

Town of Lauderdale-By-The-Sea

Regular Town Commission

Agenda

Wednesday, September 13, 2023

6:30 PM



Jarvis Hall 4505 N. Ocean Drive
www.Lauderdalebythesea-fl.gov

LAUDERDALE-BY-THE-SEA TOWN COMMISSION

Mayor Chris Vincent
Vice Mayor Edmund Malkoon
Commissioner Buz Oldaker
Commissioner Randy Strauss
Commissioner Theo Pouloupoulos

Linda Connors, Town Manager
Susan Trevarthen, Town Attorney
Katrina Adler, Town Clerk

Regular Town Commission

Wednesday, September 13, 2023, 6:30 PM
Jarvis Hall 4505 N. Ocean Drive

1. **CALL TO ORDER, MAYOR CHRIS VINCENT**
2. **PLEDGE OF ALLEGIANCE TO THE FLAG**
3. **INVOCATION Rabbi Bentzion Singer**
4. **ADDITIONS, DELETIONS, DEFERRALS OF AGENDA ITEMS**
5. **PRESENTATIONS**
 - 5.a. Suicide Prevention Proclamation
6. **PUBLIC COMMENTS**
7. **PUBLIC SAFETY DISCUSSION**
8. **TOWN MANAGER REPORT**
 - 8.a. Town Manager Report
 - 8.b. July 2023 Finance Report
9. **TOWN ATTORNEY REPORT**
10. **APPROVAL OF MINUTES**
 - 10.a. Approval of Minutes for 8-15-23 Regular Town Commission Meeting
11. **CONSENT AGENDA**
 - 11.a. Special Event Application - Wild Berry Anniversary
 - 11.b. Resolution 2023-49: A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PIGGYBACK AGREEMENT WITH LMK PIPE RENEWAL, LLC, FOR CURED IN PLACE PIPE LINING AT 4607 W. TRADEWINDS AVENUE IN THE AMOUNT NOT TO EXCEED \$41,622.81; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT WITH LMK PIPE RENEWAL, LLC, ; PROVIDING FOR IMPLEMENTATION AND FOR AN EFFECTIVE DATE
 - 11.c. Boo! By The Sea 2024
 - 11.d. RESOLUTION 2023-54: A RESOLUTION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A MAINTENANCE MEMORANDUM OF AGREEMENT WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION FOR LANDSCAPE/HARDSCAPE IMPROVEMENTS WITHIN THE RIGHT OF WAY OF STATE ROAD A1A - NORTH OCEAN BOULEVARD; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND FOR AN EFFECTIVE DATE (Exhibit 1).

12. OLD BUSINESS

13. NEW BUSINESS

13.a. Resolution 2023-51: A RESOLUTION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PIGGYBACK AGREEMENT WITH JANICE M. RILEY INC. DBA THE PAVING LADY FOR SIDEWALK INSTALLATION ON HIBISCUS AVE FROM BOUGAINVILLE DR TO SEA GRAPE DRIVE, IN AN AMOUNT NOT TO EXCEED \$49,886.44; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION AND FOR AN EFFECTIVE DATE.

13.b. Traffic Calming Study for South Silver Shores

13.c. Special Event Application for Chanukah Festival Sunday, December 10, 2023

13.d. Resolution 2023-47: A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A REVOCABLE LICENSE AGREEMENT WITH ARUBA BAY, INC. FOR USE OF THE OCEAN PLAZA FOR OUTDOOR DINING; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND FOR AN EFFECTIVE DATE.

14. COMMISSIONER COMMENTS

15. ORDINANCES 1st Reading

15.a. Ordinance 2023-06 AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, SETTING MARCH 19, 2024 FOR THE TOWN'S 2024 GENERAL MUNICIPAL ELECTION DATE TO COINCIDE WITH THE PRESIDENTIAL PREFERENCE PRIMARY ELECTION DATE AS ALLOWED BY SECTION 101.75, FLORIDA STATUTES; ESTABLISHING THE QUALIFYING PERIOD FOR THE 2024 GENERAL MUNICIPAL ELECTION TO OCCUR FROM NOON ON TUESDAY, JANUARY 2, 2024 THROUGH NOON ON TUESDAY, JANUARY 9, 2024, AS REQUIRED BY THE SUPERVISOR OF ELECTIONS; PROVIDING FOR THE DATE ON WHICH ELECTED OFFICIALS TAKE OFFICE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; AND PROVIDING FOR AN EFFECTIVE DATE.

16. ORDINANCES 2nd Reading

16.a. ORDINANCE 2023-05: AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, AMENDING CHAPTER 9, "FIRE PREVENTION AND PROTECTION," OF THE CODE OF ORDINANCES BY AMENDING ARTICLE 1" IN GENERAL" AND ARTICLE II "FIRE DEPARTMENT" TO ADOPT THE CITY OF POMPANO BEACH'S FIRE PREVENTION CODE AND FEE SCHEDULE; AMENDING ARTICLE VI "FIRE PREVENTION SPECIAL ASSESSMENT" TO CLARIFY AND UPDATE PROVISIONS; PROVIDING FOR CODIFICATION, SEVERABILITY, CONFLICTS AND AN EFFECTIVE DATE.

17. RESOLUTIONS – PUBLIC COMMENTS

18. QUASI JUDICIAL PUBLIC HEARINGS

19. ADJOURNMENT

THE TOWN OF LAUDERDALE-BY-THE-SEA WILL FURNISH APPROPRIATE AUXILIARY AIDS AND SERVICES NECESSARY TO AFFORD INDIVIDUALS AN EQUAL OPPORTUNITY TO PARTICIPATE IN MEETINGS OF THE TOWN COMMISSION. IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND FLORIDA STATUTE 286.26, PERSONS WITH DISABILITIES NEEDING SPECIAL ACCOMMODATION TO PARTICIPATE IN THIS PROCEEDING

SHOULD CONTACT THE TOWN CLERK NO LATER THAN TWO (2) DAYS PRIOR TO THE MEETING AT (954) 640-4200 FOR ASSISTANCE.

IF ANY PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE TOWN COMMISSION WITH RESPECT TO ANY MATTER CONSIDERED AT SUCH MEETING OR HEARING, HE/SHE WILL NEED A RECORD OF THE PROCEEDINGS AND FOR SUCH PURPOSES MAY NEED TO ENSURE THAT A VERBATIM RECORDING OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED.

PROCEDURES FOR PUBLIC COMMENTS:

Public Comments may address issues that are not on this meeting's agenda, but should relate to the business of the Town, and should not contain personal attacks. If your comment requires follow up, the Town Manager will have a staff person respond to your concerns, and will advise us of the outcome.

The Town Clerk will read off the names of those who have signed up to speak. When your name is called, please come to the podium, state your name for the record, and indicate whether you are a Town resident. Do not state your address. You have up to three minutes to make your comments, but there is no requirement to use the entire time. If you wish to address a particular Commissioner or member of Town Administration, please do so by use of their title.

If you wish to approach the Commission dais to hand out a document or for some other reason, please request permission and state your reason for doing so. All documents to be provided to the Commission should be handed to the Town Clerk for distribution.

These procedures have been developed to assure that the Town Commission meeting time is efficiently used, and that meetings are conducted in a polite and respectful manner. More information on the decorum rules for Town Commission meetings is available in Section 2-23 of the Town Code of Ordinances.

INVOCATION:

The Invocation before each Town Commission meeting is a voluntary service of a private citizen, offered to serve the spiritual needs of the members of the Town Commission and solemnize the meeting. It is not intended to be an opportunity to advance or disparage one faith or belief over another. The views expressed in the Invocation have not been previously reviewed by the Town and do not necessarily represent the beliefs of any Town employee or official. No person is required to be present at or participate in the Invocation, and the decision whether to be present or participate in the Invocation will not affect any person's right to actively participate in the official business of the Town or obtain any benefit from the Town. The Town's written Invocation policy is available on its website, and upon written request to the Town Clerk.all static



Agenda Item No: 5.a.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Katrina Adler, Town Clerk

Submitting Department: Administration

Item Type: Presentation

Agenda Section: PRESENTATIONS

Subject Title: Suicide Prevention Proclamation

Explanation: A proclamation designating September as "Suicide Prevention Month".

Recommendation:

Exhibits:

1. Suicide Prevention Month

Proclamation

*Issued by the Governing Body of the
Town of Lauderdale-By-The-Sea, Florida*

WHEREAS, the Town of Lauderdale-By-The-Sea Commission is firmly committed to raising awareness about Suicide Prevention in the Town of Lauderdale-By-The-Sea and Broward County, and

WHEREAS, the month of September is nationally recognized as Suicide Prevention Awareness Month.

WHEREAS, more than 45,000 Americans die by suicide each year, and

WHEREAS, suicide is a national epidemic costing the lives of 6,000 Veterans each year and is a leading cause of death for first responders, and

WHEREAS, suicide is the second leading cause of death for children, adolescents, and young adults age 10 to 24 years and because of that the American Academy of Pediatrics, the Children's Hospital Association, and the American Academy of Child and Adolescent Psychiatry have declared a national emergency in child mental health, and

WHEREAS, it is critical to recognize the signs of depression that may lead to thoughts of suicide including: speaking about wanting to die, feelings of isolation or hopelessness, increased use of drugs or alcohol, and severe mood swings, and

WHEREAS, it is critical to recognize the best methods to prevent suicide when a person is in crisis: ask if the person is thinking of taking their life; keep them safe and remove their access to lethal means such as poisons, prescription drugs, and firearms; get them professional help. In Florida, dial 988 or call the National Suicide Prevention Lifeline 1- 800-273-8255 or text 741741.

NOW, THEREFORE, I, Chris Vincent, Mayor, on behalf of the Town Commission and residents of Lauderdale-By-The-Sea, hereby designates the month of **September** as

"Suicide Prevention Month"

and encourages everyone to recognize the signs of depression that may lead to thought of suicide and to understand the best methods to prevent suicide when a person is in crisis.

*In witness wherof we have hereunto set our
hands and caused this seal to be affixed*

Chris Vincent, Mayor

Katrina Adler, Town Clerk





Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Linda Connors, Town Manager

Submitting Department: Administration

Item Type: Presentation

Agenda Section: TOWN MANAGER REPORT

Subject Title: Town Manager Report

Explanation: Following is the Town Manager's report for September 13, 2023.

1. Sunsational Award

The Town's "Golf Cart Do's and Don'ts" video received second place in the Radio Program, Ad or PSA category at the Florida Festivals and Events Association SunSational Award ceremony. The video provides important information on the requirements for operating golf carts and where you can drive one within the Town. To view the video, click <https://www.lauderdalebythesea-fl.gov/civicalerts.aspx?aid=259>.

2. Community Center Fee

As a reminder to all of our community center participants - beginning October 1, there will be a \$25 resident and \$50 non-resident annual fee for participating in the Community Center programs. One-time registration is \$5 per class.

3. Downtown Enhancement Project

The Downtown Enhancement project continues to progress a little ahead of schedule. The foundation has been poured on the south side of the street and dredging for the foundation is progressing on the north side. We anticipate the pavers being replaced on the ocean front block in the next week or so.

4. Tours of the Town with Senator Pizzo and Representative LaMarca

The staff held separate Town tours with Senator Pizzo and Representative LaMarca. We showed them the Codrington Drive drainage project that was completed with a state appropriation. We also toured the Town's community center where we discussed our grant application for an expanded kitchen and also the public safety complex as Staff will be submitting an appropriation request for a new public safety facility.

5. Grant Applications

The Town applied for a \$25,000 grant from the Florida Division of Arts and Culture for the Downtown Music Series. The rankings were held on August 18th and the Town's application

was accepted on the funding list. The awarded amount will be announced in June or July 2024. If we are awarded, these funds will be available for the FY25 budget year.

We have also applied for a \$200,000 grant for Friedt Park improvements, \$50,000 for Beach Portals, \$350,000 for hazard mitigation projects and \$100,000 for Phase 1 of Community Center improvements. If awarded, all funds will be available for the FY25 budget year. Thank you to Courtney Easley for her work on coordinating these applications!

6. Upcoming Meetings

September 19	Planning and Zoning Board	6:00 PM
September 26	Town Commission Budget Meeting	5:01 PM
September 26	Town Commission Regular Meeting	6:30 PM
September 28	Special Magistrate Meeting	6:00 PM

Recommendation: N/A

Exhibits: None



Agenda Item No: 8.b.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Lucila Lang, Finance Director

Submitting Department: Finance

Item Type: Town Manager Report

Agenda Section: TOWN MANAGER REPORT

Subject Title: July 2023 Finance Report

Explanation: Presented is the July 2023 financial report which consists of the attached Revenue/Expenditure Report (Exhibit 2) and the Cash & Investment Report (Exhibit 3). At the end of July, the Town was 83.33% through the fiscal year.

Recommendation: N/A

Exhibits:

1. Summary-July 2023
2. Revenue Expenditure Report July 2023
3. CASH-INVESTMENT REPORT_July 2023

The following is a summary of the operating results through 7/31/23:

Fund	Annual Budget	Budgeted Appropriations	Budgeted Revenues Excluding Appropriations	YTD Revenues		YTD Expenditures		Net Amount
				Amount	% of Budget	Amount	% of Budget	
General Fund	\$ 14,345,011.00	\$ 477,342.00	\$ 13,867,669.00	\$ 13,328,848.52	96.11%	\$ 12,802,196.21	92.32%	\$ 526,652.31
Building Fund	\$ 998,833.00	\$ 30,983.00	\$ 967,850.00	\$ 2,000,182.53	206.66%	\$ 1,196,457.82	123.62%	\$ 803,724.71
Sewer Fund	\$ 1,528,373.00	\$ 224,296.00	\$ 1,304,077.00	\$ 1,009,415.98	77.40%	\$ 1,144,189.07	87.74%	\$ (134,773.09)
Fire Fund	\$ 2,344,367.00	\$ 1,175,350.00	\$ 1,169,017.00	\$ 1,197,578.87	102.44%	\$ 1,769,436.08	151.36%	\$ (571,857.21)
Capital Fund	\$ 4,979,310.00	\$ 2,798,866.00	\$ 2,180,444.00	\$ 11,762.03	0.54%	\$ 2,508,397.75	50.38%	\$ (2,496,635.72)
Parking Fund	\$ 2,457,024.00	\$ -	\$ 2,457,024.00	\$ 3,210,479.18	130.67%	\$ 2,963,690.35	120.62%	\$ 246,788.83
Grand Total	\$ 26,652,918.00	\$ 4,706,837.00	\$ 21,946,081.00	\$ 20,758,267.11		\$ 22,384,367.28		\$ (1,626,100.17)

Notable items for this month are as follows:

General Fund-001:

- Through the month of July, the Town had received a total of \$9,922,690.44 or 101.23% of Ad Valorem Property Taxes of budgeted amount.
- Overall, General Fund revenues and expenditures are within budget.

Building Fund-102:

- Building Permit Fees are at \$1.9M, which is 109% over what was budgeted for FY23.
- Fund expenditures correlate with the revenues; therefore, expenses are above what was budgeted.

Sewer Fund-103:

- Sewer Fund revenues and expenditures are within expectations for the fiscal year.

Fire Fund-115:

- Through the month of July, the Town had received a total of \$1,153,199.23 or 101.67% of Property Tax-Fire Assessment of budgeted amount.
- Expenditures are within expectations.

Capital Projects Fund-300:

- Activity for capital projects for the month of July is listed below:

JULY, 2023 REPORT INFORMATION

<u>CIP Projects</u>	<u>Budget</u>	<u>July Expenditures</u>	<u>YTD Expenditures</u>	<u>% Completion</u>	<u>Comments</u>
Jarvis AV Upgrades	\$ 165,000.00	\$ -	\$ 79,532.47	48.20%	No activity for the month of July.
Financial Software Updates	\$ 98,000.00	\$ -	\$ 8,744.83	8.92%	No activity for the month of July.
Offsite Roof Replacement	\$ 331,000.00	\$ -	\$ 305,860.00	92.40%	No activity for the month of July.
Downtown Parking Configuration	\$ -	\$ -	\$ 43,819.22	0.00%	No activity for the month of July.
Downtown Commercial Refurbishment	\$ 1,200,000.00	\$ 59,047.84	\$ 295,796.46	24.65%	Payment i/a/o \$1,427.34 made to the U.S. Postal Service for residential postcards for the Downtown Project. Payment i/a/o \$57,620.50 made to Artistic Paver Manufacturing LLC for the downtown pavers.
Bel Air-Seawall Repair-East	\$ 215,545.00	\$ 574.93	\$ (41,443.83)	-19.23%	Payment i/a/o \$574.93 made to The Chappell Group, Inc. for principal's time in coordination with Town and Palm Club, preparation of exhibit for property appraiser, and attendance at the Commission meeting.
Canal Dredging	\$ 380,000.00	\$ -	\$ 358,914.73	94.45%	No activity for the month of July.
Storm Water Rate Study	\$ 60,000.00	\$ -	\$ -	0.00%	No activity for the month of July.
Dune Master Plan/ Beach Renourishment	\$ -	\$ -	\$ 2,463.87	FY22 Project. Rollover expense.	No activity for the month of July.
Pedestrian Amenities	\$ 50,000.00	\$ 2,594.31	\$ 3,638.13	7.28%	Payment i/a/o \$2,594.31 made to AT&T for engineering costs to relocate lines.
Street Project Codrington Drive	\$ 1,700,000.00	\$ 958,163.15	\$ 1,394,090.06	82.01%	Payments in the amounts of \$1,485.06 and \$11,254.71 made to Baxter & Woodman, Inc. for pre-construction conference meetings, submittal reviews, construction clarifications and changes, inspections, pay applications and inspections. Payment i/a/o \$945,423.38 made to Man Con, Inc. for the installation of the storm sewer system on Codrington.
Friedt Park	\$ 700,000.00	\$ -	\$ -	0.00%	No activity for the month of July.
Totals:	\$ 4,899,545.00	\$ 1,020,380.23	\$ 2,451,415.94		

Parking Fund-310:

- Parking revenues are at 127.62%, slightly higher than what was budgeted for FY23.
- Expenditures are within expectations.
- The top producing lots for July 2023 were:
 - Ocean Front Meters
 - A1A Parking Lot
 - El Prado Parking Lot
 - El Mar Parking Lot

A breakdown of parking revenue by lots is outlined in the Table below:

	<u>March, 2023</u>		<u>April, 2023</u>		<u>May, 2023</u>		<u>June, 2023</u>		<u>July, 2023</u>	
South Ocean	\$ 41,968.17	\$ 1,832.16	\$ 29,660.20	\$ 3,148.74	\$ 11,896.15	\$ (15,920.43)	\$ 18,142.30	\$ (2,994.29)	\$ 26,750.96	\$ 2,690.03
Ocean Front Meters	\$ 49,731.89	\$ 5,759.91	\$ 38,918.20	\$ 1,076.73	\$ 71,118.22	\$ 29,654.77	\$ 43,912.12	\$ 6,192.06	\$ 49,782.49	\$ 9,343.16
Commercial Blvd. Meters	\$ 14,963.95	\$ 3,801.91	\$ 9,348.83	\$ 1,472.93	\$ 12,111.88	\$ 5,118.23	\$ 8,993.10	\$ 2,492.88	\$ 8,092.04	\$ 2,358.74
Parking Meters-Beach	\$ 26,731.83	\$ 342.59	\$ 20,172.51	\$ 151.65	\$ 25,320.67	\$ 2,505.31	\$ 19,139.94	\$ (2,505.56)	\$ 23,067.41	\$ 5,245.50
PalM Portal-FDG	\$ 18,129.46	\$ 2,793.93	\$ 12,520.55	\$ (0.32)	\$ 16,237.39	\$ 3,394.67	\$ 11,749.80	\$ (211.22)	\$ 15,964.91	\$ 2,261.77
El Prado Parking Lot	\$ 85,645.75	\$ 5,008.22	\$ 60,541.11	\$ (1,005.96)	\$ 70,499.04	\$ 9,450.96	\$ 45,246.21	\$ (3,469.00)	\$ 55,887.40	\$ (3,314.97)
Town Hall Parking Lot	\$ 5,654.43	\$ 316.77	\$ 3,557.56	\$ (103.53)	\$ 4,790.44	\$ 133.12	\$ 1,504.69	\$ (1,174.25)	\$ 4,175.29	\$ 797.42
El Mar Parking Lot	\$ 30,037.34	\$ (1,056.48)	\$ 22,990.58	\$ (1,034.35)	\$ 31,260.05	\$ 2,636.48	\$ 22,638.64	\$ (1,748.32)	\$ 24,714.59	\$ 592.56
A1A Parking Lot	\$ 91,556.05	\$ 5,848.89	\$ 68,410.71	\$ 8,333.88	\$ 72,564.23	\$ 10,611.48	\$ 46,766.72	\$ (3,975.81)	\$ 63,036.67	\$ 3,297.50
Bougainvillea/PoINCIANA	\$ 34,718.69	\$ 6,215.64	\$ 26,785.18	\$ 6,143.83	\$ 27,741.47	\$ 8,781.60	\$ 18,194.53	\$ 2,245.98	\$ 23,682.87	\$ 6,317.29
Monthly Total:	\$ 399,137.56		\$ 292,905.43		\$ 343,539.54		\$ 236,288.05		\$ 295,154.63	
<i>Difference from last year \$:</i>	\$ 30,863.54		\$ 18,183.60		\$ 56,366.19		\$ (5,147.53)		\$ 29,589.00	
<i>Difference from last year %:</i>	8.38%		6.62%		19.63%		-2.13%		11.14%	

In addition to the detailed information on parking revenues, the following chart shows the collection of parking fines collected at Town Hall and Municipal Citations. For the month of July, no collections were received from Municipal Citations since these revenues are one month in arrears, July revenues will be recognized in August.

Parking Fines	February 2023	March 2023	April 2023	May 2023	June 2023	July 2023
	\$ 18,682.38	\$ 14,305.00	\$ 16,538.03	\$ 1,680.00	\$ 25,689.13	\$ 1,220.00

Note:

- Information from RTR Financial Services, Inc. (Collection Agency) has not been received for this month.



