateral bladders.
- 2. Air pressure monitoring system:
 - a. Configured with no valves on air line between measuring point and pressure sensing device.
 - b. Digital readouts located at control panel in grouting truck.

B. Grouting packer:

- 1. Diameter less than pipe size, with cables attached at each end to pull it through the line.
- 2. Designed to allow restricted amount of sewage to flow through device, in mainlines where sewage flows do not exceed maximum depth for joint testing/sealing following manufacturer's recommendation and following ASTM F2304 and ASTM F2454.
- 3. Approved Manufacturers:
 - a. Logiball, Inc.
 - b. Cues, Inc.
 - c. Or Equal.

PART 3 - EXECUTION

3.1 PUBLIC NOTIFICATION

- B. Refer to Section 01001, General Work Requirements paragraph 1.16.C for Notification of Public or Customers. No sewer or water service is to remain shut down for more than a period of 8-hours unless the Contractor provides substitute services for the residents. Commercial sewer services shall always be maintained that the business is open. No

sewage from the services or main line shall be discharged on the ground or in waterways.

3.2 PREPARATION

A. Access.

2. Chemical grout sealing of mainline sewers: Through existing manholes.
5. Chemical grout sealing of lateral-mainline connections: Through mainline sewers.

B. Sewer Cleaning and Surface Preparation.

1. Cleaning of Main Line Sewers and Laterals.
 - a. Hydraulic high-pressure jetting of reaches is permitted.
 - c. Before sealing work, lightly clean each line section.
 - d. Remove sludge, dirt, sand, grease, root, and other materials from pipe and collect and remove resulting debris from downstream manhole of sewer section being cleaned.
 - b. Collect debris and remove from site. Following jurisdictional requirements and Engineers' approval.
 - f. Sewers damaged as result of improper use of cleaning equipment: Promptly repaired at no additional cost to the Commission.
2. Clean sewer main within 72 hours before chemical grouting of sewer lateral connections.

C. Pre-sealing CCTV Inspection.

6. After cleaning, perform CCTV inspection to ensure main is sufficiently clean to perform sealing operations. Document protruding taps and structural defects found during the CCTV inspection.
 - c. If Engineer finds main is not sufficiently cleaned, remove CCTV and sealing equipment and re-clean at no additional cost to the Commission.
 - d. If light cleaning is not sufficient, heavy clean sewer following Section 02761.

D. Pre-sealing Reaming.

2. Ream or trim protruding taps following Section 02766.

G. Bypass Pumping: Before pre-sealing CCTV inspection, and joint testing and sealing can be performed, depth of flow should be at or below levels shown in table.

2. If necessary, bypass pump to bring flow levels down to acceptable levels.

Pipe Diameter (inches)	Maximum Depth of Flow (as % of Pipe Diameter)
6 to 10	20
12 to 24	25
27 or greater	30

- H. Refer to Section 01001, General Work Requirements paragraph 1.17.i for responsibility for overflows and spills.
- I. Refer to Section 01001, General Work Requirements paragraph 1.07.H regarding property damage.

3.3 TESTING

A. Performance Test Demonstrations.

- 2. Before start of work, verify accuracy and repeatability of void pressure meter and fluid pumping equipment.
- 3. If test demonstrations fail to show accuracy of +/-0.5 psi for void pressure repeatability and +/- 0.1 gallon of chemical pumped into measured container or bucket, make required repairs or adjustments to equipment and gauges and retest until results meet Engineers satisfaction.
- 8. Test may be required at commencement of each work shift during sealing operations.
- 9. Perform demonstration testing may be performed each day of grouting. This testing may be waved by the City. 06-08-2020 Conformed 

B. Mainline Joint Pressure Air Testing.

- 2. Before testing, perform control tests at ground surface to verify accuracy, integrity, and reliability of testing equipment following ASTM F2304.
- 7. After entering each pipe segment through manhole, and immediately before joint pressure air testing, perform an intermediate test on pipe between joints following ASTM F2454.
- 8. Maintain joint testing air pressure of 3 psi higher than groundwater pressure outside the pipe, up to maximum of 10 psi. If groundwater pressure data is not available, use joint testing pressure of 0.5 psi per vertical foot of pipe depth or 10 psi, whichever is greater.
- 9. Perform testing following ASTM F2304. Seal joints that do not maintain void pressure drop of less than 1 psi in 15 seconds.
- 10. When the joints are longitudinally cracked, fractured or broken testing will not be required. 06-08-2020 Confirmed 

C. Lateral Connection Pressure Air Testing.

- 2. Before lateral connection testing, perform control tests at ground surface to verify accuracy, integrity and reliability of testing equipment following ASTM F2454.
- 3. Maintain joint testing air pressure of 3 psi higher than groundwater pressure outside the pipe, up to maximum 6 psi. If groundwater pressure data is not available, use joint testing pressure of 0.5 psi per vertical foot of pipe depth or 6 psi whichever is greater.
- 5. Perform lateral connection testing following ASTM F2454. Seal joints that do not maintain void pressure with pressure drop of less than 2 psi in 15 seconds.

6. If the service lateral connection at the main is longitudinally cracked, fractured or broken pre-testing will not be required. 06-08-2020 ~~Con~~formed

3.4 BASIC REQUIREMENTS

A. General.

5. Seal joints, defects or leaking lateral connections that failed air testing or show sign of visible leaks, by internal chemical methods, as directed by Engineer.
6. Grouting of service lateral is prohibited if the grouting location cannot be inspected before and after the sealing procedures.
7. Service laterals cannot be sealed from the mainline when the packer cannot be seated.
8. Protruding laterals are to be cut back within 5/8" prior to sealing.
3. After sealing of joint, defect or connection, perform post air test per ASTM F2304 or ASTM F2454 for mainline sewer sealing and lateral sealing, respectively.
4. Sewer that Engineer deems damaged as a result of Contractor's operations, will be promptly repaired to Engineer's satisfaction at no cost to the Commission.
10. Grouting materials that set to a hard, rigid product capable of intrusion into sewer lines are not acceptable unless specifically approved by Engineer on a case by case basis.
11. Post sealing flow verification is to be made to document the lateral service has been returned to service with unrestrained flow.
12. Provide qualified, independent third-party inspector to observe grouting mixing process, chemical grouting injections process and post grouting pressure testing. Report findings to Engineer.

H. Grout Preparation.

6. Follow the manufacturer's recommendations for the mixing and safety procedures.
7. Adjust gel time as necessary to compensate for changes in temperature in grout component tanks or hoses. The addition of dilution water to extend gel times is not acceptable unless resulting base grout tank only material exceeds 20% by weight for solution grouts.
8. During the grouting process, the Grouting Technician shall monitor the grout component tanks to make sure that proper ratios are being pumped. If unequal levels are noted in the tanks, repeat the pump test as described above and correct any defective equipment.
9. Gel times shall be calculated using the following formula unless CONTRACTOR experience and/or field conditions dictate otherwise. Any alterations of the gel time formula shall be approved by the City.

$$\text{Gel Time} = (\text{Volume of Pipe/Packer Void Space (gal)}/\text{Pumping Rate (gpm)}) (60 \text{ Sec}/1 \text{ Min}) + 20 \text{ Sec (+/- 5sec)}$$

10. Packer/Pipe void shall be defined as the volume between the inflated packer and the inside pipe wall when the packer is inflated per manufacturer recommendations. For example: an 8" pipe with a packer void space of 0.3 gallons and a 3 gpm pumping rate would provide

$$\text{Gel Time} = (.3 \text{ (gal)}/3 \text{ (gpm)}) (60\text{sec}/1 \text{ Min}) + (20 \text{ sec}) = 26\text{sec} (+/- 5\text{sec})$$

I. Grouting General.

3. Grout all joint and lateral connections that failed the pressure test by the injection method. This shall be accomplished by forcing grout through a system of pumps and hoses into and through the joints of the sewer from the packer within the sewer pipe. Remove excess grout from pipe and laterals. Excess grout shall be defined as a thickness of grout that given its location, size and geometry, could cause a blockage. Flush or push forward to the next downstream manhole, remove from the sewer system, and properly dispose of excess grout.

J. Application Procedures for Joint Sealing and Lateral Connection Sealing.

1. Force chemical grouting material into or through faulty joints, defects or lateral connection by system of pumps, hoses, and sealing packers.
 - c. Position packer over faulty joint or lateral connection by means of measuring device and CCTV camera in line.
 - d. For mainline sewers, expand packer end bladders using controlled pressure. For lateral connections use lateral packer equipped with lateral bladder and rotating mechanism.
 - 3) Obtain a tight seal. If a tight seal is not obtained, remove equipment and make adjustments.
 - 4) Pump grout material through hose system at controlled pressures high enough to overcome external pressures such as groundwater pressures.
2. Design pumping unit, metering equipment, and packer devices so proportions and quantities of materials can be regulated following type and size of leak being sealed.
3. Set chemical pumping rates and mixing ratios as specified herein, following manufacturer's recommendations and Engineer's adjustments.
4. Determine appropriate gel set times.
 - h. To estimate gel set times, divide estimated volume of annular space (in gallons) by grout pumping rate (in gallons per minute), then add between 15 to 25 seconds. Adjust estimate by considering temperature of grout tanks, temperature of hoses, temperature of groundwater, amount of groundwater present and other field conditions.
 - i. The gel set time is typically between 20 and 40 seconds. Gel set times of less than 20 seconds may be required in presence of high filtration.
 - j. Monitor induction periods and gel characteristics through daily gel time tests for each sealing vehicle. Check each new batch once. If only one batch is used, check at least twice per day.
 - k. Perform new gel time test when grout additives are modified to change gel times, at beginning of new setup with new starting manhole, or when temperature in tanks and hoses changes by more than 10 degrees F from previous gel time test.
 - l. Use water with known and controlled pH that will be used during actual grouting operations.

- m. Allow grout mixture to settle to remove entrained oxygen, before testing gel time.
- n. Use plastic or stainless-steel tanks. Do not use tanks that contain iron or copper.
- 5. During seal operations, operate void pressure monitoring equipment, described herein.
- 6. Integrate CCTV, grout pumping, and air pressure monitoring equipment so proportions, quantities, and void pressure for materials and sealing can be instantly monitored and regulated following type and size of joint, break, or leak.
- 7. Amount of chemical being pumped: Based on number of pumped strokes delivered for each sealed sewer main joint, defect or leaking connection.
 - a. Record and provide results to Engineer.
- 8. If large voids are encountered on outside of sewer, including the possibility of “piping” holes to ground surface, which could cause excessive use of grout material, at Engineer’s direction change operating pressures and pumping rates as follows.
 - f. Reduce pressures and pumping rates, such that intervals between pump strokes are shorter than gel time.
 - g. Pump first stage of grout, and then stop pumping until temporary gel of the grout is obtained on outside of pipe.
 - h. Increase pressure and pumping rate to pump the second stage and form a second layer.
 - i. Repeat this cycle until refusal conditions are reached, or until the inspector judges the grout consumption to be excessive.
 - j. Avoid sealing inner surface of pipe from inside before building up layers on the outside.
- 10. Grout injection complete: When chemical grout is pumped to refusal as defined in ASTM F2304.
 - c. If chemical grout cannot be pumped to refusal, within a volume less than or equal to 0.5 gallons per inch of pipe diameter due to latent physical conditions, do not perform additional work until Engineer grants authorization.
 - d. Lateral connections: When back pressure of grout in void at mainline level drops from 8 psi to 6 psi in greater than 20 seconds after cessation of grout pumping, following ASTM F2454.
 - 1) If using stage grouting, grout injection is complete when refusal pressure of 8 psi is achieved.
- 10. Sealed Defects.
 - e. Remove excess grout gel ring if obtrusive and impedes air testing and CCTV inspection of work as required. If excess grout gel ring cannot be removed by use of packer, jet clean pipe prior to testing seal.
 - f. Air test each sealed joint.
 - 1) If defect or connection fails air test after grout injection, reseal failed joints and air test again.
 - 2) After lateral connection has been sealed successfully as confirmed by post air test, break lateral packer seal and test service to assure grout has not blocked lateral connection further upstream.

- b) In the event sewage back-up occurs and enters a dwelling, respond within 2 hours of being notified and be responsible for cleanup, repair, property damage costs and claims.
 - g. After all pipe joints and lateral connections have been grouted, retest all previously unsealed pipe joints and lateral connections. Seal any pipe joints and lateral connections that do not pass the air pressure test.
 - h. Payment for post testing of grout sealed joints is to be included in the grouting unit price. 06-08-2020 Confirmed
- 12. Flush or push forward excess grouting material to next downstream manhole and remove from sewer system.
 - c. Dispose of debris following grout manufacturer's recommendation, and jurisdictional regulations.
 - d. Excess grout material from upstream section(s) will not be allowed to accumulate in sewer.
- 13. Provide approved plug and/or by-pass pumping if grouting operations restrict or prevent simultaneous sewage flow passage.
 - b. Refer to Section 01516 Collection System Bypass article 1.01 Scope of Work for sewer bypass requirements.
- K. Joint, Defect or Lateral Connection Sealing Verification.
 - 2. Mainline joints and defects.
 - c. Deflate packer bladders after completing each seal until zero void pressure (± 0.5 psi) is shown on the monitoring equipment.
 - d. If zero void pressure (± 0.5 psi) is not achieved, clear residual grout material from packer or make needed equipment adjustments allowing true pressure reading.
 - 4. Re-test joint, defect or lateral connection as described herein.
 - c. Re-seal joints, defects, or connections that do not meet specified test criteria and re-test until test criteria are met, or Engineer determines that joint defect, or lateral connection cannot be sufficiently sealed.
 - d. Additional testing and sealing will be at no additional cost to the City.
- L. Residual Sealing Material.
 - 3. Leave no residual grout material capable of reducing pipe diameter or restricting flow greater than 5 percent pipe capacity.
- M. Obstructions.
 - 2. During course of sealing operations obstructions may be encountered preventing travel of packer and camera.
 - b. Should obstruction not be passable, begin sealing operations from opposite end of sewer reach.
 - 4. If additional obstructions are encountered after re-employment and no means are available for passing obstructions without damage to equipment, remaining sections

of sewer main not sealed may be temporarily excluded from work requirements of Contract, until point repair is completed.

3.5 FIELD DOCUMENTATION

A. Records.

1. Keep complete, accurate, and legible records of operation for each joint, defect or connection sealed.
- b. Include on Record of Operation for each joint or lateral mainline interface tested and/or routed or attempted to be grouted:
 - 10) Identification of work site, complete component, address, county page & grid, 200-foot sheet.
 - 11) Date and time.
 - 12) Station of each seal measured from upstream manhole.
 - 13) Location of any joints not tested and reason for not testing.
 - 14) Grout mixture formation, including additives and catalyst mixture.
 - 15) Test pressures and durations of tests maintained for each joint passing the air test.
 - 16) Ambient outside air temperature at time of grout injection.
 - 17) Grout tank temperatures.
 - 18) Gel time and time last verified.
 - 11) Verified address of lateral.
 - 16) Estimated visible leakage (gpm) from joint/defect connection or lateral.
 - 17) Number of pump strokes and amount of grout in place.
 - 18) Beginning, ending, pressure losses, re-test pressures.
 - 19) Verification lateral is clear after sealing process.
 - 20) Remaining leakage and location after seal (gpm).
3. Work site will not be accepted until Engineer receives original record.
 - b. Failure to fill out logs completely will result in non-payment for the questioned mainline joint, defect or connection.

4.6 WARRANTY

- G. Provide twelve month performance and workmanship warranty for the seals from date of acceptance and final Work Order invoice payment.
- H. Perform CCTV inspections during the first wet weather season after initial sealing, to evaluate quality of the initial sealing.
- I. CCTV inspect initial retest area consisting of 10 percent of grouted joints and 10 percent of grouted lateral connections following Sections 02762 and 02763.

- J. Provide qualified, independent third-party inspector to review CCTV inspection videos to verify integrity of seals.
- K. Reseal all joints sealed under this Contract that inspector finds defective within warranty period, at no additional cost to the City.
 - 2. Defective seals include, but not limited to those with root penetration, signs of infiltration, and cracks in pipe or grouting material.
- L. If failure rate of retested joints and lateral connections is 5 percent or less of joints and lateral connections retested, work shall be considered satisfactory and no further retesting will be required. If the failure rate of retested joints and lateral connections is greater than 5 percent, the Engineer shall randomly select another retest area consisting of another 10 percent of the initially sealed joints and lateral connections. Continue this additional retesting and resealing until a failure rate of less than 5 percent is met.

3.7 ACCEPTANCE

- A. When sealed joint, defect, and lateral connections pass the post air test.

PART 4 MEASUREMENT AND PAYMENT

8.1 PERFORMANCE DEMONSTRATION TESTING

- C. Measurement: Equipment calibration demonstrated.
- D. Payment: Unit price line item TS1. 06-08-2020 Conformed 

8.2 TEST AND SEAL MAINLINE JOINT OR DEFECT

- B. Measurement: By each joint pre-tested.
- B. Payment: Unit price line item TS2.
 - 2. Payment includes all work necessary to perform testing.
- E. Measurement: By each joint grouted, post-testing.
- F. Payment: Included in each GSx line item unit price.

4.3 TEST AND SEAL LATERAL CONNECTION

- E. Measurement: By each lateral connection pre-tested.
- F. Payment: Unit price line item TS3.
- G. Measurement: By each connection grouted, post-testing.
- H. Payment: Included in Unit price line items GS1.

4.4 SEALING MATERIAL

- A. Measurement: By gallon of grout used, over initial two gallons per joint or lateral connection.
- B. Payment: At unit price listed in Unit Price Schedule.
 - 2. Payment includes materials, additives, storage, calculations, mixing, testing for in-place percentage and gel time tests.

4.5 RETESTING SEALED JOINTS UNDER WARRANTY

- B. Measurement: By unit price for each required item of work.
- B. Payment: At contingent price listed in Unit Price Schedule.
 - 1. Payment includes work related to retesting of sealed joints including cleaning, CCTV inspection, and air testing in the initial retest area only.
 - a. No compensation will be provided for resealing joint that fails air testing or any additional testing beyond initial retest area.