Lauderdale-By-The-Sea, FL

Budget Report Account Summary

For Fiscal: 2022-2023 Period Ending: 07/31/2023

	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
Fund: 001 - General Fund						
Department: 000000 - NonDesignated						
001-000000-380200 Appropriated Fund Balance	477,342.00	477,342.00	0.00	0.00	-477,342.00	0.00 %
Department: 000000 - NonDesignated Total:	477,342.00	477,342.00	0.00	0.00	-477,342.00	0.00%
Department: 301000 - Ad Valorem Property Taxes						
001-301000-311100 Ad Valorem Property Taxes	9,801,757.00	9,801,757.00	230,180.74	9,922,690.44	120,933.44	101.23 %
Department: 301000 - Ad Valorem Property Taxes Total:	9,801,757.00	9,801,757.00	230,180.74	9,922,690.44	120,933.44	101.23%
Department: 301100 - Utility Taxes						
001-301100-311101 Fpl Utility Tax	898,000.00	898,000.00	99,623.91	781,584.58	-116,415.42	87.04 %
001-301100-311440 Gas Utility Tax	20,000.00	20,000.00	2,177.73	17,693.80	-2,306.20	88.47 %
001-301100-314300 Water Utility Tax	168,000.00	168,000.00	16,347.57	145,928.77	-22,071.23	86.86 %
Department: 301100 - Utility Taxes Total:	1,086,000.00	1,086,000.00	118,149.21	945,207.15	-140,792.85	87.04%
Department: 301600 - Francise Taxes						
001-301600-313100 Fl Power & Light Franchise	600,000.00	600,000.00	64,907.74	578,379.54	-21,620.46	96.40 %
001-301600-313300 Waste Franchise Collection	170,000.00	170,000.00	8,168.34	89,279.37	-80,720.63	52.52 %
001-301600-313301 Waste Franchise Adm-fee	9,000.00	9,000.00	0.00	0.00	-9,000.00	0.00 %
001-301600-313400 Gas Franchise	22,000.00	22,000.00	0.00	10,078.84	-11,921.16	45.81 %
001-301600-313600 Towing Franchise Fees	800.00	800.00	0.00	210.00	-590.00	26.25 %
Department: 301600 - Francise Taxes Total:	801,800.00	801,800.00	73,076.08	677,947.75	-123,852.25	84.55%
Department: 302000 - Licenses & Permits						
001-302000-321100 Business License Taxes	100,000.00	100,000.00	76.96	109,435.16	9,435.16	109.44 %
001-302000-321110 Sidewalk Cafe Row	80,000.00	80,000.00	719.11	49,945.44	-30,054.56	62.43 %
001-302000-322150 Miscellaneous Permits	1,000.00	1,000.00	0.00	0.00	-1,000.00	0.00 %
001-302000-322250 Zoning Permit & Fees	2,500.00	2,500.00	1,280.00	2,800.00	300.00	112.00 %
001-302000-322400 Sign Permits	3,000.00	3,000.00	0.00	1,700.00	-1,300.00	56.67 %
Department: 302000 - Licenses & Permits Total:	186,500.00	186,500.00	2,076.07	163,880.60	-22,619.40	87.87%
Department: 303000 - Intergovernmental Revenues						
001-303000-311120 Municipal Revenue Sharing	170,000.00	170,000.00	17,703.58	143,918.17	-26,081.83	84.66 %
001-303000-311150 Alcoholic Beverage License	16,700.00	16,700.00	0.00	9,965.35	-6,734.65	59.67 %
001-303000-311180 Sales Tax	450,000.00	450,000.00	42,973.80	396,433.71	-53,566.29	88.10 %
001-303000-312410 Local Op Gas Tax 1 - 6 Cent	67,500.00	67,500.00	6,031.13	42,685.16	-24,814.84	63.24 %
001-303000-312420 Local Op Gas Tax 2 - 5 Cent	48,000.00	48,000.00	4,349.10	38,518.24	-9,481.76	80.25 %
001-303000-315100 Communication Service Tax	325,000.00	325,000.00	26,279.13	242,181.19	-82,818.81	74.52 %
001-303000-334910 Bcc-senior Center Grant	19,045.00	19,045.00	0.00	19,045.00	0.00	100.00 %
001-303000-334914 Bcc-transportation Grant	150,000.00	150,000.00	17,893.48	69,852.64	-80,147.36	46.57 %
001-303000-334915 Fdot-reimbursable Grant	18,064.00	18,064.00	0.00	19,164.20	1,100.20	106.09 %
001-303000-334930 Emergency Supplemental Funding	0.00	0.00	0.00	16,138.52	16,138.52	0.00 %
Department: 303000 - Intergovernmental Revenues Total:	1,264,309.00	1,264,309.00	115,230.22	997,902.18	-266,406.82	78.93%
Department: 304000 - Charges for Services						
001-304000-343902 Site Plan Application Fees	2,000.00	2,000.00	0.00	0.00	-2,000.00	0.00 %
001-304000-347500 Tennis - Shuffle Key	11,000.00	11,000.00	340.00	13,190.00	2,190.00	119.91 %
Department: 304000 - Charges for Services Total:	13,000.00	13,000.00	340.00	13,190.00	190.00	101.46%
Department: 305000 - Fines & Forfeitures						
001-305000-354150 Fines,trafficviolation,citatio	32,000.00	32,000.00	5,308.02	32,085.42	85.42	100.27 %
001-305000-354160 Code Enforcement Fines	30,000.00	30,000.00	20,650.00	37,225.00	7,225.00	124.08 %
001-305000-359100 Other Fines & Alarms	3,000.00	3,000.00	0.00	0.00	-3,000.00	0.00 %
Department: 305000 - Fines & Forfeitures Total:	65,000.00	65,000.00	25,958.02	69,310.42	4,310.42	106.63%
Department: 306000 - Miscellaneous Revenues						
001-306000-361100 Interest Earnings	6,000.00	6,000.00	12,486.48	93,409.57	87,409.57	1,556.83 %
001-306000-362000 Rent/lease Royalties	79,503.00	79,503.00	10,500.00	83,407.12	3,904.12	104.91 %

Budget Report

For Fiscal: 2022-2023 Period Ending: 07/31/2023

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
001-306000-365400	Recycling Revenue	5,000.00	5,000.00	0.00	0.00	-5,000.00	0.00 %
001-306000-366100	Donations	10,000.00	10,000.00	0.00	20,500.00	10,500.00	205.00 %
001-306000-369100	Miscellaneous Revenues	80,000.00	80,000.00	8,379.23	115,195.74	35,195.74	143.99 %
001-306000-369200	Miscellaneous Applications	15,000.00	15,000.00	100.00	3,450.00	-11,550.00	23.00 %
001-306000-369201	Miscellaneous Merchandise sales	0.00	0.00	6.00	2,070.67	2,070.67	0.00 %
001-306000-369250	Recreational Activities Fee	1,250.00	1,250.00	5.00	1,215.00	-35.00	97.20 %
001-306000-369500	miscellaneous Lobbyist	250.00	250.00	200.00	650.00	400.00	260.00 %
001-306000-369901	Insurance Reimbursement	15,000.00	15,000.00	0.00	171.88	-14,828.12	1.15 %
Department: 306000 - Miscellaneous Revenues Total:		212,003.00	212,003.00	31,676.71	320,069.98	108,066.98	150.97%
Department: 511000 - Commission							
001-511000-500110	Commission Salaries	80,843.00	80,843.00	6,218.36	65,144.74	15,698.26	80.58 %
001-511000-500210	Employer Fica Taxes	6,185.00	6,185.00	438.76	4,595.66	1,589.34	74.30 %
001-511000-500220	Retirement	46,081.00	46,081.00	3,648.92	38,924.89	7,156.11	84.47 %
001-511000-500230	Group Insurance	54,185.00	54,185.00	2,919.53	44,526.42	9,658.58	82.17 %
001-511000-500345	Contractual Services	4,500.00	4,500.00	187.50	2,643.75	1,856.25	58.75 %
001-511000-500510	Office Supplies	500.00	500.00	0.00	0.00	500.00	0.00 %
001-511000-500512	Elections	0.00	0.00	0.00	15,700.00	-15,700.00	0.00 %
001-511000-500540	Dues & Subscriptions	2,700.00	2,700.00	0.00	858.00	1,842.00	31.78 %
001-511000-500545	Training	6,000.00	6,000.00	0.00	75.00	5,925.00	1.25 %
001-511000-500550	Operating Expenses	10,000.00	10,000.00	828.57	11,945.58	-1,945.58	119.46 %
Department: 511000 - Commission Total:		210,994.00	210,994.00	14,241.64	184,414.04	26,579.96	87.40%
Department: 511100 - Donation-Non Profits							
001-511100-500820	Donations-aids To Private Org	71,490.00	71,490.00	0.00	66,490.00	5,000.00	93.01 %
Department: 511100 - Donation-Non Profits Total:		71,490.00	71,490.00	0.00	66,490.00	5,000.00	93.01%
Department: 511200 - Visitor Center							
001-511200-500120	Regular Salaries	37,128.00	37,128.00	2,377.85	25,197.34	11,930.66	67.87 %
001-511200-500210	Employer Fica Taxes	2,841.00	2,841.00	181.91	1,927.59	913.41	67.85 %
001-511200-500220	Retirement	4,422.00	4,422.00	322.67	3,119.32	1,302.68	70.54 %
001-511200-500340	Sewer/wastewater	3,500.00	3,500.00	103.37	2,720.10	779.90	77.72 %
001-511200-500345	Contractual Services	0.00	0.00	0.00	580.00	-580.00	0.00 %
001-511200-500430	Electric Service	1,600.00	1,600.00	140.75	985.05	614.95	61.57 %
001-511200-500431	Water Service	4,200.00	4,200.00	93.60	3,152.24	1,047.76	75.05 %
001-511200-500463	Service Maintenance Contracts	3,000.00	3,000.00	61.19	865.38	2,134.62	28.85 %
001-511200-500506	Printing & Binding	0.00	0.00	149.78	2,639.78	-2,639.78	0.00 %
001-511200-500520	Bldg. Maintenance	10,240.00	10,240.00	346.00	4,046.00	6,194.00	39.51 %
001-511200-500550	Operating Expenses	15,370.00	15,370.00	286.91	2,297.58	13,072.42	14.95 %
001-511200-500640	Capital Outlay - Equip & Mach	3,500.00	3,500.00	0.00	0.00	3,500.00	0.00 %
Department: 511200 - Visitor Center Total:		85,801.00	85,801.00	4,064.03	47,530.38	38,270.62	55.40%
Department: 513000 - Administration							
001-513000-500120	Regular Salaries	596,812.00	596,812.00	48,458.13	472,492.93	124,319.07	79.17 %
001-513000-500140	Overtime Salaries	3,500.00	3,500.00	117.05	1,394.55	2,105.45	39.84 %
001-513000-500210	Employer Fica Taxes	46,750.00	46,750.00	3,581.58	33,442.49	13,307.51	71.53 %
001-513000-500220	Retirement	118,212.00	118,212.00	12,450.37	117,851.37	360.63	99.69 %
001-513000-500230	Group Insurance	102,707.00	102,707.00	6,121.96	76,614.51	26,092.49	74.60 %
001-513000-500315	Professional Services	29,000.00	29,000.00	0.00	13,375.00	15,625.00	46.12 %
001-513000-500320	Audit Expense	42,500.00	42,500.00	0.00	35,000.00	7,500.00	82.35 %
001-513000-500344	Hr Expenses	5,000.00	5,000.00	250.00	3,804.95	1,195.05	76.10 %
001-513000-500345	Contractual Services	40,000.00	40,000.00	4,425.20	58,913.43	-18,913.43	147.28 %
001-513000-500463	Service Maintenance Contracts	58,000.00	58,000.00	3,124.21	57,754.00	246.00	99.58 %
001-513000-500506	Printing & Binding	3,500.00	3,500.00	142.00	559.47	2,940.53	15.98 %
001-513000-500508	Postage	5,500.00	5,500.00	3,734.48	7,644.86	-2,144.86	139.00 %
001-513000-500510	Office Supplies	4,500.00	4,500.00	161.07	4,096.32	403.68	91.03 %
001-513000-500540	Dues & Subscriptions	8,200.00	8,200.00	25.00	4,566.45	3,633.55	55.69 %
001-513000-500545	Training	18,500.00	18,500.00	1,064.00	7,757.83	10,742.17	41.93 %
001-513000-500550	Operating Expenses	21,000.00	21,000.00	1,702.53	26,916.77	-5,916.77	128.18 %
Department: 513000 - Administration Total:		1,103,681.00	1,103,681.00	85,357.58	922,184.93	181,496.07	83.56%

Budget Report

For Fiscal: 2022-2023 Period Ending: 07/31/2023

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
Department: 514000 - Town Attorney							
001-514000-500310	Legal Expense	348,500.00	348,500.00	20,375.00	192,374.27	156,125.73	55.20 %
001-514000-500314	Litigation	94,860.00	94,860.00	0.00	225.00	94,635.00	0.24 %
001-514000-500319	Ethics Research, Training & Op	6,640.00	6,640.00	50.00	6,167.73	472.27	92.89 %
Department: 514000 - Town Attorney Total:		450,000.00	450,000.00	20,425.00	198,767.00	251,233.00	44.17%
Department: 519000 - General							
001-519000-500311	Advertisements	12,500.00	12,500.00	0.00	6,287.32	6,212.68	50.30 %
001-519000-500315	Professional Services	103,130.00	103,130.00	10,871.75	97,051.40	6,078.60	94.11 %
001-519000-500345	Contractual Services	50,350.00	50,350.00	2,818.40	66,227.83	-15,877.83	131.53 %
001-519000-500349	Community Mobility Services	328,187.00	328,187.00	19,734.24	123,744.88	204,442.12	37.71 %
001-519000-500451	Auto, Property & Liability Ins	157,000.00	157,000.00	0.00	146,776.66	10,223.34	93.49 %
001-519000-500452	Workers Compensation Insur	52,000.00	52,000.00	0.00	44,528.00	7,472.00	85.63 %
001-519000-500463	Service Maintenance Contracts	66,000.00	66,000.00	4,677.51	54,062.72	11,937.28	81.91 %
001-519000-500497	Contingency	100,000.00	100,000.00	0.00	0.00	100,000.00	0.00 %
001-519000-500506	Printing & Binding	40,292.00	40,292.00	0.00	11,420.36	28,871.64	28.34 %
001-519000-500511	Computer Expense	10,000.00	10,000.00	0.00	14,282.60	-4,282.60	142.83 %
001-519000-500525	Uniform Expense	225.00	225.00	102.81	193.60	31.40	86.04 %
001-519000-500550	Operating Expenses	27,900.00	27,900.00	113.73	34,574.35	-6,674.35	123.92 %
001-519000-500552	Recycling And Solid Waste Exp	32,400.00	32,400.00	4,836.49	22,030.37	10,369.63	67.99 %
001-519000-500610	Capital Outlay Land/bldg Acqui	0.00	0.00	0.00	1,571,628.82	-1,571,628.82	0.00 %
Department: 519000 - General Total:		979,984.00	979,984.00	43,154.93	2,192,808.91	-1,212,824.91	223.76%
Department: 519100 - Tourism and Community Outreach							
001-519100-500120	Regular Salaries	136,894.00	136,894.00	4,790.18	88,333.18	48,560.82	64.53 %
001-519100-500140	Overtime Salaries	5,000.00	5,000.00	0.00	529.42	4,470.58	10.59 %
001-519100-500210	Employer Fica Taxes	11,238.00	11,238.00	366.73	6,775.39	4,462.61	60.29 %
001-519100-500220	Retirement	17,496.00	17,496.00	650.03	11,260.27	6,235.73	64.36 %
001-519100-500230	Group Insurance	23,150.00	23,150.00	783.90	15,579.47	7,570.53	67.30 %
001-519100-500311	Advertisements	21,800.00	21,800.00	0.00	7,420.00	14,380.00	34.04 %
001-519100-500315	Professional Services	63,400.00	63,400.00	10,959.22	56,051.41	7,348.59	88.41 %
001-519100-500345	Contractual Services	6,138.00	6,138.00	170.00	12,498.27	-6,360.27	203.62 %
001-519100-500347	Programs	16,300.00	16,300.00	0.00	5,938.92	10,361.08	36.44 %
001-519100-500495	Special Events	179,400.00	179,400.00	27,969.77	116,458.03	62,941.97	64.92 %
001-519100-500506	Printing & Binding	9,948.00	9,948.00	0.00	9,786.44	161.56	98.38 %
001-519100-500540	Dues & Subscriptions	1,945.00	1,945.00	0.00	789.17	1,155.83	40.57 %
001-519100-500545	Training	500.00	500.00	0.00	498.00	2.00	99.60 %
001-519100-500550	Operating Expenses	1,000.00	1,000.00	0.00	1,444.04	-444.04	144.40 %
Department: 519100 - Tourism and Community Outreach Total:		494,209.00	494,209.00	45,689.83	333,362.01	160,846.99	67.45%
Department: 521000 - Police Department							
001-521000-500141	Bso Overtime	80,000.00	80,000.00	0.00	74,386.23	5,613.77	92.98 %
001-521000-500345	Contractual Services	5,681,422.00	5,681,422.00	473,451.83	4,710,242.10	971,179.90	82.91 %
001-521000-500352	Contract Services	6,000.00	6,000.00	0.00	4,996.19	1,003.81	83.27 %
001-521000-500520	Bldg. Maintenance	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00 %
001-521000-500550	Operating Expenses	6,000.00	6,000.00	0.00	209.90	5,790.10	3.50 %
001-521000-500640	Capital Outlay - Equipt & Mach	3,000.00	3,000.00	0.00	19,793.84	-16,793.84	659.79 %
Department: 521000 - Police Department Total:		5,778,422.00	5,778,422.00	473,451.83	4,809,628.26	968,793.74	83.23%
Department: 523000 - Emergency Medical Services							
001-523000-500345	Contractual Services	899,910.00	899,910.00	74,992.50	749,925.00	149,985.00	83.33 %
Department: 523000 - Emergency Medical Services Total:		899,910.00	899,910.00	74,992.50	749,925.00	149,985.00	83.33%
Department: 524000 - Development Services							
001-524000-500120	Regular Salaries	254,701.00	254,701.00	20,902.94	159,163.49	95,537.51	62.49 %
001-524000-500140	Overtime Salaries	6,000.00	6,000.00	0.00	114.51	5,885.49	1.91 %
001-524000-500210	Employer Fica Taxes	19,644.00	19,644.00	1,635.03	12,547.33	7,096.67	63.87 %
001-524000-500220	Retirement	44,922.00	44,922.00	4,511.08	36,827.72	8,094.28	81.98 %
001-524000-500230	Group Insurance	50,804.00	50,804.00	2,089.92	23,742.69	27,061.31	46.73 %
001-524000-500315	Professional Services	55,000.00	55,000.00	-1,167.25	45,132.99	9,867.01	82.06 %
001-524000-500345	Contractual Services	325,000.00	325,000.00	23,066.87	259,477.48	65,522.52	79.84 %
001-524000-500462	Fuel	0.00	0.00	132.44	846.06	-846.06	0.00 %

Budget Report

For Fiscal: 2022-2023 Period Ending: 07/31/2023

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
001-524000-500463	Service Maintenance Contracts	6,600.00	6,600.00	145.90	3,329.25	3,270.75	50.44 %
001-524000-500506	Printing & Binding	4,000.00	4,000.00	33.88	2,698.46	1,301.54	67.46 %
001-524000-500508	Postage	4,000.00	4,000.00	0.00	51.60	3,948.40	1.29 %
001-524000-500510	Office Supplies	3,000.00	3,000.00	0.00	65.99	2,934.01	2.20 %
001-524000-500525	Uniform Expense	400.00	400.00	0.00	383.04	16.96	95.76 %
001-524000-500540	Dues & Subscriptions	4,300.00	4,300.00	525.00	590.85	3,709.15	13.74 %
001-524000-500545	Training	7,000.00	7,000.00	1,000.00	1,301.00	5,699.00	18.59 %
001-524000-500550	Operating Expenses	10,200.00	10,200.00	99.92	2,004.18	8,195.82	19.65 %
Department: 524000 - Development Services Total:		795,571.00	795,571.00	52,975.73	548,276.64	247,294.36	68.92%
Department: 541100 - Mun Srvsc - Public Works Div							
001-541100-500120	Regular Salaries	951,193.00	951,193.00	71,488.56	759,018.74	192,174.26	79.80 %
001-541100-500140	Overtime Salaries	55,000.00	55,000.00	7,057.29	44,052.78	10,947.22	80.10 %
001-541100-500210	Employer Fica Taxes	76,974.00	76,974.00	5,982.19	63,190.22	13,783.78	82.09 %
001-541100-500220	Retirement	134,288.00	134,288.00	12,891.75	122,844.92	11,443.08	91.48 %
001-541100-500230	Group Insurance	220,606.00	220,606.00	13,794.17	166,014.76	54,591.24	75.25 %
001-541100-500315	Professional Services	50,000.00	50,000.00	8,081.88	33,918.72	16,081.28	67.84 %
001-541100-500340	Sewer/wastewater	14,000.00	14,000.00	633.98	7,998.41	6,001.59	57.13 %
001-541100-500345	Contractual Services	363,100.00	363,100.00	3,498.45	149,252.35	213,847.65	41.11 %
001-541100-500410	Communications	47,000.00	47,000.00	6,172.26	58,820.81	-11,820.81	125.15 %
001-541100-500430	Electric Service	48,000.00	48,000.00	5,132.76	38,780.44	9,219.56	80.79 %
001-541100-500431	Water Service	160,000.00	160,000.00	17,337.93	167,662.91	-7,662.91	104.79 %
001-541100-500433	Electric Service-streets	62,500.00	62,500.00	5,293.57	47,042.42	15,457.58	75.27 %
001-541100-500445	Equip Rent/lease	20,000.00	20,000.00	458.99	14,313.83	5,686.17	71.57 %
001-541100-500460	Equipment Maintenance	25,000.00	25,000.00	11,134.82	40,759.20	-15,759.20	163.04 %
001-541100-500461	Vehicle Maintenance	14,000.00	14,000.00	3,304.49	27,045.28	-13,045.28	193.18 %
001-541100-500462	Fuel	50,000.00	50,000.00	2,385.66	24,396.27	25,603.73	48.79 %
001-541100-500463	Service Maintenance Contracts	20,705.00	20,705.00	2,723.15	21,695.86	-990.86	104.79 %
001-541100-500470	Radio Maintenance	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00 %
001-541100-500498	Storm Drain Rehab/maint	107,500.00	107,500.00	0.00	88,120.00	19,380.00	81.97 %
001-541100-500508	Postage	250.00	250.00	0.00	658.56	-408.56	263.42 %
001-541100-500510	Office Supplies	1,750.00	1,750.00	0.00	124.74	1,625.26	7.13 %
001-541100-500520	Bldg. Maintenance	70,000.00	70,000.00	14,631.17	102,477.82	-32,477.82	146.40 %
001-541100-500525	Uniform Expense	18,000.00	18,000.00	5,995.46	27,286.42	-9,286.42	151.59 %
001-541100-500529	Street Light Maintenance	45,000.00	45,000.00	17,051.52	39,312.13	5,687.87	87.36 %
001-541100-500530	Street Maint Repair Supply	100,000.00	100,000.00	2,259.78	23,968.09	76,031.91	23.97 %
001-541100-500531	Grounds Maint/landscaping	50,000.00	50,000.00	0.00	48,743.62	1,256.38	97.49 %
001-541100-500532	Signs	12,500.00	12,500.00	409.29	2,466.59	10,033.41	19.73 %
001-541100-500534	Sidewalk Maint Repair	12,500.00	12,500.00	0.00	2,700.09	9,799.91	21.60 %
001-541100-500535	Flags	3,000.00	3,000.00	5,161.01	9,145.61	-6,145.61	304.85 %
001-541100-500540	Dues & Subscriptions	2,285.00	2,285.00	955.00	2,775.00	-490.00	121.44 %
001-541100-500545	Training	6,000.00	6,000.00	641.95	2,688.28	3,311.72	44.80 %
001-541100-500547	Hurricane Expenditure	10,000.00	10,000.00	0.00	802.05	9,197.95	8.02 %
001-541100-500550	Operating Expenses	70,000.00	70,000.00	7,219.46	74,818.72	-4,818.72	106.88 %
001-541100-500624	Capital Outlay-bldg. Improvem	50,000.00	50,000.00	0.00	55,698.00	-5,698.00	111.40 %
001-541100-500640	Capital Outlay - Equip & Mach	13,500.00	13,500.00	0.00	9,447.00	4,053.00	69.98 %
001-541100-500644	Capital Outlay-vehicles	40,000.00	40,000.00	3,096.61	32,955.95	7,044.05	82.39 %
Department: 541100 - Mun Srvsc - Public Works Div Total:		2,927,651.00	2,927,651.00	234,793.15	2,310,996.59	616,654.41	78.94%
Department: 572000 - Recreation							
001-572000-500342	Senior Rec. Ctr. Contract	102,698.00	102,698.00	7,328.17	83,280.10	19,417.90	81.09 %
001-572000-500343	Beach Maintenance Contract	264,000.00	264,000.00	20,500.00	205,000.00	59,000.00	77.65 %
001-572000-500345	Contractual Services	6,000.00	6,000.00	0.00	2,000.00	4,000.00	33.33 %
001-572000-500347	Programs	8,000.00	8,000.00	111.33	2,112.57	5,887.43	26.41 %
001-572000-500430	Electric Service	600.00	600.00	66.67	592.06	7.94	98.68 %
001-572000-500460	Equipment Maintenance	8,000.00	8,000.00	0.00	20,279.86	-12,279.86	253.50 %
001-572000-500463	Service Maintenance Contracts	0.00	0.00	133.81	1,820.91	-1,820.91	0.00 %
001-572000-500469	Buoy Maintenance	17,000.00	17,000.00	14,725.80	14,725.80	2,274.20	86.62 %
001-572000-500495	Special Events	0.00	0.00	0.00	462.76	-462.76	0.00 %
001-572000-500510	Office Supplies	1,000.00	1,000.00	113.25	113.25	886.75	11.33 %

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		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
001-572000-500520	Bldg. Maintenance	30,000.00	30,000.00	409.92	24,871.34	5,128.66	82.90 %
001-572000-500536	Sea Oats	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00 %
001-572000-500550	Operating Expenses	75,000.00	75,000.00	2,911.91	61,447.57	13,552.43	81.93 %
001-572000-500640	Capital Outlay - Equipt & Mach	25,000.00	25,000.00	0.00	21,106.23	3,893.77	84.42 %
Department: 572000 - Recreation Total:		547,298.00	547,298.00	46,300.86	437,812.45	109,485.55	80.00%
Department: 581100 - Interfund Transfers							
001-581100-380102	Transfer From Bldg-oh Costs	82,300.00	82,300.00	0.00	41,150.00	-41,150.00	50.00 %
001-581100-380115	Transfer From Fire - Oh Costs	50,000.00	50,000.00	0.00	25,000.00	-25,000.00	50.00 %
001-581100-381106	Transfer From Parking Fund	305,000.00	305,000.00	0.00	152,500.00	-152,500.00	50.00 %
Department: 581100 - Interfund Transfers Total:		437,300.00	437,300.00	0.00	218,650.00	-218,650.00	50.00%
Fund: 001 - General Fund Surplus (Deficit):		0.00	0.00	-498,760.03	526,652.31	526,652.31	0.00%
Fund: 101 - Special Revenue-Police Conf							
Department: 306000 - Miscellaneous Revenues							
101-306000-369100	Miscellaneous Revenues	0.00	0.00	0.00	219.86	219.86	0.00 %
Department: 306000 - Miscellaneous Revenues Total:		0.00	0.00	0.00	219.86	219.86	0.00%
Fund: 101 - Special Revenue-Police Conf Total:		0.00	0.00	0.00	219.86	219.86	0.00%
Fund: 102 - Building Fund							
Department: 000000 - NonDesignated							
102-000000-380200	Appropriated Fund Balance	30,983.00	30,983.00	0.00	0.00	-30,983.00	0.00 %
Department: 000000 - NonDesignated Total:		30,983.00	30,983.00	0.00	0.00	-30,983.00	0.00%
Department: 302100 - Building Permit and Inpection							
102-302100-322100	Building Permits	950,850.00	950,850.00	276,687.39	1,990,480.53	1,039,630.53	209.34 %
102-302100-322105	Fire Plan Review Fees	17,000.00	17,000.00	880.00	9,702.00	-7,298.00	57.07 %
Department: 302100 - Building Permit and Inpection Total:		967,850.00	967,850.00	277,567.39	2,000,182.53	1,032,332.53	206.66%
Department: 524100 - Building							
102-524100-500120	Regular Salaries	80,612.00	80,612.00	6,642.83	61,812.98	18,799.02	76.68 %
102-524100-500210	Employer Fica Taxes	6,167.00	6,167.00	562.59	5,509.57	657.43	89.34 %
102-524100-500220	Retirement	18,328.00	18,328.00	1,696.83	16,294.95	2,033.05	88.91 %
102-524100-500230	Group Insurance	14,926.00	14,926.00	889.33	10,401.47	4,524.53	69.69 %
102-524100-500315	Professional Services	100,000.00	100,000.00	0.00	51,490.00	48,510.00	51.49 %
102-524100-500345	Contractual Services	0.00	0.00	5,655.00	19,615.80	-19,615.80	0.00 %
102-524100-500402	Building Permit Services	665,000.00	665,000.00	0.00	971,408.78	-306,408.78	146.08 %
102-524100-500463	Service Maintenance Contracts	0.00	0.00	0.00	318.47	-318.47	0.00 %
102-524100-500550	Operating Expenses	1,500.00	1,500.00	847.25	3,677.48	-2,177.48	245.17 %
102-524100-500624	Capital Outlay-bldg. Improvemt	30,000.00	30,000.00	0.00	0.00	30,000.00	0.00 %
102-524100-500640	Capital Outlay - Equipt & Mach	0.00	0.00	0.00	14,778.32	-14,778.32	0.00 %
102-524100-581001	Transfer To GF-OH Costs	82,300.00	82,300.00	0.00	41,150.00	41,150.00	50.00 %
Department: 524100 - Building Total:		998,833.00	998,833.00	16,293.83	1,196,457.82	-197,624.82	119.79%
Fund: 102 - Building Fund Surplus (Deficit):		0.00	0.00	261,273.56	803,724.71	803,724.71	0.00%
Fund: 103 - Sewer Fund							
Department: 000000 - NonDesignated							
103-000000-380200	Appropriated Fund Balance	224,296.00	224,296.00	0.00	0.00	-224,296.00	0.00 %
Department: 000000 - NonDesignated Total:		224,296.00	224,296.00	0.00	0.00	-224,296.00	0.00%
Department: 304000 - Charges for Services							
103-304000-343500	Sewer Fees	1,303,077.00	1,303,077.00	113,356.31	1,006,066.12	-297,010.88	77.21 %
Department: 304000 - Charges for Services Total:		1,303,077.00	1,303,077.00	113,356.31	1,006,066.12	-297,010.88	77.21%
Department: 306000 - Miscellaneous Revenues							
103-306000-361100	Interest Earnings	1,000.00	1,000.00	851.98	3,349.86	2,349.86	334.99 %
Department: 306000 - Miscellaneous Revenues Total:		1,000.00	1,000.00	851.98	3,349.86	2,349.86	334.99%
Department: 535000 - Sanitary Sewers							
103-535000-500120	Regular Salaries	73,880.00	73,880.00	6,292.99	51,312.68	22,567.32	69.45 %
103-535000-500140	Overtime Salaries	5,500.00	5,500.00	151.97	2,863.37	2,636.63	52.06 %
103-535000-500210	Employer Fica Taxes	6,073.00	6,073.00	493.26	4,145.96	1,927.04	68.27 %
103-535000-500220	Retirement	15,126.00	15,126.00	1,287.34	10,576.99	4,549.01	69.93 %

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		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
103-535000-500230	Group Insurance	9,184.00	9,184.00	369.49	5,021.46	4,162.54	54.68 %
103-535000-500315	Professional Services	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00 %
103-535000-500340	Sewer/wastewater	850,000.00	850,000.00	72,629.43	703,848.56	146,151.44	82.81 %
103-535000-500345	Contractual Services	60,000.00	60,000.00	1,031.34	26,444.38	33,555.62	44.07 %
103-535000-500430	Electric Service	24,000.00	24,000.00	1,973.12	16,472.13	7,527.87	68.63 %
103-535000-500431	Water Service	360.00	360.00	19.96	318.09	41.91	88.36 %
103-535000-500459	Sewer Line Maintenance	300,000.00	300,000.00	0.00	232,685.45	67,314.55	77.56 %
103-535000-500465	Pump Station Maintenance	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00 %
103-535000-500497	Contingency	100,000.00	100,000.00	0.00	89,850.00	10,150.00	89.85 %
103-535000-500506	Printing & Binding	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00 %
103-535000-500550	Operating Expenses	2,250.00	2,250.00	0.00	0.00	2,250.00	0.00 %
103-535000-500630	Cap Outlay Imp Other Than Bldg	75,000.00	75,000.00	0.00	650.00	74,350.00	0.87 %
Department: 535000 - Sanitary Sewers Total:		1,528,373.00	1,528,373.00	84,248.90	1,144,189.07	384,183.93	74.86%
Fund: 103 - Sewer Fund Surplus (Deficit):		0.00	0.00	29,959.39	-134,773.09	-134,773.09	0.00%
Fund: 115 - Fire Fund							
Department: 000000 - NonDesignated							
115-000000-380203	Appropriation From Fire Fund	1,175,350.00	1,175,350.00	0.00	0.00	-1,175,350.00	0.00 %
Department: 000000 - NonDesignated Total:		1,175,350.00	1,175,350.00	0.00	0.00	-1,175,350.00	0.00%
Department: 301050 - Fire Assessment							
115-301050-311200	Property Tax-fire Assessment	1,134,209.00	1,134,209.00	28,964.56	1,153,199.23	18,990.23	101.67 %
Department: 301050 - Fire Assessment Total:		1,134,209.00	1,134,209.00	28,964.56	1,153,199.23	18,990.23	101.67%
Department: 304000 - Charges for Services							
115-304000-342210	Fire Inspection Fees	34,808.00	34,808.00	0.00	37,789.24	2,981.24	108.56 %
Department: 304000 - Charges for Services Total:		34,808.00	34,808.00	0.00	37,789.24	2,981.24	108.56%
Department: 306000 - Miscellaneous Revenues							
115-306000-361100	Interest Earnings	0.00	0.00	1,545.10	6,590.40	6,590.40	0.00 %
Department: 306000 - Miscellaneous Revenues Total:		0.00	0.00	1,545.10	6,590.40	6,590.40	0.00%
Department: 522000 - Fire Department							
115-522000-500151	Fire Dept Pension	6,000.00	6,000.00	0.00	0.00	6,000.00	0.00 %
115-522000-500315	Professional Services	52,300.00	52,300.00	3,275.00	50,881.30	1,418.70	97.29 %
115-522000-500320	Audit Expense	8,400.00	8,400.00	0.00	8,400.00	0.00	100.00 %
115-522000-500345	Contractual Services	939,167.00	939,167.00	78,263.92	782,639.20	156,527.80	83.33 %
115-522000-500520	Bldg. Maintenance	2,500.00	2,500.00	0.00	0.00	2,500.00	0.00 %
115-522000-500624	Capital Outlay-bldg. Improvem	306,000.00	306,000.00	0.00	0.00	306,000.00	0.00 %
115-522000-500644	Capital Outlay-vehicles	980,000.00	980,000.00	0.00	902,515.58	77,484.42	92.09 %
115-522000-500912	Transfer To General Fund	50,000.00	50,000.00	0.00	25,000.00	25,000.00	50.00 %
Department: 522000 - Fire Department Total:		2,344,367.00	2,344,367.00	81,538.92	1,769,436.08	574,930.92	75.48%
Fund: 115 - Fire Fund Surplus (Deficit):		0.00	0.00	-51,029.26	-571,857.21	-571,857.21	0.00%
Fund: 300 - Capital Project Fund							
Department: 000000 - NonDesignated							
300-000000-380200	Appropriated Fund Balance	1,148,866.00	1,148,866.00	0.00	0.00	-1,148,866.00	0.00 %
300-000000-380211	Appropriated El Mar Res.fdg Fi	1,650,000.00	1,650,000.00	0.00	0.00	-1,650,000.00	0.00 %
Department: 000000 - NonDesignated Total:		2,798,866.00	2,798,866.00	0.00	0.00	-2,798,866.00	0.00%
Department: 303000 - Intergovernmental Revenues							
300-303000-334931	American Rescue Plan Act Grant	1,668,844.00	1,668,844.00	0.00	0.00	-1,668,844.00	0.00 %
300-303000-344901	State of Florida- Funding Codrington	511,000.00	511,000.00	0.00	0.00	-511,000.00	0.00 %
Department: 303000 - Intergovernmental Revenues Total:		2,179,844.00	2,179,844.00	0.00	0.00	-2,179,844.00	0.00%
Department: 306000 - Miscellaneous Revenues							
300-306000-361100	Interest Earnings	600.00	600.00	3,501.77	11,762.03	11,162.03	1,960.34 %
Department: 306000 - Miscellaneous Revenues Total:		600.00	600.00	3,501.77	11,762.03	11,162.03	1,960.34%
Department: 519000 - General							
300-519000-500120	Regular Salaries	51,847.00	51,847.00	3,324.24	35,724.53	16,122.47	68.90 %
300-519000-500210	Employer Fica Taxes	3,968.00	3,968.00	254.30	2,732.86	1,235.14	68.87 %
300-519000-500220	Retirement	14,995.00	14,995.00	1,006.91	10,630.25	4,364.75	70.89 %
300-519000-500230	Group Insurance	8,955.00	8,955.00	499.72	7,894.17	1,060.83	88.15 %

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		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
300-519000-500640	Capital Outlay - Equipmt & Mach	263,000.00	263,000.00	0.00	88,277.30	174,722.70	33.57 %
	Department: 519000 - General Total:	342,765.00	342,765.00	5,085.17	145,259.11	197,505.89	42.38%
	Department: 519163 - OffsiteRoof Replacement						
300-519163-500630	Cap Outlay Imp other than bldg	331,000.00	331,000.00	0.00	305,860.00	25,140.00	92.40 %
	Department: 519163 - OffsiteRoof Replacement Total:	331,000.00	331,000.00	0.00	305,860.00	25,140.00	92.40%
	Department: 545100 - Downtown Parking Reconfiguration						
300-545100-500630	Cap Outlay Imp Other Than Bldg	0.00	0.00	0.00	43,819.22	-43,819.22	0.00 %
	Department: 545100 - Downtown Parking Reconfiguration Total:	0.00	0.00	0.00	43,819.22	-43,819.22	0.00%
	Department: 545101 - Downtown Commercial Refurbishm						
300-545101-500630	Cap Outlay Imp other than bldg	1,200,000.00	1,200,000.00	59,047.84	295,796.46	904,203.54	24.65 %
	Department: 545101 - Downtown Commercial Refurbishm Total:	1,200,000.00	1,200,000.00	59,047.84	295,796.46	904,203.54	24.65%
	Department: 559025 - Bel Air - Sewall Repair - East						
300-559025-500630	Cap Outlay Imp Other Than Bldg	215,545.00	215,545.00	574.93	-41,443.83	256,988.83	-19.23 %
	Department: 559025 - Bel Air - Sewall Repair - East Total:	215,545.00	215,545.00	574.93	-41,443.83	256,988.83	-19.23%
	Department: 559026 - Canal Dredging						
300-559026-500630	Cap Outlay Imp Other Than Bldg	380,000.00	380,000.00	0.00	358,914.73	21,085.27	94.45 %
	Department: 559026 - Canal Dredging Total:	380,000.00	380,000.00	0.00	358,914.73	21,085.27	94.45%
	Department: 559027 - Storm Water Rate Study						
300-559027-500630	Cap Outlay Imp Other Than Bldg	60,000.00	60,000.00	0.00	0.00	60,000.00	0.00 %
	Department: 559027 - Storm Water Rate Study Total:	60,000.00	60,000.00	0.00	0.00	60,000.00	0.00%
	Department: 572200 - Beach Renourishment						
300-572200-500630	Cap Outlay Imp Other Than Bldg	0.00	0.00	0.00	2,463.87	-2,463.87	0.00 %
	Department: 572200 - Beach Renourishment Total:	0.00	0.00	0.00	2,463.87	-2,463.87	0.00%
	Department: 575201 - Pedestrian Amenities						
300-575201-500630	Cap Outlay Imp Other Than Bldg	50,000.00	50,000.00	2,594.31	3,638.13	46,361.87	7.28 %
	Department: 575201 - Pedestrian Amenities Total:	50,000.00	50,000.00	2,594.31	3,638.13	46,361.87	7.28%
	Department: 576135 - Street Project Codrington Drive						
300-576135-500630	Cap Outlay Imp Other Than Bldg	1,700,000.00	1,700,000.00	958,163.15	1,394,090.06	305,909.94	82.01 %
	Department: 576135 - Street Project Codrington Drive Total:	1,700,000.00	1,700,000.00	958,163.15	1,394,090.06	305,909.94	82.01%
	Department: 577100 - Friedt Park						
300-577100-500630	Cap Outlay Imp Other Than Bldg	700,000.00	700,000.00	0.00	0.00	700,000.00	0.00 %
	Department: 577100 - Friedt Park Total:	700,000.00	700,000.00	0.00	0.00	700,000.00	0.00%
	Fund: 300 - Capital Project Fund Surplus (Deficit):	0.00	0.00	-1,021,963.63	-2,496,635.72	-2,496,635.72	0.00%
Fund: 310 - Parking Fund							
	Department: 302000 - Licenses & Permits						
310-302000-313101	Pilop Fee	20,000.00	20,000.00	0.00	60,350.00	40,350.00	301.75 %
	Department: 302000 - Licenses & Permits Total:	20,000.00	20,000.00	0.00	60,350.00	40,350.00	301.75%
	Department: 304000 - Charges for Services						
310-304000-344500	Parking Permits	140,000.00	140,000.00	7,011.49	163,642.78	23,642.78	116.89 %
310-304000-344520	Parking Agreements	94,024.00	94,024.00	0.00	94,024.00	0.00	100.00 %
310-304000-344551	South Ocean	190,000.00	190,000.00	26,750.96	237,671.13	47,671.13	125.09 %
310-304000-344552	Ocean Front Meters	300,000.00	300,000.00	49,782.49	431,143.82	131,143.82	143.71 %
310-304000-344553	Commercial Blvd. Meters	75,000.00	75,000.00	8,092.04	88,796.98	13,796.98	118.40 %
310-304000-344554	Parking Meters - Beach	200,000.00	200,000.00	23,067.41	195,210.71	-4,789.29	97.61 %
310-304000-344555	Palm Portal- Fdg	80,000.00	80,000.00	15,964.91	121,566.82	41,566.82	151.96 %
310-304000-344556	El Prado Parking Lot	450,000.00	450,000.00	55,887.40	559,002.50	109,002.50	124.22 %
310-304000-344558	Town Hall Parking Lot	27,000.00	27,000.00	4,175.29	28,855.43	1,855.43	106.87 %
310-304000-344559	El Mar Parking Lot	200,000.00	200,000.00	24,714.59	245,760.55	45,760.55	122.88 %
310-304000-344560	A1A Parking Lot	450,000.00	450,000.00	63,036.67	601,819.01	151,819.01	133.74 %
310-304000-344563	Bougainvilla/ Poinciana	130,000.00	130,000.00	23,682.87	213,682.40	83,682.40	164.37 %
	Department: 304000 - Charges for Services Total:	2,336,024.00	2,336,024.00	302,166.12	2,981,176.13	645,152.13	127.62%

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Department: 305000 - Fines & Forfeitures						
310-305000-354100 Parking Fines	100,000.00	100,000.00	1,220.00	105,382.74	5,382.74	105.38 %
Department: 305000 - Fines & Forfeitures Total:	100,000.00	100,000.00	1,220.00	105,382.74	5,382.74	105.38%
Department: 306000 - Miscellaneous Revenues						
310-306000-361100 Interest Earnings	1,000.00	1,000.00	3,558.03	14,307.06	13,307.06	1,430.71 %
310-306000-362001 Bougainvillea Rent	0.00	0.00	11,271.50	49,263.25	49,263.25	0.00 %
Department: 306000 - Miscellaneous Revenues Total:	1,000.00	1,000.00	14,829.53	63,570.31	62,570.31	6,357.03%
Department: 545000 - Parking Operations						
310-545000-500120 Regular Salaries	163,721.00	163,721.00	13,457.82	135,158.72	28,562.28	82.55 %
310-545000-500140 Overtime Salaries	3,500.00	3,500.00	704.30	5,207.51	-1,707.51	148.79 %
310-545000-500210 Employer Fica Taxes	12,793.00	12,793.00	980.47	9,642.93	3,150.07	75.38 %
310-545000-500220 Retirement	27,291.00	27,291.00	2,484.94	23,837.17	3,453.83	87.34 %
310-545000-500230 Group Insurance	40,301.00	40,301.00	2,228.70	37,898.24	2,402.76	94.04 %
310-545000-500345 Contractual Services	400,000.00	400,000.00	12,843.84	291,333.32	108,666.68	72.83 %
310-545000-500353 Parking Alternatives	175,000.00	175,000.00	17,919.14	174,118.63	881.37	99.50 %
310-545000-500410 Communications	3,300.00	3,300.00	144.54	1,595.20	1,704.80	48.34 %
310-545000-500430 Electric Service	6,200.00	6,200.00	775.47	6,100.20	99.80	98.39 %
310-545000-500431 Water Service	25,000.00	25,000.00	1,394.02	14,317.98	10,682.02	57.27 %
310-545000-500445 Equip Rent/lease	12,800.00	12,800.00	0.00	0.00	12,800.00	0.00 %
310-545000-500461 Vehicle Maintenance	5,000.00	5,000.00	226.49	4,225.23	774.77	84.50 %
310-545000-500462 Fuel	20,000.00	20,000.00	0.00	5,916.74	14,083.26	29.58 %
310-545000-500463 Service Maintenance Contracts	31,920.00	31,920.00	0.00	39,546.10	-7,626.10	123.89 %
310-545000-500497 Contingency	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00 %
310-545000-500506 Printing & Binding	11,000.00	11,000.00	0.00	478.17	10,521.83	4.35 %
310-545000-500508 Postage	3,000.00	3,000.00	44.76	552.66	2,447.34	18.42 %
310-545000-500510 Office Supplies	1,000.00	1,000.00	209.06	461.50	538.50	46.15 %
310-545000-500525 Uniform Expense	4,000.00	4,000.00	0.00	3,158.53	841.47	78.96 %
310-545000-500532 Signs	13,000.00	13,000.00	2,210.74	12,082.92	917.08	92.95 %
310-545000-500533 Parking Meter Parts-supplies	38,000.00	38,000.00	0.00	3,612.39	34,387.61	9.51 %
310-545000-500545 Training	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00 %
310-545000-500550 Operating Expenses	30,000.00	30,000.00	2,061.93	17,372.47	12,627.53	57.91 %
310-545000-500610 Capital Outlay Land/Bldg Acqui	0.00	0.00	0.00	2,000,000.00	-2,000,000.00	0.00 %
310-545000-500629 Capital Outlay - Design/permit	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00 %
310-545000-500630 Cap Outlay Imp Other Than Bldg	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00 %
310-545000-500640 Capital Outlay - Equipmt & Mach	55,600.00	55,600.00	0.00	6,895.00	48,705.00	12.40 %
310-545000-500644 Capital Outlay-vehicles	20,264.00	20,264.00	5,812.11	17,678.74	2,585.26	87.24 %
Department: 545000 - Parking Operations Total:	1,118,690.00	1,118,690.00	63,498.33	2,811,190.35	-1,692,500.35	251.29%
Department: 545152 - Land Acquisitions						
310-545152-500611 Land Acquisition	1,033,334.00	1,033,334.00	0.00	0.00	1,033,334.00	0.00 %
Department: 545152 - Land Acquisitions Total:	1,033,334.00	1,033,334.00	0.00	0.00	1,033,334.00	0.00%
Department: 581100 - Interfund Transfers						
310-581100-500912 Transfer To General Fund	305,000.00	305,000.00	0.00	152,500.00	152,500.00	50.00 %
Department: 581100 - Interfund Transfers Total:	305,000.00	305,000.00	0.00	152,500.00	152,500.00	50.00%
Fund: 310 - Parking Fund Surplus (Deficit):	0.00	0.00	254,717.32	246,788.83	246,788.83	0.00%
Report Surplus (Deficit):	0.00	0.00	-1,025,802.65	-1,625,880.31	-1,625,880.31	0.00%

Group Summary

Departmen...	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
Fund: 001 - General Fund						
000000 - NonDesignated	477,342.00	477,342.00	0.00	0.00	-477,342.00	0.00%
301000 - Ad Valorem Property Taxes	9,801,757.00	9,801,757.00	230,180.74	9,922,690.44	120,933.44	101.23%
301100 - Utility Taxes	1,086,000.00	1,086,000.00	118,149.21	945,207.15	-140,792.85	87.04%
301600 - Franchise Taxes	801,800.00	801,800.00	73,076.08	677,947.75	-123,852.25	84.55%
302000 - Licenses & Permits	186,500.00	186,500.00	2,076.07	163,880.60	-22,619.40	87.87%
303000 - Intergovernmental Revenues	1,264,309.00	1,264,309.00	115,230.22	997,902.18	-266,406.82	78.93%
304000 - Charges for Services	13,000.00	13,000.00	340.00	13,190.00	190.00	101.46%
305000 - Fines & Forfeitures	65,000.00	65,000.00	25,958.02	69,310.42	4,310.42	106.63%
306000 - Miscellaneous Revenues	212,003.00	212,003.00	31,676.71	320,069.98	108,066.98	150.97%
511000 - Commission	210,994.00	210,994.00	14,241.64	184,414.04	26,579.96	87.40%
511100 - Donation-Non Profits	71,490.00	71,490.00	0.00	66,490.00	5,000.00	93.01%
511200 - Visitor Center	85,801.00	85,801.00	4,064.03	47,530.38	38,270.62	55.40%
513000 - Administration	1,103,681.00	1,103,681.00	85,357.58	922,184.93	181,496.07	83.56%
514000 - Town Attorney	450,000.00	450,000.00	20,425.00	198,767.00	251,233.00	44.17%
519000 - General	979,984.00	979,984.00	43,154.93	2,192,808.91	-1,212,824.91	223.76%
519100 - Tourism and Community Outreach	494,209.00	494,209.00	45,689.83	333,362.01	160,846.99	67.45%
521000 - Police Department	5,778,422.00	5,778,422.00	473,451.83	4,809,628.26	968,793.74	83.23%
523000 - Emergency Medical Services	899,910.00	899,910.00	74,992.50	749,925.00	149,985.00	83.33%
524000 - Development Services	795,571.00	795,571.00	52,975.73	548,276.64	247,294.36	68.92%
541100 - Mun Srvsc - Public Works Div	2,927,651.00	2,927,651.00	234,793.15	2,310,996.59	616,654.41	78.94%
572000 - Recreation	547,298.00	547,298.00	46,300.86	437,812.45	109,485.55	80.00%
581100 - Interfund Transfers	437,300.00	437,300.00	0.00	218,650.00	-218,650.00	50.00%
Fund: 001 - General Fund Surplus (Deficit):	0.00	0.00	-498,760.03	526,652.31	526,652.31	0.00%
Fund: 101 - Special Revenue-Police Conf						
306000 - Miscellaneous Revenues	0.00	0.00	0.00	219.86	219.86	0.00%
Fund: 101 - Special Revenue-Police Conf Total:	0.00	0.00	0.00	219.86	219.86	0.00%
Fund: 102 - Building Fund						
000000 - NonDesignated	30,983.00	30,983.00	0.00	0.00	-30,983.00	0.00%
302100 - Building Permit and Inspection	967,850.00	967,850.00	277,567.39	2,000,182.53	1,032,332.53	206.66%
524100 - Building	998,833.00	998,833.00	16,293.83	1,196,457.82	-197,624.82	119.79%
Fund: 102 - Building Fund Surplus (Deficit):	0.00	0.00	261,273.56	803,724.71	803,724.71	0.00%
Fund: 103 - Sewer Fund						
000000 - NonDesignated	224,296.00	224,296.00	0.00	0.00	-224,296.00	0.00%
304000 - Charges for Services	1,303,077.00	1,303,077.00	113,356.31	1,006,066.12	-297,010.88	77.21%
306000 - Miscellaneous Revenues	1,000.00	1,000.00	851.98	3,349.86	2,349.86	334.99%
535000 - Sanitary Sewers	1,528,373.00	1,528,373.00	84,248.90	1,144,189.07	384,183.93	74.86%
Fund: 103 - Sewer Fund Surplus (Deficit):	0.00	0.00	29,959.39	-134,773.09	-134,773.09	0.00%
Fund: 115 - Fire Fund						
000000 - NonDesignated	1,175,350.00	1,175,350.00	0.00	0.00	-1,175,350.00	0.00%
301050 - Fire Assessment	1,134,209.00	1,134,209.00	28,964.56	1,153,199.23	18,990.23	101.67%
304000 - Charges for Services	34,808.00	34,808.00	0.00	37,789.24	2,981.24	108.56%
306000 - Miscellaneous Revenues	0.00	0.00	1,545.10	6,590.40	6,590.40	0.00%
522000 - Fire Department	2,344,367.00	2,344,367.00	81,538.92	1,769,436.08	574,930.92	75.48%
Fund: 115 - Fire Fund Surplus (Deficit):	0.00	0.00	-51,029.26	-571,857.21	-571,857.21	0.00%
Fund: 300 - Capital Project Fund						
000000 - NonDesignated	2,798,866.00	2,798,866.00	0.00	0.00	-2,798,866.00	0.00%
303000 - Intergovernmental Revenues	2,179,844.00	2,179,844.00	0.00	0.00	-2,179,844.00	0.00%
306000 - Miscellaneous Revenues	600.00	600.00	3,501.77	11,762.03	11,162.03	1,960.34%
519000 - General	342,765.00	342,765.00	5,085.17	145,259.11	197,505.89	42.38%
519163 - OffsiteRoof Replacement	331,000.00	331,000.00	0.00	305,860.00	25,140.00	92.40%
545100 - Downtown Parking Reconfiguration	0.00	0.00	0.00	43,819.22	-43,819.22	0.00%
545101 - Downtown Commercial Refurbishm	1,200,000.00	1,200,000.00	59,047.84	295,796.46	904,203.54	24.65%
559025 - Bel Air - Sewall Repair - East	215,545.00	215,545.00	574.93	-41,443.83	256,988.83	-19.23%
559026 - Canal Dredging	380,000.00	380,000.00	0.00	358,914.73	21,085.27	94.45%