06-08-2020 Conformed



END OF SECTION

EXHIBIT B

3-21-24

Brad Kalsow
City of Coco Beach
1600 Minutemen Cuaseway
Cocoa Beach, FL 32931
bkalsow@cityofcocoabeach.com

Re: Cost Proposal – Sunflower and 4th Street Storm CIPP Lining Project

Brad,

Insituform Technologies, LLC, ("ITLLC") is pleased to provide the following proposal to the **City of Cocoa Beach**, hereinafter referred to as "Customer", for the scope of work detailed below for the above-referenced Project. This proposal is based off the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

PROPOSAL PRICING

ITLLC proposes the following pricing for the scope of services described herein:

Bid Item per Docs	Description	Measure	Quantity	Bid Price	Total
TM1	Traffic Control MOT Index 601 or 602	Day	2	\$446.80	\$893.60
M1	Mobilization	EA	1	\$4,746.90	\$4,746.90
A41	Stormwater System Cleaning and Inspection Heavy Cleaning and Inspection	LF	226	\$8.70	\$1,966.20
A89	Stormwater Sewer CIPP Lining 21" Diameter 10.5 mm nominal thickness	LF	226	\$177.40	\$40,092.40
A89	21" each additional 1.5 mm thickness	LF	226	\$5.60	\$1,265.60
	TOTAL				\$48,964.70

INSITUFORM SCOPE OF WORK / RESPONSIBILITIES

ITLLC will provide the following:

1. Mobilization and demobilization of personnel, equipment, and materials to and from the Project site. The price presented is based upon one (1) instance of mobilization and demobilization.
2. Install **polyester** resin impregnated CIPP liner in accordance with ASTM F1216 or F1743 using either water or air/pull-in/steam, at the discretion of ITLLC. We have not included any costs associated with the disposal of inversion water.
3. Internal reinstatement of all service connections as directed by the Customer or their representative.
4. CCTV inspection of the pipe before and after the lining is complete.
5. Standard ITLLC one-year warranty from date of installation, excluding any required warranty TV inspection and/or testing.
6. Standard insurance coverage with the following limits:
 General Liability: \$2,000,000 per occurrence/\$4,000,000 aggregate
 Auto: \$2,000,000 Combined Single Limit
 Workers Compensation: Statutory with \$1,000,000 Employer's Liability
 The above insurance shall not include Primary and Non-Contributory Coverage and ITLLC shall not provide a Waiver of Subrogation endorsement.

NOTE: Modifications to the Scope of Work/Responsibilities of ITLLC may result in a change in price and/or duration.

ASSUMPTIONS AND QUALIFICATIONS

ITLLC's Proposal Pricing is based upon the following assumptions and clarifications:

1. ITLLC assumes the work will be completed during dry weather conditions.
2. Quantities are estimated. Customer shall be invoiced for actual quantities at the above unit prices.
3. ITLLC is an open-shop company and shall not be subject to any union requirements or agreements and will not enter into any Project Labor Agreement or any such similar agreement for this Project. Where required by the Contract Documents, ITLLC will pay the Prevailing Wages then in effect for the Project and will submit Certified Payroll Reports in a timely manner.

EXCLUSIONS:

The following items are excluded from ITLLC's above Pricing and Scope of Services / Responsibilities stated in this Proposal. These items, if necessary, applicable or otherwise required, shall be furnished by Customer, at Customer's direction and at no cost to ITLLC or may, upon mutual agreement in writing between ITLLC and Customer, be provided by ITLLC at an additional cost:

1. Permits, licenses and construction easements.
2. Manual operation of any pumping and/or metering stations.
3. Environmental/erosion controls (i.e., hay bales, silt fence etc.) that may be required adjacent to manholes, access points and/or water supply hose.
4. Access to and use of fire hydrants and/or sufficient water supply (within 500 ft. of the installation site) to complete flushing and CIPP installation.
5. Burial and/or ramping of discharge or bypass hose/pipe.
6. External service reconnections.
7. Traffic control, including without limitation, police details, flagmen and special traffic control setups.
8. Obstruction removal (calcium, concrete, mineral deposits, roots, etc.) and/or protruding tap removal.
9. Point repairs.
10. Bypassing of services or laterals.
11. Repair of pipe damaged during any industry standard high-pressure jet cleaning operations, preparation or lining and any subsequent cleaning necessary to remove debris that has fallen into the pipe as a result of any such collapse or repair.
12. Directives setting forth which service connections must be reinstated prior to final CCTV inspection.

13. Locations of and access (of ITLLC equipment and/or personnel) to all manholes associated with the project and as required by ITLLC's work plan.
14. Equivalent pipe diameter access from the invert to the street level. This may include removal of the frame, cover and/or cone section of the liner installation manhole(s) such that the opening at the street level is no less than equivalent to the pipe diameter.
15. Payment and Performance bonds. If payment and performance bonds are required, add 2.5% to the total Project cost.
16. Removal and disposal of any hazardous or toxic materials encountered during the Project.
17. Holiday work, rush delivery or adverse weather work (as defined by ITLLC).
18. Complete independent testing of liner samples from each installation. Will be provided if required per specifications.
19. Certified Professional Engineer stamped designs. Will be provided if required in specifications.
20. State and local sales and/or use taxes.
21. Additional premiums for special insurance coverage(s) specific to this project.
22. Project is contingent upon Cocoa Beach removing two large pieces of broken concrete in the pipe off Sunflower.

GENERAL TERMS AND CONDITIONS:

ITLLC's Proposal is conditioned and shall adhere to the General Terms and Conditions written in the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

The information contained in this letter is proprietary to Insituform Technologies, LLC. and shall be retained by the recipient in confidence and shall not be published or otherwise disclosed to third parties without the express written consent of Insituform Technologies, LLC. The foregoing shall not preclude the use of any data which (i) was in its possession without restriction as to use prior to receipt as proprietary of the same or similar data from Insituform Technologies, LLC., (ii) is or becomes available from a public source on or after such receipt from Insituform Technologies, LLC. or (iii) is obtained by the recipient from a third party not under obligation of confidentiality or other restriction with respect to use.

Please do not hesitate to contact me with any further questions.

Very truly yours,

Insituform Technologies, LLC.

Dave Raymond

Dave Raymond
Business Development Manager

Accepted By: _____
(signed)

(print name)

Date: _____

Title: _____

3-21-24

Brad Kalsow
City of Coco Beach
1600 Minutemen Causeway
Cocoa Beach, FL 32931
bkalsow@cityofcocoabeach.com

Re: Cost Proposal – 4th Street Storm CIPP Lining Project

Brad,

Insituform Technologies, LLC, ("ITLLC") is pleased to provide the following proposal to the **City of Cocoa Beach**, hereinafter referred to as "Customer", for the scope of work detailed below for the above-referenced Project. This proposal is based off the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

PROPOSAL PRICING

ITLLC proposes the following pricing for the scope of services described herein:

Bid Item per Docs	Description	Measure	Quantity	Bid Price	Total
TM1	Traffic Control MOT Index 601 or 602	Day	2	\$446.80	\$893.60
M1	Mobilization	EA	4	\$4,746.90	\$18,987.60
A30	Stormwater Systems Heavy Cleaning & Inspections 15" Diameter	LF	30	\$6.20	\$186.00
A89	Stormwater Sewer CIPP Lining 15" Diameter 9.0 mm nominal thickness	LF	30	\$109.30	\$3,279.00
	TOTAL				\$23,346.20

INSITUFORM SCOPE OF WORK / RESPONSIBILITIES

ITLLC will provide the following:

1. Mobilization and demobilization of personnel, equipment, and materials to and from the Project site.
The price presented is based upon one (1) instance of mobilization and demobilization.
2. Install **polyester** resin impregnated CIPP liner in accordance with ASTM F1216 or F1743 using either water

or air/pull-in/steam, at the discretion of ITLLC. We have not included any costs associated with the disposal of inversion water.

3. Internal reinstatement of all service connections as directed by the Customer or their representative.
4. CCTV inspection of the pipe before and after the lining is complete.
5. Standard ITLLC one-year warranty from date of installation, excluding any required warranty TV inspection and/or testing.
6. Standard insurance coverage with the following limits:
 - General Liability: \$2,000,000 per occurrence/\$4,000,000 aggregate
 - Auto: \$2,000,000 Combined Single Limit
 - Workers Compensation: Statutory with \$1,000,000 Employer's LiabilityThe above insurance shall not include Primary and Non-Contributory Coverage and ITLLC shall not provide a Waiver of Subrogation endorsement.

NOTE: Modifications to the Scope of Work/Responsibilities of ITLLC may result in a change in price and/or duration.

ASSUMPTIONS AND QUALIFICATIONS

ITLLC's Proposal Pricing is based upon the following assumptions and clarifications:

1. ITLLC assumes the work will be completed during dry weather conditions.
2. Quantities are estimated. Customer shall be invoiced for actual quantities at the above unit prices.
3. ITLLC is an open-shop company and shall not be subject to any union requirements or agreements and will not enter into any Project Labor Agreement or any such similar agreement for this Project. Where required by the Contract Documents, ITLLC will pay the Prevailing Wages then in effect for the Project and will submit Certified Payroll Reports in a timely manner.

EXCLUSIONS:

The following items are excluded from ITLLC's above Pricing and Scope of Services / Responsibilities stated in this Proposal. These items, if necessary, applicable or otherwise required, shall be furnished by Customer, at Customer's direction and at no cost to ITLLC or may, upon mutual agreement in writing between ITLLC and Customer, be provided by ITLLC at an additional cost:

1. Permits, licenses and construction easements.
2. Manual operation of any pumping and/or metering stations.
3. Environmental/erosion controls (i.e., hay bales, silt fence etc.) that may be required adjacent to manholes, access points and/or water supply hose.
4. Access to and use of fire hydrants and/or sufficient water supply (within 500 ft. of the installation site) to complete flushing and CIPP installation.
5. Burial and/or ramping of discharge or bypass hose/pipe.
6. External service reconnections.
7. Traffic control, including without limitation, police details, flagmen and special traffic control setups.
8. Obstruction removal (calcium, concrete, mineral deposits, roots, etc.) and/or protruding tap removal.
9. Point repairs.
10. Bypassing of services or laterals.
11. Repair of pipe damaged during any industry standard high-pressure jet cleaning operations, preparation or lining and any subsequent cleaning necessary to remove debris that has fallen into the pipe as a result of any such collapse or repair.
12. Directives setting forth which service connections must be reinstated prior to final CCTV inspection.
13. Locations of and access (of ITLLC equipment and/or personnel) to all manholes associated with the project and as required by ITLLC's work plan.

14. Equivalent pipe diameter access from the invert to the street level. This may include removal of the frame, cover and/or cone section of the liner installation manhole(s) such that the opening at the street level is no less than equivalent to the pipe diameter.
15. Payment and Performance bonds. If payment and performance bonds are required, add 2.5% to the total Project cost.
16. Removal and disposal of any hazardous or toxic materials encountered during the Project.
17. Holiday work, rush delivery or adverse weather work (as defined by ITLLC).
18. Complete independent testing of liner samples from each installation. Will be provided if required per specifications.
19. Certified Professional Engineer stamped designs. Will be provided if required in specifications.
20. State and local sales and/or use taxes.
21. Additional premiums for special insurance coverage(s) specific to this project.

GENERAL TERMS AND CONDITIONS:

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Please do not hesitate to contact me with any further questions.

Very truly yours,

Insituform Technologies, LLC.

Dave Raymond

Dave Raymond
Business Development Manager

Accepted By: _____
(signed)

(print name)

Date: _____

Title: _____

12-14-23

Walker Dawson, P.E.
City of Cocoa Beach
Stormwater Utility Manager
1600 Minuteman Causeway
Cocoa Beach, FL 32931
Walker.dawson@cityofcocoabeach.com

Re: Cost Proposal – City of Cocoa Beach St. Lucie Stormwater CIPP Project

Walker,

Insituform Technologies, LLC, ("ITLLC") is pleased to provide the following proposal to the **City of Cocoa Beach**, hereinafter referred to as "Customer", for the scope of work detailed below for the above-referenced Project. This proposal is based off the City of St. Augustine Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

PROPOSAL PRICING

ITLLC proposes the following pricing for the scope of services described herein:

Bid Item per Docs	Description	Measure	Quantity	Bid Price	Total
TM3	Maintenance of Traffic Traffic Control MOT 604 of Higher	Day	4	\$1,200.00	\$4,800.00
TM8	Maintenance of Traffic Variable Message Board (per week)	Week	1	\$2,233.80	\$2,233.80
M1	Mobilization Mobilization for 20 work day period	EA	1	\$4,746.90	\$4,746.90
A22	Stormwater System Clean and Inspection of Storm Water Mains – Medium Cleaning and Inspection – 36" Diameter	LF	705	\$14.50	\$10,222.50
A88	Plug Installation & Removal 24" to 42" Diameter	Each Day	1	\$1,005.20	\$1,005.20
	Stormwater Sewer CIPP Lining 36" Diameter 15 mm nominal thickness	LF	705	\$293.50	\$206,917.50

B	Bond Contract Performance and Payment Bond Cost Not to Exceed 2%	%		1.5%	\$3,448.89
	TOTAL				\$233,374.79

INSITUFORM SCOPE OF WORK / RESPONSIBILITIES

ITLLC will provide the following:

1. Mobilization and demobilization of personnel, equipment, and materials to and from the Project site.
The price presented is based upon one (1) instance of mobilization and demobilization.
2. Install **polyester** resin impregnated CIPP liner in accordance with ASTM F1216 or F1743 using either water or air/pull-in/steam, at the discretion of ITLLC. We have not included any costs associated with the disposal of inversion water.
3. Internal reinstatement of all service connections as directed by the Customer or their representative.
4. CCTV inspection of the pipe before and after the lining is complete.
5. Standard ITLLC one-year warranty from date of installation, excluding any required warranty TV inspection and/or testing.
6. Standard insurance coverage with the following limits:
General Liability: \$2,000,000 per occurrence/\$4,000,000 aggregate
Auto: \$2,000,000 Combined Single Limit
Workers Compensation: Statutory with \$1,000,000 Employer's Liability
The above insurance shall not include Primary and Non-Contributory Coverage and ITLLC shall not provide a Waiver of Subrogation endorsement.

NOTE: Modifications to the Scope of Work/Responsibilities of ITLLC may result in a change in price and/or duration.

ASSUMPTIONS AND QUALIFICATIONS

ITLLC's Proposal Pricing is based upon the following assumptions and clarifications:

1. ITLLC assumes the work will be completed during dry weather conditions.
2. Quantities are estimated. Customer shall be invoiced for actual quantities at the above unit prices.
3. ITLLC is an open-shop company and shall not be subject to any union requirements or agreements and will not enter into any Project Labor Agreement or any such similar agreement for this Project. Where required by the Contract Documents, ITLLC will pay the Prevailing Wages then in effect for the Project and will submit Certified Payroll Reports in a timely manner.
4. **The City of Cocoa Beach will cut all pipes flush with the box that protrude out into the manhole so that ITLLC can successfully install the liners without removing the lids/tops.**

EXCLUSIONS:

The following items are excluded from ITLLC's above Pricing and Scope of Services / Responsibilities stated in this Proposal. These items, if necessary, applicable or otherwise required, shall be furnished by Customer, at Customer's direction and at no cost to ITLLC or may, upon mutual agreement in writing between ITLLC and Customer, be provided by ITLLC at an additional cost:

1. Permits, licenses and construction easements.
2. Manual operation of any pumping and/or metering stations.
3. Environmental/erosion controls (i.e., hay bales, silt fence etc.) that may be required adjacent to manholes, access points and/or water supply hose.

4. Access to and use of fire hydrants and/or sufficient water supply (within 500 ft. of the installation site) to complete flushing and CIPP installation.
5. Burial and/or ramping of discharge or bypass hose/pipe.
6. External service reconnections.
7. Traffic control, including without limitation, police details, flagmen and special traffic control setups.
8. Obstruction removal (calcium, concrete, mineral deposits, roots, etc.) and/or protruding tap removal.
9. Point repairs.
10. Bypassing of services or laterals.
11. Repair of pipe damaged during any industry standard high-pressure jet cleaning operations, preparation or lining and any subsequent cleaning necessary to remove debris that has fallen into the pipe as a result of any such collapse or repair.
12. Directives setting forth which service connections must be reinstated prior to final CCTV inspection.
13. Locations of and access (of ITLLC equipment and/or personnel) to all manholes associated with the project and as required by ITLLC's work plan.
14. Equivalent pipe diameter access from the invert to the street level. This may include removal of the frame, cover and/or cone section of the liner installation manhole(s) such that the opening at the street level is no less than equivalent to the pipe diameter.
15. Payment and Performance bonds. If payment and performance bonds are required, add 2.5% to the total Project cost.
16. Removal and disposal of any hazardous or toxic materials encountered during the Project.
17. Holiday work, rush delivery or adverse weather work (as defined by ITLLC).
18. Complete independent testing of liner samples from each installation. Will be provided if required per specifications.
19. Certified Professional Engineer stamped designs. Will be provided if required in specifications.
20. State and local sales and/or use taxes.
21. Additional premiums for special insurance coverage(s) specific to this project.

GENERAL TERMS AND CONDITIONS:

ITLLC's Proposal is conditioned and shall adhere to the General Terms and Conditions written in the City of St. Augustine Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

The information contained in this letter is proprietary to Insituform Technologies, LLC. and shall be retained by the recipient in confidence and shall not be published or otherwise disclosed to third parties without the express written consent of Insituform Technologies, LLC. The foregoing shall not preclude the use of any data which (i) was in its possession without restriction as to use prior to receipt as proprietary of the same or similar data from Insituform Technologies, LLC., (ii) is or becomes available from a public source on or after such receipt from Insituform Technologies, LLC. or (iii) is obtained by the recipient from a third party not under obligation of confidentiality or other restriction with respect to use.

Please do not hesitate to contact me with any further questions.

Very truly yours,

Insituform Technologies, LLC.