Budget Report

For Fiscal: 2022-2023 Period Ending: 07/31/2023

Department...	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
559027 - Storm Water Rate Study	60,000.00	60,000.00	0.00	0.00	60,000.00	0.00%
572200 - Beach Renourishment	0.00	0.00	0.00	2,463.87	-2,463.87	0.00%
575201 - Pedestrian Amenities	50,000.00	50,000.00	2,594.31	3,638.13	46,361.87	7.28%
576135 - Street Project Codrington Drive	1,700,000.00	1,700,000.00	958,163.15	1,394,090.06	305,909.94	82.01%
577100 - Friedt Park	700,000.00	700,000.00	0.00	0.00	700,000.00	0.00%
Fund: 300 - Capital Project Fund Surplus (Deficit):	0.00	0.00	-1,021,963.63	-2,496,635.72	-2,496,635.72	0.00%
Fund: 310 - Parking Fund						
302000 - Licenses & Permits	20,000.00	20,000.00	0.00	60,350.00	40,350.00	301.75%
304000 - Charges for Services	2,336,024.00	2,336,024.00	302,166.12	2,981,176.13	645,152.13	127.62%
305000 - Fines & Forfeitures	100,000.00	100,000.00	1,220.00	105,382.74	5,382.74	105.38%
306000 - Miscellaneous Revenues	1,000.00	1,000.00	14,829.53	63,570.31	62,570.31	6,357.03%
545000 - Parking Operations	1,118,690.00	1,118,690.00	63,498.33	2,811,190.35	-1,692,500.35	251.29%
545152 - Land Acquisitions	1,033,334.00	1,033,334.00	0.00	0.00	1,033,334.00	0.00%
581100 - Interfund Transfers	305,000.00	305,000.00	0.00	152,500.00	152,500.00	50.00%
Fund: 310 - Parking Fund Surplus (Deficit):	0.00	0.00	254,717.32	246,788.83	246,788.83	0.00%
Report Surplus (Deficit):	0.00	0.00	-1,025,802.65	-1,625,880.31	-1,625,880.31	0.00%

Fund Summary

Fund	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)
001 - General Fund	0.00	0.00	-498,760.03	526,652.31	526,652.31
101 - Special Revenue-Police Conf	0.00	0.00	0.00	219.86	219.86
102 - Building Fund	0.00	0.00	261,273.56	803,724.71	803,724.71
103 - Sewer Fund	0.00	0.00	29,959.39	-134,773.09	-134,773.09
115 - Fire Fund	0.00	0.00	-51,029.26	-571,857.21	-571,857.21
300 - Capital Project Fund	0.00	0.00	-1,021,963.63	-2,496,635.72	-2,496,635.72
310 - Parking Fund	0.00	0.00	254,717.32	246,788.83	246,788.83
Report Surplus (Deficit):	0.00	0.00	-1,025,802.65	-1,625,880.31	-1,625,880.31

Town of Lauderdale-by-the-Sea
Cash and Investment Report
as of July 31,2023

Bank / Other	GL No.	Bank No.	Account Name	Account Type	Bank/ Pool	Balance 7/31/2023	Interest/ Avg % Yield	Interest/Chg Mkt Value	Interest/ Year to Date
001 General Fund:									
SunTrust	101.000	8015	Master Account	Advantage NOW	SunTrust	7,092,561.63	0.01%	7,811.86	44,911.86
SunTrust	101.009	6876	Emergency Reserve	Advantage NOW	SunTrust	2,500,000.00	0.01%	Included Above	Included Above
GENERAL FUND						BANK SUBTOTAL		7,811.86	44,911.86
SBA	101.300	1471-A	General Fund Invest Acct A	SBA Invest Pool	SBA	182,416.31	5.39%	831.78	6,821.09
SBA	101.400	1472-A	Emergency Reserves Acct A	SBA Invest Pool	SBA	88,501.63	5.39%	403.57	3,358.24
GENERAL FUND						SBA SUBTOTAL		1,235.35	10,179.33
GENERAL FUND						GRAND TOTAL		9,047.21	55,091.19
101 Police Forfeiture & Training									
SunTrust	101.100	9613	Police Forfeiture Fund	Advantage NOW	SunTrust	15,659.60	0.01%	Included Above	Included Above
POLICE FUND						TOTAL		0.00	0.00
103 Sewer Enterprise Fund									
SunTrust	101.105	9999	Cash	Advantage NOW	SunTrust	1,458,332.81	0.01%	851.98	6,325.97
SEWER FUND						TOTAL		851.98	6,325.97
115 Fire Fund:									
SunTrust	101.109	5379	Fire Fund Account	Advantage NOW		1,067,401.96	0.01%	1,168.64	13,132.31
FIRE FUND						GRAND TOTAL		1,168.64	13,132.31
300 Capital Improvement Fund:									
SunTrust	101.115	0010	Cash	Advantage NOW	SunTrust	4,266,716.26	0.01%	3,501.77	19,599.52
CAPITAL IMPROVEMENT FUND						TOTAL		3,501.77	19,599.52
310 Parking Improvement Fund									
SunTrust	101.125	0120	Parking Improvement Account	Advantage NOW	SunTrust	4,832,367.67	0.01%	3,558.03	26,093.92
SunTrust	101.128	8554	PILOP Account	Advantage NOW	SunTrust	148,871.00	0.01%	106.43	622.82
PARKING FUND						TOTAL		3,664.46	26,716.74
102 Building Fund									
SunTrust	101.104	8686	Building Account	Advantage NOW	SunTrust	1,299,617.20	0.01%	831.19	5,466.09
BUILDING FUND						TOTAL		831.19	5,466.09
ALL FUNDS						GRAND TOTAL		19,065.25	126,331.82

Town of Lauderdale-by-the-Sea
Cash and Investment Report
as of July 31,2023

Summary by Investment Type		Amount	Percent
Interest Bearing Checking		22,681,528.13	99%
Non-interest Bearing Checking		0.00	0%
SBA Trust Fund/Pools		270,917.94	1%
Repurchase Agreements		0.00	0%
Money Market Funds		0.00	0%
U.S. Securities/Treasuries		0.00	0%
U.S. Federal Agencies		0.00	0%
Federal Instrumentalities		0.00	0%
GRAND TOTAL		22,952,446.07	100%

Summary by Fund		Amount	Percent
101.000/101-400	General Fund	9,863,479.57	43%
	Police Fund	15,659.60	0%
	Sewer Fund	1,458,332.81	6%
	Fire Fund	1,067,401.96	5%
	Building Fund	1,299,617.20	6%
	Capital Improvement Fund	4,266,716.26	19%
	Parking Fund	4,981,238.67	22%
GRAND TOTAL		22,952,446.07	100%

Summary by Bank/Pool		Amount	Percent
	SunTrust	22,681,528.13	99%
	Florida Prime/State Board of Admin.	270,917.94	1%
GRAND TOTAL		22,952,446.07	100%



Agenda Item No: 10.a.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Katrina Adler, Town Clerk

Submitting Department: Administration

Item Type: Approval of Minutes

Agenda Section: APPROVAL OF MINUTES

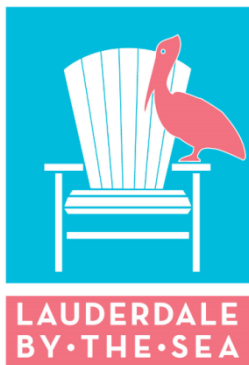
Subject Title: Approval of Minutes for 8-15-23 Regular Town Commission Meeting

Explanation: Draft minutes for approval for the 8-25-23 Regular Town Commisison Meeting

Recommendation:

Exhibits:

1. 8-15-23 Regular Commission Meeting Minutes



DRAFT
TOWN OF LAUDERDALE-BY-THE-SEA
TOWN COMMISSION
MEETING MINUTES
Jarvis Hall
4505 Ocean Drive
Tuesday, August 15, 2023
6:30 PM

1. CALL TO ORDER, MAYOR CHRIS VINCENT

Mayor Chris Vincent called the meeting to order at 6:38 p.m. Also present were Vice Mayor Edmund Malkoon, Commissioner Alfred “Buz” Oldaker, Commissioner Theo Pouloupoulos, Commissioner Randy Strauss, Town Manager Linda Connors, Town Attorney Amelia Jadoo, Deputy Town Manager/Public Works Director Ken Rubach, Assistant to the Town Manager Courtney Easley, Development Services Director Jhanelle Campbell, Director of Budget and Finance Lucila Lang, Senior Special Events and Marketing Coordinator Katie Anderson, and Town Clerk Katrina Adler.

2. PLEDGE OF ALLEGIANCE TO THE FLAG

3. INVOCATION

All present observed a moment of silence.

4. ADDITIONS, DELETIONS, DEFERRALS OF AGENDA ITEMS

None.

5. PRESENTATIONS

a. Dive Into Summer Recap

Senior Special Events and Marketing Coordinator Katie Anderson reported that on July 29, 2023, the Town held its first annual Dive Into Summer event, which was a community success. The Town partnered with SCUBA for Good, which promotes adaptive diving for individuals with disabilities. The inaugural event attracted roughly 2500 people throughout the day.

b. Proclamation for Volunteer Fire Department

Mayor Vincent read a Proclamation recognizing the Volunteer Fire Department (VFD) for their service to the Town. VFD Chief Judson Hopping accepted the Proclamation on behalf of the Department.

c. Proclamation for American Medical Response

Mayor Vincent read a Proclamation recognizing American Medical Response (AMR) for their service to the Town.

d. Downtown Design Clarification

Mayor Vincent explained that Staff has prepared a brief presentation to provide a summary of, and address concerns about, the Downtown renovation project, including its potential design and what the Town can expect from this project. He recalled that prior to the COVID-19 pandemic, the Town's outdoor café space was expanded in 2013 to provide outdoor seating for a number of Downtown restaurants. Since the pandemic, and after hearing input from Downtown businesses, it was determined that the additional spaces used for expanded outdoor dining would be implemented permanently.

Mayor Vincent noted that there have been concerns that the project may not be capturing as much additional square footage for each business as originally intended. He explained that he has asked Staff to review the pre-COVID-19 Downtown layout for each business as well as the layout for these businesses once the new design is implemented.

Development Services Director Jhanelle Campbell clarified that the breakdown of space is provided for businesses on the south side of Commercial Boulevard. She showed a rendering of existing conditions for each business in that area, followed by a rendering of the increased square footage and numbers of seats approved for these businesses.

Mayor Vincent requested clarification of the reduction in square footage necessary per body. Development Services Director Campbell advised that in the past, Staff calculated the number of allowed seats as one per 15 sq. ft.; however, this is now calculated as one seat per 10 sq. ft., which allows for increases in seating.

Mayor Vincent also asked for more information on why so many potential seats were gained for Even Keel, which is located on a corner. Development Services Director Campbell explained that this is because the backout parking spaces at that location are

being eliminated. This change meets standards for the right-of-way and does not include any islands, walls, or additional landscaping, which affords that restaurant additional seating. Other restaurants which formerly had backout parking will experience a similar increase in outdoor seating space.

Development Services Director Campbell also pointed out that Harat's-By-The-Sea, which is on a different corner, is gaining fewer seats due to the deeper orientation of the parking spaces.

Town Manager Linda Connors explained that a trench has been dug as part of the construction phase in order to lay the forms for the footer wall. While this trench looks very large at present, the result will be an "eccentric footer," which means the wall will not be located in the middle of the trench but on the farthest edge of the rebar. It is designed to serve as a border to the landscaping planned for the area.

Town Manager Connors continued that one issue with the existing design was that pedestrians tended to walk through the landscaping. Plans for the renovated Downtown include more robust landscaping, which will create a more intimate setting for outdoor diners. The architectural wall has a maximum height of 14 in. which slopes down to 11 in. toward the landscaping and lighting.

Mayor Vincent observed that the revised layout and additional square footage seem to be working as a means to provide a net gain in seating. He requested more information on the wall's encroachment toward the existing pedestrian walkway near Even Keel and Harat's-By-The-Sea. Town Manager Connors clarified that the design is intended to add space so the restaurants can create a more intimate dining experience, while pedestrians are encouraged to remain on the path outside this space. The wall curves inward to discourage foot traffic through the outdoor dining area and establishes an easier path outside of the dining space.

Mayor Vincent stated that since the additional square footage to each restaurant has been clarified, he would like Staff to meet with any individual business owner who wishes to confirm these numbers. He emphasized that the intent is to provide additional seating in comparison to pre-pandemic conditions, and to give the Downtown businesses an opportunity for continued success.

Vice Mayor Malkoon commented that Staff has already calculated the additional space provided to the Downtown businesses and determined that the project represents an

increase in dining area. He recognized Town Staff for their work on clarifying these dimensions on short notice.

Vice Mayor Malkoon also noted that one corner has less space due to the requirement for two Americans with Disabilities Act (ADA) -compliant parking spaces, which must be retained. He felt the access points for businesses are sufficiently wide, and concluded that the project's design makes sense without providing an excessive amount of sidewalk. He was not in favor of further delay to redesign the project, pointing out the significant investment of Staff time over the past year to 18 months in meeting with businesses to discuss the project.

Mayor Vincent briefly addressed trees, noting that Code requires the maintenance of a specific perimeter around the roots of trees. Town Manager Connors added that she had spoken with the project's architect to determine whether or not the wall could be shifted closer to the street; however, it was confirmed that the wall cannot be shifted further without encroaching upon the root systems of trees.

Commissioner Pouloupoulos observed that while the project's current conditions appear dramatic, it is better to proceed with construction. He was not certain that the project could be taken back to the drawing board at this point if it is to be complete before the tourist season begins. He recalled there were multiple Town meetings and workshops to review renderings and aspects of the project, and that all parties made some sacrifices in order to arrive at a project that benefits both businesses and pedestrians.

Mayor Vincent concluded that the intent of adding this Item to tonight's Agenda was to look at the project's progress and hear any concerns, not to delay it further. Upon consultation with Staff and discussion with all affected parties, his concerns have been addressed and he was comfortable proceeding with the project without changes.

Commissioner Pouloupoulos requested that Staff look into the possibility of better roadway signage, including larger detour signs as well as more accurate signs directing drivers and pedestrians to open businesses. Town Manager Connors noted that it may be possible to gain permission from a property owner to place some signage on private property, which would circumvent the need to seek further approval from the Florida Department of Transportation (FDOT).

Commissioner Oldaker confirmed that he was comfortable moving forward with the project as well.

6. PUBLIC COMMENTS

At this time Mayor Vincent opened public comment.

Bill Ciani, resident, stated that one of his Downtown corner tenants has lost a number of outdoor dining tables due to the ongoing project, and requested that the Town consider a way to address this issue.

Heather Hefner, general manager of Harat's-By-The-Sea, advised that the restaurant owners have expressed concern with the loss of some outdoor tables. She did not feel that the dimensions reviewed at tonight's meeting were accurate, including the wall and access to the business as well as seating.

Mayor Vincent clarified the location of ingress/egress to the restaurant, and suggested that once the project is complete, it may be possible to review the area and make adjustments to architectural features and configuration.

Dmitri Senebrianik, business owner, requested clarification of one of the drawings showing the project's layout. Town Manager Connors advised that this particular drawing was not representative of additional square footage, but was intended to show the placement of pavers.

Mr. Senebrianik suggested that it could be helpful to see the exact location of tables as well as the number of tables that would be gained through the project. Mayor Vincent explained that each business is responsible for the layout of their tables within the additional square footage.

Town Manager Connors further clarified that the space is calculated using square footage because there had been difficulty comparing the different sizes of tables used by various restaurants. This disparity in size means that restaurants with the same additional square footage may be able to accommodate different numbers of new tables. She also noted that Florida Building Code specifies the number of persons who may be accommodated within a certain number of square feet; however, this will again depend upon the size of the business's street furniture.

Mr. Senebrianik also addressed the flow of pedestrian traffic, which is affected by the location of a bike rack in one area. Town Manager Connors confirmed that Staff will reconsider the bike rack, which may be replaced with a smaller model or relocated once the renovations are complete.

Paul Novak, resident, stated that he had no further comment, as he felt the Commissioners' minds were made up.

With no other individuals wishing to speak at this time, Mayor Vincent closed public comment.

7. PUBLIC SAFETY REPORT

a. BSO July 2023 Report

Broward Sheriff's Office (BSO) Captain Tom Palmer, stated that Deputy James Goodwin is the Deputy of the Month for July 2023, citing two incidents from that month in which the Deputy provided outstanding service.

Captain Palmer also clarified that pedestrians are not permitted to carry alcoholic beverages in the open.

Commissioner Oldaker made a motion, seconded by Commissioner Strauss, to approve. Motion carried 5-0.

8. TOWN MANAGER REPORT

a. Town Manager Report for August 15, 2023

Town Manager Connors reported that Ray Qualmann Marine Construction has been selected as the contractor to complete work on the Bel Air seawall. This project is expected to begin in September 2023. Permits have been issued and the contractor is awaiting materials.

Staff has authorized solid waste provider WastePro to temporarily begin work at 6 a.m. in recognition of extreme heat conditions. The Building Department has similarly authorized its contractors to begin any exterior work at 7 a.m., and the Public Works Department is attempting to work earlier as well. Once the heat subsides, the Town will rescind these temporary measures.

A governing board has been established for the Solid Waste Disposal and Recyclable Materials Processing Authority of Broward County by a positive vote of Broward municipalities adding up to 75% of the County. The next step in the process is for each

municipality to appoint a representative and alternate member to the governing board. The Commissioners determined that Commissioner Oldaker would serve as the regular board member and Commissioner Strauss would serve as alternate.

Town Manager Connors continued that the Town's new contract with the Pompano Beach Fire Department for Fire services includes a clause requesting that this new provider work with the Town to establish a Community Emergency Response Team (CERT). This is a national program which trains volunteers in basic disaster skills, including fire safety, life search and rescue, team organization, and disaster operations. Interested parties are encouraged to contact Robin Burns of the Pompano Beach Fire Department at (954)786-4695 or at robin.burns@copfl.com. This team will continue the tradition of volunteerism for which the VFD has set an example for many years.

Because the Town received Broward County transportation surtax funds for the operation of the Pelican Hopper, the Town Manager has reached out to the County requesting that the Town be allowed to use these funds for Circuit, which provides similar service. This request has been denied. The Town Manager has spoken with Circuit to enlist their help in seeking grant funding, and will keep the Town informed of any opportunities that arise. She noted that very few riders used the Pelican Hopper, while thousands of riders used Circuit during the month of July 2023 alone.

A Special Magistrate meeting is scheduled for August 24, 2023, and a Commission budget meeting is scheduled before the regular Commission meeting of Wednesday, September 13, 2023.

The Commissioners briefly commented on the ongoing success of Circuit within the Town. Town Manager Connors advised that Lauderdale-By-The-Sea, Pompano Beach, Hollywood, Fort Lauderdale, and Wilton Manors use this service and are encouraging the County to provide surtax funds toward its use.

Vice Mayor Malkoon asked if the Town can request condominium property managers to send the Town's newsletter to their residents. Town Manager Connors replied that the Town is working to strengthen its relationships with condominiums. She also noted that Circuit helps to advertise the Town's businesses and events with information and materials inside the vehicles.

b. May 2023 Finance Report

The May and June 2023 reports were presented together.

c. June 2023 Finance Report

Director of Budget and Finance Lucila Lang noted that as of June 2023, the Town had completed 75% of its fiscal year. Some line items show that more than 75% of the budget has been spent, however, which is attributable to cost increases. These include printing, water service, and maintenance of equipment, vehicles, and buildings.

Commissioner Oldaker commented that the Town may be able to take advantage of current interest rates, noting that the state of Florida offers a program similar to a money market account. This program currently offers rates that would be favorable to the Town. He asserted that not taking advantage of this program was resulting in lost money, and that investment of existing dollars in the state program could be earning close to \$11,000/month. This could generate additional dollars that could go toward increasing the Town's Emergency Fund, as discussed during earlier budget workshops.

Commissioner Oldaker concluded that he felt the Town should expedite the investigation of how to move funds to more profitable accounts, possibly by "piggybacking" on another municipality's contract with an investment manager. He felt this should be done before the new fiscal year commences.

Commissioner Poulopoulos asked if the Town is required to keep certain funds, such as emergency reserves, in specific types of accounts, as it may be necessary to keep these funds liquid for emergency withdrawal. Commissioner Oldaker replied that to the best of his knowledge, it is possible to move monies in and out of the state fund at will. He added that the Town is already participating in the program.

Commissioner Poulopoulos asked if there are any additional hurdles involved in moving funds to the state program. Commissioner Oldaker advised that this is a "state-backed" fund which is regularly used by municipalities from throughout the state of Florida.

Town Manager Connors advised that the Town is unsatisfied with its current banking and investments, and plans to investigate other ways that funds may be invested. She noted that it will be necessary to determine the best program in which the Town may wish to invest. She has spoken with the Finance Department on making this a priority once budget discussions have concluded.

Mayor Vincent commented that discussions of this nature should happen individually with the Town Manager and/or Budget and Finance Director before being brought

before the Commission. He felt it was inappropriate to suggest that Staff was not doing everything possible to maximize the Town's reserves and finances.

d. Q2 2023 Visitor Center Quarterly Report

Senior Special Events and Marketing Coordinator Anderson reported that the Visitor Center has now been managed by the Town for approximately 18 months. Its operations include two part-time employees as well as volunteers. Since March 2023, Visitor Center staff has added another four volunteers.

Data points are taken at the Visitor Center to determine who is being captured by their services. During the second quarter, April through June 2023, there was a nearly 20% increase of walk-in foot traffic over the previous year. The second quarter saw more domestic visitors, while the first quarter had reflected international travelers. One of the main ways visitors became aware of the Visitor Center was through signage.

In the second quarter, the Visitor Center had three Chamber of Commerce referrals, and will continue to encourage new businesses to join the Chamber. The Center has also procured new artwork from local artists, which will be featured within the facility. They have updated the Town map, assisted visitors and residents with the download of the Circuit app, distributed flyers to businesses, updated the TripAdvisor site, and worked with the Visit Lauderdale and Visit Florida sites to ensure all information is up-to-date.

Moving into the third quarter, the Visitor Center will continue to enhance its experience and seek to increase foot traffic in order to promote the Town and its businesses.

9. TOWN ATTORNEY REPORT

None.

10. APPROVAL OF MINUTES

a. Approval of Minutes for the July 11, 2023 and July 25, 2023 Special and Regular Commission Meetings

Commissioner Strauss made a motion, seconded by Commissioner Poulopoulos, to approve. Motion carried 5-0.

11. CONSENT AGENDA

- a. **Resolution 2023-44 A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PAYMENT INCREASE FOR ADDITIONAL SERVICES IN CONNECTION WITH THE AGREEMENT WITH TASK TIME SERVICES, LLC FOR FISCAL YEAR 2023; APPROVING AN INCREASE TO THE MAXIMUM TOTAL COMPENSATION FOR EACH FISCAL YEAR DURING ANY EXTENSIONS TO THE TERM OF THE AGREEMENT WITH TASK TIME SERVICES, LLC; APPROVING THE FIRST AMENDMENT TO THE AGREEMENT WITH TASK TIME SERVICES, LLC TO EXTEND THE TERM TO SEPTEMBER 30, 2024 AND TO PROVIDE FOR TWO OPTIONAL ONE-YEAR RENEWALS; PROVIDING FOR EXECUTION, IMPLEMENTATION, CONFLICTS, AND AN EFFECTIVE DATE.**
- b. **Resolution 2023-45 A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING AN INCREASE IN PAYMENT FOR ADDITIONAL SERVICES IN CONNECTION WITH THE AGREEMENT WITH JEFFREY A. MODARELLI FOR FISCAL YEAR 2023; APPROVING AN INCREASE IN THE MAXIMUM TOTAL COMPENSATION FOR EACH FISCAL YEAR DURING THE TERM OF THE AGREEMENT WITH JEFFREY A. MODARELLI; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND AN EFFECTIVE DATE.**
- c. **Resolution 2023-46 A RESOLUTION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, AUTHORIZING THE TOWN MANAGER TO EXECUTE AN AGREEMENT WITH AN INDEPENDENT CONTRACTOR FOR THE PROVISION OF PROFESSIONAL FIRE PREVENTION CONSULTING SERVICES; AND PROVIDING FOR AN EFFECTIVE DATE.**
- d. **Employee Insurance Benefits for FY24**

Vice Mayor Malkoon requested clarification of the purposes of the contracts addressed in Items 11.a and 11.b, including why they reflect overages. Town Manager Connors explained that she currently has an approval limit of \$15,000, which means she may not authorize expenses larger than that amount without Commission approval. Because the work includes organization of the Building Department's files, there is no established end date at this time.

Town Manager Connors added that most of the expense will come from the Building Fund, which has sufficient funds to cover these and related activities.

Vice Mayor Malkoon asked if it would be more efficient to hire a company to finish the project more quickly. Town Manager Connors replied that the files must be organized before they are digitized, and the contractor responsible has significant experience with that type of project. The second individual is a former City Clerk of Fort Lauderdale and also has related experience.

Town Manager Connors also addressed Item 11.c, which would hire Fire Marshal Steve Paine assist with the transition between the VFD and the Pompano Beach Fire Department. This will ensure as seamless a transition as possible. While the request is for up to \$50,000, it has not yet been determined how many hours per week Mr. Paine will work. He will serve as an independent contractor to the Town, and will be under the oversight of the Town Manager.

Mayor Vincent recommended that the Town Attorney's firm review the contractual obligation to ensure that the Town can legally pay Mr. Paine, or if his position requires a special license due to the public safety concerns of the position. Town Manager Connors confirmed that Weiss Serota Helfman Cole & Bierman has reviewed the contract. She further clarified that Mr. Paine will not be serving as a public official, but as a consultant. Any inspections or reviews will be the responsibility of the Pompano Beach Fire Department.

Commissioner Pouloupoulos made a motion, seconded by Commissioner Oldaker, to approve. Motion carried 5-0.