Dave Raymond

Dave Raymond
Business Development Manager

Accepted By: _____
(signed)

(print name)

Date: _____

Title: _____

3-21-24

Brad Kalsow
City of Coco Beach
1600 Minutemen Cuaseway
Cocoa Beach, FL 32931
bkalsow@cityofcocoabeach.com

Re: Cost Proposal – Sunflower and 4th Street Storm CIPP Lining Project

Brad,

Insituform Technologies, LLC, ("ITLLC") is pleased to provide the following proposal to the **City of Cocoa Beach**, hereinafter referred to as "Customer", for the scope of work detailed below for the above-referenced Project. This proposal is based off the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

PROPOSAL PRICING

ITLLC proposes the following pricing for the scope of services described herein:

Bid Item per Docs	Description	Measure	Quantity	Bid Price	Total
TM1	Traffic Control MOT Index 601 or 602	Day	2	\$446.80	\$893.60
M1	Mobilization	EA	1	\$4,746.90	\$4,746.90
A41	Stormwater System Cleaning and Inspection Heavy Cleaning and Inspection	LF	226	\$8.70	\$1,966.20
A89	Stormwater Sewer CIPP Lining 21" Diameter 10.5 mm nominal thickness	LF	226	\$177.40	\$40,092.40
A89	21" each additional 1.5 mm thickness	LF	226	\$5.60	\$1,265.60
	TOTAL				\$48,964.70

INSITUFORM SCOPE OF WORK / RESPONSIBILITIES

ITLLC will provide the following:

1. Mobilization and demobilization of personnel, equipment, and materials to and from the Project site. The price presented is based upon one (1) instance of mobilization and demobilization.
2. Install **polyester** resin impregnated CIPP liner in accordance with ASTM F1216 or F1743 using either water or air/pull-in/steam, at the discretion of ITLLC. We have not included any costs associated with the disposal of inversion water.
3. Internal reinstatement of all service connections as directed by the Customer or their representative.
4. CCTV inspection of the pipe before and after the lining is complete.
5. Standard ITLLC one-year warranty from date of installation, excluding any required warranty TV inspection and/or testing.
6. Standard insurance coverage with the following limits:
 General Liability: \$2,000,000 per occurrence/\$4,000,000 aggregate
 Auto: \$2,000,000 Combined Single Limit
 Workers Compensation: Statutory with \$1,000,000 Employer's Liability
 The above insurance shall not include Primary and Non-Contributory Coverage and ITLLC shall not provide a Waiver of Subrogation endorsement.

NOTE: Modifications to the Scope of Work/Responsibilities of ITLLC may result in a change in price and/or duration.

ASSUMPTIONS AND QUALIFICATIONS

ITLLC's Proposal Pricing is based upon the following assumptions and clarifications:

1. ITLLC assumes the work will be completed during dry weather conditions.
2. Quantities are estimated. Customer shall be invoiced for actual quantities at the above unit prices.
3. ITLLC is an open-shop company and shall not be subject to any union requirements or agreements and will not enter into any Project Labor Agreement or any such similar agreement for this Project. Where required by the Contract Documents, ITLLC will pay the Prevailing Wages then in effect for the Project and will submit Certified Payroll Reports in a timely manner.

EXCLUSIONS:

The following items are excluded from ITLLC's above Pricing and Scope of Services / Responsibilities stated in this Proposal. These items, if necessary, applicable or otherwise required, shall be furnished by Customer, at Customer's direction and at no cost to ITLLC or may, upon mutual agreement in writing between ITLLC and Customer, be provided by ITLLC at an additional cost:

1. Permits, licenses and construction easements.
2. Manual operation of any pumping and/or metering stations.
3. Environmental/erosion controls (i.e., hay bales, silt fence etc.) that may be required adjacent to manholes, access points and/or water supply hose.
4. Access to and use of fire hydrants and/or sufficient water supply (within 500 ft. of the installation site) to complete flushing and CIPP installation.
5. Burial and/or ramping of discharge or bypass hose/pipe.
6. External service reconnections.
7. Traffic control, including without limitation, police details, flagmen and special traffic control setups.
8. Obstruction removal (calcium, concrete, mineral deposits, roots, etc.) and/or protruding tap removal.
9. Point repairs.
10. Bypassing of services or laterals.
11. Repair of pipe damaged during any industry standard high-pressure jet cleaning operations, preparation or lining and any subsequent cleaning necessary to remove debris that has fallen into the pipe as a result of any such collapse or repair.
12. Directives setting forth which service connections must be reinstated prior to final CCTV inspection.

13. Locations of and access (of ITLLC equipment and/or personnel) to all manholes associated with the project and as required by ITLLC's work plan.
14. Equivalent pipe diameter access from the invert to the street level. This may include removal of the frame, cover and/or cone section of the liner installation manhole(s) such that the opening at the street level is no less than equivalent to the pipe diameter.
15. Payment and Performance bonds. If payment and performance bonds are required, add 2.5% to the total Project cost.
16. Removal and disposal of any hazardous or toxic materials encountered during the Project.
17. Holiday work, rush delivery or adverse weather work (as defined by ITLLC).
18. Complete independent testing of liner samples from each installation. Will be provided if required per specifications.
19. Certified Professional Engineer stamped designs. Will be provided if required in specifications.
20. State and local sales and/or use taxes.
21. Additional premiums for special insurance coverage(s) specific to this project.
22. Project is contingent upon Cocoa Beach removing two large pieces of broken concrete in the pipe off Sunflower.

GENERAL TERMS AND CONDITIONS:

ITLLC's Proposal is conditioned and shall adhere to the General Terms and Conditions written in the City of St. Augustine, Florida Contract No PW2020-06 Sanitary Sewer Cleaning, Inspection and Renewal.

The information contained in this letter is proprietary to Insituform Technologies, LLC. and shall be retained by the recipient in confidence and shall not be published or otherwise disclosed to third parties without the express written consent of Insituform Technologies, LLC. The foregoing shall not preclude the use of any data which (i) was in its possession without restriction as to use prior to receipt as proprietary of the same or similar data from Insituform Technologies, LLC., (ii) is or becomes available from a public source on or after such receipt from Insituform Technologies, LLC. or (iii) is obtained by the recipient from a third party not under obligation of confidentiality or other restriction with respect to use.

Please do not hesitate to contact me with any further questions.

Very truly yours,

Insituform Technologies, LLC.

Dave Raymond

Dave Raymond
Business Development Manager

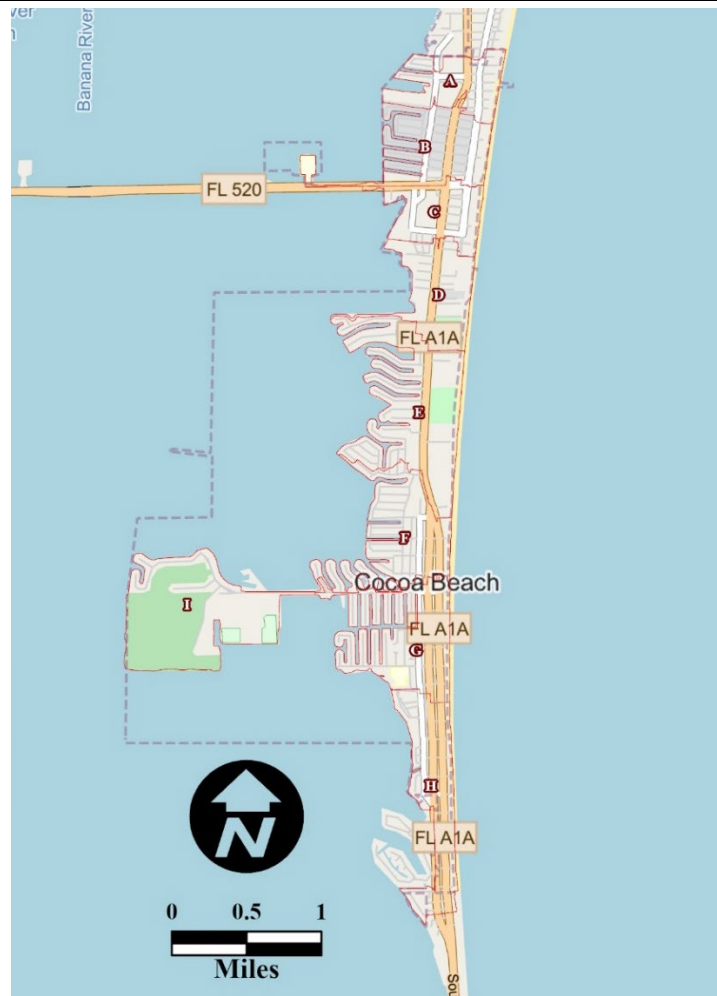
Accepted By: _____
(signed)

(print name)

Date: _____

Title: _____

CIP Project STUDY-07
FUTURE CONDITIONS VULNERABILITY AND RESILIENCY STUDY



Project Description:	Future Conditions Vulnerability and Resiliency Study: It is recommended that the city consider a study into the impacts of these future conditions in order to confirm BMP vulnerability and identify improvement measures that may increase the function of existing infrastructure under these potential future conditions. This would identify areas and specific locations that may need to have infrastructure upgrades or enhancements to allow for continued effective storm attenuation and treatment in future decades. This should first focus on County maintained rights of way and facilities. The efforts should then be expanded to also look at impacts from loss of function associated with the FDOT and private drainage systems that may interact with the City systems either by design or under overflow conditions.		
Project Development Needs:	Desktop investigation and assessment.		
Project Constraints:	None		
Planning Level CIP Cost Projection:	\$50,000	Ranking:	ST-04

To Sept 30 24

QUOTE RESPONSE FORM
RFQ #Y23-116-CD

The Contractor shall provide all labor and other resources necessary to provide the goods and/or equipment in strict accordance with the specifications defined in this solicitation for the amounts specified in this Quote Response Form, inclusive of overhead, profit and any other costs.

ITEM NO.	DESCRIPTION	ANNUAL QUANTITY	X	UNIT PRICE	= TOTAL QUOTE
-------------	-------------	--------------------	---	---------------	------------------

1	Weekly Inspection	78 21	X	\$ 290.00 /ea	\$ 22620.00	\$ 6,090
2	Semi-annual System Inspection	4 1	X	\$ 500.00 /ea	\$ 2000.00	\$ 500
3	Annual Maintenance	2 1	X	\$ 1500.00 /ea	\$ 3000.00	\$ 1500
4	System Troubleshooting and Adjustment Labor Rate	200 80	X	\$ 65.00 /hrs	\$ 13000.00	\$ 5,200
5	Emergency Labor Rate	40 10	X	\$ 75.00 /hrs	\$ 3000.00	\$ 750
6	Weir Board Removal and Replace	20	X	\$ 500.00 /ea	\$ 10000.00	
7	Parts/Materials Actual Cost with percent mark-up or mark-down on the actual cost (3rd party documentation required). <i>Calculate as follows: Example: If the mark-up is 10% your calculation should be \$1,000 + 10% = \$1,100 OR If the mark-down is 10% your calculation should be \$1,000 -10% = \$900</i>	\$1,000	X	15.00 % ☒ Markup ☐ Mark Down	\$ 1150.00	2,000
TOTAL ESTIMATED ANNUAL OFFER (1 through 7)					54770.00	16,090

Analytical & Diagnostic Services, LLC
Company Name

IMPORTANT NOTE: When completing your quote, do not attach any forms which may contain terms and conditions that conflict with those listed in the County's quote documents(s). Inclusion of additional terms and conditions such as those which may be on your company's standard forms shall result in your quote being declared non-responsive as these changes will be considered a counteroffer to the County's quote.

Performance shall be not later than three (3) calendar days After Receipt of Order (ARO) per Special Terms and Conditions.

Inquiries regarding this Request for Quotes may be directed to Cecilia Dominguez, Buyer, at Cecilia.Dominguez@ocfl.net

High Performance Roofing, Building Envelopes and Construction Services

Façade Restoration Proposal



Long
Live
Your
Buildings

OMNIA Contract R230404

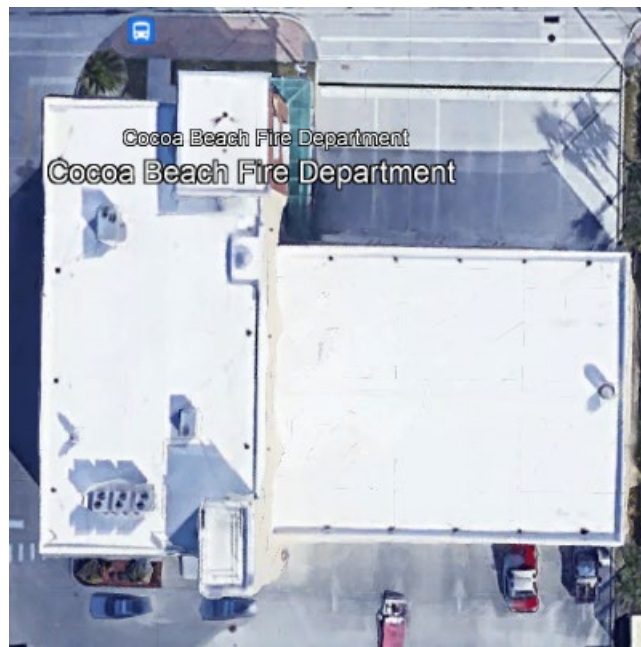
Proposal #:
FL License CGC: 1522684

CITY OF COCOA BEACH
FIRE STATION 51 FAÇADE REPIARS

May 3, 2024
Mr. Scott Maxim
City of Cocoa Beach

RE: City of Cocoa Beach Fire Station 51 Façade
Façade Repairs OMNIA R230404

At your request, Weatherproofing Technologies Inc. has performed a due diligence condition assessment of the Fire Station 51 Façade. The purpose of the assessment was to evaluate existing conditions deterioration/damage conditions and to recommend repair and preventive maintenance measures to extend the service life of the area of concern.



SCOPE OF WORK

GENERAL CONDITIONS

Mobilization – Demobilization temporary protection including set up and maintaining all necessary temporary partitions and barricades around work area:

- Install perimeter netting and/or fencing to meet OSHA safety requirements.
- Protection of adjacent building walls and facilities required by State laws and City Ordinances.
- Mobilization, site preparation, and demobilization of equipment.
- Site cleaning and restoration to original condition required for completion of the work.

I. Remove and Replace Window Perimeter and Wet Glazing:

- **Window Perimeter Sealant:**

- Remove existing window perimeter sealant and backer material between window frame and building façade – 248 LF Included
- Clean exposed joint and install new backer material, as required – 248 LF Included
- Place new bead of Dymonic 100 sealant and tool with concave joint design and overall dimension to conform to manufacture specification and recommendation – 248 LF Included

- **Window Wet Seal:**

- Remove or trim, existing joint at glass to frame, flush to mullions – 232 LF Included
- Clean surfaces with a solvent wipe - 232 LF Included
- Place new single component Tremco Spectrem 2 silicone sealant bead of Spectrum Silicone Sealant, between glass and frame – 232 LF Included

- **Clean work areas and demobilize.**

Pricing: \$25,000.00

II. Remove and Replace Remaining Control Joints

- **Control Joint Sealant: Precast to Precast**

- Remove existing vertical sealant and backer material at precast-to-precast joints – 860 LF Included
- Clean exposed joint and install new backer material – 860 LF Included
- Place new bead of Dymonic 100 sealant and tool with concave joint design and overall dimension to conform to manufacture specification and recommendation – 860 LF Included

- **Clean work areas and demobilize.**

Pricing: \$28,000.00

III. Clean and Coat Façade & Covered Parking Ceiling

- **Façade Pressure Washing and Cleaning: 21,524 SF Included**

All façade surfaces shall be cleaned using high pressure water.

- **Façade Repairs: 25 SF Included**

Clean damaged area and profile perimeter of damaged area. Apply new masonry repair mortar to match surrounding surface profile.

- **Façade Coating Application:**

- **Vertical Walls and Columns– 16,964 SF Included**
- **Ceilings – 4,560 SF Included**

Apply Tremco Solargard Hy-Build Coating at 1 gallons per 100sf to all vertical wall and column facade surfaces and covered parking area ceiling. Apply a second coat at 1 gallon per 100sf to all vertical wall and column facade surfaces only. Solargard Hy-Build is a water-based, acrylic, elastomeric wall coating that provides a durable, flexible, breathable waterproofing coating.

- Solargard is designed to bond to any type of concrete surface as long as there is not a release agent, silicone/sealer or some type of bond breaker on the surface
- Pricing is based on best practice (utilize a pressure turbo blasting water head to open the pores of the concrete for new material)
 - Adhesion test will be completed prior to start of work

Pricing: \$239,503.55

OMNIA Contract R230404

TOTAL COST OF OUTLINED SCOPE ABOVE:

**TWO HUNDRED NINETY TWO THOUSAND FIVE HUNDRED
THREE DOLLARS AND FIFTY FIVE CENTS (\$292,503.55)**

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

Finance /

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Approve changes to the City's Investment Policy

Staff Representative: Patrisha Draycott, CFO/Assistant City Manager

Recommendation: Approval

IS THIS ITEM BUDGETED (IF APPLICABLE)?

N/A

BACKGROUND:

This resolution updates the City's investment policy (last updated with resolution 2017-20); adding language for safeguards against credit and interest risk; adding language that limits City investments to qualified public depositories, as defined by Florida statutes; and including a requirement to review and maintain the investment policy on an annual basis.

RESOLUTION NO. 2024-07

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF COCOA BEACH, FLORIDA, ADOPTING POLICIES FOR CITY FUNDS TO BE INVESTED; PROVIDING A CUSTODIAN OF FUNDS; PROVIDING FOR SELECTION OF INVESTMENTS, USE OF INVESTMENT INSTITUTIONS AND DEALERS AND BID REQUIREMENTS; AUTHORIZING THE SELLING OF INVESTMENTS AND TRANSFER OF FUNDS; PROVIDING FOR REPORTING OF INVESTMENTS HELD; PROVIDING FOR PRORATION OF EARNINGS AND CHANGES IN VALUE; PROVIDING FOR THE EXCLUSION OF RETIREMENT PLAN AND BOND FUNDS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Commission adopted Resolution No. 2017-20, which established policies for City Fund investment; and

WHEREAS, the City Commission wishes to rescind Resolution 2017-20, in order to update policies, to be adopted by this Resolution.

BE IT RESOLVED by the City Commission of the City of Cocoa Beach, Florida, in lawful session assembled as follows:

SECTION 1. SCOPE/INTENT

This policy applies to the investment of all funds, excluding the investment of employees' retirement funds.

- A. Pooling of Funds - Except for cash in certain restricted and special funds, the City of Cocoa Beach will consolidate cash and reserve balances from all funds to maximize investment earnings and to increase efficiencies with regard to investment pricing, safekeeping and administration. Investment income will be allocated to the various funds based on their respective net revenues and in accordance with generally accepted accounting principles.
- B. The City Commission of the City of Cocoa Beach declares its intent to establish a policy for surplus City funds, as defined in Florida Statutes Section 218.403(3), to be invested to provide safety of capital, liquidity of funds and investment income, in that order of importance, as authorized in Florida Statutes Section 218.415.

SECTION 2. CUSTODIAN OF FUNDS

- A. The Chief Financial Officer (CFO) shall be the custodian of all public funds belonging to or under the control of the City.
- B. The Chief Financial Officer (CFO) shall be required to account for all City funds and investments in the manner hereinafter set forth.
- C. The Chief Financial Officer (CFO) shall be charged with the responsibility of supervising all administrative matters relating to this Resolution and shall establish a written system of internal controls and operating procedures, which shall be made part of the City's operational procedures. Internal controls shall be designed to prevent the loss of funds by fraud, employee error, misrepresentations by third parties, or imprudent actions by City employees. The required annual financial audit shall include a review of such internal controls.
- D. In the absence of the Chief Financial Officer (CFO), qualified persons designated by the City Manager or Chief Financial Officer (CFO) are authorized to initiate investment activities.

- E. The Chief Financial Officer (CFO) or any other persons designated to initiate investment activities shall annually complete 8 hours of continuing education in subjects or courses of study related to investment practices and products.
- F. All securities shall be held in a designated third-party safekeeping account, designated as assets of the City of Cocoa Beach, and shall not be withdrawn except as directed by an authorized staff member of the City. Securities transactions between a broker-dealer and the custodian involving purchase or sale of securities by transfers of money or securities must be made on a "delivery vs. payment" basis, if applicable, to ensure that the custodian will have the security or money, as appropriate, in hand at the conclusion of the transaction. Bank trust receipts or confirmations fully describing the securities held, including CUSIP number, will serve as evidence of actual delivery of the securities in return for investment of funds.

SECTION 3. SELECTION OF INVESTMENTS

The Chief Financial Officer (CFO) or designated person shall select the investments to be made, subject to the following conditions:

- A. Investments are to be made with judgement and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived from the investment.
- B. The investment must be one of the following authorized types:
 - 1. The Local Government Surplus Funds Trust Fund or any intergovernmental investment pool authorized pursuant to the Florida Interlocal Cooperation Act as provided in s. 163.01, Florida Statutes.
 - 2. Securities and Exchange Commission registered money market funds with the highest credit quality ratings (AAA/AA) from a nationally recognized rating agency.
 - 3. Interest-bearing time deposits or savings accounts in qualified public depositories as defined in s. 280.02, Florida Statutes.
 - 4. Direct Obligations of the United States Treasury.
 - 5. Federal agencies and instrumentalities.

Derivative products and margin purchases are expressly prohibited.

- C. Investments shall be diversified to limit the risk of loss resulting from over concentration in a specific maturity, issuer, instrument, investment institution or dealer. No more than 50% of the City's funds will be invested with the same issuer, except direct obligations of the United States Treasury. No more than 50% of the City's funds will be invested through the same investment institution or dealer and no more than 20% of the City's funds will be invested beyond five years in any security with the same maturity date. Diversification strategies within these guidelines shall be periodically reviewed and revised by the Chief Financial Officer (CFO). To preserve the overall value of the investments, we must safeguard against obstacles such as credit and interest rate risk. Credit risk is the loss of all or part of the investment due to the failure of the security issuer or backer. Interest rate risk is the risk that the market value of securities in the portfolio will fall due to changes in market interest rates. Eliminating such risk is done by diversifying the portfolio in a calculated manner. For all investment decisions the City will, in this specific order, ensure the safety of principal, provide for sufficient liquidity to pay obligations when due, and earn a reasonable rate of return on invested funds.

- D. Investments will be made on the basis of those securities offering the greatest degree of liquidity and flexibility. The investment portfolio shall be structured in such a manner as to provide sufficient liquidity to pay obligations as they come due. To the extent possible, maturities of securities will be made to match known cash needs and anticipated cash-flow requirements and with the expectation that they can be held to maturity and will not obligate the City for amounts in excess of the total amount of funds known to be available.
- E. Repurchase agreement transactions shall adhere to the requirements of a Master Repurchase Agreement, which shall require all approved institutions and dealers transacting repurchase agreements to execute and perform as stated therein.
- F. Investments in reverse repurchase agreements or other forms of leverage shall be limited to transactions in which the proceeds are intended to provide liquidity and for which the City has sufficient resources and expertise to manage them.

SECTION 4. USE OF INVESTMENT INSTITUTIONS AND DEALERS

Securities may only be purchased from investment institutions and dealers recommended by the Chief Financial Officer (CFO) or designated person and authorized by the City Manager. The City Manager may withhold authorization without cause and shall not be required to offer any investment institution or dealer any reason or justification for such action. No investment institution or dealer will be used without having first reviewed this investment policy and providing acknowledgement in writing that they fully understand its parameters and provisions. The City will only purchase investments with institutions that are Florida Qualified Public Depositories as per Florida Statutes 280.

SECTION 5. BID REQUIREMENTS

The Chief Financial Officer (CFO) shall determine the approximate maturity date based on cash-flow needs and market conditions and shall analyze and select one or more optimal types of investments. Competitive bids will be considered from authorized investment institutions and dealers, unless the Chief Financial Officer (CFO) determines that competitive bids are not feasible and appropriate. Consideration may be given to instances of market volatility, time restraints, or other factors. When competitive bids are considered, the bid deemed by the Chief Financial Officer (CFO) to best meet the investments objectives must be selected, unless a decision is made to not proceed with the purchase.

SECTION 6. LIQUIDATION OF INVESTMENTS

The Chief Financial Officer (CFO) is authorized to select such obligations or securities to be sold, subject to the following:

- A. Individual investments may be sold, to capture profits or to reinvest funds in expectation of improving the expected future yield.
- B. Individual investments may be sold, in order to provide liquidity for unanticipated cash flow requirements.

SECTION 7. TRANSFER OF FUNDS

Transfer of funds for investments by Federal Reserve Wire System or by check is hereby authorized.

SECTION 8. REPORTING ON INVESTMENTS

- A. The Chief Financial Officer (CFO) shall submit, via the Annual Comprehensive Financial Report (ACFR) a report on investment activity to the City Commission and City Manager.
- B. The report shall include the class and types of securities currently being held, current book values and estimated market values.
- C. The report shall indicate the percentage of the City's funds invested with the same issuer, investment institution or dealer and the percentage of the City's funds invested beyond five years in any security with the same maturity date.
- D. The report shall indicate the investment income earned as compared to appropriate performance measures, including comparison to earnings from the Local Government Surplus Funds and the City's interest-bearing bank account.
- E. The Chief Financial Officer (CFO) shall immediately notify the City Manager of any deviations from currently approved investment policies.

SECTION 9. CHANGES IN VALUE AND PRORATION OF EARNINGS

Changes in value of investments shall be marked-to-market in accordance with Generally Accepted Accounting Principles and recorded monthly. Investment earnings and changes in the value of securities shall be allocated based on the City's allocation procedures. Allocation procedures are reviewed annually by the CFO.

SECTION 10. EXCLUSION OF RETIREMENT AND BOND FUNDS

This Resolution shall in no way affect pension funds that are administered by separate ordinances or bond funds where there are other existing policies or indentures in effect.

SECTION 11. EFFECTIVE DATE

This Resolution shall take effect immediately upon adoption.

Upon Motion by Commissioner _____ and Seconded by Commissioner _____ this Resolution was duly adopted at a Meeting of the City Commission of the City of Cocoa Beach, Florida, held on the ____ day of _____, 2024.

ATTEST:

Ayes: _____
Nays: _____
Absent or Abstaining _____

Karin Grooms, MPA, CMC
City Clerk

Keith Capizzi
Mayor-Commissioner

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

Public Works /
Kelsey Mack, Environmental Specialist

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Geosyntec Task Order 7 for CBGOLF Muck Capping Project
Staff Representative: Wayne Carragino, City Manager
Recommendation: Approval

IS THIS ITEM BUDGETED (IF APPLICABLE)?

This is a budgeted item and is included in the Public Works CIP budget. The project is 100% grant reimbursable through SOIRL and FDEP.

BACKGROUND:

The city is currently in the middle of the CB Golf Muck Capping Project in conjunction with Save Our Indian River Lagoon (SOIRL) and the State of Florida. The lead Engineer Design firm for the project is Geosyntec Consultants, Inc. To continue moving the project forward, Geosyntec has presented the City with Task Order 7 which includes delivery of 100% engineered design plans, obtaining state authorizations, construction bidding and contractor selection services.

April 23, 2024

Ms. Kelsey Mack
Project Manager
1600 Minuteman Causeway
Cocoa Beach, FL 32931

Via Electronic Mail: kelsey.mack@cityofcocoabeach.com

Subject: 100% Design and Procurement Support Cost Proposal
City of Cocoa Beach Golf Muck Capping Project
Contract CB20-003
Proposed Task Order No. 7

Dear Ms. Mack:

Geosyntec Consultants, Inc. (Geosyntec) is pleased to provide the City of Cocoa Beach (City) with this summary of proposed activities to be completed pursuant to a new Task Order (TO#7) in support of CB 20-003. As you are aware, Geosyntec is nearing completion of the 90% Design Drawings, 90% Design Report, an updated cost estimate, and the initial permitting process for work associated with the project. Additionally, the project has been determined to be within State Lands, which required Board of Trustee Approval in order to place fill. To support the future project implementation, the project will need to receive Board of Trustee Approval; undergo an updated submerged aquatic vegetation (SAV) survey; accommodate permitting requests in the Design; progress to a 100% Design, and enter into contractor bidding and procurement. Accordingly, TO#7 provides a scope to apply for Board of Trustee approval to place fill in State Lands; perform an updated SAV survey; address permitting concerns related to requests for additional information; progress the 90% Design Drawings, 90% Design Report, and 90% Design Specification to a 100% Design; develop a Request for Qualifications (RFQ) and Request for Proposal (RFP) Package; and assist the City in contractor procurement.

Applied Ecology, Inc. (AEI) will provide a primary role in applying for Board of Trustee Approval to place fill in State Land and performing an SAV Survey and Report for the project with support from Geosyntec. AEI has prepared a detailed scope of work and cost estimate for the performance of these item associated with this project (Attachment A). Geosyntec will perform activities associated with the design work as described herein.

Proposed Scope of Services

The proposed scope of services are listed below by Phase and Task.

- Phase 1 – Project Technical Meetings
- Phase 2 – Board of Trustee Approval Process to Place Fill in State Lands
- Phase 3 – SAV Survey and SAV Report
- Phase 4 – Design
 - Task 4.1. Design Report
 - Task 4.2. Drawings
 - Task 4.3. Specifications
 - Task 4.4. Cost Estimate
- Phase 5 – Bidding and Procurement
 - Task 5.1. RFQ Development and Qualifications Review
 - Task 5.2. RFP Development
 - Task 5.3. Procurement Support

SCOPE OF WORK

Detailed descriptions and deliverables for Phase 2 and Phase 3 are provided in **Attachment A**. Detailed descriptions and deliverables for Phase 1, Phase 4, and Phase 5 are provided below. Estimated costs for all Phases are included in **Table 1**.

Phase 1 – Project Technical Meetings

Phase 1 includes the lump sum costs for up to three Geosyntec personnel to prepare for and attend six, approximately 2-hour remote/virtual project meetings; up to two Geosyntec personnel to prepare for and attend an in person Bid Walk at the Site; and up to two Geosyntec personnel in-person and up to two personnel remote/virtual to prepare for and attend one bidder interview meeting for up to three contractors (approximately 2-hours for each bidder interview). It is assumed that the in-person bidder interview meetings will occur at the City's offices. Meetings are generally anticipated to occur as follows:

- Draft 100% Design Status Meeting (Virtual): Meeting to discuss the current design and permitting status approximately midway through development of the 100% Design and present the updated costs generated as part of an updated cost estimate.
- Final 100% Design Meeting (Virtual): Meeting to present and discuss the overall design prior to submission of the final City draft documents.
- RFQ, RFP, and Procurement Strategy Meeting (Virtual): Meeting to discuss RFQ and RFP strategy and requirements for developing the RFQ and RFP Documents. Additionally, this meeting will discuss procurement strategies, including City/contractor expectations, as well as the dates/time, locations, and materials for distribution at the bid walk.
- RFQ Results Meeting (Virtual): Meeting to discuss the results of the RFQ and make a recommendation for the bidders who will receive the RFP.
- Contractor Bid Walk (In Person): On-site contractor bid walk. The purpose of this will be to allow contractors to view the Site and prepare for bidding.
- Bid Results Meeting (Virtual): Meeting to discuss the results of the bids and make a recommendation for the bidders who will be invited for an interview.
- Bidder Interview Meetings (In Person): Meetings to interview contractors after submission of bids to assist in determining the best fit contractor to perform the Work.
- Contractor Selection Meeting (Virtual): Meeting to discuss final thoughts and make a recommendation for contractor selection.

The topics of the meetings may be modified, as warranted, based upon the results of ongoing design and construction preparation activities. Deliverables associated with each meeting will include, at a minimum, PowerPoint slides following the meeting.

Phase 2 – Board of Trustee Approval Process to Place Fill in State Lands

Please see Attachment A – Task 1.

Phase 3 – SAV Survey and SAV Report

Please see Attachment A – Task 3

Phase 4 – Design

Task 4.1. Design Report

Task 4.1 includes the lump sum costs to progress the 90% Design Report to a 100% Design Report. The Design Report will summarize preliminary design related data collection activities and results and provide a summary of the overall cap design, construction process and include supporting calculations, assumptions, and Appendices which contain the Engineering Design Drawings associated with Task 4.2 and the Specifications associated with Task 4.3. A draft (electronic) copy of the 100% Design Report will be provided to the City for review. Upon receipt of comments (if any), the 100% Design Report will be signed and sealed by the Florida registered Professional Engineer in responsible charge of the project and submitted electronically (PDF) to the City.

Task 4.2. Drawings

Task 4.2 includes the lump sum costs to progress the 90% Design Drawings to 100% Design. The Design Drawings will be used by the contractor to implement the Work in compilation with the Project Specifications (to be developed in Task 4.3). A draft (electronic) copy of the 100% Design Drawings will be provided to the City for review. Upon receipt of comments (if any), the 100% Design Drawings will be signed and sealed by the Florida registered Professional Engineer in responsible charge of the project and submitted electronically (PDF) to the City.

Task 4.3. Specifications

Task 4.3 includes the lump sum costs to progress the 90% Specifications to 100% Design. The Specifications will be used by the contractor to implement the Work in compilation with the Design Drawings (to be developed in Task 4.2). A draft (electronic) copy of the 100% Specifications will be provided to the City for review. Upon receipt of comments (if any), the 100% Design Specifications will be revised and signed and sealed by the Florida registered Professional Engineer in responsible charge of the project and submitted electronically (PDF) to the City.

Task 4.4. Cost Estimate

Task 4.4 includes the lump sum costs to update the 90% cost estimate to a 100% cost estimate. An initial draft of the Cost Estimate will be submitted electronically (PDF) to the City for review with the draft 100% Design Drawings and Specifications (Tasks 4.2 and 4.3). Upon receipt of comments (if any), the 100% Design Cost Estimate will be revised and submitted electronically (PDF) to the City.

Phase 5 – Bidding and Procurement

Task 5.1. RFQ Development and Qualifications Review

Task 5.1 includes the lump sum costs to develop a public notice of advertisement for the bid for the City to publish, RFQ package, generate a brief RFQ score card, and review contractor submitted qualifications for recommendation of qualified contractors. Geosyntec will develop the initial package and will work with the City to incorporate City specific qualifications prior to distribution. A draft (electronic) copy of the RFQ will be provided to the City for review. Upon receipt of comments (if any), the final RFQ will be submitted electronically (PDF) to the City and sent to contractors via Demand Star/Onvia or equivalent, as determined by the City. Upon receipt of qualifications, Geosyntec will review and develop a brief qualifications scoring sheet based on overall qualifications and the contractor's ability to meet the qualifications and perform the work. Based on this scoring, Geosyntec will work with the City to recommend up to five qualified contractors for future RFP distribution. It is anticipated that the City will provide Geosyntec with contracting requirements and develop their required contracting documents to be added to the RFQ.

Task 5.2. RFP Development

Task 2 includes the lump sum costs to develop a RFP cover letter, and bid sheet to be sent to up to five pre-qualified subcontractors determined through the RFQ process described in Task 5.1. These RFP documents, along with the Design Report and respective Design Documents and supporting information, will make up the final RFP package that will clearly define the roles, responsibilities, and expectations for the Work. A draft (electronic) copy of the RFP will be provided to the City for review. Upon receipt of comments (if any), the final RFP Package will be submitted electronically (PDF) to the City and sent to contractors via Demand Star/Onvia or equivalent, as determined by the City. It is anticipated that the City will provide Geosyntec their contracting requirements and develop their required contracting documents to be added to the RFP.

Task 5.3. Procurement Support

Geosyntec will lead and/or assist the City with one site walk with interested bidders (Geosyntec costs are included in Phase 1) and respond to contractor questions during the timeframe allotted in the RFP. AEI will support Geosyntec and the City in various activities as described in Attachment A – Phase 2. Geosyntec will issues Bid Document addenda, as applicable, based on contractor questions that arise during the bidding period. Upon receipt of qualified bids, bids will be reviewed. A brief bid scoring sheet will be developed to evaluate subcontractor proposals considering price, project team,

ability to perform the work as specified, value, schedule, health and safety, and overall understanding of the work outlined by the Bidder in their proposal.

In coordination with the City, Geosyntec will assist in the selection of a contractor to perform the work, develop a written notice of selected contractor for the City, and the City will issue award. Geosyntec will reissue the Drawings and Specifications with applicable addenda as “Issued for Construction”. The Issued for Construction package will be signed and sealed by the Florida registered Professional Engineer in responsible charge of the project and submitted electronically (PDF) to the City. Pre-construction and construction activities are not included in this scope of work.

COST SUMMARY

The proposed budget for TO#7 is \$266,348 summarized in **Table 1** below with a detailed breakdown of Geosyntec labor and expenses included in **Attachment B**.

Scope of Work	Labor Hours	Labor	Direct Expenses	External Expenses	Total
Phase 1: Project Technical Meetings	168	\$ 43,606	\$ 4,983	\$0	\$48,589
Phase 2: Board of Trustee Approval Process to Place Fill in State	46	\$ 12,124	\$ 2,195	\$35,668	\$49,986
Phase 3: SAV Survey and SAV Report	26	\$ 6,413	\$ 66	\$39,147	\$45,627
Phase 4: Design					
<i>Task 4.1: Design Report</i>	48	\$ 11,529	\$ 198	\$0	\$11,727
<i>Task 4.2: Drawings</i>	86	\$ 18,104	\$ 825	\$0	\$18,929
<i>Task 4.3: Specifications</i>	74	\$ 18,504	\$ -	\$0	\$18,504
<i>Task 4.4: Cost Estimate</i>	31	\$ 8,246	\$ -	\$0	\$8,246
Phase 5: Bidding and Procurement					
<i>Task 5.1: RFQ Development and Qualifications Review</i>	82	\$ 21,251	\$ 66	\$0	\$21,317
<i>Task 5.2: RFP Development</i>	66	\$ 17,207	\$ 66	\$0	\$17,273
<i>Task 5.3: Procurement Support</i>	80	\$ 20,321	\$ 363	\$5,465	\$26,149
Total	707	\$ 177,307	\$ 8,762	\$80,280	\$266,348

It is anticipated that the proposed project scope will be performed on a lump basis in accordance with the terms and conditions of Amendment #2 of our executed contract upon issuance of a Task Order by the City.