12. OLD BUSINESS

- a. Resolution 2023-39: A RESOLUTION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, AMENDING THE TOWN'S PURCHASING MANUAL; PROVIDING FOR CONFLICTS, SEVERABILITY, AND AN EFFECTIVE DATE.**

At this time Mayor Vincent opened public comment, which he closed upon receiving no input.

Assistant to the Town Manager Courtney Easley advised that this Item was first presented at the July 25, 2023 Commission meeting. It has since been updated to reflect revisions recommended by Town Staff and the Town Attorney.

There was also a request from the Commission to provide additional information on one of the proposed changes to purchasing approval authority, which was to gather information from similarly-sized and neighboring municipalities with respect to their purchasing authority thresholds. This information is included in the Commissioners' backup materials.

Assistant to the Town Manager Easley recommended that the Commission may want

to review each proposed change individually and arrive at consensus on them before voting on the Resolution.

Commissioner Oldaker addressed renewal of contracts, stating that he felt these should continue to be brought before the Commission for acknowledgement if not for approval. Assistant to the Town Manager Easley noted that this proposal was only for contracts with terms and conditions that would remain the same, while contracts with changes would come back to the Commission. It was determined that unchanged contracts could be presented as part of the Town Manager's Report, which would allow the Commissioners to discuss them as needed.

Commissioner Strauss addressed purchase approval authority, commenting that he understood the need to recognize rising prices and additional spending without bringing items back before the Commission; however, he advised that he did not mind reviewing items in advance of purchasing them. He suggested that the Commission may wish to consider an approval threshold of \$20,000 for the Town Manager rather than the \$25,000 proposed by the Resolution.

Commissioner Pouloupoulos agreed with Commissioner Strauss's suggestion regarding a possible \$20,000 approval threshold. He also noted the reference to change orders, pointing out that for a large contract, 10% of the contract amount could be significant. He added that while the Commissioners would discuss these items with Town Staff, bringing them formally before the Commission for approval would provide an additional level of transparency for the Town's taxpayers.

Mayor Vincent agreed with these comments as well, also emphasizing the importance of transparency. He was in favor of Commissioner Strauss's proposal for a Town Manager approval threshold of \$20,000. He was also not in favor of the change order threshold of 10% without Commission review/approval.

Commissioner Pouloupoulos made a motion, seconded by Commissioner Oldaker, to approve Resolution 2023-39 with the following changes:

- **Remove the extension deleting the renewal of contracts from the revised purchasing manual, giving the Town Manager authority to renew contracts;**
- **Change the Town Manager's contract approval amount to \$20,000;**
- **Remove the 10% threshold for Town Manager approval of change orders, and keep the amount at \$20,000**

Motion carried 5-0.

b. Reconsideration for Code Mitigation for 1500 South Ocean Boulevard, Unit #1608

Development Services Director Campbell recalled that a mitigation application came

before the Commission in February 2023 for the property located at 1500 South Ocean Boulevard, Unit #1608. The property was cited for work performed without a permit. The Commission considered the application and ruled that the applicant would need to pay \$17,325.

Following that meeting, the property owner reached out to Town Staff with concerns regarding the facts presented. Development Services Director Campbell reviewed the file and recognized that some of the information presented to the Commission had been incorrect. This information would have had an effect on the Commission's decision. These corrections are outlined in Exhibit 2 accompanying the Item.

Development Services Director Campbell concluded that she was bringing the Item back for reconsideration with a recommendation that, due to the circumstances, the Commission accept a 5% payment of \$1155 rather than the 25% payment of \$17,325 from the owner.

Mayor Vincent requested clarification of the items on which the property owner had acted negligently. Development Services Director Campbell confirmed that while work without a permit had occurred, there were errors in the file, such as an assertion that no one was present to represent the owner at a February 24, 2023 Special Magistrate meeting. It was determined that the owner was present at that meeting.

Development Services Director Campbell continued that the Code Officer present at the February 24 meeting had requested both a continuance and an extension, which are two different procedures within the Code process. In a continuance, the fines will continue to accrue; if an extension is granted, the compliance date would be reset and the fines would not start to accrue until that new date. Only a continuance was recorded at the Special Magistrate meeting, which meant fines began to accrue on February 24.

Mayor Vincent recommended that the Applicant be granted 100% mitigation of the fines, as the Town should recognize its errors in this case.

Vice Mayor Malkoon asked what safety can be put into place so a similar error does not recur in the future. Development Services Director Campbell noted that the Code Officer who handled the case is no longer with Town Staff, and Code Officers are now instructed to ensure that diligent notes are taken at Special Magistrate hearings, including the presence of the Applicant.

Commissioner Strauss emphasized the importance of building relationships between the Town and its condominium residents, possibly identifying a liaison for this purpose. He pointed out that issues such as this one could be cured or prevented by strengthening relationships with condominiums in the future. Mayor Vincent was also in favor of a liaison to help educate the boards on these issues.

Commissioner Pouloupoulos made a motion, seconded by Commissioner Strauss, to mitigate the fines to 100%. Motion carried 5-0.

13. NEW BUSINESS

- a. RESOLUTION 2023-43 A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, ESTABLISHING A SCHEDULE OF FEES FOR USE OF THE TOWN'S COMMUNITY CENTER; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND FOR AN EFFECTIVE DATE.**

At this time Mayor Vincent opened public comment, which he closed upon receiving no input.

Assistant to the Town Manager Easley advised that since 2004, the Town has received funding from Broward County's Community Development Block Grant (CDBG) program to supplement the costs of operating the Community Center. In July 2023, the Broward County Board of County Commissioners voted to discontinue receiving CDBG funds due to a number of issues with that program.

To replace the funds that will no longer be received, which came to approximately \$9000/year, Staff proposes that the Town charge a small annual fee to users of the Community Center to supplement the Town's budget for the Center. Fee structures from several Broward communities were reviewed, with the results included in the Commissioners' Agenda Memo. Most municipalities charge \$12 to \$15 per class.

Staff recommends a fee structure that will provide Town residents with an annual fee of \$25, with non-residents to be charged \$50. There would be no cost to volunteer instructors. The per-class fee would be \$5 and the weekly fee would be \$15.

Based on enrollment numbers for the current fiscal year, the Town projects that the new fee schedule would bring in approximately \$28,875. Staff is seeking approval for Resolution 2023-43 for this proposed fee structure.

Vice Mayor Malkoon asked if Armilio Bien-Aime, who operates the Community Center, was in favor of the proposal. Assistant to the Town Manager Easley confirmed this is the case.

Vice Mayor Malkoon made a motion, seconded by Commissioner Oldaker, to accept the fee schedule as presented. Motion carried 5-0.

- b. Special Event – Community Church Monthly Flea Market beginning September 2, 2023**

Senior Special Events and Marketing Coordinator Anderson stated that the

Community Church requests the ability to hold a monthly flea market on the first Saturday of each month, from September 2023 through July 2024, to raise funds for the church. The Applicant has submitted a special event application and has paid the \$100 application fee. The flea market will be a recurring event and has taken place in the Town over the last several years.

The event season would consist of the following Saturdays in 2023-2024:

- September 2, 2023
- October 7, 2023
- November 4, 2023
- December 2, 2023
- January 6, 2024
- February 3, 2024
- March 2, 2024
- April 6, 2024
- May 4, 2024
- June 1, 2024
- July 6, 2024

Setup for the event will begin at 7 a.m., with the event beginning at 8 a.m. and concluding at 2 p.m., with cleanup to be completed by 4 p.m. Tables will be arranged inside the church's Fellowship Hall and outside the building as well. Acoustic music may be played, and free parking will be available just north of the Community Church. Food will be served from the church's kitchen unless approval has been granted for a food truck.

The Town recommends conditional approval of food trucks at some of these events. At least one week prior to an event at which a food truck is anticipated, the church will be required to provide the Town with a site map identifying the number of trucks, their location, proof of insurance, and the proposed hours of operation. The Town Manager will review this information and provide authorization of the site map by the Thursday before the event.

In addition to approval of the event, the Applicant requests waiver of the \$15 per event day fee, as well as the use of Friedt Park for acoustic music and a gathering place for the event's guests.

Should the Commission approve the event, Town Staff recommends approval with the conditions reflected in the tentative permit, attached as Exhibit 2.

Staff requests direction from the Commission on the following items:

- Approval of the event, with Staff's recommended conditions as outlined in the tentative permit
- Waiver of the \$15 per event day fee

- Approval for the Community Church to use the annex of Friedt Park

Commissioner Pouloupoulos advised that while he agreed with approval of the event and Town Staff oversight, he was not in favor of permitting food trucks, as they would compete with the Town's restaurants that are experiencing construction. Commissioner Strauss agreed that any food trucks at the event should represent the Town's restaurants.

Commissioner Oldaker asked if a representative of the Community Church had reached out to any Town restaurants to determine if they could participate in the event. Senior Special Events and Marketing Coordinator Anderson replied that she was not aware of any such communication, but confirmed that Town Staff could relay this suggestion to the Applicant.

Vice Mayor Malkoon did not feel a food truck would constitute direct competition with a restaurant, as these vehicles cannot provide a seated dining environment. He was not opposed to encouraging Town restaurants if they wished to participate, but noted that the attendees of a flea market are unlikely to visit the Downtown area.

Commissioner Pouloupoulos expressed concern that allowing food trucks by outside restaurants could open other Town events to the possibility of outside food trucks that could take business away from Town restaurants.

Motion made by Commissioner Pouloupoulos, seconded by Commissioner Strauss, to approve the Application, under the condition that no food trucks will be allowed from outside vendors. Motion carried 5-0.

14. COMMISSIONER COMMENTS

Commissioner Oldaker noted that he had expressed an opinion on a figure within a Staff report based on research he had conducted with the intent of helping Town Staff. He emphasized that he has raised issues individually with Staff in the past, but also wished to discuss these issues with the other Commissioners, as they may not have these discussions outside meetings due to the requirements of the Sunshine Law. He felt it was unfair for another individual to present an opinion on this issue without permitting a rebuttal and further discussion.

Vice Mayor Malkoon reported that he attended the recent Florida League of Cities conference.

Mayor Vincent stated that if Commissioner Oldaker wished to propose plans for the investment of Town funds, they should have been placed on a Commission Agenda at any point during the past year. He took issue with the manner in which the item had been raised without prior discussion.

15. ORDINANCES 1ST READING

- a. **Ordinance 2023-03: ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, AMENDING CHAPTER 6, “BUILDINGS AND BUILDING REGULATIONS,” ARTICLE I “IN GENERAL” OF THE CODE OF ORDINANCES, TO UPDATE REGULATIONS REGARDING CONSTRUCTION FENCING REQUIREMENTS; PROVIDING FOR CODIFICATION, SEVERABILITY, CONFLICTS AND AN EFFECTIVE DATE.**

At this time Mayor Vincent opened public comment, which he closed upon receiving no input.

Development Services Director Campbell advised that Chapter 6 of the Town's Code of Ordinances outlines the requirements for temporary perimeter fencing when a construction project begins; however, Code is not explicit on the type of fencing required. As a result, not all construction fences which have been installed meet the intent of Code.

Staff recommends updating Code to reflect the specific types of fencing the Town wishes to see in order to ensure that proper locks are placed on gates and that canvas or other fencing is also uniform in nature. The proposed Ordinance includes all of these requirements.

Mayor Vincent stated that he was in favor of any Ordinance which would abate a nuisance to adjoining properties, streets, or waterways. Development Services Director Campbell advised that the requirement would be for a 6 ft. chain link fence with canvas or other screening material. She added that Staff had reviewed the Codes of neighboring communities for comparison. Mayor Vincent concluded that some properties may need to be reviewed on a case-by-case basis.

Commissioner Oldaker requested clarification that no fencing would be required if a residential property was performing interior work. Development Services Director Campbell confirmed this. Commissioner Oldaker noted that exterior work may not include a physical structure itself, but could involve digging in a yard.

Mayor Vincent asked if total landscaping would require a construction fence. Development Services Director Campbell replied that a fence would not be required in

this case. Mayor Vincent recommended looking further into these clarifications before moving forward with the Ordinance.

Development Services Director Campbell pointed out that a stand-alone landscaping permit would not require input from the Building Department, although a landscaping project in conjunction with other renovations would. Mayor Vincent observed, however, that a landscaping project could generate significant dust. He asked when a perimeter fence would need to be taken down so a project can move into a landscaping phase. Town Manager Connors replied that once major exterior construction of a structure is complete, the fencing could be removed. She acknowledged that it would be difficult to make the Ordinance fit every situation.

Mayor Vincent explained that his intent was to lessen the burden on homeowners who would be required to pay for barriers. He concluded that there was significant ambiguity in the proposed Ordinance.

Commissioner Strauss agreed that any required fencing should reflect uniformity, and that the instances in which fencing is required may need further clarification. Mayor Vincent suggested that fencing be required in cases of major construction, which means more than 50% renovation involving the exterior of a structure.

Commissioner Pouloupoulos recommended the addition of the words “to a structure” to line 31 of Section 6-8, Subsection C-1. He reiterated that the definition would not apply to landscaping, but to perimeter site fencing for new construction or substantial exterior alterations. Mayor Vincent pointed out that this would require property owners to erect a fence for work such as enclosing a carport, which could be a greater expense than the project itself.

Development Services Director Campbell advised that the intent of the proposed Ordinance was not to increase the number of instances in which a fence would be required, but to create uniformity for the use of these fences and address issues in which appropriate standards, including security issues, were not met.

Commissioner Pouloupoulos suggested that if the Commission wished to further limit the fencing requirement to a certain price point, the existing Ordinance would need to be amended further.

Town Manager Connors referred to line 49 of the proposed Ordinance, which refers to an approved and maintained silt fence to prevent construction debris from entering a

waterway from abutting properties. She pointed out that the silt fence is only required for properties adjacent to waterways; however, a screen or canvas is required for all fences. She felt the use of Commissioner Pouloupoulos's proposed language would allow the Ordinance to move forward. She also noted that the reference to significant construction provides additional leeway for discretion while allowing the Town to ensure that makeshift and/or insufficient fencing on construction sites is not an option. The fences must be chain-link, include a screening element, and provide a locking mechanism.

Commissioner Pouloupoulos made a motion, seconded by Commissioner Oldaker, to approve, subject to line 31 being edited to include the language "significant exterior alterations or additions to a structure is required."

Commissioner Pouloupoulos further clarified that this language would remove the possibility of opening the Ordinance up to include landscaping.

Mayor Vincent again stated that he felt this went too far, again citing the example of enclosing a carport as placing too great of a financial burden on a property owner. Development Services Director Campbell pointed out that enclosure of a carport constituted a significant exterior alteration.

Commissioner Pouloupoulos advised that the term "significant" would be left to the discretion of Staff. For example, Staff can inform a property owner seeking to add a garage or enclose a carport that the alteration or revision would not be sufficiently significant to require a fence. He again recommended inclusion of the phrase "to a structure" to ensure that the requirement would not be opened up to landscaping.

Motion carried 5-0.

- b. Ordinance 2023-04: AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, AMENDING CHAPTER 14.3, "PARKS AND RECREATIONAL FACILITIES," OF THE TOWN CODE OF ORDINANCES TO DEFINE AND REGULATE DESIGNATED CHILDREN'S PLAY AREAS AND TO OTHERWISE UPDATE AND CLARIFY CHAPTER 14.3; PROVIDING FOR CODIFICATION, SEVERABILITY, CONFLICTS, AND FOR AN EFFECTIVE DATE.**

At this time Mayor Vincent opened public comment, which he closed upon receiving no input.

Vice Mayor Malkoon requested clarification of the definition of a children's play area, which the Ordinance suggests would be denoted by signage. He asked if it might be better to call this space a playground or play equipment area, pointing out that an entire park could be characterized as a play area. Town Manager Connors advised that an entire park is not designated for the use of children, adding that the proposed Ordinance defines children as persons aged 12 years or younger.

Town Manager Connors also noted that the language of Chapter 14.3 regarding weapons was updated for consistency with State Statutes, and language addressing use of drugs and/or alcohol in parks areas was also clarified. The proposed language is consistent with that of other municipalities regarding designated children's play areas, and there is no legal precedent of its being overturned.

Commissioner Pouloupoulos stated that there is no reason adults without children should be loitering in a playground area, even if no children are present. He pointed out that a family may be reluctant to enter a park if they see this activity.

Mayor Vincent asked if the proposed Ordinance applies to fenced areas. Town Manager Connors advised that line 37 of the Ordinance defines "children's play area" as the area within the Town park, bounded by signs that identify the designated area as a children's play area, pursuant to the Chapter. This means the area must be demarcated for clarification, whether by a fence, hedge, or other component, with signage identifying the space as a children's play area.

Commissioner Strauss expressed concern with the proposal from a Constitutional standpoint, as he felt there may be subjectivity. He pointed out that the Town only has one children's play area, which is a fenced playground at Friedt Park, and recommended that the Ordinance specifically refer to that area and location.

Mayor Vincent also expressed concern with the potential subjectivity of the issue, offering the example of individuals who may be in the park to play sports. A different interpretation of the proposed Ordinance could mean those individuals could be asked to leave if children enter the play area.

Town Manager Connors pointed out that other space, such as the basketball court, will not include fencing denoting it as a children's play area, while the children's play area will include this signage.

It was determined that the term “children’s play area” would be defined as the area fenced within the Town park and bounded by signage identifying it as a play area.

BSO Captain Palmer advised that the area under discussion is clearly delineated by fencing and signage, and he did not foresee any issues with the proposed Ordinance.

Commissioner Poulopoulos made a motion, seconded by Vice Mayor Malkoon, to approve Ordinance 2023-04 with the verbiage “fenced with signage.” Motion carried 5-0.

- c. Ordinance 2023-05: AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, AMENDING CHAPTER 8, “FIRE PREVENTION AND PROTECTION,” OF THE CODE OF ORDINANCES BY AMENDING ARTICLE I “IN GENERAL” AND ARTICLE II “FIRE DEPARTMENT” TO ADOPT THE CITY OF POMPANO BEACH’S FIRE PREVENTION CODE AND FEE SCHEDULE; AMENDING ARTICLE VI “FIRE PROTECTION SPECIAL ASSESSMENT” TO CLARIFY AND UPDATE PROVISIONS; PROVIDING FOR CODIFICATION, SEVERABILITY, CONFLICTS AND AN EFFECTIVE DATE.**

At this time Mayor Vincent opened public comment, which he closed upon receiving no input.

Commissioner Oldaker made a motion, seconded by Commissioner Strauss, to approve. Motion carried 5-0.

16. ORDINANCES 2ND READING

None.

17. RESOLUTIONS – PUBLIC COMMENTS

None.

18. QUASI JUDICIAL PUBLIC HEARINGS

None.

19. ADJOURNMENT

With no other business to come before the Commission at this time, the meeting was adjourned at 9:45 p.m.

Mayor Chris Vincent

ATTEST:

Town Clerk

Date



Agenda Item No: 11.a.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Katie Anderson, Special Events and Community Marketing Coordinator

Submitting Department: Administration

Item Type: Action Item

Agenda Section: CONSENT AGENDA

Subject Title: Special Event Application - Wild Berry Anniversary

Explanation: Annie Berry (the “Applicant”), owner of Wild Berry Salon, has submitted a Special Event Application (Exhibit 1) for the Wild Berry 1st Year Anniversary Celebration (the “Event”) scheduled for Tuesday, October 17, 2023.

The Event will take place in the Eagle Ray Plaza in front of Wild Berry Salon and Big Cat Bikes. The Anniversary will have complimentary food from Uptown Deli, complimentary wine and other non-alcoholic beverages, live music, and more. The Applicant is anticipating approximately 50 spectators, 6 participants putting on the Event, and 4 volunteers.

Tuesday, October 17, 2023	
Set Up Begins:	11:00 AM
Event Start:	6:00 PM
Event Ends:	10:00 PM
Cleanup Completed:	11:00 PM

The band is scheduled to play from 6:00 p.m. to 10:00 p.m. The band will be required to adhere to the Town’s sound ordinance as outlined in Section 13-6 in the Code of Ordinances. The Applicant is requesting the use of one (1) of the Town's power outlets for the band. Town recommends approving this request. The band will utilize one (1) 10 x 12 canopy to play underneath.

The site map portrays six (6) low top tables with six (6) chairs each set throughout the breezeway, as well as seven (7) high tops located in front of the store fronts. The Applicant understands that final site plan approval will require an inspection by the Fire Marshal.

No parking concessions have been requested or approved, so Town parking will operate as

usual.

Restrooms located inside of Wild Berry Salon and Big Cats Electric Bikes will be available for attendees during the Event.

The Lauderdale-By-The-Sea Chamber of Commerce will be supporting the Event by inviting all Chamber members to attend.

Recommendation: Town Staff recommends approving the Event under the conditions outlined in the tentative event permit (Exhibit 2) as well as approval of the Applicant utilizing one (1) of Town's electrical outlet for the Event.

Exhibits:

1. SEA Wild Berry Anniversary Celebration 10.17.23
2. LBTS Permit Wild Berry Anniversary 10.17.23



SPECIAL EVENT APPLICATION INFORMATION

For your event to be considered by the Town Commission, a **fully completed** application must be submitted **at least** 60 days prior to the date of the event.

This application is available in Word format at www.lbts-fl.gov/town/docs.htm. If possible please use the Word document and your computer to complete the application.

An application is not considered complete unless it includes:

1. A full description of the proposed event,
2. A detailed site plan (*very important!*),
3. All required documents, and
4. The application fee.

A meeting with Special Events Permitting is required before submitting a Special Event Application. Questions? Call our Special Projects Coordinator at 954-640-4200 or email debbieh@lbts-fl.gov.

Payment of Special Event Permit fee is required at the time of Application submission via hand delivery or by mail to:

**Town of Lauderdale-By-The-Sea
4501 Ocean Drive
Lauderdale-By-The-Sea, Florida 33308**

A Special Event shall be approved by the Town Commission before an event is advertised to the public. A special event is defined as a concert, festival, race, walk, carnival, show, exhibition, parade, or any other similar outdoor event whether operated totally outdoors, on stage, under tents, or with the use of any temporary building or structure, ***to which members of the public are invited as participants or spectators.***

Please review the Town's special event requirements by clicking on: <https://www.SpecialEventRequirements>
Or download a copy of the Special Event Requirements from our website and review them before submitting your application.

Important to remember:

1. Your event is approved by the Town Commission with "Conditions" that must be met or your event is cancelled. READ and understand the Conditions. *Talk with us if you have questions.*
2. You are responsible for securing and paying for all fees, licenses, and permits required by any governmental agency having jurisdiction, providing the Town evidence of all required insurances, and providing evidence of organization and/or charity.
3. You have to file all of the required documents shall be provided not later than 30 days prior to the event date or the event authorization terminates (unless prior arrangements have been approved by Town).
 - a. Insurance
 - b. Vendor lists and licenses
 - c. File site plan



SPECIAL EVENT APPLICATION

Submit this completed application at least 60 days prior to the proposed date of your event.

DETAILED SITE PLAN REQUIRED (see details at end of application)
Site Plans often do not include details that are necessary to approve an application or to issue a permit and delays are caused by rejections of initial applications.

Once you have completed the written portion of the application, provide a Site Plan on the last page or attach separately to this application.

Name of Event: Anniversary Celebration

Event Purpose, Description and Activities: 1 year anniversary celebration Live music/food/drinks

New Event **or Returning Event** X **Previous Attendance** 100

Day(s) and Date(s) of Event: Tuesday October 17th 2023

Proposed location of the Event (location, streets, landmarks):

Stingray Plaza Breezeway/store front The Wild Berry Salon & Big Cat Electric Bikes

How many people do you anticipate on site at any peak time?

Participants: 6 #Spectators 50 #Adult volunteers: 4

Please complete the following table:

Activity	Day	Time
Start of set-up:	10/17	11 am
Start time of the Event:	10/17	6pm
EVENT	10/17	6-10 pm
End time of the Event:	10/17	11pm
Start of Clean up:	10/17	10pm
Clean-up completed by: (Site restored to original condition)	10/17	my Staff

Name and address of host or sponsoring organization:

Is applicant a Non-Profit Organization?

YES NO **X**

Please attach Organization's proof of 501c3 IRS exemption, background, history, accomplishments, and other events:

4. Parking is limited in Lauderdale-By-The-Sea, and will be a consideration when approving your event.
5. You may have to obtain permits from the Building & Fire Departments to meet Florida Building Code and Fire Code standards.
6. You are responsible for securing and paying for all fees, licenses, and permits required by any governmental agency having jurisdiction.

I (Applicant) have read and fully understand the above:

Anna Berry

Signature of Applicant

Print Name: ANNA BERRY

Event Name: Anniversary Celebration

111111pm

Person submitting Application ("Responsible Party"):

Name: Annie Berry

Mailing address: 262 Commercial Blvd LBTS B

Phone: 954-268-4924

Mobile phone: 954-552-2458

Email: annie@thewildberrysalon.com

Fax:

Representative(s) who will be at each day of the event:

Name(s): Vincent Gebbia

Mailing address: 262 Commercial Blvd LBTS A

Phone: 754-206-3646

Mobile phone: 516-695-4898

Evening phone:

Fax:

Email: vtg@bigcatusa.com

Add information as necessary:

Will you have an event contractor or planner?

YES ☒ NO

If yes, please provide the contact information of your event contractor (event planner)

Name:

Company Name:

Business Address:

Company Email:

Phone Office:

Phone Mobile:

List contractors that will be on site before, during or after the event (use separate page if needed) – final list required 30 days prior to event. NA

Request for Town Involvement:

Are you requesting the Town be involved with this event in any way? YES ☒ NO

If yes, describe services requested, if any:

STATEMENT OF BENEFIT

If the applicant is seeking sponsorship/co-sponsorship from the Town of Lauderdale-By-The-Sea, a Statement of Benefit is required by Town Code and shall be included here or attached to this application. NA

If the Town is a sponsor or co-sponsor of the event, the Applicant shall keep financial records of the event sufficient to document all revenues and expenditures. These records shall be available at reasonable time within Broward County for inspection by the Town.