DELIVERABLES

Work described herein will include the following final deliverables provided in electronic format:

- Phase 1 – Project Technical Meetings
 - Copies of prepared presentation materials associated with each meeting or meetings minutes if no formal presentation was developed.
- Phase 2 – Board of Trustee Approval Process to Place Fill in State Lands
 - Prepared application forms and assist with preparing the documentation necessary to apply for Sovereign Submerged Lands (SSL) approval.
 - Response to up to three (3) Requests for Additional Information (RAI) responses pertaining to SSL in electronic format.
- Phase 3 – SAV Survey and SAV Report
 - Draft Pre-Construction SAV Report.
 - Final Pre-Construction SAV Report (after receipt of one set of comments).
 - Final Pre-Construction SAV Report submittal to regulatory agencies.
- Phase 4 – Design
 - Task 4.1. Design Report
 - City Draft and Final 100% Design Report
 - Task 4.2. Drawings
 - City Draft and Final 100% Design Drawings
 - Task 4.3. Specifications
 - City Draft and Final 100% Design Specifications
 - Task 4.4. Cost Estimate
 - City Draft and Final 100% Design Cost Estimate
- Phase 5 – Bidding and Procurement
 - Task 5.1. RFQ Development and Qualifications Review
 - Public notice of advertisement for the bid for the City to publish

- City Draft and Final RFQ package, RFQ Score Card, Recommendation of Qualified Contractors
- Task 5.2. RFP Development
 - City Draft RFP Cover Letter and Bid Sheet
 - Final RFP Package (complete with final 100% Design elements for bidding)
- Task 5.3. Procurement Support
 - Response to contractor questions during the timeframe allotted in the RFP
 - Bid Document addenda, as applicable
 - Bid scoring sheet to evaluate subcontractor proposals
 - A written notice of selected contractor (in coordination with the City)
 - Drawings and Specifications with applicable addenda as “Issued for Construction”

SCHEDULE

Upon receipt of the executed Task Order and completion of respective 90% documents, Geosyntec will begin work on the 100% Design Documents and tasks described herein. A general schedule by Tasks is as follows:

- Phase 1 – Project Technical Meetings
 - Draft 100% Design Status Meeting (Virtual): Quarter 3 2024
 - Final 100% Design Meeting (Virtual): Late Quarter 3 2024
 - RFQ, RFP, and Procurement Strategy Meeting (Virtual): Late Quarter 3 2024
 - RFQ Results Meeting (Virtual): Early Quarter 4 2024
 - Contractor Bid Walk (In Person): Quarter 4 2024
 - Bid Results Meeting (Virtual): Early Quarter 1 2024
 - Bidder Interview Meetings (In Person): Quarter 1 2024
 - Contractor Selection Meeting (Virtual): Late Quarter 1 2024.
- Phase 2 – Board of Trustee Approval Process to Place Fill in State Lands

- Quarter 2 2024 through Quarter 3 2024
- Phase 3 – SAV Survey and SAV Report
 - Quarter 3 2024/Quarter 4 2024
- Phase 4 – Design
 - Task 4.1. Design Report: Anticipated submission of final deliverable in late Quarter 3 2024
 - Task 4.2. Drawings: Anticipated submission of final deliverable in late Quarter 3 2024
 - Task 4.3. Specifications: Anticipated submission of final deliverable in late Quarter 3 2024
 - Task 4.4. Cost Estimate: Anticipated submission of final deliverable in late Quarter 3 2024
- Phase 5 – Bidding and Procurement
 - Task 5.1. RFQ Development and Qualifications Review: Late Quarter 3 2024 through early Quarter 4 2023
 - Task 5.2. RFP Development: Quarter 4 2024 through early Quarter 1 2025
 - Task 5.3. Procurement Support: Early Quarter 1 2025 through early Quarter 2 2025

Note: Completion dates for tasks are approximate assuming that the proposal is approved within 15 days of submission. Schedule may be extended depending on proposal approval, permitting process and permit approvals, City approach to RFQ/RFP, bidding and procurement, and document review turnaround times.

Kelsey Mack
23 April 2024
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CLOSING

Geosyntec appreciates the opportunity to continue working with the City on this important project. If you would like to discuss the path forward recommendations, please do not hesitate contacting Jason Raimondi at 339.532.8632 to discuss.

Regards,
GEOSYNTEC CONSULTANTS



Jim Langenbach, P.E.(FL, SC), BCEE
Senior Principal



Jason Raimondi, P.E.(NY)
Senior Engineer

Enclosures:

Attachment A – Applied Ecology Cost Proposal
Attachment B – Geosyntec Labor and Expenses Summary

Cc:

Dave Himmelheber, PhD, P.E.(DE, NJ, NY), Geosyntec Consultants
Wayne Carragino, City of Cocoa Beach

ATTACHMENT A



2200 Front Street
Suite 300
Melbourne, FL 32901

April 22, 2024

Jaison Raimondi, PE
Senior Engineer
Geosyntec Consultants
1750 American Blvd, Suite 200
Pennington, NJ 08534
cc. Jim Langenbach, PE, BCEE, Senior Principal

**SUBJECT: Scope and Fee for Permitting Support and Survey
 City of Cocoa Beach, Muck Capping Project; Additional Services**

Dear Mr. Raimondi,

Applied Ecology, Inc. (AEI) is pleased to submit Geosyntec Consultants (hereafter Geosyntec) this scope and fee for conducting additional Environmental Permitting Support, Procurement Review, and Pre-Construction Survey for the above referenced project, herein referred to as the City of Cocoa Beach (CCB) Muck Cap Project.

PROPOSED ADDITIONAL SCOPE OF SERVICES

TASK 1: ASSIST WITH STATE OF FLORIDA, DIVISION OF STATE LANDS, TRUSTEES APPROVAL

This task includes preparing the documents needed to obtain Sovereign Submerged Lands (SSL) approval. This task includes internal coordination with AEI, external coordination with Geosyntec and CCB.

Included in this scope is an in-person meeting with the Board of Trustees (BOT) in Tallahassee, FL. Typically the BOT reviews and holds a public meeting for the SSL proposal and two of AEI staff have been budgeted to attend this meeting to explain our unique muck cap restoration project.

TASK 1 DELIVERABLES:

- Prepare the application forms and assist with preparing the documentation necessary to apply for SSL approval.



support@AppliedEcologyInc.com



321-499-3336



www.AppliedEcologyInc.com

- Respond to up to three (3) RAI responses pertaining to SSL in electronic format.
- Coordinate with SSL staff.

TASK 1 ASSUMPTIONS:

- The project conference calls will take place virtually (e.g., Microsoft Teams).
- Two AEI staff will attend the BOT meeting in Tallahassee, FL.
- Geosyntec will prepare and provide all engineering services associated with this project.
- Geosyntec or others will provide any necessary signed and sealed exhibits that the FDEP, DSL may need to process the Sovereign Submerged Lands authorization.
- Costs for permitting fees, SSL fees, public notices, engineering services and project logistics are not included in this scope of work.

TASK 2: PROCUREMENT ASSISTANCE

During the procurement process, AEI will provide the following services:

- Answer contractor questions regarding the permit regulatory requirements.
- Review and provide comments on documents submitted during the procurement process.
- Participate in up to four remote meetings (MS Teams) with Geosyntec and CCB.

TASK 2 DELIVERABLES:

- Any comments provided during the procurement review will be provided during the meetings and provided electronically.

TASK 2 ASSUMPTIONS:

- The project meetings will take place virtually (e.g., Microsoft Teams) and will last approximately 2 hours each.
- Up to 36 hours of assistance are included under Task 7.

TASK 3: PRE-CONSTRUCTION SUBMERGED AQUATIC VEGETATION SURVEY AND REPORT

This task includes project planning and AEI's staff internal coordination prior to performing the in-water pre-construction submerged aquatic vegetation survey (SAV). The limits of the SAV survey will be as stipulated in the State and Federal permit documents. AEI has allocated up to five days to conduct the in-season SAV survey. Upon completion of the survey, AEI staff will prepare a draft Pre-Construction SAV Report for Geosyntec's review. A final version will be provided after addressing one round of comments.



TASK 3 DELIVERABLES:

- Draft Pre-Construction SAV Report.
- Final Pre-Construction SAV Report (after receipt of one set of comments).
- Final Pre-Construction SAV Report submittal to regulatory agencies.

TASK 3 ASSUMPTIONS:

- The Regulatory Agencies (FDEP, USACE) will require a much smaller area for the Pre-Construction SAV survey.
- The project conference calls will take place virtually (e.g., Microsoft Teams) and will last approximately 1 hour.
- The SAV survey will take place only within the approved regulatory window which is between June 1 through September 30.

ASSUMPTIONS

The following assumptions were used in the development of this scope of work:

- Geosyntec will assist with preparing all documents that get submitted to the regulatory agencies.
- CCB will allow AEI to utilize the boat ramp at the project site to conduct the Survey.

FEE AND METHOD OF COMPENSATION

Applied Ecology, Inc. will complete the above additional scope of work in a lump sum not to exceed basis and will bill each task based on percentage completion. Detailed level of effort associated with Tasks 1-3 is provided in **Attachment A**. The additional cost for Tasks 1-3 associated with this change order is \$72,982.20.. The table below provides the lump cost by task:

TASK	DESCRIPTION	Cost
1	Assist with State of Florida Division of State Lands, Trustees Approval	\$29,370.00
2	Procurement Assistance	\$4,968.00
3	Pre-Construction Submerged Aquatic Vegetation (SAV) Survey	\$32,533.00
EXP	Expenses Associated with Additional Services	\$6,111.20
NEW TOTAL PROJECT COST		\$72,982.20

If unforeseen conditions should require services beyond the scope of services described herein, Applied Ecology will notify Geosyntec immediately of additional costs necessary to complete the project, prior to proceeding. Services beyond those described herein would be invoiced in accordance with the fee schedule of the existing contract.



AUTHORIZATION

Please provide written authorization to proceed consistent with the terms and conditions of the Subcontractor Services Agreement between Geosyntec Consultants and Applied Ecology (dated April 10, 2019) for services rendered as part of the City of Cocoa Beach Dredging/Capping Engineering Design Services (CB20 003).

We appreciate the opportunity to offer our professional services on this project. If you have any questions concerning this proposal, please contact us at 321-499-3336.

Sincerely,



Claudia Listopad, Ph.D., GISP
President, Applied Ecology, Inc.

ATTACHMENTS:

Attachment A- Detailed level of effort.



Task 1: Assist with State of Florida Division of State Lands, Trustees Approval

Subtask	Description	Principal (\$152.00)	Sr. Staff Scientist (\$110.00)	Staff Scientist (\$85.00)	Assoc. Staff Scientist (\$66.00)	Sr. Field Manager (\$120.00)	GIS Specialist (\$85.00)	Administrative (\$40.50)	Total Hrs	Total Cost
1	Prepare documents to Apply for Sovereign Submerged Lands (SSL) Approval	8	40	32	0	0	0	0	80	\$ 8,336.00
2	Internal and External Coordination (AEI, Geosyntec and CCB)	16	24	0	0	0	0	0	40	\$ 5,072.00
3	Respond to FDEP, RAI RE SSL issues (up to 3 RAI's)	8	40	16	0	0	0	0	64	\$ 6,976.00
4	Meeting with Board of Trustees (Tallahassee)	24	24	0	0	0	0	0	48	\$ 6,288.00
5	Project Management	8	12	0	0	0	0	4	24	\$ 2,698.00
ALL	Assist with State of Florida Division of State Lands, Trustees Approval	64	140	48	0	0	0	4	256	\$ 29,370.00

Task 2: Procurement Assistance

Subtask	Description	Principal (\$152.00)	Sr. Staff Scientist (\$110.00)	Staff Scientist (\$85.00)	Assoc. Staff Scientist (\$66.00)	Sr. Field Manager (\$120.00)	GIS Specialist (\$85.00)	Administrative (\$40.50)	Total Hrs	Total Cost
1	Provide Regulatory Review and Comments during Procurement	24	12	0	0	0	0	0	36	\$ 4,968.00
ALL	Procurement Assistance	24	12	0	0	0	0	0	36	\$ 4,968.00

Task 3: Pre-Construction Submerged Aquatic Vegetation (SAV) Survey

Subtask	Description	Principal (\$152.00)	Sr. Staff Scientist (\$110.00)	Staff Scientist (\$85.00)	Assoc. Staff Scientist (\$66.00)	Sr. Field Manager (\$120.00)	GIS Specialist (\$85.00)	Administrative (\$40.50)	Total Hrs	Total Cost
1	Project Planning & Internal Coordination for SAV Survey	2	8	0	0	8	0	0	18	\$ 2,144.00
2	Conduct In Season SAV survey	0	50	50	50	50	0	0	200	\$ 19,050.00
3	Post Survey Data Processing	0	0	0	0	8	16	0	24	\$ 2,320.00
4	Prepare Draft SAV Report	4	16	40	0	0	8	0	68	\$ 6,448.00
5	Final SAV Report	1	4	8	0	0	2	0	15	\$ 1,442.00
6	Project Management	4	4	0	0	0	0	2	10	\$ 1,129.00
ALL	Pre-Construction Submerged Aquatic Vegetation (SAV) Survey	11	82	98	50	66	26	2	335	\$ 32,533.00

Major Task Summary

Subtask	Description	Principal (\$152.00)	Sr. Staff Scientist (\$110.00)	Staff Scientist (\$85.00)	Assoc. Staff Scientist (\$66.00)	Sr. Field Manager (\$120.00)	GIS Specialist (\$85.00)	Administrative (\$40.50)	Total Hrs	Total Cost
1	Assist with State of Florida Division of State Lands, Trustees Approval	64	140	48	0	0	0	4	256	\$ 29,370.00
2	Procurement Assistance	24	12	0	0	0	0	0	36	\$ 4,968.00
3	Pre-Construction Submerged Aquatic Vegetation (SAV) Survey	11	82	98	50	66	26	2	335	\$ 32,533.00
Total Labor		99	234	146	50	66	26	6	627	\$ 66,871.00
Project Expenses										\$ 6,111.20
Total Project										\$ 72,982.20
Sub-Contractor Fees										\$ -
Total Project w/Sub-Contractor Fees										\$ 72,982.20

ATTACHMENT B

Cocoa Beach Muck Capping Project TO#7	Level Summary										Labor Hours	Labor Total	Communications	Direct Expenses	Subcontractors	Total
	Senior Principal	Principal	Senior Professional	Project Professional	Professional	Senior Staff Professional	Staff Professional	Designer	Site Manager I	Project Adminstrator						
	SRP \$295	P \$275	SRPROF \$255	PJPROF \$230	PROF \$205	SRSTF \$180	STF \$155	DES \$160	SM2 \$120	PA \$85						
Phase 1: Project Technical Meetings	28		96		12			32			168	\$ 42,336	\$ 1,270	\$ 4,983	\$ -	\$ 48,589
Phase 2: Board of Trustee Approval Process to Place Fill in State Lands	6		32					8			46	\$ 11,771	\$ 353	\$ 2,195	\$ -	\$ 14,318
Phase 3: SAV Survey and SAV Report	2		12		8			4			26	\$ 6,227	\$ 187	\$ 66	\$ -	\$ 6,479
Phase 4: Design													\$ -			
Task 4.1: Design Report	4		20		12			12			48	\$ 11,193	\$ 336	\$ 198	\$ -	\$ 11,727
Task 4.2: Drawings	4		20		12			50			86	\$ 17,577	\$ 527	\$ 825	\$ -	\$ 18,929
Task 4.3: Specifications	10		40		16					8	74	\$ 17,966	\$ 539	\$ -	\$ -	\$ 18,504
Task 4.4: Cost Estimate	3		20		8						31	\$ 8,006	\$ 240	\$ -	\$ -	\$ 8,246
Phase 5: Bidding and Procurement													\$ -			
Task 5.1: RFQ Development and Qualifications Review	10		52		12			4		4	82	\$ 20,633	\$ 619	\$ 66	\$ -	\$ 21,317
Task 5.2: RFP Development	4		44		14			4			66	\$ 16,706	\$ 501	\$ 66	\$ -	\$ 17,273
Task 5.3: Procurement Support	12		46					22			80	\$ 19,730	\$ 592	\$ 363	\$ -	\$ 20,684
Project Totals	83		382		94			136		12	707	\$ 172,142	\$ 5,164	\$ 8,762	\$ -	\$ 186,068

Cocoa Beach Muck Capping Project TO#7 (Applied Ecology)	Labor Total	Communications	Direct Expenses	Subcontractors	Task Total
Phase 1: Project Technical Meetings					
Phase 2: Board of Trustee Approval Process to Place Fill in State Lands	\$ 32,307		\$ 3,361		\$ 35,668
Phase 3: SAV Survey and SAV Report	\$ 35,786		\$ 3,361		\$ 39,147
Phase 4: Design					
Task 4.1: Design Report					
Task 4.2: Drawings					
Task 4.3: Specifications					
Task 4.4: Cost Estimate					
Phase 5: Bidding and Procurement					
Task 5.1: RFQ Development and Qualifications Review					
Task 5.2: RFP Development					
Task 5.3: Procurement Support	\$ 5,465				\$ 5,465
Project Totals	\$ 73,558		\$ 6,722	\$ -	\$ 80,280

City of Cocoa Beach Golf Muck Capping Project
100% Design and Procurement Support Cost Proposal
Proposed Task Order No. 7

Phase 1: Project Technical Meetings

GEOSYNTEC LABOR											
Subtasks	Senior Principal	Principal	Senior Professional	Project Professional	Professional	Senior Staff Professional	Staff Professional	Designer	Site Manager I	Project Adminstrator	Labor
	SRP	P	SRPROF	PJPROF	PROF	SRSTF	STF	DES	SM2	PA	
	\$295	\$275	\$255	\$230	\$205	\$180	\$155	\$160	\$120	\$85	
Draft 100% Design Status Meeting (Virtual)	2		8		2			4			\$ 3,680.00
Final 100% Design Meeting (Virtual)	2		8		2			4			\$ 3,680.00
RFQ, RFP, and Procurement Strategy Meeting (Virtual)	2		8		2			4			\$ 3,680.00
RFQ Results Meeting (Virtual)	2		8		2			4			\$ 3,680.00
Contractor Bid Walk: On-site contractor bid walk (In Person)	8		24					4			\$ 9,120.00
Bid Results Meeting (Virtual)	2		8		2			4			\$ 3,680.00
Bidder Interview Meetings (In Person)	8		24					4			\$ 9,120.00
Contractor Selection Meeting (Virtual)	2		8		2			4			\$ 3,680.00
											\$ -
											\$ -
	28		96		12			32			
Subtotal											\$ 40,320.00
Communications Fee											\$ -
Project Management Fee											\$ 2,016
Total											\$ 42,336.00
GEOSYNTEC DIRECT EXPENSES											
								Unit	Cost	Quantity	Total
Specialized Computer Program								per hour	\$ 15.00	32	\$ 480.00
Flights (Jason)								Ea	\$ 1,000.00	2	\$ 2,000.00
Rental Car								Day	\$ 100.00	6	\$ 600.00
Hotel								Ea	\$ 175.00	6	\$ 1,050.00
Fuel and Expense								Ea	\$ 50.00	2	\$ 100.00
Misc Expense								Ea	\$ 150.00	2	\$ 300.00
											\$ -
											\$ -
											\$ -
											\$ -
Subtotal											\$ 4,530.00
Direct Expense Markup											\$ 453.00
Total Direct Costs											\$ 4,983.00

Phase 2: Board of Trustee Approval Process to Place Fill in State Lands

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Phase 3: SAV Survey and SAV Report

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Task 4.1: Design Report

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Task 4.2: Drawings

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Task 4.3: Specifications

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Task 4.4: Cost Estimate

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City of Cocoa Beach Golf Muck Capping Project
100% Design and Procurement Support Cost Proposal
Proposed Task Order No. 7

Task 5.1: RFQ Development and Qualifications Review

GEOSYNTEC LABOR											
Subtasks	Senior Principal	Principal	Senior Professional	Project Professional	Professional	Senior Staff Professional	Staff Professional	Designer	Site Manager I	Project Adminstrator	Labor
	SRP	P	SRPROF	PJPROF	PROF	SRSTF	STF	SRDES	SM2	CE	
	\$295	\$275	\$255	\$230	\$205	\$180	\$155	\$160	\$120	\$85	
RFQ Development	4		24		12			4		4	\$ 10,740.00
Scorecard	1		4								\$ 1,315.00
Review Contractor Quals	3		12								\$ 3,945.00
Develop Recommendation	1		6								\$ 1,825.00
Draft Public	1		6								\$ 1,825.00
											\$ -
											\$ -
											\$ -
											\$ -
											\$ -
	10		52		12			4		4	
Subtotal											\$ 19,650.00
Communications Fee											\$ -
Project Management Fee											\$ 982.50
Total											\$ 20,632.50
GEOSYNTEC DIRECT EXPENSES											
								Unit	Cost	Quantity	Total
Specialized Computer Program								per hour	\$ 15.00	4	\$ 60.00
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Task 5.2: RFP Development

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Task 5.3: Procurement Support

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**City of Cocoa Beach City Commission
Agenda Item Summary**

**DEPARTMENT MAKING
REQUEST/NAME:**

City Clerk /

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Approve Member Appointment to the **Police and Fire Pension Board:**

Appoint Dan Avodasio as a regular member for a term to expire April 1, 2026,
Commissioner Skip Williams (Seat 4)

Appoint A.J. Anderson as a regular member for a term to expire April 1, 2026,
Commissioner Karalyn Woulas (Seat 3)

Representative: City Commission

Recommendation: Approve Appointment

IS THIS ITEM BUDGETED (IF APPLICABLE)?

BACKGROUND:

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

Finance /

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Confirm the following meeting:

July 2nd, 2024 - 6:00 PM FY 25 Budget Workshop

Staff Representative: Patrisha Draycott, CFO/Assistant City Manager

Recommendation: Confirm

IS THIS ITEM BUDGETED (IF APPLICABLE)?

BACKGROUND:

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

City Manager /

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Approve the request by Wayne Carragino to continue in his current position of city manager.

IS THIS ITEM BUDGETED (IF APPLICABLE)?

BACKGROUND:

As directed by the city commission at the meeting on January 18, 2024, the current city manager, Wayne Carragino, is requesting permission to continue in the role of city manager.

After six months in the position Mr. Carragino feels he can continue to contribute positive change and leadership to the city.

He has a sixteen-year history of major accomplishments for the city that speak for themselves.

He lives in Cocoa Beach, he knows Cocoa Beach, and he feels honored to continue in a position to serve Cocoa Beach and our city commission.

In conclusion, Mr. Carragino is requesting the permission of the city commission to continue in the position of city manager.

City of Cocoa Beach Commission
Agenda Item Summary

1. **DEPARTMENT MAKING REQUEST/NAME:** WAYNE CARRAGINO, CITY MANAGER

2. **MEETING DATE:** JANUARY 5/16 2024

3. **REQUESTED MOTION/ACTION (SUMMARY THAT WILL APPEAR ON THE AGENDA):**

Approve the request by Wayne Carragino to continue in his current position of city manager.

4. **AGENDA**

STAFF PRESENTATION ☐

CONSENT ☐

SITE PLAN CONSENT ☐

UNFINISHED BUSINESS ☒

NEW BUSINESS ☐

5. **IS THIS ITEM BUDGETED (IF APPLICABLE)?:** YES ☐ NO ☒ **IF NO, CITY ACTION REQUIRED** ☐ N/A

DETAILED ANALYSIS ATTACHED?: YES ☐ NO ☒

BACKGROUND: (WHY IS THE ACTION NECESSARY, WHAT ACTION WILL BE ACCOMPLISHED, (WHO, WHERE, WHEN & HOW))

As directed by the city commission at the meeting on January 18, 2024, the current city manager, Wayne Carragino, is requesting permission to continue in the role of city manager.

After six months in the position Mr. Carragino feels he can continue to contribute positive change and leadership to the city.

He has a sixteen-year history of major accomplishments for the city that speak for themselves.

He lives in Cocoa Beach, he knows Cocoa Beach, and he feels honored to continue in a position to serve Cocoa Beach and our city commission.

In conclusion, Mr. Carragino is requesting the permission of the city commission to continue in the position of city manager.

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

Finance /
Devan Taly, CRA Administrator

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Permission to proceed with a Request for Qualifications (RFQ) for the 19th Hole Restaurant/Auditorium Operations and Management at the Cocoa Beach Country Club
Staff Representative: Devan Taly,
Recommendation: Approval

IS THIS ITEM BUDGETED (IF APPLICABLE)?

N/A

BACKGROUND:

City staff is looking at all options for operations and management services at the 19th Hole Restaurant/Auditorium at the Cocoa Beach Country Club. The staff is requesting permission to proceed with the Request For Qualifications (RFQ).

CITY OF COCOA BEACH

Request for Qualifications

19th Hole Restaurant/Auditorium Operations and Management

CB 24 – 006



City of Cocoa Beach
1600 Minutemen Causeway
Cocoa Beach, FL 32931

www.cityofcocoa.beach.com

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PART I – GENERAL INSTRUCTIONS

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

The City of Cocoa Beach is requesting qualifications for the 19th Hole Restaurant/Auditorium Operations and Management at Cocoa Beach Country Club. Respondents are responsible for providing the following:

- Provide all necessary labor, supervision, products, supplies, and equipment, as required to successfully operate the 19th Hole Restaurant, Auditorium Banquet Area, Pavilion Area, and Mobile Concession Cart operations.
- Firms experience and qualifications
- Restaurant Manager's experience and qualifications
- Business Plan (Operational Concepts & Plans)
- Financial History

The proposal package, other information, and addendums (if issued) may be obtained at www.cityofcocoa-beach.com/bids.aspx. The requirements contained herein apply to all offers made to the City of Cocoa Beach by all prospective Proposers and include, but are not limited to, Request for Quotes, Request for Qualifications, Request for Proposal, RFQ, etc. As such, the words "bid" and "Proposal" are interchangeable in reference to all Proposals submitted by prospective Proposers.

The City will receive Proposals at the office of the City Clerk, Public Works Facility, 1600 Minutemen Causeway., Cocoa Beach, FL 32931.

All proposals to be considered must be received **on or before 2:00 p.m. local time on Friday, July 26, 2024**, in a sealed envelope (Price Proposal Form) clearly marked with your firm's name and: **RFQ No: CB 24 - 006: "19TH HOLE RESTURANT/AUDITORIUM OPERATIONS AND MANAGEMENT"**. Proposals must be submitted in **one (1) UNBOUND signed original** and **FIVE (5) signed copies** with a flash/jump drive containing **one file in PDF format of the hard copy of the proposal exactly as submitted**.

The complete responsibility for obtaining, completing, and submitting this request for sealed proposals to the City of Cocoa Beach is solely and strictly the responsibility of the Proposer. Proposals received after the time and date stipulated shall be considered non-responsive and returned to the Proposer unopened. Proposals will be publicly recorded. Late proposals will not be accepted. The City Manager or designee will be the official and final authority for determining late proposals.

19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

The City reserves the right to waive any irregularity or informality in the proposals received, to determine, in its sole discretion, whether or not an informality is minor, to reject or accept any or all submissions and to select the winner based on criteria which serves the best interest of the City of Cocoa Beach.

Any Proposer may withdraw its submittal prior to the indicated opening time. The request for withdrawal must be submitted in writing to the Project Coordinator. After the deadline, proposals become a record of the City and will not be returned to the Proposer. The withdrawal letter must clearly state that the Proposer has withdrawn any offer contained in the RFQ and as such, a withdrawal is irrevocable. Proposal documents are exempt from public records for a period of thirty (30) days or a Notice of Intent to Award is issued whichever comes sooner per Chapter 119, as amended, in accordance with the Florida law.

Should any interested Proposer find any part of the specifications, terms, and conditions to be discrepant, incomplete, or questionable in any respect, it shall be the responsibility of the concerned Proposer to call such matters to the attention of the Project Coordinator immediately.

1. PURPOSE

It is the intent of the City of Cocoa Beach, Florida, to request proposals from firms that must be legal entities authorized to do business in Florida and which have experience in providing operational and management Services similar to that requested by the City of Cocoa Beach, using a qualifications-based selection process.

2. PUBLIC OPENING

All submittals will be publicly opened shortly following the deadline for submission of the proposals. The purpose of the public opening is for acknowledgement of proposals received. Only the names of the proposers will be announced at that time. No award will be made or implied at this time. The documents will not be reviewed or evaluated at the public opening. No discussion of any nature concerning the proposals/submissions will be held at this time. A copy of the opening document will be posted to City's website after opening. The proposal shall be firm for a period of ninety (90) days from the date of the public opening.

A review committee utilizing the Selection Criteria presented in **Part V** of this document will conduct a review of the Proposals and conduct other fact finding processes and recommend selection of the best qualified Proposal in the interest of the City. The selected Proposals and Proposer(s) will be ranked and may be presented to the City Commission for final selection. The City Commission retains the right to accept or reject the recommendations, if any, of the review

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

committee and make a decision that is seemed by the City Commission to be in the best interests of the City of Cocoa Beach.

3.SCHEDULE OF EVENTS

The Schedule as listed below is the City’s intended course of action for this project. The City will follow the schedule to the extent possible; however, the City reserves the right to change both the sequence and timing if deemed necessary.

Step	Proposed Date (Estimated no later than)
Advertisement of RFQ	Sunday, June 9, 2024
Mandatory Pre – Proposal Meeting	Friday, June 21, 2024
Cut-off for Receipt of Questions	Wednesday, July 3, 2024
Final Addenda to Answer Questions	Wednesday, July 10, 2024
RFQ Proposals Due (Public Opening)	Friday, July 26, 2024
Evaluation of Firms by Committee	Friday, July 26, 2024 to Friday, August 9, 2024
Presentation to City Commission	Thursday, September 5, 2024
Contract Execution	To Be Determined

4.MANDATORY PRE-PROPOSAL MEETING

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

A mandatory pre-proposal conference will be held Friday, June 21, 2024, at 10:00 AM in the Cocoa Beach Country Club, 5000 Tom Warriner Blvd, Cocoa Beach FL 32931. This Pre-Proposal meeting will allow all Proposers the opportunity to bring forward any questions concerning this proposal. All interested parties are required to attend. Any proposal received from any firm other than firms represented at the conference will be disqualified from consideration. An attendee may represent only one (1) firm.

5.PROJECT COORDINATOR

The project coordinator and designated liaison for the City of Cocoa Beach is:

Devan Taly

Phone (321) 868-3280

Project/Grant Coordinator

1600 Minutemen Causeway

Cocoa Beach, FL 32931

Email: devan.taly@cityofcocoa beach.com

The city will not respond to oral inquiries. Proposers may submit written, (e-mailed) inquiries regarding this RFQ to the project coordinator. The city will record its responses to inquiries and any supplemental instructions in the form of written addenda. All written addenda will be issued through the City's website at www.cityofcocoa beach.com/aspx. It shall be the responsibility of the Proposer, prior to submitting its Proposal, to determine if addenda were issued, acknowledging same, and incorporating them into its proposal.

6.COSTS OF PROPOSAL PREPARATION AND/OR PRESENTATIONS:

The City shall not be liable for any expense whatsoever incurred in connection with the preparation of a response to this Request for Qualifications (RFQ). The Proposer shall prepare a Proposal with the understanding that no claim for reimbursement shall be submitted for the expense of Proposal preparation and/or oral or written presentation(s). Proposers should prepare a straightforward and concise description of the Proposer's ability to meet the requirements of the RFQ.

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

The Evaluation Committee, at its discretion, may conduct inquiries by checking references and otherwise investigating and fact-finding regarding Proposers, and hold discussions with and may require public presentations, oral interviews, or question and answer sessions by shortlisted firms regarding their qualifications, approach to the project, and ability to furnish the required services. The City shall not be responsible for any expenses incurred for such presentations.

7.CONTRACT PROHIBITION:

All prospective proposers are hereby instructed **NOT** to contact any member of the City of Cocoa Beach Commission, City Manager, or City of Cocoa Beach staff member other than the Authorized City Contact Person identified in this Solicitation, or their designated staff member, regarding this solicitation package, or their submittal package, City's Intent to Award, or City's Intent to Reject (if applicable) at any time prior to the formal award for this project. Any such contact shall be cause for rejection of your submittal. Only that individual listed as the contact person shall be contacted, and such contact shall be in writing.

8.CONTRACT AGREEMENT/TERM & TYPE OF CONTRACT:

The Proposer understands that this RFQ does not constitute an agreement or a contract with the Proposer. A contract shall not exist until approved by the appropriate levels of authority in the City and properly executed. The RFQ shall be included in and be made a part of the final award. Other requirements to be included in the contract are:

- a) Registration and participation in the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of.
 - All persons employed by the Contractor to perform employment duties within Florida.

AND

 - All persons (including sub-contractors) assigned by the Contractor to perform work pursuant to the Contract with the City.

- b) Participation in the City's Owner Direct Purchase (ODP) Program.

9.RESERVED RIGHTS:

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

The City reserves the right to accept or reject any/or all submissions, to accept all or any part of the submission, to waive any irregularities and technicalities, and to request resubmission, if it is deemed in the best interest of the City.

The City, in its sole discretion, may expand or decrease the scope of work to include modify or exclude additional requirements. The City reserves the right to investigate, as it deems necessary, to determine the ability of any firm to perform the work or services requested. The firms upon request shall provide information the City deems necessary in order to make a determination. In the event of a sole Proposal, City reserves the right to reject the sole Proposal. The City reserves the right to award more than one (1) contract if that is in the City's best interest.

10. COLLUSION

By affixing its signature to this proposal, the Proposer certifies that its proposal is made without any previous understanding, agreement, or connection with either any previous firms or corporations offering a Proposal for the same items, or with the City. The Proposer also certifies that its Proposal is in all respects fair and without outside control, collusion, fraud, or otherwise illegal action.

11. COPYRIGHTS & PATENTS

The Proposer warrants that there will be no violation of copyrights or patent rights in any respect to the Proposal or providing services to the City of Cocoa Beach. The seller agrees to hold the City harmless for all liability, loss or expense occasioned by any such violation.

12. QUALIFICATION OF PROPOSERS/BIDDERS

This bid shall be awarded to the firm(s) the City Commission deem is/are most beneficial to the City of Cocoa Beach. Every Proposer is request to supply information as to qualifications to provide the work specified and produce evidence that they have established a satisfactory record of performance for a reasonable period of time under similar circumstances; and have sufficient financial support, equipment and organization to ensure that they can satisfactorily execute the services if awarded a contract under the terms and conditions stated herein.

13. PERFORMANCE

Failure on the part of the Proposer to comply with the conditions, terms, specifications, and requirements of this document or any resultant agreement shall be just cause for the cancellation of the award or any resultant agreement.

14.AUDIT RIGHTS

The City shall be entitled to audit the books and records of a Contractor or any sub- contractor to the extent that such books and records relate to the performance of such Contract or sub-contract. Such books and records shall be maintained by the Contractor for a period of five (5) years from the date of final payment under the prime Contract and by the sub-contractor for a period of five (5) years from the date of final payment under any sub-contract unless a shorter period is otherwise authorized in writing. If any litigation, claim, negotiation, audit or other action involving the records has been started before the expiration of the five (5)-year period, the records must be retained until completion of the action and resolution of all issues which arise from it, or until the end of the regular five (5)-year period, whichever is later.

15.PROMPT PAYMENT ACT & PROJECT INVOICING

Payment by the City shall be made in accordance with Sections 218.70. et sq. Florida Statutes, Local Government Prompt Payment Act

Invoices will be prepared in accordance with the City Finance Department procedures, which will be addressed in the contract.

16.DISPUTE RESOLUTION

In the event a dispute occurs between a contractor, vendor or other invoicing party ("invoicing party") and the City concerning payment of an invoice, the City Department, Office or Division which has the dispute along with a representative of the City's Procurement and Contracts Division and the invoicing party shall meet to consider the disputed issues.

17.FLORIDA SALES TAX

The City is a governmental agency under Florida law. Purchases by the City under this Contract are exempt from Florida sales tax: No purchase made by any entity is qualified to be exempt other than those made directly by the City.