(Insert here or denote if attached)

FEES

Are there fees or donations collected on site from the participants or spectators?

YES

~~NO~~

If yes, provide details:

SOUND SYSTEMS

The event sound systems shall be operated so as not to violate the Town's Code, including and especially Section 13-6, Noise Limitation. Violations of the Town's noise ordinance are grounds for the immediate termination of the source of the noise and may be grounds to terminate the event.

Do you plan to use amplified sound? Provide details, time and location, and if you require electrical connections for:

 Proposed amplified sound/speaker system:

 X Proposed live music: List genre, type, ambiance: Jazz/cover musicX

 Planned recorded music

 X Do you require electrical connections for any of the above? Please give details:

THE USE OF 1 ELECTRICAL OUTLET

CLEAN EVENT STANDARDS

Keeping the event area clean during the event and immediately following the event, including trash removal, walkways, and streets, is the responsibility of the applicant. See Clean Up Deposit under Conditions

Please note that, except for very small events, all events shall provide a recycling plan and follow recycling requirements. See Recycling Requirements under Conditions. For more info email recycle@lbts-fl.gov.

Name the contractor or organization (including contact information) who is responsible for your Event's recycling: NA SMALL EVENT

Name:

Email:

Address:

Daytime phone:

Mobile phone:

TENTS, CANOPIES, STAGES, BLEACHERS

Tents are generally defined as temporary structures having two or more sidewalls or drops.

A canopy is a tent without sides.

All Tents, canopies larger than 120 sq. ft., multiple canopies without separation, and stages require a building permit. The use of tents or large canopies require approval of the LBTS Fire Marshal and are required to have building permits obtained via LBTS Building Department prior to Event. Manufacture labels are required to be attached to the tents and canopies.

Rental agencies shall provide documentation of the flame spread labeling of 25 or less submitted with application. All canopies larger than 120 sq. ft. shall submit copies the manufacture's labels attached to the tents or canopies with application.

Stages and bleachers shall include product approvals that are supplied by the manufacturer.

Indicate if any of the following will be assembled at the Event and include locations on Site Plan. List sizes and numbers of each:

Tents: _____

Canopies: 1 ONE

Stages: _____

Bleachers: _____ list size and max load:

UTILITIES

All utilities requirements shall be approved by the Director of Development Services and the Fire Marshall prior to Application submission to Town Commission.

Depending on location of event, electrical and/or water may be available from the Town for a fee.

Electrical Requirements: *Electrical work requires an Electrical Building Permit.
Generators over 5KW require an Electrical Building Permit.
A Florida Licensed Electrical Contractor is required to obtain permits.*

All electrical requests shall meet the requirements of the Florida Building Code with final approval from the Town's Building Official at least 30 days prior to the Event. Contractor is required to schedule and successfully complete inspection of work prior to Event opening. Florida Building Code 101.4.1, 105.4.5.

Will any **electrical equipment** be installed in conjunction with the Special Event? (i.e. lighting in tents, outlets for cooking, stages, etc.) Yes ☒ NO ☐

If the Event requires the following on public property, list what equipment is to be installed and locations (include voltage, amperage, and phases of wiring) as well as company name providing the equipment. Describe below, include location and use, and also include locations on Site Plan:

Electrical power:

Water: _____

Gas, propane, BBQ grills, generators:

Fuel Storage:

SIGNAGE

All signage shall be included in the application if you wish to exceed the Town Code requirements. Signage shall be reviewed by Development Services (LindaC@lbtz-fl.gov) before Application is submitted to Town Commission). No signage shall be installed without permit.

Information on signage shall include location, colors, size and number of signs. Indicate signage to be placed in any right of way that directs traffic to the Event and their approximate size.

Are you requesting permission to erect signage for this Event? YES NO ☒

For each sign please provide:

Description, number of signs, proposed dates, location, size of signs in square feet and letter size:

Include sign locations on detailed Site Plan or attach a separate sheet.

RESTROOMS (show on Site Plan)

The number of portable toilets required depends on the number of attendees, length and type of event, as determined by the Building Official.

Local businesses that have more than the required number of restroom facilities that allow their facilities to be used may count towards the extra restroom facilities required.

If Event is downtown, permit holder is required to obtain written approval from restaurants to allow participants to use their restroom facilities.

Number of restroom facilities required by Town: TBD

Number of additional restroom facilities, and type, that will be on event site: INSIDE STORES 3
(Show on Site Plan)

STREET CLOSURES

Street closures may be required at the Event's expense

Are you requesting that any public streets be closed for the Event? YES ☒ NO ☒
I don't know, please advise _____

If yes, indicate the streets and blocks and times the closure is requested:

TRAFFIC CONTROL/BARRICADES

A traffic control contractor may be required for events which require barricades or traffic control signage.

Please list your traffic control contractor, if applicable:

VEHICLES

Vehicles are not allowed to drive or park on Town property or park grounds due to damage to underground irrigation systems and to the sod. Applicant shall be responsible for restoration of any damage to Town property.

Are you requesting to drive or park on town property or park grounds: YES ☒ NO ☒

If you are requesting that vehicles be permitted to drive or park on Town property, please indicate the type(s) of vehicles, the locations, and times they would be parked. Must be approved by Town's Parking Department prior to Event.

LOADING/UNLOADING: If you are requesting that vehicles be permitted to load/unload in non-metered areas, please indicate the location and times loading and unloading would occur:

TRAFFIC CONTROL PLAN

Parking exemptions shall be approved by Assistant Town Manager prior to Application submission to Town Commission). Town may block spaces for safety and other reasons at the expense of the Event.

Include detailed Site Plan indicating how on and off street parking will be accommodated.

Are you requesting the reservation of any Town parking meter spaces for the Event?
YES ☒ NO ☒

If yes, provide the meter numbers on the Site Plan and purpose for which they will be used.

All parking meter fees are paid 30 days prior to the event.

OFF DUTY POLICE/CODE COMPLIANCE OFFICERS

Off duty police officers are required, at the applicant's expense, for street closures, events with alcohol, or large crowds, as determined by the Sheriff's Department. Large events may require a code compliance officer to ensure compliance with Town codes.

Do you anticipate needing off duty police officers for your Event? YES ~~NO~~
Do you anticipate needing code compliance officers for your Event? YES ~~NO~~

CONCESSIONS:

A no-compete clause pertaining to local restaurants will be required where applicable.

Are you planning to have any type of concessions? YES ~~NO~~

If YES, has the Florida Health Department approved the food vending Site Plans?

YES ~~NO~~

If yes, is the food provided by a Non-Profit _____ or For Profit _____ organization?

Is the food free of charge _____ or for sale _____

Do all food vendors have a temporary food service permit? YES NO

Please list the types of food that will be served: complimentary sandwichies

Are you requesting any of the following types of cooking equipment be used on site:

Charcoal Grills _____	Sterno _____	Fryers _____	Open fires _____
Propane Grills _____	Refrigerators _____	Smokers _____	Hoods _____
Concession trailers _____	Warmers _____	LP Tanks _____	Other _____

Provide details of dispensing locations here and on Site Plan

ALCOHOL

State license is required to be submitted to the Town at least 30 days prior to the event

Are you planning on selling alcoholic beverages at the event? YES ~~NO~~

If YES, has a liquor permit been obtained from the State of Florida? YES NO

Provide details of dispensing locations here and on Site Plan

Provide contact information for all license holders that will be serving alcohol:

VENDORS

A list of all vendors their company name is required for initial approval and final list is required 30 days prior to event and subject to approval (add here or on separate page, and vendor location on site Plan):

Name *Private event we are buying Food/Drink all together*
uptown Deli Cafe Company *Food* Vendor Type *Complimentary*

ANIMALS

Any exhibition or similar undertaking in which animals are required to participate in performances for the amusement or entertainment of an audience is subject to Town Commission approval.

Are animals included in your event?

YES NO

If yes, please give details:

FIREWORKS

(Fireworks require a separate permit approval process and application)

Are you requesting approval to discharge fireworks at the event?

YES NO

SALE OF MERCHANDISE

Are you requesting approval to offer other items for sale at the event?

YES NO

List items for sale:

RIDES

Rides or other amusement may require a State of Florida inspection

Copies of contracts with any provider of rides, mechanical devices and amusements shall be submitted to the Town at least 30-days prior to the event.

Are rides to be included in the Event?

YES NO

If yes, please provide the number and description of each type:

Mechanical/Electrical:

Inflatable (bounce house etc.):

Manual (slides, trampolines):

Other:

NO BALLOONS RELEASED

When balloons are released over the ocean, they become a major source of pollution and significantly increase the mortality rate among sea turtles, birds and other marine life. Sea turtles and fish often mistake the balloons for jellyfish, eat them and die when their stomachs become blocked. Birds can become entangled in the balloon strings and drown. To help reduce the threats caused by balloons, I agree that there will be no release of balloons at this event and I have been informed that the release of balloons is illegal under Florida Statute 379.233. Balloons may be used for decorations at an event but they must either be deflated or taken home at the end of the event, NEVER released into the air. Failure to abide by this requirement will result in the cancellation of the current Event and denial of future special event permits.

I agree no balloons will be released AB

FIRE WATCH or EMS ONSITE

If required by the Fire Marshall, the applicant shall provide for a fire watch and/or an EMS Crew during the event. Large events or those using combustible materials may require qualified stand-by personnel and the appropriate equipment, the cost of which is the responsibility of the applicant.

First Aid facilities may be required by Town at Event's expense. Initial AB

INSURANCE

Insurance requirements differ depending on the type of event and if alcohol is served.

For events not serving alcohol and without fireworks, the Applicants shall provide a Certificate of Liability Insurance written in comprehensive form naming the Town as additional insured in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and \$1,000,000 per occurrence and \$2,000,000 general aggregate for property damage with thirty days written notice required for cancellation.

Certificate of Liability Insurance naming the Town as additional insured is required from all Event businesses, promoters, and other related event planners

An approved form of a Certificate of Liability Insurance may be required with your Application for approval by the Town Commission and/or shall be provided the Town at least 30 days prior to the Event date.

Talk to Town Staff representative if your Event proposes serving alcohol or having fireworks about insurance requirements, as both require additional insurance.

Do you and all parties involved have the required insurance coverage needed for this Event?

~~YES~~ NO

EVENT CONDITIONS

Approval for this Event shall expire without future action of the Town if all documents such as but not limited to insurance certificates, health and liquor licenses, BSO police detail contract(s), Fire Marshall or Development Services approvals, MOT Plan, Solid Waste Plan, final Site Plan, any monies due to Town, and other material requirements are not submitted at least 30 days prior to the Event.

Copies of State and County licenses for all vendors and contractors shall be filed with the Town 30 days in advance of the Event. (Final list of vendors and their locations shall be submitted to the Town no later than two weeks prior to the event unless otherwise approved in advance by Town)

If the Event is approved by the Commission, they will establish the Event conditions that the application shall abide by during the Event. Standard Conditions shall include, but are not limited to the following:

1. Permission for this Event may be suspended or modified by the Commission, Town Manager or his designated Staff.
2. Turtle Clause: If any of the set-up will take place on the beach sand please avoid any marked sea turtle nests with a minimum buffer of 30 feet.
3. Setup of the Event will start at about 11 am and the area will be cleaned and open by 6PM (11PM)
4. The Police Chief shall specify the number of BSO detail officers needed for traffic and crowd control. The Applicants shall contract with BSO Detail Office for the detail BSO deputies within ten (10) days of receiving Event approval.

5. The Police Chief shall approve the Applicant's Maintenance of Traffic Plan (MOT), if one is required.
6. The Applicants shall submit a solid waste and recycling plan for approval at least 30 days prior to the Event to the Municipal Services Director. The Applicant shall provide additional waste receptacles and recycling bins. During the event as needed and at the end of the event, the Applicant shall empty all of the waste receptacles and recycling bins and pick up litter within the event site and 100 feet of the site.
7. All signage will be approved and permitted with Development Services at least 30 days prior to the event
8. All related Fire Marshall and Building Official's related requirements have been approved
9. Provide proof of additional restroom facilities ordered at least 30 days prior to event
10. The event and its approved sound systems shall be operated so as not to violate the Town's Code, including and especially Section 13-6, Noise Limitation. All music shall end promptly at 10 pm.
11. The event site shall be organized in a safe manner to protect attendees. All electric cords and similar material shall be covered so as to not pose a hazard to the public or event staff, or will be battery operated.
12. Parking Requirements have been identified, fees paid and listed on site plan
13. The Applicant shall provide a written notice to all properties affected by this event by (date), (30 days in advance) for approval prior to distribution; and confirm in writing which properties have been notified.
14. Clean up Deposit may be imposed, based on the final Site Plan, and due two weeks prior to the event.
15. Clean up fee starting at \$150 will be charged if area is not cleaned to Town standards.
16. Final Site Plan must be presented for approval at least 48 hours in advance of the event.
17. Streets and sidewalks will be free of any debris and cleaned at the end of tear down.
18. A Damage Deposit may be imposed, based on size of event and location.
19. There will be no release of balloons at this Event.
20. Any inspections or work required by Town Staff after normal working hours will incur additional costs set forth by the respective department.
21. Upon showing by the Applicant of a valid reason, or if required by the Town, the Town Manager may approve minor logistical changes that are consistent with the Commission's policy direction on special Events.
22. The Applicant shall meet the following minimum insurance requirements per Ordinance 2015-06, which may be modified by action of the Town Commission for a specific Event:
 - a) Prior to issuance of the requested permit, proof of commercial general liability insurance, whether through a single policy, or a combination of policies, in the amount of \$1,000,000 per occurrence and \$2,000,000 in the aggregate for bodily injury and property damage.
 - b) No required policy shall have a deductible or self-insurance retention greater than \$15,000.
 - c) All policies must be issued by companies authorized to do business in the State of Florida and rated A- or better per Best's Key Rating Guide, latest edition. The certification of insurance shall provide for the Town to receive 30 days' written notice prior to any cancellation, non-renewal or material change in the coverage provided, unless the insurance company refuses to provide such notice, as evidenced by affidavit of the policy holder or written documentation from the insurance company. In any Event, the Applicants shall be held responsible for providing the Town notice of any change in insurance coverage. The Town shall be named as an additional insured on all required insurance policies, and an endorsement reflecting this requirement shall be issued as part of any required policies. The Applicants shall provide an original certificate of insurance as evidence of continued coverage prior to any annual renewal of the permit. Failure

to comply with these requirements shall justify a denial, suspension or revocation of the requested approval by the Town Manager or designee.

- d) In the Event that control of any applicable Event or activity, by contract or other arrangement, becomes the responsibility of a party other than the Applicant (the "sub-applicant"), the sub-applicant shall provide insurance and indemnification meeting the requirements of this Section under which the Applicant is applying, as if they were the Applicant and shall be held responsible for compliance with the Town Code as if the sub-applicant were the Applicant.
 - e) If applicable, at least thirty (30) days prior to the first Event, the Applicants shall provide a Certificate of Liquor Liability Insurance written in comprehensive form naming the Town as additional insured in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and \$1,000,000 per occurrence and \$2,000,000 general aggregate for property damage, which provides coverage for each Event authorized by this permit. The Certificate shall specify that the Town will be given at least thirty (30) days written notice of any cancellation.
23. In the Event that insurance certificates, licenses and other material requirements are not provided by the required dates, the approval for this Event shall expire unless the Town Manager finds there are extenuating circumstances that the Event sponsors have cured or can immediately cure without compromising the health, welfare and safety of the citizens of the Town of Lauderdale-By-The-Sea and those attending the Event, without increasing the administration costs of the Town.
24. Applicant shall owe no monies to the Town at the time of the Event. There shall be no past due fines, moneys, fees, taxes or other charges owed to the Town by the current or past property owners or operators requesting the special Event permit. A special Event permit will not be issued until all past due debts to the Town are paid in full.
25. The Town Manager may suspend permission for this Event due to failure of the Applicants to comply with the terms and conditions of the Town's permit, due to conflicting activities, for health or safety issues, or for the best interests of the Town.
26. The onsite Town representative may terminate an Event due to the Applicant not complying with the terms and conditions of the Town's Event permit, for health or safety issues, and for such as but not limited to, crowds that exceed the capacity of the Event site.

INDEMNIFICATION

Applicant shall indemnify, defend and hold harmless the Town, its officers, agents and employees, from and against any and all claims, suits, actions, damages, liabilities, expenditures or causes of action of any kind arising directly or indirectly from this Special Event and resulting or accruing from any intentional act or any negligent act, omission or error of Applicant which in turn results in or relates to injuries to body, life, limb or property sustained in, about or upon the Special Event Area, and arising from the use of the Town property.

Applicant shall defend, at its sole cost and expense, any legal action, claim or proceeding instituted by any person against the Town as a result of any claim, suit or cause of action accruing or in any way arising out of this Special Event Application for injuries to body, life, limb or property as set forth above.

Applicant shall save the Town harmless from and against all judgments, orders, decrees, attorneys' fees, costs, expenses and liabilities incurred in and about any claim, and the investigation or defense of them, which maybe entered, incurred or assessed as result of the foregoing.

PERMISSION OF THE PROPERTY OWNER

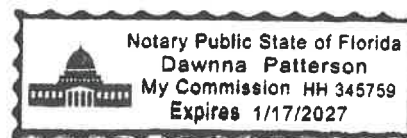
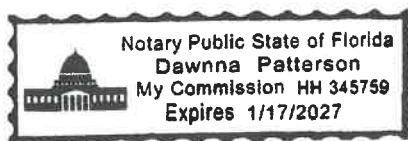
Applicant's and Property Owner's Certification

An event held on property that is not owned by the applicant requires the permission of the property owner, which is granted by having the property owner sign this special event application.

By signing this event application, the petitioner agrees to all terms, conditions, and indemnification in this application, and understands that this application or the approval of this event application by the Town Commission does not grant any permission to violate any laws, ordinances or statutes.

Additions and/or revisions to this application must be submitted in writing.

Applicant	Property Owner
<i>I understand the Town's requirements to hold a special event and the information provided in this application is complete to the best of my knowledge.</i>	<i>I give the applicant permission to use my/our property for the proposed special event and I understand the Town's requirements to hold a special event and the information given by the applicant is complete to the best of my knowledge.</i>
<i>Anna Berry</i>	
Applicant's Signature (required):	Property owner's Signature (required):
Date <u>8/3/2023</u>	Date: <u>8/3/23</u>
Applicant's (Print information below) Name: ANNA BERRY Title: PRESIDENT Organization: THE WILD BERRY SALON Telephone: Mobile: 954-552-2458 Email: annie@thewildberrysalon.com	Property Owner's (Print information below) Name: ERIC MAUGEE Title: PRESIDENT Organization: FLORIDA PURCHASTING AGENCY Telephone: 954-776-5170 Mobile: 954-471-0349 Email: EMAUGEE@FLORIDAPURCH.COM
STATE OF FLORIDA: COUNTY OF BROWARD:	STATE OF FLORIDA: COUNTY OF BROWARD:
SWORN TO AND SUBSCRIBED BEFORE ME, a Notary Public of the State of Florida, by <u>ANNA BERRY</u> who is <u>personally known to me/provided</u> as identification and who <u>did not take an oath.</u>	SWORN TO AND SUBSCRIBED BEFORE ME, a Notary Public of the State of Florida, by <u>ERIC MAUGEE</u> who is <u>personally known to me/provided</u> as identification and who <u>did not take an oath.</u>
My Commission Expires: <u>1/17/27</u> <i>Dawnna Patterson</i> Notary Public, State of Florida	My Commission Expires: <u>1/17/27</u> <i>Dawnna Patterson</i> Notary Public, State of Florida



SITE PLAN DETAILS

Site Plans often do not include the details that are necessary to approve an application or to issue a permit and delays are caused by rejections of initial applications.

The following details are intended to be a guide to assist you in developing a Site Plan. A current survey of the property is most helpful. If a survey is not available, a drawing depicting the area of the Event should include these details, as necessary. More than a one page Site Plan may be included in your application if details of specific areas are important to your Event.

A detailed map of the Event site identifying location of each of the following *MUST* be drawn here or attached to this application prior to submission. Dimensions are required to determine if available site will support all of the proposed activities.

Cooking Areas need to be separated from public areas with fences or barricades

Canopy, tents or other covers: locations should include the size, type, & (shelter, vending, food, EMS)

Location:

The site of the event, with streets, parks and other landmarks identified

Routes for races, parades, etc.

Traffic routing and road closures

Ticket Kiosks

Access control points

Signage (*shall be approved by Development Services prior to Application submission to Town Commission*)

Signs (location, size, color and wording)*

Public Services:

Fire lanes (emergency access for fire equipment and EMS)

Restroom facilities (incl. Portable & Private)

Locate electrical equipment, permanent and temporary (temporary electrical installation (must be to code and approved by Town)

Trash and Recycling receptacle locations

Smoking and No Smoking areas

Pedestrian walkways

Garbage Cans

Recycling Bins

Hazard/ Precautions:

Hazards at the site (ditches, construction areas, obstructions to pedestrian traffic, bodies of water)

Fencing, barriers, barricades, walls, gates, etc.

Gasoline, propane, grills, fire, charcoal, generators, any other flammable fuel

Fuel Storage and dispensing areas

Fire Extinguishers Minimum size 4A/10BC one every 75 ft. of travel. If cooking, Class K or 1 40BC rated Fire Extinguisher for every cooking station or canopy (at discretion of Fire Marshall)

Generators (shall be approved by Fire Marshall in advance)

Event:

Canopies, tents, stages (types shall be specified) locations for sales, food service, etc. *Large tents will require Fire Marshall approval of illuminated exit signs and fire extinguishers*

Vendor locations (booths or tables and approximate size, (Vendor's company names phone numbers and email addresses required on separate page at least 48 hours in advance of the Event)

Restrooms – Portable and Private

First Aid facilities

Trailers, storage, sleeping facilities, service boxes, displays, etc.

Alcohol serving/consuming areas

Rides and Amusements, Rides, demonstrations, performance areas and stages including Musicians and Artists

Parking:

Parking areas, location, parking spaces, and parking space numbers that will be blocked; to load/unload before, during or after the event and the amount of time for each occurrence

Code or Security Enforcement (paid by Event)

EMS stand-by or Fire watch areas (include first aid stations)

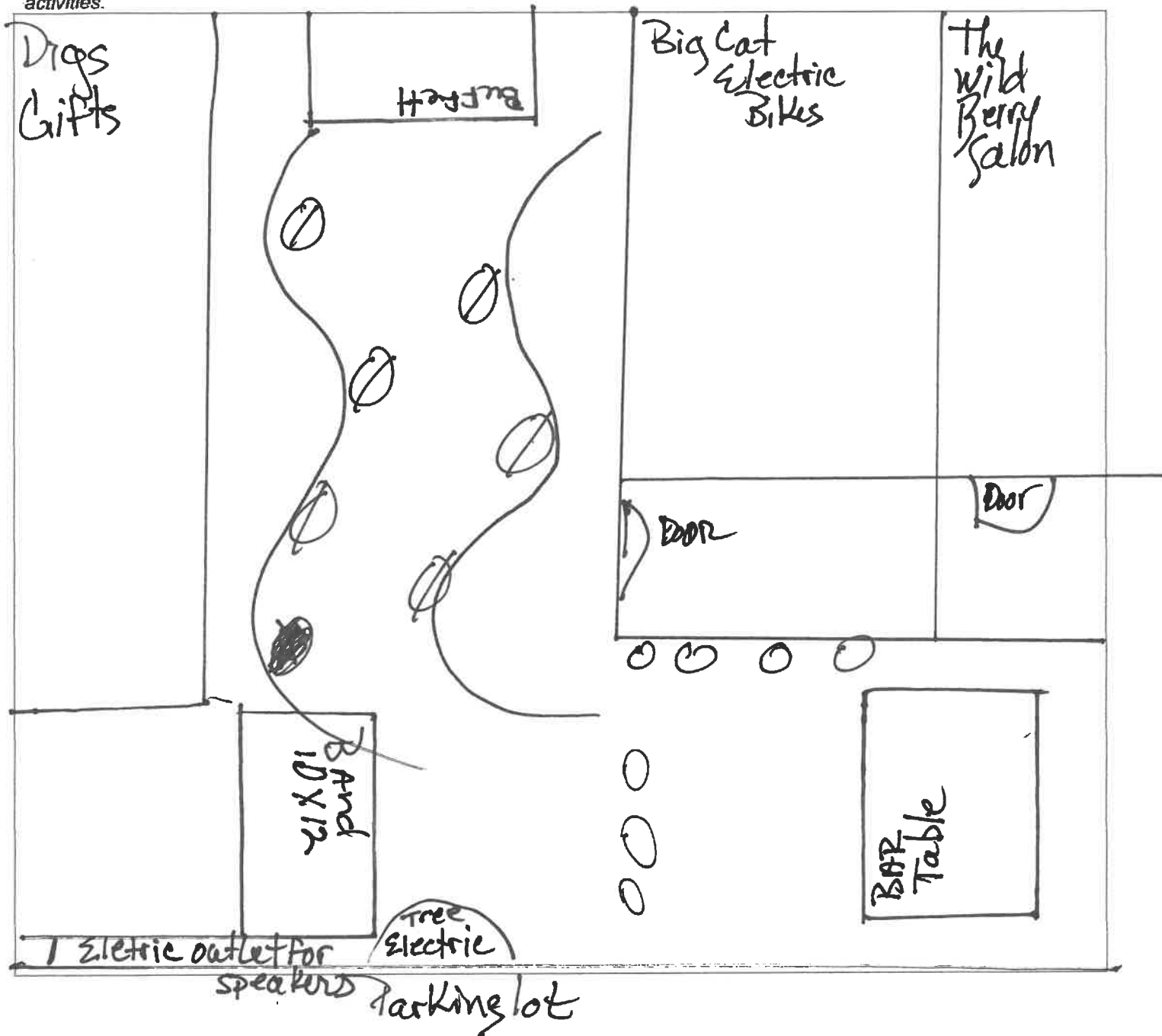
Police: Off duty police officers (if known)

○ table-chairs 6 per table
 ○ High top 4 per

DETAILED SITE PLAN

See above for inclusion examples

A detailed map of the event site identifying location of each of the following **MUST** be drawn here or attached to this application prior to submission. Dimensions are required to determine if available site will support all of the proposed activities.



Applicant's Certification

By signing this event application, the petitioner agrees to all terms, conditions, and indemnification in this application, and understands that this application or the approval of this event application by the Town Commission does not grant any permission to violate any laws, ordinances or statutes.

Additions and/or revisions to this application shall be submitted in writing.

I understand the Town's requirements to hold a special event and the information provided in this application is complete to the best of my knowledge.

Anna Berry
Applicant's Signature (required)

8/4/23
Date

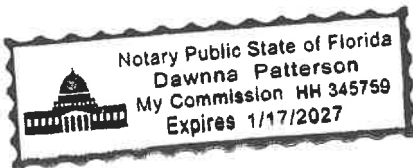
ANNA BERRY, OWNER THE WILD BERRY SALON
Applicant's Printed Name and Title/Organization

954-552-2458
Telephone Number

STATE OF FLORIDA:
COUNTY OF BROWARD:

SWORN TO AND SUBSCRIBED BEFORE ME, a Notary Public of the State of Florida,
by ANNA BERRY who is personally known to me/provided
as identification and who did/did not take an oath.

Dawnna Patterson
Notary Public, State of Florida
My Commission Expires: 1/17/27



11pm



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
08/04/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Simply Business 1 Beacon Street 15th Floor Boston, MA 02108	CONTACT NAME: Simply Business
	PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: contactus@simplybusiness.com
INSURED Jamin Jam LLC / DBA The Wild Berry Salon 262 Commercial Blvd Unit B Fort Lauderdale, Florida 33308	INSURER(S) AFFORDING COVERAGE INSURER A: Hiscox Insurance Company Inc
	INSURER B:
	INSURER C:
	INSURER D:
	INSURER E:
	INSURER F:

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PRO-JECT ☐ LOC OTHER:	X		HIUS3526434XB2	05/01/2023	05/01/2024	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$5,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COM/PO/AGG \$2,000,000
	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ OWNED AUTOS ONLY ☐ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	UMBRELLA LIAB ☐ OCCUR EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION						EACH OCCURRENCE AGGREGATE
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE ☐ Y/N OFFICER/MEMBER EXCLUDED? (Mandatory in NH) ☐ N/A If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE ☐ OTH-ER ☐ E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT
	PROFESSIONAL LIABILITY						EACH CLAIM AGGREGATE

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
BUSINESS PERSONAL PROPERTY: \$10,000 Certificate holder is included as an additional insured on the General Liability policy per written contract.

CERTIFICATE HOLDER The Town of Lauderdale By The Sea, 4501 Ocean Dr, Lauderdale By The Sea, FL 33308	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
--	---

ANNA M BERRY

2881 NE 15TH ST
POMPANO BEACH, FL 33062-3611

7700

9-32/720

DATE 8-4-23

PAY TO THE
ORDER OF

Team of Landlordale by the Sea

\$ 100 -

One hundred and 00/100

Amount in figures
Amount in words
Dollars and Cents

DOLLARS



CHASE

JPMorgan Chase Bank, N.A.
www.Chase.com

Anna Berry

MEMO

MP

⑆072000326⑆

77503109617700



Town of Lauderdale-By-The-Sea Special Event Permit

PERMIT HOLDER INFORMATION

NAME/ORGANIZATION	Wild Berry Salon	REPRESENTATIVE	Annie Berry
STREET ADDRESS	262 E. Commercial Blvd. B	CITY, STATE ZIP	LBTS, FL 33308
PHONE NUMBER(S)	954-552-2458 A Berry	FAX # • EMAIL	annie@thewildberrysalon.com

DATE AND LOCATION OF EVENT

TYPE OF EVENT	Anniversary Party	DATE(S) OF EVENT	Tuesday, October 17, 2023
HOUR(S) OF OPERATION	6:00 PM – 10:00 PM	ADDRESS OR LOCATION OF EVENT	262 E. Commercial Blvd. A & B Walkway and Breezeway

DESCRIPTION OF EVENT (TEMPORARY STRUCTURES, SIGNAGE, BANNERS, BALLOONS, ETC. - LOCATION, COLORS, SIZE AND NUMBER)

Anniversary party with six high top tables along the walkway and 6 tables in the breezeway; catering tables and beverage areas as noted on the site plan (attached).

Start of Set Up	11:00 a.m.
Event Begins	6:00 p.m.
Event Ends	10:00 p.m.
Clean Up Completed	11:00 p.m.

SPECIAL CONDITIONS

The Special Event was approved at the September 13, 2023 Commission meeting based on the following conditions:

1. The Police Chief will:
 - a. Specify the number of BSO detail officers needed for traffic and crowd control; and
 - b. Arrange for the number of BSO deputies required to work on public property for crowd and traffic control. The Permit Holder will reimburse the Town for this expense.
2. Permit Holders will direct the attendees to the Permit Holders' restrooms.
3. Permit Holders will arrange for an inspection from Fire Marshal at least one hour prior to EVENT to ensure that it is organized in a safe manner to protect attendees.
4. Parking will operate according to normal parking regulations.
5. Permit Holders may use one power box at base of tree is needed for the event.
6. Tables, chairs, stage, equipment, etc., will not interfere with pedestrian walkways, ingress, or egress.
7. Permit Holders shall keep the sidewalks next to the event site and within the event site open and clear for pedestrian traffic.

8. The event shall not use any portion of the walkway east of the breezeway.
9. Setup of the event will start no earlier than 11:00 a.m. and the area will be cleaned and opened by 11:00 p.m.
10. All noise will end promptly at 10:00pm. Noise from the event site shall not exceed 85 dba or 85 dbc otherwise shall meet the requirements of Section 13-6 "Noise Limitations" (Exhibit 3.)
11. Permit Holders shall provide one 4A/10BC fire extinguisher near the food preparation truck as requested by the Fire Marshal.
12. Streets and sidewalks will be free of any debris and cleaned at the end of tear down.
13. During the Event, as needed, and at the end of the Event, the Permit Holders shall empty all the waste receptacles and recycling bins and pick up litter within the event site and 100 feet of the site and appropriately disposal of all refuse.
14. Clean-up fee starting at \$150 will be charged if area is not cleaned to Town standards.
15. Permit Holders shall provide written notice to all properties within a one-block of the event by September 17, 2023. The Town shall approve the notice and distribution area will be approved prior to distribution.
17. Any proposed revisions to the Site Plan must be presented to Town staff for approval at least 48 hours in advance of the Event.
18. Any inspections or work to support the event required by Town Staff after normal working hours will incur additional costs set forth by the respective department.
19. The Event shall provide a Certificate of Liability Insurance prior to permitting that meets all insurance requirements of Chapter 17, 17-9, which may be modified by action of the Town Commission for a specific event:
 - a. The Permit Holders shall provide a Certificate of Liability Insurance written in comprehensive form naming the Town as additional insured in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and \$1,000,000 per occurrence and \$2,000,000 general aggregate for property damage with thirty (30) days written notice required for cancellation.
 - b. At least thirty (30) days prior to the first event, Permit Holders shall provide a Certificate of Liquor Liability Insurance written in comprehensive form naming the Town as additional insured in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and \$1,000,000 per occurrence and \$2,000,000 general aggregate for property damage, which provides coverage for each event authorized by this permit. The Certificate shall specify that the Town will be given at least thirty (30) days written notice of any cancellation.
 - c. No required policy shall have a deductible or self-insurance retention greater than \$15,000.
 - d. All policies must be issued by companies authorized to do business in the State of Florida and rated A- or better per Best's Key Rating Guide, latest edition. The certification of insurance will provide for the

Town to receive 30 days' written notice prior to any cancellation, non-renewal or material change in the coverage provided, unless the insurance company refuses to provide such notice, as evidenced by affidavit of the policy holder or written documentation from the insurance company. In any event, the Permit Holders will be held responsible for providing the Town notice of any change in insurance coverage. The Town will be named as an additional insured on all required insurance policies, and an endorsement reflecting this requirement will be issued as part of any required policies. The Permit Holders will provide an original certificate of insurance as evidence of continued coverage prior to any annual renewal of the permit. Failure to comply with these requirements will justify a denial, suspension or revocation of the requested approval by the Town Manager or designee. In the event that control of any applicable event or activity, by contract or other arrangement, becomes the responsibility of a party other than Applicant (the "Sub-Applicant"), the Sub-Applicant shall be required to meet the insurance and indemnification requirements of this Section under which Applicant is applying, as if they were the Applicant and will be held responsible for compliance with the Town Code as if the Sub-Applicant were the Applicant.

21. In the event that insurance certificates, licenses, and other material requirements are not provided by the required dates, the approval for this Event will expire unless the Town Manager finds there are extenuating circumstances that the event sponsors have cured or can immediately cure without compromising the health, welfare, and safety of the citizens of the Town of Lauderdale-By-The-Sea and those attending the Event without increasing the administration costs of the Town.
22. Permit Holders shall owe no monies to the Town prior to or at the time of the Event. There will be no outstanding fines, moneys, fees, licenses, permits, taxes, or other charges owed to the Town by the current or past property owners or operators requesting the special event permit. A special event permit will not be issued until all outstanding debts to the Town are paid in full.
23. Permission for this Event may be suspended or modified by the Commission, Town Manager, or designated Staff.
24. The Town Manager may suspend permission for this Event due to construction activities, failure of Applicant to comply with the terms and conditions of the Town's event permit, for health or safety issues, or for the best interests of the Town.
25. Upon showing by Applicant of a valid reason, or if required by the Town, the Town Manager may approve minor logistical changes that are consistent with the Commission's policy direction on special events.
26. The onsite Town representative may terminate the Event due to Applicant not complying with the terms and conditions of the Town's event permit, for health or safety issues, and for issues such as but not limited to, crowds that exceed the capacity of the event site.

DOCUMENTS AND PERMITS REQUIRED

Insurance has been received ; Liquor Liability update needed. Application fee \$25 received.

Signature:

Courtney Easley, Assistant to the Town Manager

Date:

APPLICANT: I AGREE TO COMPLY WITH ALL OF THE CONDITIONS OF THIS PERMIT.

Signature of Applicant:

Print Name: Annie Berry, The Wild Berry Salon

Date:

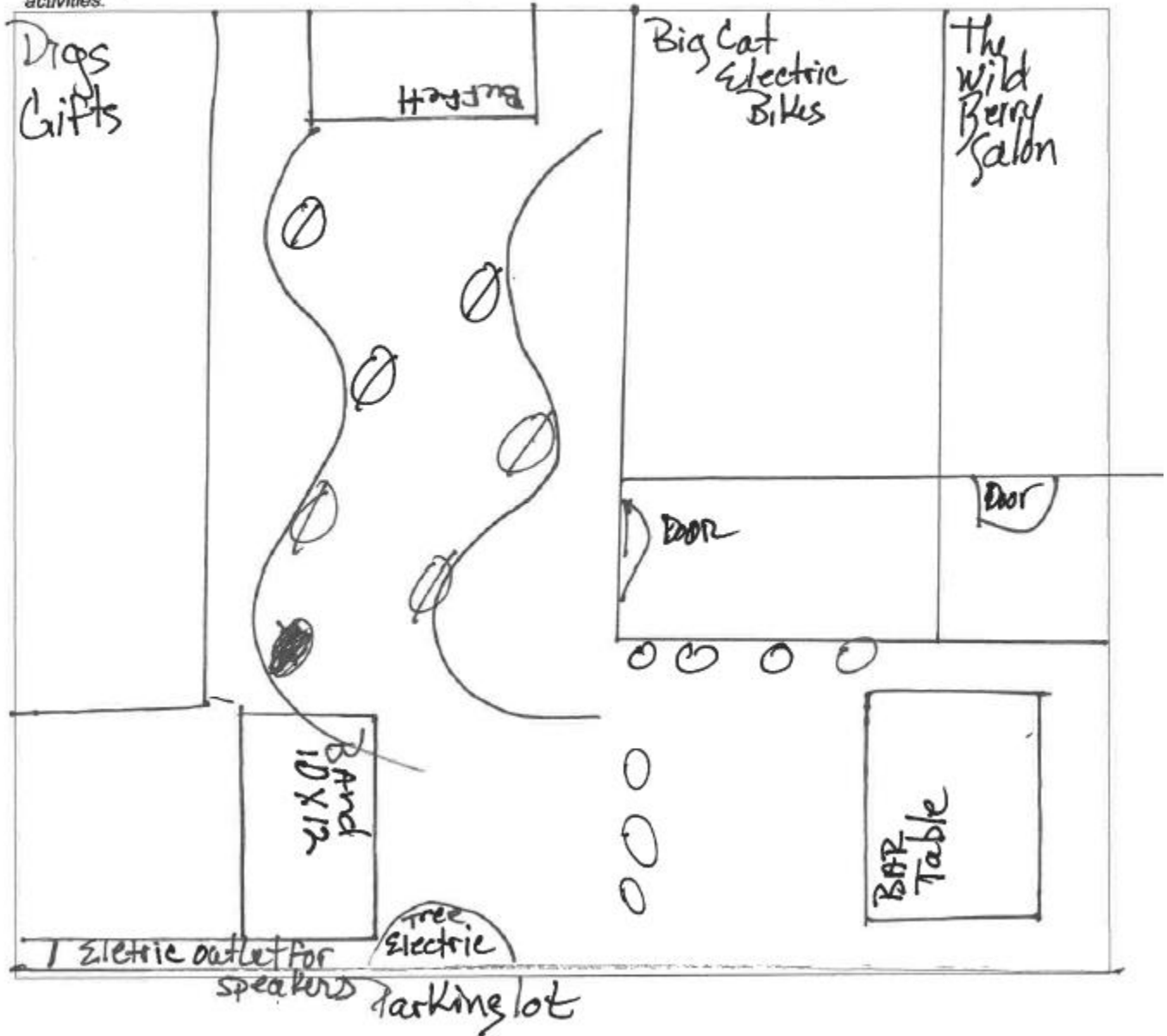
○ table-chairs 6 per table
 ○ High tops 4 per

The Town of Lauderdale-By-The-Sea
 Special Event Application

DETAILED SITE PLAN

See above for inclusion examples

A detailed map of the event site identifying location of each of the following **MUST** be drawn here or attached to this application prior to submission. Dimensions are required to determine if available site will support all of the proposed activities.





Agenda Item No: 11.b.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Ken Rubach, Deputy Town Manager/Public Works Director

Submitting Department: Administration

Item Type: Resolution

Agenda Section: CONSENT AGENDA

Subject Title: Resolution 2023-49: A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PIGGYBACK AGREEMENT WITH LMK PIPE RENEWAL, LLC, FOR CURED IN PLACE PIPE LINING AT 4607 W. TRADEWINDS AVENUE IN THE AMOUNT NOT TO EXCEED \$41,622.81; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT WITH LMK PIPE RENEWAL, LLC, ; PROVIDING FOR IMPLEMENTATION AND FOR AN EFFECTIVE DATE

Explanation: On May 17, 2023, staff received a call from a resident residing at 4607 W. Tradewinds Ave stating she was experiencing sinkholes in her yard adjacent to the storm sewer line that runs from W. Tradewinds Ave to the outfall located at the Intracoastal Waterway. Upon visual inspection by staff, we noted several sinkholes forming and contacted one of our vendors to televise the line. The recording confirmed several locations where soil intrusion was occurring into the pipe along with additional locations where joints were visibly separated. Given the pipe's condition, the cost to repair just the noted issues in the small area televised was approximately \$15,000.00. These sectional repairs would address the current issues but would leave open the possibility of similar issues occurring elsewhere in the pipe requiring additional repairs. Instead of moving forward with the immediately needed repairs, the staff is recommending that the Town line the entire pipe to save money and prevent future issues with the line going forward.



4607 W. Tradewinds Ave Storm Sewer Line

Section IV.E of the Town Purchasing Manual authorizes the Town to select and contract using the competitive bid process of another government entity as an exception to the otherwise required formal bidding process. This is considered “piggybacking.”

On September 17, 2020, the City of St. Petersburg entered into a contract with LMK Pipe Renewal, LLC, pursuant to Project # 2003-111, (the “St. Petersburg Contract”) for Sanitary Annual CIPP Lining FY20 (the “Services”). The St. Petersburg Contract is for a three (3) year term, beginning on September 17, 2020, through September 17, 2023, with the option to renew the contract for one (1) additional two (2) year term (**Exhibit 2**). The Town would like to piggyback the St. Petersburg Contract with LMK Pipe Renewal, LLC for Cured in Place Pipe (“CIPP”) lining at 4607 W. Tradewinds Ave as the lining process/materials for lining of sanitary sewer mirrors that of storm sewer as shown in Exhibit A of the Resolution.

The anticipated cost for the proposed project is \$41,622.81 (**Exhibit 3**). This includes lining the entire pipe, approximately 112 feet. Funding for the construction is available within the Public works budget under the "Street Maintenance/Supply" line item due to the deferral of the decorative intersection coating work.

Recommendation: Staff recommends that the Town Commission approve Resolution 2023-49 approving the piggyback agreement with LMK Pipe Renewal, LLC for CIPP storm sewer lining at 4607 W. Tradewinds Ave, utilizing the City of St. Petersburg Project #2003-111 for Sanitary Annual CIPP Lining FY20 in an amount not to exceed \$41,622.81.

Exhibits:

1. Resolution 2023-49 LMK Agreement
2. City of St. Petersburg Contract
3. Lauderdale by the Sea 4607 Tradewinds Ave Proposal

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A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PIGGYBACK AGREEMENT WITH LMK PIPE RENEWAL, LLC, FOR CURED IN PLACE PIPE LINING AT 4607 W. TRADEWINDS AVENUE IN AN AMOUNT NOT TO EXCEED \$41,622.81; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION AND FOR AN EFFECTIVE DATE

WHEREAS, on September 17, 2020, the City of St. Petersburg entered into a contract with LMK Pipe Renewal, LLC (“LMK”) pursuant to the City of St. Petersburg Project No. 20013-111 (the “St. Petersburg Contract”) for the provision of all labor, material, equipment and services necessary for sanitary sewer cured in place pipe (CIPP) lining (the “Services”); and

WHEREAS, the Town wishes to contract with LMK for the Services, utilizing the St. Petersburg Contract, for the CIPP storm sewer lining at 4607 W. Tradewinds Avenue (the “Project”); and

WHEREAS, Section IV.E. “Cooperative Purchasing (Piggybacking)” of the Town’s Purchasing Manual provides that purchases made under the provisions of another government’s purchasing contracts shall be exempt from the competitive bidding requirements provided that certain criteria set forth are all satisfied; and

WHEREAS, LMK has provided the Town with a quote, consistent with the terms of the St. Petersburg Contract, to perform the Services for the Project in an amount of \$41,622.81 (the “Quote”); and

WHEREAS, pursuant to Section IV.E. of the Town's Purchasing Manual, the Town Commission desires to approve an agreement with LMK, attached hereto as Exhibit “A,” to perform the Services for the Project, consistent with the terms of the St. Petersburg Contract and the Quote (the “Piggyback Agreement”); and

WHEREAS, the Town Commission deems it to be in the best interest of the Town and its residents to approve the Piggyback Agreement, in an amount not to exceed \$41,622.81.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, THAT:

Section 1. Recitals. The foregoing “Whereas” clauses are hereby ratified and confirmed as being true and correct and incorporated herein by this reference.

Section 2. Piggyback Agreement Approved. The Town Commission hereby approves the Piggyback Agreement with LMK, attached as Exhibit “A” to provide the Services for the Project in an amount not to exceed \$41,622.81.

Section 3. Authorization to Execute the Agreement. The Town Manager is hereby authorized to execute the Piggyback Agreement with LMK, in substantially the same form attached hereto as Exhibit “A,” together with such non-substantial changes as are deemed necessary by the Town Manager and approved as to form and legal sufficiency by the Town Attorney.

Section 4. Authorization to Implement. The appropriate Town officials are authorized to execute all necessary documents and to take any necessary action to effectuate the intent of this Resolution.

Section 5. Effective Date. This Resolution shall become effective immediately upon passage and adoption.

PASSED AND ADOPTED on this 12th day of September, 2023.

MAYOR CHRIS VINCENT

Attest:

Katrina Adler, Town Clerk

APPROVED AS TO FORM:

Susan L. Trevarthen, Town Attorney

**TOWN OF LAUDERDALE-BY-THE-SEA AGREEMENT FOR SEWER
REHABILITATION AND REPAIR SERVICES
(Piggyback Competitive Award)**

This Agreement is made this ____ day of September, 2023 (the "Effective Date") between the Town of Lauderdale-By-The-Sea, a municipal corporation organized and existing under the laws of the State of Florida and whose address 4501 North Ocean Drive, Lauderdale-By-The-Sea, FL 33308 (the "Town"), and LMK Pipe Renewal, LLC ("LMK") whose address is 1131 NW 55TH Street, Fort Lauderdale, FL 33309.

WITNESSETH

WHEREAS, the Town wishes to enter into an agreement with Contractor (this "Agreement") for the provision of sewer rehabilitation and repair services (the "Services"); and

WHEREAS, the parties wish to incorporate the terms and conditions of the solicitation and contractual arrangement between the City of St. Petersburg, Florida and the Contractor as set forth in the City of St. Petersburg Project No. 20013-111 for Annual San CIPP Pipe Lining FY20 and resulting agreement dated September 17, 2020, attached hereto and incorporated herein as Exhibit "A" (the "St. Petersburg Contract"); and

WHEREAS, the Contractor has provided a proposal, attached hereto as Exhibit "B" and incorporated herein, based on the St. Petersburg Contract rates, in an amount not to exceed \$41,662.81; and

WHEREAS, the Town Procurement Manual authorizes the Town to select and contract through the use of the competitive bid process of another government entity as an exception to the otherwise required formal bidding process.

NOW THEREFORE, in consideration of the mutual covenants set forth in this Agreement, the receipt and sufficiency of which is acknowledged, the parties agree as follows:

Section 1. Term. The term of this Agreement shall expire upon completion of the project.

Section 2. Contract Terms. The Contractor agrees to provide the Town the Service as set forth in the St. Petersburg Contract, which terms are incorporated into this Agreement for all purposes and represent the entire agreement between the parties except for those modifications made herein. In the event of conflict between or among this Agreement and the terms and conditions of the St. Petersburg Agreement, the order of priority shall be: this Agreement, and the St. Petersburg Agreement.

The following additional provisions are included:

- A. The "Town of Lauderdale-By-The-Sea" and "the Town" shall be deemed substituted for "City of St. Petersburg" and "the City" with regard to any and all provisions of the St. Petersburg Contract, including by example, and not limitation, with regard to bond requirements, insurance, indemnification, licensing, termination, default and ownership of documents, which is incorporated herein by this reference. All recitals, representations, and warranties of Contractor made in the St. Petersburg Contract, including Contractor's proposal, are restated as if set forth fully herein, made for the benefit of the Town, and incorporated herein.
- B. The Town shall compensate the Contractor pursuant to the rates set forth in the St. Petersburg Contract, in an amount not to exceed \$41,662.81, as further set forth in the Contractor's proposal attached hereto as Exhibit "B".
- C. This Agreement shall be construed in accordance with and governed by the laws of the State of Florida. Venue for any litigation arising out of this Agreement shall be proper exclusively in Broward County, Florida.
- D. **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 townclerk@lauderdalebytheseafl.gov, OR BY MAIL: KATRINA ADLER, Town Clerk, Town of Lauderdale-By-The-Sea, 4501 Ocean Drive, Lauderdale-By-The Sea, Florida 33308.**

Refusal of the Contractor to comply with the provisions of this Section shall be grounds for immediate termination for cause by the Town of this Agreement.

E. ETHICS

1. Contractor warrants and represents that its employees shall abide by the Code of Ethics for Public Officers and Employees, Chapter 112, Florida Statutes.
2. No officer or employee of the Town, during his or her term of employment or for one year thereafter, shall have any interest, direct or indirect, in this Agreement or the proceeds thereof. Any subcontractors hired by the firm must also adhere to this policy and it must be included in their contracts as well.
3. No vendor shall give, solicit for, deliver or provide a campaign contribution directly or indirectly to a candidate, or to the campaign committee of a candidate, for the offices of Mayor or Commissioner.
4. Compliance with Applicable Law: Contractor covenants to promptly comply with all applicable federal, state, county, and municipal laws, ordinances, regulations, and rules relating to the Services to be performed hereunder and in effect at the time of performance. CONTRACTOR covenants that it will conduct no activity or provide any service that is unlawful or offensive.

Section 3. Notice. Notice hereunder shall be provided in writing by certified mail, return receipt requested, or customarily used overnight transmission with proof of delivery, to the following parties, with mandatory copies as provided below:

For Town: Town Manager
 Town of Lauderdale-By-The-Sea
 4501 North Ocean Drive
 Lauderdale-By-The-Sea, FL 33308

Copy to: Town Attorney
 Town of Lauderdale-By-The-Sea
 4501 North Ocean Drive
 Lauderdale-By-The-Sea, FL 33308

For Contractor: Shaun Flanery, Vice President
 LMK Pipe Renewal, LLC

1131 NW 55TH Street
Fort Lauderdale, FL 33309

Section 4. Certificates of Insurance. Prior to Contractor's commencement of services pursuant to this Agreement, Contractor shall deliver to Town, in a form acceptable to the Town in its sole discretion, the following documents within 15 days of execution of this Agreement:

- a) All required certificates of insurance as described in the St. Petersburg Contract, naming the Town as an additional insured.