END OF PART I

PART II – RFQ/PROPOSAL PREPARATION

PROPOSAL SUBMISSIONS-GENERAL

All Proposals must be typed and presented in an organized fashion. Both sides of the page may be printed. If necessary 11” x 17” pages are allowed for illustrations, construction schedules, charts, tables, exhibits, etc. and will count as one (1) page. Any corrections to the Proposals must be initialed. The Proposer’s name shall appear on each page of the Proposal and each page shall be numbered. All Proposals shall contain a table of contents. Please submit all information as outlined below. Failure to submit all information may result in a lowered evaluation of the Proposal. The City at its discretion may reject Proposals that are substantially incomplete or lack key information. The Proposals shall be concise and straightforward in describing the Proposer’s experience and capabilities. Emphasis should be placed on completeness and clarity. In your Proposal, please provide information as follows.

Subsequent specification(s) as to the number of pages and content of those pages is intended to provide general guidance only. Proposers should include all pages/information necessary to indicate their qualifications & abilities for this project.

Responses will be evaluated based on the written document submitted as the response to this RFQ as well as other information gleaned by the City through the checking of references and general fact-finding; therefore, the response must give a clear, concise, and complete statement of qualifications. For reasons of maintaining fairness and for ease of evaluation, responses to this Request for Qualifications must comply with the following directions and must be presented in this format and in the order identified below. Covers, tables of contents, and divider tabs will not be counted in the section page limits.

Proposal Format and Certification:

Complete the form enclosed as **EXHIBIT B, PROJECT FORM and CERTIFICATION** and return in the submittal immediately following the cover page and before the Tab 1 Firm Profile. Proposals without the manual signature of an authorized agent of the Proposer shall be deemed non-responsive and ineligible for award.

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

Table of Contents

Self-explanatory

Tab 1 – Firm’s Experience and Qualifications: The purpose of this section is to provide a brief overview of the firm and firm history. Briefly describe the firm’s organization and philosophy and, in addition, include the following information (maximum three (3) pages):

- Basic Information – Proposer’s name, mailing address, email address, and phone number(s).
- Primary Contact Person - Name and contact information for the Proposer’s primary contact person. This person will be the contact person for all matters related to the response to this RFQ, scheduling, negotiating, and contracting.
- Qualifications - List of restaurants currently or previously actively managed by the Proposer (firm). Provide a summary of the qualifications and experience of the entity (i.e., the firm) responsible for management of the restaurant/bar/Mobile Concession Cart, especially with regard to prior experience with operation of projects similar in scale and character to the restaurant/bar/Mobile Concession Cart operation. Include years and type of experience relevant to the Scope of Services.
- Availability - Specify the location of the Manager and key personnel that will be assigned to work on these operations. If the proposer has more than one location, then indicate where each Team Member's main office resides, and the amount of their time (in hours per week) allocated to the main office and the satellite offices.
- Additional Information - Additional information the Proposer believes relevant and important, not otherwise requested.

Tab 2 – Restaurant Manager’s Experience and Qualifications: (Maximum five (5) pages) The Proposer shall review Part III Scope of Services and provide a narrative demonstrating Proposer’s approach to project and its ability to provide services. Relative to the scope of services (Part III) for the operations, describe the specific abilities of the firm and its sub-consultants. Provide the following information/descriptions:

- Provide a detailed history and description of the Proposer's Restaurant Manager's experience in restaurant and bar management, including the specific role and accomplishments, type of facilities managed, and scale of revenues.
- Provide Resumes of Key Corporate Personnel Assigned to Project: Proposers must include a resume of each officer or employee that will be responsible for managing the restaurant under the terms and conditions of the ensuing contract. All resumes for any

19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

- corporate employees, agents or assigns that may have any interest in management of the restaurant or the ensuing contract must also be included.
- Provide a summary of the qualifications and experience of the key person(s) within the organization directly responsible for management of the restaurant/bar/Mobile Concession Cart, especially with regard to prior experience with operation of projects similar in scale and character to the restaurant/bar/Mobile Concession Cart operation. Include years and type of experience relevant to the Scope of Services.
 - Provide at least *five* industry related references that have direct and relevant experience with the Proposer, including addresses, phone numbers and email addresses when available. Provide a comprehensive list of golf courses owned or operated by the-Proposer's Restaurant Manager (over the past five years), its officers or employees and the individuals that will be assigned to the project. Be sure to include contact information. If Proposers have conducted surveys to determine customer satisfaction at those facilities please include that information in your Proposal package.
 - Provide the Proposer's (the firm) total annual restaurant advertising expense for the previous fiscal year, and the total annual restaurant(s) gross sales for that same year.

Tab 3 - Staff Credentials and Management Team: Introduce the designated management and team. Include a team organizational chart highlighting the key people who shall be assigned to work on the operations (no photos please). Illustrate the lines of authority and designate the individual responsible for the completion of the service.

In addition, for each key person who would be assigned to the operations, include: a one- or two-page résumé with the person's title, email and other contact information, current position with the company, length of time with the company, a summary of relevant professional qualifications, relevant project experience and education. For each key person include a copy of applicable current professional licenses, registrations, and/or certifications. Identify services to be provided by subcontractors, and provide the name, email, and other contact information for each subcontractor's contact person, including county of residence. Provide summaries of each subcontractor's experience relative to the portion of the services they intend to provide.

Tab 4 – Business Plan (Operational Concepts & Plans):

Proposals must address the proposed Business Plan for the restaurant/bar/auditorium/pavilion/Mobile Concession Cart as described in the Scope of Services. Provide a Narrative and Vision Statement that includes:

- A clear statement of the Proposer's Vision for the restaurant/bar/Mobile Concession Cart operation and how the Proposer will appeal to the golfing as well as the general public, including any proposed improvements to the restaurant facility.

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- Proposers must clearly state their understanding of the City's intent to operate the restaurant in such a manner as to recognize the need to balance that expectation with the desire to operate the restaurant strictly on a for-profit basis. It is also very important that each Proposer insure full accountability of all public assets and policies.
- Proposers should indicate how they envision transitioning into management of the Club to minimize or eliminate any disruption to the players and customers.
- The Proposer's intended approach toward achieving and measuring customer satisfaction
- Provide projections and outlook for operating and growing the business
 - The nature and extent of restaurant, building and facility maintenance programs.
 - The nature and extent to which the Proposer intends to maximize public use of the premises and the facilities.
- Provide sample menu and proposed prices for both the bar and the restaurant
- Describe the number of seats/tables and layout.
- Specify and discuss the anticipated number and types of employees and their projected titles.
- Address proposed hours and days of operation on both weekdays and weekends and types of meals to be offered
- Discuss on-site management, staffing, and procedures - The proposed staffing plan for all operations. It is important to differentiate between full and part time positions, corporate employees and restaurant employees.
- Provide a narrative that indicates the management structure and ownership of the firm.
- Description of management approach and plans for:
 - Food and Beverage Services
 - Staffing Plan
 - Marketing strategies and plans (food/beverage)
- Proposers should submit copies of policies and procedures, organizational charts, job descriptions, etc. that they use in their everyday effort to improve the businesses they are responsible for managing. The Proposer hereby acknowledges that these attachments and statements are an integral part of the Proposal and as such are truthful and complete. Furthermore, Proposer affirms its liability to the City in carrying out its proposed operational concepts, financial commitments and plans, should it be the successful Proposer.

Tab 5:- Financial History :

- Provide Current Corporate Financial Statements: Each Proposer is required to submit a true copy of their current financial statements or the most recent independent audit report of the Proposer. The City will use this and other information to make an informed judgment of the financial stability of the Proposer. Proposers are encouraged to fully discuss their financial profile and offer the City insight into their capacity to obtain financing for large-scale projects and equipment purchases.
- Describe in detail the Proposer's financial commitments (if any).
- Provide evidence of financial stability. Proposers will be subject to a credit check.

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Tab 6- References: Include a minimum of three (3) references that have recently (within the last five (5) years) hired the firm for operations and management in the discipline of services being offered. Inaccurate information and/or if the reference cannot be reached due to inaccurate information, will be penalized in the assessment of the Proposal.

INSURANCE REQUIREMENTS:

The successful firm shall be required to supply, at its cost, the following minimum insurance coverage:

Workers Compensation:

Coverage is to apply for all employees for Statutory Limits in compliance with the applicable state and federal laws. The policy must include Employers' Liability with a limit of \$500,000 each accident; \$500,000 each employee; and \$500,000 policy limit for disease.

Comprehensive Commercial General Liability Insurance:

Occurrence form required. Aggregate must apply separately to this contract/job. Minimum \$1,000,000 each occurrence; \$ 2,000,000 general aggregate; \$1,000,000 products and completed ops; and \$500,000 fire damage.

Automobile Insurance:

To include all vehicles owned, leased, hired and non-owned vehicles with limits of not less than \$1,000,000 per each accident and for property damage and bodily injury, with contractual liability coverage for all work performed under this agreement.

Professional Liability Insurance:

A minimum of \$ 2,000,000 per occurrence with a \$ 2,000,000 policy term general aggregate. Coverage shall be extended beyond the policy year term either by a supplemental extended reporting period (ERP) with as great a duration as available, with no less coverage and reinstated aggregate limits, or by requiring that any new policy provide a retroactive date no later than the date of the agreement with the City.

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The City of Cocoa Beach is to be named additional insured on Comprehensive Commercial General Liability Policy, fire damage, and the Business Auto Policy. Certification of same shall be required. All certificates of insurance must be on file with and approved by the City before commencement of any work activities under this agreement.

Any and all deductibles to the above referenced policies are to be the responsibility of the successful firm.

All insurance policies must be issued by companies of recognized responsibility licensed to do business in Florida and must contain a provision that prohibits cancellation unless the City is given at least ten (10) days' prior written notice of cancellation by the insurance company.

INDEMNIFICATION/HOLD HARMLESS:

The contract with the successful Proposer shall include the following indemnity:

The **SUCCESSFUL PROPOSER** shall indemnify and hold harmless, the *CITY*, its Commissioners, officers and employees, from all liabilities, damages, losses and costs, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the **SUCCESSFUL PROPOSER**, or **SUCCESSFUL PROPOSER'S** officers, employees, agents, and other persons employed or utilized by the **SUCCESSFUL PROPOSER** in the performance of, or the failure to perform, the Contract.

In the event of a claim, the *CITY* shall promptly notify the **SUCCESSFUL PROPOSER** in writing by prepaid certified mail (return receipt requested) or by delivery through any nationally recognized courier service (such as Federal Express or UPS) which provides evidence of delivery, at the address shown in the contract.

The *CITY* shall provide all available information and assistance that the **SUCCESSFUL PROPOSER** may reasonably require regarding any claim, so long as such information and assistance does not require any out-of-pocket expenses to the City, or excessive use of City employee/consultant/or attorney's time.

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This agreement by **SUCCESSFUL PROPOSER** for indemnification shall continue in force for five (5) years from the date of full completion of all obligations of the **SUCCESSFUL PROPOSER** under the Contract.

In the event that there is a conflict between this agreement and any other applicable indemnification agreement between the CITY and the **SUCCESSFUL PROPOSER**, the agreement which provides the most protection for the CITY shall take precedence.

Nothing in the award, resulting agreement, or contract shall be deemed to affect the rights, privileges and immunities of the City as set forth in Florida Statute 768.28. The obligations of the **SUCCESSFUL PROPOSER** contained in this document shall survive the award of any agreement made pursuant to this document.

END OF PART II

PART III – SCOPE OF SERVICES

SCOPE OF SERVICES AND REQUIREMENTS

SCOPE OF WORK

Provide all necessary labor, supervision, products, supplies and equipment, as required to successfully operate and manage the 19th Hole Restaurant, Auditorium Banquet Area, Pavilion, and Mobile Cart Concession located at 5000 Tom Warriner Blvd Cocoa Beach, FL 32931 on behalf of the City of Cocoa Beach.

INTRODUCTION

The restaurant will be managed as a fully equipped sit-down restaurant with indoor/outdoor seating, including a liquor bar, auditorium banquet area, and pavilion.

OBJECTIVES

To serve the golfers as well as the general public as a full-service restaurant serving breakfast, lunch, dinner, beer, wine and preferably liquor, in a clean, safe, and professional manner in an attractive setting in compliance with all governmental codes and regulations, subject to

CITY OF COCOA BEACH – REQUEST FOR QUALIFICATIONS - CB24 006
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inspection and review by the City of Cocoa Beach and to generate revenue for the City through a contract agreement negotiated with the city.

THE FACILITY

The facility consists of the 19th Hole Restaurant, Auditorium Banquet Area, and Pavilion located at 5000 Tom Warriner Blvd Cocoa Beach, FL 32931. Any interior modifications can be negotiated between the successful bidder and the City.

The City owns the existing restaurant equipment. All or part of the equipment may be used by the Successful Proposer, or alternately, all or part of the Successful Proposer owned equipment may be used.

The restaurant is currently equipped with a service bar counter top and shelf, an 80 gallon natural gas water heater, and HVAC equipment and ducting to the restaurant.

The Building: The electric system meets code, and natural gas, water, sanitary sewer, phone, and cable television are all currently available in the facility. High speed internet is available.

The 19th Hole Restaurant area is 4,120 square feet and the lounge is 170 square feet, that is designated as restaurant space and includes a dining room, bar, kitchen. There is a separate men's and ladies' rooms (non-exclusive use) that is a total of 480 square feet. The auditorium/banquet room is 5,000 square feet which is sometimes used for other purposes by the City.

- Restaurant Area, 4120 SF
- Restaurant Lounge, 170 SF
- Auditorium/Banquet Room 5000 SF (with non-exclusive use rights)
- Kitchen 825 SF
- Ladies' & Men's Room 480 SF (with non-exclusive use rights)
- Pavilion Area, 5281 SF (2 restrooms/sink/exterior grills/playground area)
- Dumpster (1)
- 143 Parking Spaces (with non-exclusive use rights)

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Any improvements implemented by the successful Proposer shall be subject to the approved by the City of Cocoa Beach and shall be code compliant. Suggestions for specific improvements by the Proposer should be reviewed by the Building Department.

The Successful Proposer will keep and maintain the premises in good condition and repair in a neat, sanitary and orderly manner to comply with all applicable City, County, State and Federal regulations, and shall bear the expense of any and all painting and decoration made or furnished to the interior of the building, and of custodial services.

Taxes:

The Successful Proposer will pay all federal, state, and local taxes in connection with the agreement, including sales tax due on the sale of food and beverage, as well as employment taxes and other taxes, as applicable.

Mobile Concession Carts:

Mobile Concession Carts will operate daily, (subject to weather) year-round. They shall offer soft drinks, beer, wine, and potentially liquor. The carts must be approved for use by the Golf Course Management.

Parking:

The Country Club has non-exclusive use of the parking lot which must be shared among golfers, diners, other miscellaneous City uses, and the Golf Pro Shop.

Equipment and Improvements:

All improvements, fixtures, equipment and supplies installed, constructed, or located in the Restaurant shall be the property of the City upon any termination of the negotiated contract.

Signage:

Signage, including way-finding signs, may be included in the Proposal for consideration. Proposers should suggest signage locations which the City may consider.

Signage may be included in the Proposal for consideration. Proposers are encouraged to review the code requirements prior to submitting their Proposal if that Proposal includes signage.

Liquor License:

The City holds a liquor license, and the City is interested in the Successful Proposer serving liquor as well. The liquor license may be transferred to the Successful Proposer; however the transfer cost into the Successful Proposer's name as well as the cost to transfer it back into the

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city's name upon terminating the contract will be the Successful Proposer's responsibility. The Successful Proposer also has the option of using its own liquor license.

Contract Terms:

The term of the contract is proposed at ten (10) years or whatever period is negotiated.

The Successful Proposer shall have exclusive rights to provide food and beverage service at the 19th Hole Restaurant, Auditorium Banquet Area, and Pavilion located at 5000 Tom Warriner Blvd Cocoa Beach, FL 32931. The terms and details of financial agreements between the Successful Proposer and the City will be negotiated with the Successful Proposer.

Restaurant Operation:

The Successful Proposer shall be responsible for operations, marketing and advertising, staffing, cleaning, security, cost of some utilities, including but not limited to electric, natural gas or LP gas, cable or satellite TV service, and maintenance within the Restaurant, Bar, and obtaining all required permits and licenses.

The Successful Proposer shall utilize the Food & Beverage Management software of their choice for restaurant.

The City will in no way be obligated to subsidize or support the operation of the successful Proposer. The City will not pledge any revenues, taxes, fees, or other financial resources to pay expenses incurred by the firm that enters into the Contract with the City. It will be the complete responsibility of the Successful Proposer to ensure that it operates in a financially responsible manner.

INSURANCE:

The Successful Proposer must provide liability and liquor liability insurance in the amount of one million dollars each listing the city as an additional insured. The Successful Proposer must also provide worker compensation and motor vehicle insurance. Insurance must be rated by AM best as A or better. If reinsurance is purchased it must be rated AM best as A or better.

END OF PART II

PART IV – PROJECT DETAIL

RFQ PROCESS

The selection process will involve a staged proposal structure.

The intent is for respondents to indicate their interest, relevant experience, financial capability, staffing and organizational structure. The Proposers shall submit a proposal which will be the basis for short-listing not less than three (3) firms.

The city will utilize a Professional Services Review Committee (PSRC) in the selection process. The City will invite those firms which are short-listed to propose a services structure based on the Scope of Services in Part III and any other documents prepared by the City. The short-listed firms will present this documentation in oral presentations to the selection PSRC committee, as outlined on page 5 of this RFQ. The proposers will have no contact with the PSRC, unless initiated by the PSRC.

The Successful Proposer, as part of their contract with the City, will be required to perform the services in **PART III – SCOPE OF SERVICES**.

TRUTH-IN-NEGOTIATIONS CERTIFICATE:

If applicable, execution and signature by the vendor of the Bid Form shall act as the execution of a truth-in-negotiation certificate certifying that the wage rates and costs used to determine the compensation provided for in this Contract are accurate, complete, and current as of the date of the Contract. For professional service Contracts, the original Contract Fee Schedule and any additions thereto will be adjusted to exclude any significant sums by which the City determines the Contract Fee Schedule was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. The City shall exercise its rights under this “Certificate” within one (1) year following payment.

PROPOSAL BOND:

A Proposal Bond is not required.

INSTRUCTIONS FOR SUBMISSION OF PROPOSALS

Proposals shall clearly indicate the legal name, address and telephone number of the proposer (company, firm, partnership, individual). The signatory shall have the authority to bind the proposer to the submitted proposal.

The Proposer may be a corporation, partnership, limited liability company, joint venture or other legal entity. If more than one entity has combined to form the Proposer, each such entity must be appropriately registered to do business in the State of Florida as required by law.