Section 5. Severability. This Agreement sets forth the entire agreement between Contractor and the Town with respect to the subject matter of this Agreement. This Agreement supersedes all prior and contemporaneous negotiations, understandings and agreements, written or oral, between the parties. This Agreement may not be modified except by the parties' mutual agreement set forth in writing and signed by the parties.

Section 6. Waiver of Jury Trial. The Town and Contractor knowingly, irrevocably, voluntarily and intentionally waive any right either may have to a trial by jury in state and or federal court proceedings in respect to any action, proceeding, lawsuit or counterclaim based upon this Agreement or arising out of, under, or in connection with the services performed hereunder, or any course of conduct, course of dealing, statements or actions or inactions of any party hereto.

IN WITNESS WHEREOF, the parties hereto have accepted, made and executed this Agreement upon the terms and conditions above stated on the day and year first above written.

TOWN:

CONTRACTOR:

TOWN OF LAUDERDALE-BY-THE-SEA

LMK PIPE RENEWAL, LLC

Linda Connors, Town Manager

Shaun Flanery, Vice President

Date: _____

Date: _____

Attest: _____
Katrina Adler, Town Clerk

APPROVED AS TO FORM:

Susan L. Trevarthen, Town Attorney

A G R E E M E N T

THIS AGREEMENT ("Agreement"), made and entered into on the 17th day of September, 2020 ("Effective Date"), by and between LMK Pipe Renewal, LLC, ("Contractor") and the City of St. Petersburg, Florida, ("City" or "Owner").

WITNESSETH:

NOW, THEREFORE, in consideration of the promises and covenants contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Contractor and the City agree as follows:

- a) The Contractor shall furnish all material and perform all of the work for:

SAN Annual CIPP Lining FY20

St. Petersburg, Florida, Project No. 20013-111 ("Project"), in full and complete accordance with this Agreement and the Contract Documents. Contract Documents shall mean, collectively, the General Conditions and supplementals thereto, Specifications and supplementals thereto, the Plans, the Solicitation and any addenda thereto, and the Bid (as those terms, i.e., Specifications, Plans, Solicitation, and Bid, are defined in the General Conditions).

- b) This Agreement and the Contract Documents form the contract ("Contract") between the City and Contractor.
- c) The initial term of this Agreement is three (3) years commencing on the Effective Date. The City reserves the right to renew this Agreement under the same terms and conditions, except as set forth below, for one (1) two-year period at the end of the initial term, provided that the City and Contractor mutually agree through a written amendment to the Contract to (i) a renewal, (ii) the unit prices for the first annual period of the renewal term, and (iii) the method for calculating adjustments to those unit prices during the second annual period of the renewal term. In the event this Agreement is renewed, the parties will mutually agree on a description of the work for each annual period of the renewal term.
- d) After the City issues a Notice to Proceed (as defined in the General Conditions) for each annual period, Contractor shall be prepared to commence portions of the Work (as described in the Contract Documents) set forth in individual Field Orders (as defined in the General Conditions). After the City issues a Field Order, Contractor shall, for each Field Order: (i) reach Substantial Completion (as defined in the General Conditions) of all Work under that Field Order within the time period stated therein, and (ii) reach Final Completion within thirty (30) calendar days after the City's delivery of the punch list in accordance with the Contract, unless a longer period of time to

reach Final Completion is set forth in the punch list (collectively for each Field Order, (i) and (ii), "Field Order Completion Time"). The Field Order Completion Time may be modified by a Change Order (as defined in the General Conditions).

- e) For the first annual period of the Initial term of this Agreement, Contractor shall obtain a Public Construction Bond in accordance with the applicable requirements set forth in the Contract Documents. For each annual period thereafter, Contractor shall obtain a rider to the Public Construction Bond or a new Public Construction Bond in the additional amount of the Contract Price for that annual period (as hereinafter defined). All Public Construction Bonds and riders thereto must be approved by the City Attorney's Office prior to issuance of a Notice to Proceed for any new work. All Public Construction Bonds and riders thereto must be approved by the City Attorney's Office prior to issuance of a Notice to Proceed for any new work.
- f) Provided that Contractor faithfully performs its obligations contained the Contract, the City hereby agrees to pay Contractor pursuant to the amounts set forth in the unit prices, as those unit prices may be annually adjusted in accordance with the Contract Documents, at the time and in the manner set forth in the Contract Documents, an amount not to exceed Five Hundred Twenty Nine Thousand (\$529,000) for the first annual period of the initial term, Seven Hundred Fifty Thousand (\$750,000) for the second annual period of the initial term, and Seven Hundred Fifty Thousand (\$750,000) for the third annual period of the initial term (individually for each annual period, "Contract Price") subject to additions and deductions as provided in the Contract.
- g) Time is of the essence in the Contract. The parties agree that it would be extremely difficult and impractical under known and anticipated facts and circumstances to ascertain and fix the actual damages the City would incur if Contractor does not achieve Substantial Completion within the time stipulated in each Field Order. Therefore, Contractor shall be liable for and shall pay to the City the sums hereafter stipulated as fixed, agreed and acknowledged as reasonable liquidated damages, not as a penalty, for each calendar day of delay until the Work in each Field Order reaches Substantial Completion, in the following aggregate amounts:

Field Order Amount	Daily Charge per Calendar Day
\$50,000 and under.....	\$500
Over \$50,000 but less than \$500,000	\$1,000
Over \$500,000 but less than \$5,000,000	\$1,500
Over \$5,000,000 but less than \$15,000,000.....	\$2,000
\$15,000,000 and over	\$4,000

These liquidated damages shall be the City's sole and exclusive damages for Contractor's delay of the Work.

- h) The obligations of the City as to any funding required pursuant to the Contract shall be limited to an obligation in any given year to budget, appropriate and pay from legally available funds, after monies for essential City services have been budgeted and appropriated, sufficient monies for the funding that is required during that year. Notwithstanding the foregoing, the City shall not be prohibited from pledging any legally available non-ad valorem revenues for any obligations heretofore or hereafter incurred, which pledge shall be prior and superior to any obligation of the City pursuant to the Contract.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which is effective as of the day and date first above written.

LMK Pipe Renewal
(Company Name)

By: Shawn M. Flaney
(Signature of Corporate Officer)

WITNESSES:

By: Timothy G. Ischay
(Printed Name)

By: Andrea Sorensen
(Printed Name)

CITY OF ST. PETERSBURG, FLORIDA

By: _____
Procurement and Supply Management Director

By: _____
City Clerk (Designee)

Date

APPROVED AS TO FORM:

By: _____
City Attorney (Designee)

00470584 -- 3-yr w/ 2-yr renewal, Field Order

(Acknowledgment of Contractor, If a Limited Liability Company)

(State of Florida)
(County of Broward)
(City of Fort Lauderdale)

The foregoing instrument was acknowledged before me this 17th day of September
2020, by Shaun Flanery
(Managing Member or Manager of LLC)

of LMK Pipe Renewal a Florida
(Name of Limited Liability Company) (State of Organization)

Limited Liability Company, on behalf of said liability company.

He/she is personally known to me or has produced Drivers License as
(Select) (Type of Identification)

Identification and Did take an oath; and appeared before me at the time of notarization.
(Did/Did Not)

The undersigned warrants that he/she is authorized by the said limited liability company to
(Select)

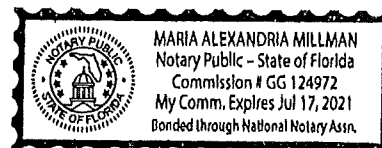
execute the foregoing instrument.

NOTARY PUBLIC:

Sign: [Signature]

Print/Type: Maria A. Millman

(Seal)



payment must be in accordance with the notice and time limitation provisions set forth in Sections 255.05(2) and 255.05(10), Florida Statutes.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or to the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

IN TESTIMONY WHEREOF, the hands and seals of the parties hereto this ____ day of _____, 20____.

SURETY:

North American Specialty Insurance Company
SURETY NAME

BY: [Signature]
(Signature of Attorney-In-Fact)

Dione R. Young
(Print or Type Name of Attorney-In-Fact)

W286959
(Florida license # of Attorney-In-Fact)



Countersignature of Florida Licensed Agent (only required if Attorney-In-Fact is not a Florida Licensed Agent)

Note: A copy of a power of attorney attested by the corporate secretary of the Surety evidencing the Attorney-In-Fact named above is currently authorized to execute this bond on behalf of the Surety must be attached to this bond.

CITY:

APPROVED AS TO FORM:

By: _____
City Attorney (Designee)

PRINCIPAL:

LMK Pipe Renewal, LLC
PRINCIPAL NAME

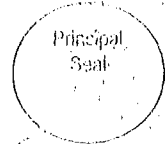
BY: Shan M. Floney
(Signature)

Shan Floney, VP
(Print or Type Name and Title)

Check applicable box below (check only one box):

☒ Principal has a seal. *If checked, attest and impress Principal's seal:*

ATTEST:



BY: [Signature]
(Signature)
TIMOTHY G. ISCHAY
(Print or Type Name)

☐ Principal has no seal. *If checked, provide two witness signatures:*

WITNESS 1 for Principal:

BY: _____
(Signature)

(Print or Type Name)

WITNESS 2 for Principal:

BY: _____
(Signature)

(Print or Type Name)

PUBLIC CONSTRUCTION BOND

Bond # 2309596

(STATE OF FLORIDA)

(COUNTY OF Pinellas)

(CITY OF St. Petersburg)

KNOW ALL MEN BY THESE PRESENTS:

That we, LMK Pipe Renewal, LLC (hereinafter called the "Principal"),
(Company Name)
located at 1131 NW 55th Street, Fort Lauderdale, FL 33309, (954) 772-0075,
(Principal Business Address) (Phone Number)
and North American Specialty Insurance Company (hereinafter called the "Surety"),
(Surety Name)
located at 1200 Main Street, Suite 800, Kansas City, MO 64105, (913) 676-5200,
(Surety Business Address) (Phone Number)

are held and firmly bound unto the City of St. Petersburg, Florida (hereinafter called the "City")
located at One 4th Street North, St. Petersburg, FL 33701, phone: (727) 893-7220, in the penal
sum of: \$ 529,000.00 ^(first annual period of the initial term) for the payment of which we bind ourselves, our heirs, personal
representatives, successors, and assigns, jointly and severally, for the faithful performance of a
certain written construction agreement, dated the _____ day of _____, 20____, entered
into between the Principal and the City ("Contract") for:

SAN Annual CIPP Lining FY20 Project No. 20013-111

The locations of the proposed Work for the project are within the sanitary sewer collection service areas for the City of St. Petersburg, Florida.

NOW, THEREFORE, THE CONDITIONS of this bond are such that, if the Principal shall (i) in all respects comply with the terms and conditions of the Contract (the Contract being made a part of this bond by reference), including but not limited to the guarantee and warranty requirements, all obligations contained in the Contract Documents (as defined in the Contract) and all modifications made to the Contract as therein provided, for the original term of the Contract and any extensions which may be granted by the City, with or without notice to the Surety; and (ii) promptly make payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying labor, materials, or supplies used directly or indirectly in the prosecution of the work provided for in the Contract; and (iii) pay the City all losses, damages, liquidated damages, expenses, costs, and attorneys' fees at trial and on appeal sustained by the City due to a default by Principal under the Contract; and (iv) fulfill its obligations related to the guarantee and warranty of all work and materials furnished under the Contract pursuant to the terms and conditions specified in the Contract, then this bond shall be void; otherwise, it shall remain in full force.

This bond is meant to comply with all the requirements of Section 255.05, Florida Statutes, and herewith incorporates all duties of a surety required by Section 255.05, Florida Statutes, and all notice and time limitation provisions set forth in Sections 255.05(2) and 255.05 (10), Florida Statutes. Any action instituted by a claimant under this bond for

Acknowledgment of Principal, if a Corporation

(STATE OF FLORIDA)

(COUNTY OF Broward)

(CITY OF Ft. Lauderdale)

The foregoing instrument was acknowledged before me this 18th day of September, 2020
by Shawn Flanery, V.P. of LMK Pipe Renewal, LLC, a
(Name and Title of Officer) (Name of Principal)

Florida corporation, on behalf of said corporation. He/She is
(State of Corporation) (Select)

personally known to me or has produced Drivers License as identification.
(Type of Identification)

He/She warrants that he/she is authorized by the Board of Directors of said corporation to execute
(Select) (Select)

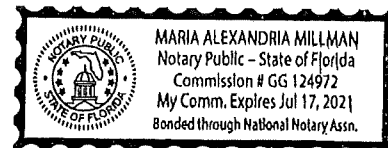
to execute the foregoing instrument.

NOTARY PUBLIC:

Sign: [Signature]

Print/Type: Maria Millman

SEAL



**Acknowledgment of Surety,
(Where Executed by Attorney-in-Fact, as Agent)**

Iowa
(STATE OF ~~FLORIDA~~)
(COUNTY OF Dallas)
(CITY OF Wauke)

The foregoing instrument was acknowledged before me this 17th day of September, 2020,
by Dione R. Young
(Name of Attorney-in-Fact)

as Attorney-in-Fact for North American Specialty Insurance Company,
(Name of Surety)

who is personally known to me or has produced Attorney-in-Fact
(Type of Identification)

as Identification.

By virtue of a power of attorney from said corporation, a copy of which is attached hereto,
he/she is duly authorized to execute the foregoing instrument.

NOTARY PUBLIC:

Sign: 

Print/Type: Stacy Venn

Commission Expires: August 20, 2023

SEAL



**Acknowledgment of Countersigner,
(Only Required if Attorney-in-Fact is not a Florida Licensed Agent)**

(STATE OF FLORIDA)

(COUNTY OF _____)

(CITY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____,

by _____
(Name of Countersigner)

as Countersignator for _____
(Name of Surety)

who is personally known to me or has produced _____
(Type of Identification)

as Identification.

By virtue of a power of attorney from said corporation, a copy of which is attached hereto,
he/she is duly authorized to execute the foregoing instrument.

NOTARY PUBLIC:

Sign: _____

Print/Type: _____

SEAL

SWISS RE CORPORATE SOLUTIONS

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WESTPORT INSURANCE CORPORATION

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Overland Park, Kansas and Washington International Insurance Company a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Overland Park, Kansas, and Westport Insurance Corporation, organized under the laws of the State of Missouri, and having its principal office in the City of Overland Park, Kansas each does hereby make, constitute and appoint:

JAY D. FREIERMUTH, CRAIG E. HANSEN, BRIAN M. DEIMERLY, SHIRLEY S. BARTENHAGEN, CINDY BENNETT, ANNE CROWNER,

TIM McCULLOH,, STACY VENN, DIONE R. YOUNG, and WENDY ANN CASEY

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED TWENTY FIVE MILLION (\$125,000,000.00) DOLLARS

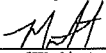
This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on March 24, 2000 and Westport Insurance Corporation by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By 
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation

By 
Mike A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation



IN WITNESS WHEREOF, North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 3rd day of November, 20 17.

North American Specialty Insurance Company
Washington International Insurance Company
Westport Insurance Corporation

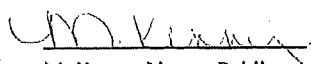
State of Illinois
County of Cook ss:

On this 3rd day of November, 20 17, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of

Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation and Michael A. Ito Senior Vice President of Washington International Insurance Company and Senior Vice President

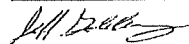
of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.




M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Vice President and Assistant Secretary of North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this day of , .


Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company &
North American Specialty Insurance Company & Vice President & Assistant Secretary of Westport Insurance Corporation



City of St. Petersburg
PURCHASE ORDER

PURCHASE ORDER NO	REVISION	DATE
237766	0	14-OCT-2020

This Purchase Order No must appear on all invoices, packing lists and correspondence related to this order.

SHIP TO:
Thompson, Lillian A ENGINEERING DEPARTMENT CITY OF ST PETERSBURG ONE 4TH ST N 7TH FLOOR Saint Petersburg, FL 33701 United States

VENDOR:	VENDOR NO: 130680
LMK Pipe Renewal LLC 1131 NW 55th St Fort Lauderdale , FL 33309 Frank Schwartz / (954) 772-0075	

BILL TO:
FINANCE DEPARTMENT ACCOUNTS PAYABLE CITY OF ST PETERSBURG PO BOX 1257 Saint Petersburg, FL 33731 United States

CONTACT/PHONE/EMAIL			BUYER/PHONE/EMAIL		
Thompson, Lillian A / 7278925492 / Lillian.Thompson@stpete.org			Neal Jones / 727-892-5297 / Neal.Jones@stpete.org		
Contract No	DELIVERY DATE	SHIP VIA	FOB	FREIGHT	TERMS
236497	01-OCT-2020	Best Way	FOB Destination	Prepaid	NET 15

Description:

Supplier Notes: *Pending executed Agreement*

This BPA covers Annual SAN CIPP Pipe Lining projects effective September 20, 2020 through August 31, 2023, with one, two-year renewal option. Incorporated into this BPA: Your bid submittal for IFB No. 7737; Executed Agreement; Scope of Service; Bid pricing page.

Negotiation Header Note To Supplier

All questions regarding this solicitation shall be directed in writing to Neal Jones, Procurement Analyst, at neal.jones@stpete.org no later than Noon, Monday, June 22, 2020.

Bidders must attach all required documents, including but not limited to the Bid Bond and Insurance Certificates as a single PDF, except for the Price Page, Subcontract Summary and Apprentice/Disadvantaged Worker Utilization Plan Worksheet which must be attached as separate Excel documents.

Web Conferencing Invitation to Pre-Bid: June 5, 2020, at 10:00 a.m.:

You are invited to attend a remote meeting; to attend the meeting use the instructions provided below:

To attend remotely using a PC, Mac or Linux computer or an iOS or Android tablet/smartphone click on the link below:

<https://zoom.us/j/7278925298>

To join using a smartphone tap:

+16699006833,,7278925298# or +14086380968,,7278925298#

Or to join via a wired Telephone dial:

City of St. Petersburg Standard Purchase Order 237766

1-669-900-6833 or 1-408-638-0968 or 1-646-876-9923
Meeting ID: 727 892 5298

LINE	DESCRIPTION	ORIGINAL QTY	UOM	UNIT PRICE	LINE AMOUNT
1	SAN Annual CIPP Lining FY20, pricing per bid pricing sheet.	529000	DOLLAR	1.00	529,000.00

NOTE: Total represents original award amount as amended

TOTAL: \$529,000.00

State Sales Tax Exemption Number 85-8012740154C-1

Federal Employer ID Number 59-6000424



Procurement Director

Acceptance and Acknowledgement

For orders \$10,000 and above please log in to the [iSupplier Portal](#) and acknowledge acceptance of the terms and conditions of this agreement and all change notices.

Once logged in, follow the steps outlined below to acknowledge this purchase order:

1. Click on 'Orders' tab
2. Select 'Purchase Orders to Acknowledge' from the View Menu
3. Select the specific purchase order
4. Click the 'Acknowledge' button
5. Select 'Accept Entire Order'
6. On next screen, click 'Submit'

If login information is unknown or difficulties are experienced please contact Registration@stpete.org for assistance.

Attention: Important Payment Information – Please Read

- The Purchase Order (PO) Number on this document MUST appear on all invoices
- Invoices without PO Numbers will delay payment and are not considered proper invoices
- Each invoice must be in a separate PDF file and be emailed to ap@stpete.org
- Invoices must contain:
Remit to Address, Service Location, City Department and Requestor name, detailed description and cost breakout pursuant to the Agreement
- Due dates are based on the date a proper invoice is received

The City's preferred payment method is e-payables and the City also offers automated clearing house (ACH) payments as authorized by the vendor.

For questions on invoices or payments, please contact the Finance Department at AP-Solutions@stpete.org or call 727-893-7031. Please reference the invoice # and city's six digit Purchase Order # in your email so we can better assist you.

Rev (07/2020)



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
09/30/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Holmes Murphy & Assoc - WDM PO Box 9207 Des Moines, IA 50306-9207		CONTACT NAME: PHONE (A/C, No. Ext): E-MAIL ADDRESS:		FAX (A/C, No):
INSURED LMK Pipe Renewal, LLC 1131 NW 55th Street Fort Lauderdale, FL 33309		INSURER(S) AFFORDING COVERAGE INSURER A: NATIONAL FIRE INS CO OF HARTFORD INSURER B: CONTINENTAL INS CO INSURER C: CONTINENTAL CAS CO INSURER D: COLUMBIA CAS CO INSURER E: INSURER F:		NAIC # 20478 35289 20443 31127

COVERAGES

CERTIFICATE NUMBER: 60399037

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☒ LOC ☐ OTHER:	X	X	6057465522	06/01/20	06/01/21	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY	X	X	6057465519	06/01/20	06/01/21	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☒ RETENTION \$ 10,000	X	X	6057465598	06/01/20	06/01/21	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		X	6057465553	06/01/20	06/01/21	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional Liability	X	X	6072220853	06/01/20	06/01/21	Limit 2,000,000
D	Pollution Liability		X	6076568890	06/01/20	06/01/21	Limit 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Additional Insured (GL, Auto, Umbrella, Pollution): City of St. Petersburg as required by written contract, per policy terms and conditions.
Waiver of Subrogation (GL, Auto, Umbrella, WC, Pollution, Professional): in favor of the additional insured as required by written contract, per policy terms and conditions.

CERTIFICATE HOLDER

City of St. Petersburg

PO Box 2842

St. Petersburg, FL 33731

USA

APPROVED

Anthony Rotella, 10/1/2020, 4:34:20 pm

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Ty Hoot

© 1988-2015 ACORD CORPORATION. All rights reserved.

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
	GENERAL - GROUP I				
G-1.1	Emergency Response	10	DAY	\$ 3,000.00	\$ 30,000.00
G-2.1	Traffic Control	75	DAY	\$ 450.00	\$ 33,750.00
	SANITARY SEWER - GROUP I				
S-1.1	Sewer Main Cleaning and CCTV Inspection - 8" Diameter and Less (Not part of CIPP Lining Work)	5,000	LF	\$ 2.25	\$ 11,250.00
S-1.2	Sewer Main Cleaning and CCTV Inspection - 10" to 12" Diameter (Not part of CIPP Lining Work)	2,000	LF	\$ 2.95	\$ 5,900.00
S-1.3	Sewer Main Cleaning and CCTV Inspection - 14" to 18" Diameter (Not part of CIPP Lining Work)	1,000	LF	\$ 5.25	\$ 5,250.00
S-1.4	Sewer Main Cleaning and CCTV Inspection - 20" to 27" Diameter (Not part of CIPP Lining Work)	1,000	LF	\$ 8.95	\$ 8,950.00
S-1.5	Sewer Main Cleaning and CCTV Inspection - 30" to 48" Diameter (Not part of CIPP Lining Work)	1,000	LF	\$ 14.50	\$ 14,500.00
S-2	Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection (Not part of CIPP Lining Work)	100	EA	\$ 285.00	\$ 28,500.00
S-3.1	Specialty Cleaning - 8" Diameter and Less	500	LF	\$ 9.00	\$ 4,500.00
S-3.2	Specialty Cleaning - 10" to 12" Diameter	200	LF	\$ 11.00	\$ 2,200.00
S-3.3	Specialty Cleaning - 14" to 18" Diameter	100	LF	\$ 13.00	\$ 1,300.00
S-3.4	Specialty Cleaning - 20" to 27" Diameter	100	LF	\$ 25.00	\$ 2,500.00
S-3.5	Specialty Cleaning - 30" Diameter and Greater	100	LF	\$ 32.00	\$ 3,200.00
S-4.1	Chemical Sealing of Host Pipe – 10" Diameter and Less	20	EA	\$ 495.00	\$ 9,900.00
S-4.2	Chemical Sealing of Host Pipe – 12" to 15" Diameter	5	EA	\$ 525.00	\$ 2,625.00

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-4.3	Chemical Sealing of Host Pipe – 18” to 24” Diameter	5	EA	\$ 650.00	\$ 3,250.00
S-4.4	Chemical Sealing of Host Pipe – 27” Diameter and Greater	5	EA	\$ 835.00	\$ 4,175.00
S-5	Chemical Sealing – Grout	1,000	GAL	\$ 400.00	\$ 400,000.00
S-6	Additional Access Cost	50	EA	\$ 350.00	\$ 17,500.00
S-7	Chemical Sealing of Service Lateral Connection	20	EA	\$ 450.00	\$ 9,000.00
MISCELLANEOUS - GROUP I					
M-13	Allowance for Contract Amendment	--	--	\$ 50,000.00	\$ 50,000.00
CONTRACT BASE BID TOTAL - GROUP I:					\$ 648,250.00
SANITARY SEWER - GROUP II					
(CIPP Main Lining)					
S-11.1	CIPP Main Liner 8" Diameter - 6.0 mm Thick	25,000	LF		\$ -
S-11.2	CIPP Main Liner 10" Diameter - 6.0 mm Thick	7,500	LF		\$ -
S-11.3	CIPP Main Liner 12" Diameter - 6.0 mm Thick	2,500	LF		\$ -
S-11.4	CIPP Main Liner 15" Diameter - 7.5 mm Thick	1,500	LF		\$ -
S-11.5	CIPP Main Liner 18" Diameter - 9.0 mm Thick	1,500	LF		\$ -
S-11.6	CIPP Main Liner 21" Diameter - 9.0 mm Thick	1,000	LF		\$ -
S-11.7	CIPP Main Liner 24" Diameter - 10.5 mm Thick	1,000	LF		\$ -
S-11.8	CIPP Main Liner 27" Diameter - 10.5 mm Thick	1,000	LF		\$ -

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-11.9	CIPP Main Liner 30" Diameter - 12.0 mm Thick	1,000	LF		\$ -
S-11.10	CIPP Main Liner 36" Diameter - 12.0 mm Thick	1,000	LF		\$ -
S-11.11	CIPP