END OF PART IV

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PART V - EVALUATION AND SCORING

RATING SYSTEM FOR DEVELOPMENT OF SHORT-LIST

For the development of a shortlist, a rating system will be utilized by the City's Professional Services Review Committee (PSRC) to score and rank each proposal. Proposers are encouraged to keep their qualification proposals concise and to include a minimum of marketing materials. The final ranking will be a combination of the written submittals and the oral presentations. At a minimum, each Proposal must address the following criteria:

	Maximum Points
1. Firm's Experience/Qualifications	10
2. Restaurant Manager's Experience/Qualifications	20
3. Staff Credentials and Management Team	15
4. Business/Financial Plan (Operational Concepts & Plans)	25
5. Financial History	30
6. References (results applied as appropriate to above)	none
TOTAL POSSIBLE POINTS	100

1. FIRM'S EXPERIENCE/QUALIFICATIONS - 10 POINTS

The Proposer will be evaluated on the Proposer's capacity and experience relative to the services specified in the scope of services section (Part III) of this RFQ. The points awarded shall be based on the following:

- List of restaurants currently or previously actively managed by the proposer (firm).
- A summary of the qualifications and experience of the entity (i.e., the firm) responsible for management of the restaurant/bar/Mobile Concession Cart, especially with regard to prior experience with operation of projects similar in scale and character to the restaurant/bar/Mobile Concession Cart operation. Include years and type of experience relevant to the Scope of Services.

2. RESTAURANT MANAGER'S EXPERIENCE/QUALIFICATIONS - 20 POINTS

The Proposer's restaurant manager's experience will be evaluated on the following items:

19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

- A detailed history and description of the Proposer's Restaurant Manager's experience in restaurant and bar management, including the specific role and accomplishments, type of facilities managed, and scale of revenues.
- Resumes of Key Corporate Personnel Assigned to Project: Proposers must include a resume of each officer or employee that will be responsible for managing the restaurant under the terms and conditions of the ensuing contract. All resumes for any corporate employees, agents or assigns that may have any interest in the restaurant or the ensuing contract must also be included.
- A summary of the qualifications and experience of the key person(s) within the organization directly responsible for management of the restaurant/bar/Mobile Concession Cart, especially with regard to prior experience with operation of projects similar in scale and character to the restaurant/bar/Mobile Concession Cart operation.
- Review of at least *five* industry related references that have direct and relevant experience with the Proposer's Restaurant Manager's, including addresses, phone numbers and email addresses when available. A comprehensive list of golf courses owned or operated by the-Proposer's Restaurant Manager (over the past five years), its officers or employees and the individuals that will be assigned to the Club.
- The Proposer's (the firm) total annual restaurant advertising expense for the previous fiscal year.

3. STAFF CREDENTIALS AND PROJECT TEAM - 15 POINTS

The Proposer's staff credentials, and project team will be evaluated on the following items:

- Team profile and proposed management
- Organizational chart
- Resumes, certifications, registrations, and licensure of personnel
- Credentials and experience of proposed project team
- Required information for sub-consultants, if applicable
- Management Team work history

4. BUSINESS/FINANCIAL PLAN (OPERATIONAL CONCEPTS & PLANS) – 25 POINTS

The Proposer's business plan will be evaluated on the following items:

- A clear statement of the Proposer's Vision for the restaurant/bar/Mobile Concession Cart operation and how the Proposer will appeal to the golfing as well as the general public, including any proposed improvements to the restaurant facility.
- An understanding of the City's intent to operate the restaurant in such a manner as to recognize the need to balance that expectation with the desire to operate the restaurant strictly on a for-profit basis.
- An indication of how they envision transitioning into management of the Club to minimize or eliminate any disruption to the players and customers.
- The intended approach toward achieving and measuring customer satisfaction.

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- Projections and outlook for operating and growing the business along with proposed financial arrangement with City
- Reviewing a sample menu and proposed prices for both the bar and the restaurant
- Proposed hours and days of operation on both weekdays and weekends and types of meals to be offered
- Review of on-site management, staffing, and procedures - The proposed staffing plan for all operations.
- Description of management approach and plans for:
 - Marketing strategies and plans (food/beverage)
- Submission of copies of policies and procedures, organizational charts, job descriptions, etc. that they use in their everyday effort to improve the businesses they are responsible for managing.

5. FINANCIAL HISTORY – 30 POINTS

The Proposer's ability to meet schedule and budget requirements will be evaluated based on the following:

- Review a copy of current financial statements or the most recent independent audit report of the Proposer. The City will use this and other information to make an informed judgment of the financial stability of the Proposer. Proposers are encouraged to fully discuss their financial profile and offer the City insight into their capacity to obtain financing for large-scale projects and equipment purchases.
- The proposer's current and future financial commitments
- Evidence of financial stability.

FINAL RANKING AND RECOMMENDATION FOR AWARD:

After the oral presentations are completed the PSRC will score all proposals using the evaluation sheet in Exhibit E to determine a final ranking of proposers considered to be most capable of performing the required services in the best interest of the city.

RISK:

Proposers responding to this Request for Proposals do so at their sole expense and risk. Subsequent to the issuance of this Request for Qualifications, the City reserves the right to:

- Make changes to the RFQ.
- Cancel this RFQ.
- Request clarifications.
- Waive any informality or irregularity.
- Negotiate modifications to qualification proposals.
- Reject any and all qualification proposals for any reason whatsoever; and
- Proceed with alternative project delivery methods if so desired by the city.

19TH HOLE RESTAURANT/AUDITORIUM OPERATIONS AND MANAGEMENT

No Proposer is guaranteed the award of an Agreement or any work as a result of being selected or short-listed for this project.

CLARIFICATIONS AND ADDITIONAL INFORMATION

The City reserves the right to request clarifications or additional information from any Proposer. Specific questions may be addressed to each of the Proposers and the Professional Services Review Committee may consider any further elaboration by the Proposers of any information previously submitted.

PARTNERSHIPS/CORPORATIONS/AGENTS

If the proposer is a joint venture, the individual empowered by a properly executed Declaration of Joint Venture and Power of Attorney Form shall execute the proposal. The proposal shall clearly identify who will be responsible for the various portions of the work.

When a corporation is a Proposer, the authorized corporate officer signing the Proposal shall set out the corporate name in full beneath which said officer shall sign his/her name and give title of his/her office.

Anyone signing the Proposal as officer or other agent must file with it legal evidence of the authority to do so. Proposers who are or include corporations or limited partnerships shall furnish a duly executed certificate of status from the Florida Department of State.

The person(s) signing each Proposal shall certify under oath on the Proposer Information / Certification Form (Attachment C), that the information contained in the Proposal is true and accurate. Each Proposer understands by submitting a Proposal that the Professional Services Review Committee will rely in part on such certification in selecting the short-listed firms.

Failure to submit documents requested above with the proposal or within twenty-four (24) hours of the request made by the CITY may be the basis for rejection of the Proposal. Such documents must be effective as of the date of the proposal.

END OF PART V

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PART VI – EXHIBITS

FORM	NAME	REMARKS	PAGE
EXHIBIT A	PROPOSAL SUBMITTAL SIGNATURE FORM	Mandatory	20
EXHIBIT B	PROJECT FORM & CERTIFICATION	Mandatory	21
EXHIBIT C	STATEMENT OF ORGANIZATION	Mandatory	22
EXHIBIT D	STANDARD CONTACT AMMENDMENT	Mandatory	25
EXHIBIT E	EVALUATION SHEET	City Staff	38

****** COMPLETE ALL EXHIBITS AND INCLUDE IN SUBMITTAL******

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EXHIBIT A
PROPOSAL SUBMITTAL SIGNATURE FORM

The undersigned attests to his/her authority to submit this proposal and to bind the firm herein named to perform as per contract if the firm is awarded the contract by the City.

The undersigned further certifies that he/she has read the Request for Proposal, Terms and Conditions, Insurance Requirements and any other documentation relating to this request and this proposal is submitted with full knowledge and understanding of the requirements and time constraints noted herein.

As addenda are considered binding as if contained in the original specifications, it is critical that the firm acknowledge receipt of same. The submittal may be considered void if receipt of an addendum is not acknowledged.

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

Addendum No. _____ Dated _____ Addendum No. _____ Dated _____

Company Name

Telephone # Email

Main Office Address

City State Zip Code

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Address of Office Servicing City of Cocoa Beach, if different than above

City

State

Zip Code

Name & Title of Firm Representative

Telephone #

Email

Signature

Date

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EXHIBIT B
PROJECT FORM & CERTIFICATION

Proposer Name:

Address:

City:

State

Zip

Telephone

Email

Type of Business (Corporation, Partnership, Other – Specify)

Tax ID number (EIN/SSN):

Certification: The undersigned hereby confirms as follows:

- A. I am a duly authorized agent of the Company/Individual submitting the proposal;
- B. I have read the Proposal in its entirety and fully understand and accept these terms unless specific variations have been expressly listed below.

Variations

The Proposer shall identify all variations and exceptions taken to this RFP in the space provided below unless such variation is expressly prohibited in the RFP documents. If no variations are listed here, it is understood that the Proposer fully complies with the terms and conditions. It is further understood that such variations may be cause for determining that the Proposal is non-responsive and ineligible for award:

Section

Variance

Section

Variance

Section

Variance

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Attach additional sheets as necessary.

By:

Manual Signature of Agent

Date

Typed/Printed Name of Agent

Title of Agent

DRAFT

EXHIBIT C
STATEMENT OF ORGANIZATION

Page 1 of 3

The proposer must state whether he/she is an individual, partnership, corporation, or joint venture. Partnerships shall show the names, titles, and original signature of all partners with authority to bind the company. Corporations must be signed in the name and with the seal of the corporation, followed by the original signature and title of the person authorized to bind the corporation. Each joint venture shall be required to sign for each individual, partnership and corporation that is a party to the joint venture.

If the Proposer is an **INDIVIDUAL**:

Individual's Name:

D/B/A:

Signature:

Business Address:

Phone:

Fax:

If the Proposer is a **PARTNERSHIP and LIMITED LIABILITY COMPANY**

(Provide names and signatures of all partners):

Company Name:

Partner

Signature:

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Partner

Signature:

Partner

Signature:

Business Address:

Phone:

Fax:

EXHIBIT C

STATEMENT OF ORGANIZATION

Page 2 of 3

If the Proposer is a **CORPORATION:**

Corporation Name:

State of Incorporation

Name/Title of person

authorized to bind

Signature:

Name/Title of person

authorized to bind

Signature:

Business Address:

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Phone:

Fax:

If Proposer is a **JOINT VENTURE:**

Name/Title:

Business Address

Phone:

Fax:

**Name/Title of person
authorized to bind**

Signature:

Business Address:

Phone:

Fax:

EXHIBIT C
STATEMENT OF ORGANIZATION

Page 3 of 3

STATE OF _____

COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____, 20____, by
_____ who ☐ is personally known to me or ☐ has produced his/her driver's
license as identification.

Notary Public - State of Florida

Print Name:

Commission No:

() Offeror shall submit proof that the company is authorized to do business in the State of Florida.

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EXHIBIT D

CITY OF COCOA BEACH, FLORIDA

STANDARD CONTRACT ADDENDUM

THIS STANDARD CONTRACT ADDENDUM is made and entered into this _____ day of _____, 20____, by and between the CITY OF COCOA BEACH, a Florida municipality, hereinafter referred to as the “City”, and _____, hereinafter referred to as “Contractor”, concerning that certain agreement entitled _____, dated _____ (“Agreement”).

WITNESSETH:

WHEREAS, Section 119.0701, Fla. Stat., requires that certain public agency contracts must include certain statutorily required provisions concerning the contractor’s compliance for Florida’s Public Records Act; and

WHEREAS, Section 768.28, Fla. Stat., sets forth certain mandatory limitations on indemnification and liability for Florida public agencies; and

WHEREAS Florida law requires that public agency contracts be subject to non-appropriation and thereby contingent upon appropriation during the public agency’s statutorily mandated annual budget approval process.

NOW, THEREFORE, in consideration of the covenants set forth herein, the parties agree to this addendum as follows:

1. Amendment. This Addendum hereby amends and supplements the terms of the Agreement. In the event of a conflict between the terms of the Agreement and terms of the Addendum, the terms of the Addendum shall prevail.

2. Public Records Compliance. Contractor agrees that, to the extent that it may "act on behalf" of the City within the meaning of Section 119.071(1)(a), Florida Statutes in providing its services under this Agreement, it shall:

- (a) Keep and maintain public records required by the public agency to perform the service.
- (b) Upon request from the public agency’s custodian of public records, provide the public agency with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law.

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- (c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the public agency.
- (d) Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of the contractor or keep and maintain public records required by the public agency to perform the service. If the contractor transfers all public records to the public agency upon completion of the contract, the contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon completion of the contract, the contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.
- (e) Pursuant to Section 119.0701(2)(a), Fla. Stat., **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

**CITY HALL - SECOND FLOOR
1600 MINUTEMEN CAUSEWAY
P.O. BOX 322430
COCOA BEACH, FL 32932-2430.
321-868-3286,
CITYCLERK@CITYOFCOCOABEACH.COM**

3. Public Records Compliance Indemnification. Contractor agrees to indemnify and hold the City harmless against any and all claims, damage awards, and causes of action arising from the contractor's failure to comply with the public records disclosure requirements of Section 119.07(1), Florida Statutes, or by contractor's failure to maintain public records that are exempt or confidential and exempt from the public records disclosure requirements, including, but not limited to, any third party claims or awards for attorneys' fees and costs arising therefrom. Contractor authorizes the public agency to seek declaratory, injunctive, or other appropriate relief against Contractor in Brevard County Circuit Court on an expedited basis to enforce the requirements of this section.

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4. Compliance/Consistency with Section 768.28, Fla. Stat. Any indemnification by City specified in the Agreement shall not be construed as a waiver of City's sovereign immunity and shall be limited to such indemnification and liability limits consistent with the requirements of Section 768.28, Fla. Stat. and subject to the procedural requirements set forth therein. Any other purported indemnification by City in the Agreement in derogation hereof shall be void and of no force or effect.

5. Non-appropriation. City's performance and obligation to pay under this Agreement is contingent upon an appropriation during the City's annual budget approval process. If funds are not appropriated for a fiscal year, then the Contractor shall be notified as soon as is practical by memorandum from the City Manager or designee that funds have not been appropriated for continuation of the Agreement, and the Agreement shall expire at the end of the fiscal year for which funding has been appropriated. The termination of the Agreement at fiscal yearend shall be without penalty or expense to the City subject to the City paying all invoices for services rendered during the period the Agreement was funded by appropriations.

6. Venue and Jurisdiction. Notwithstanding any of other provision to the contrary, this Agreement and the parties' actions under this Agreement shall be governed by and construed under the laws of the state of Florida, without reference to conflict of law principles. As a material condition of this Agreement, each Party hereby irrevocably and unconditionally: i) consents to submit and does submit to the jurisdiction of the Circuit Court in and for Brevard County, Florida for any actions, suits or proceedings arising out of or relating to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this instrument on the days and year indicated below and the signatories below to bind the parties set forth herein.

Contractor:

Print Name: _____

Title: _____

Company: _____

City of Cocoa Beach

Print Name: _____

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EXHIBIT E
EVALUATION SCORE SHEET

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MANAGEMENT

FIRM NAME

SELECTION CRITERIA	MAXIMUM POINTS	ASSIGNED POINTS
1. Firm's Experience and Qualifications	10	
2. Restaurant Manager's Experience and Qualifications	20	
3. Staff Credentials and Management Team	15	
4. Business Plan (Operational Concepts & Plans)	25	
5. Financial History	30	
TOTAL POINTS	100	

EVALUATOR SIGNATURE

DATE

City of Cocoa Beach City Commission Agenda Item Summary

**DEPARTMENT MAKING
REQUEST/NAME:**

City Commission /
Wayne Carragino, City Manager

MEETING DATE

May 16, 2024

REQUESTED MOTION/ACTION

Discuss the property 3570 Ocean Beach Blvd. and the potential future usage of the property as ADA Beach Park.

Commissioner Representative: Skip Williams, Commissioner

Recommendations: Discuss

IS THIS ITEM BUDGETED (IF APPLICABLE)?

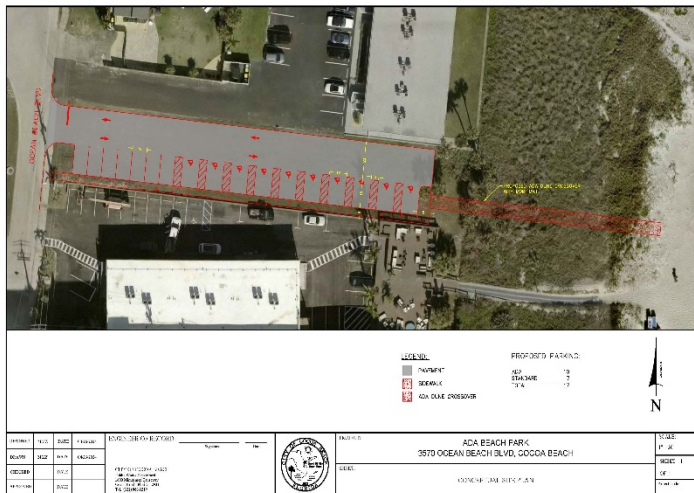
BACKGROUND:

This agenda item is to discuss 3570 Ocean Beach Blvd. This property is currently owned by the Federal Government. The Department of Defense (DOD) will screen the disposal of the property. Then the Government Services Administration (GSA) will screen the property with all Federal agencies before declaring the property surplus to government needs. Once it is declared surplus, municipalities will be first on the list to obtain the property. If the City obtains this land, the proposal is to make it an ADA Beach Access Park. Attached is the conceptual site plan.



City of Cocoa Beach

ADA BEACH ACCESS DEDICATED FACILITY



ADA Beach Park is located at 3570 Ocean Beach Boulevard in Cocoa Beach, Florida.

The park is currently owned by the United States Space Force.

The City of Cocoa Beach desires to obtain the property and dedicate it as a facility for people with disabilities (ADA) to access the beach.

A location map and conceptual site plan are illustrated above.

Currently, the individual processing the acquisition is "AHLIN, THERESA C CIV USSF HQSF 45 CES/CEIA theresa.ahlin@spaceforce.mil "

The preliminary package was submitted to the higher-level organization for DoD screening which is a 30-day process.

We believe responses are due around mid/late May.

The USSF is submitting the staffing package, and the ECD is to line up with that mid/late May timeframe.

After that, and if there are no interested responses from other DoD agencies, the package will go through to GSA.

The city is requesting any help that you can give us in obtaining the property.

Respectfully City of Cocoa Beach:

Skip Williams, Cocoa Beach Commissioner (321-868-3201)

Wayne Carragino, City Manager (321-868-3201)

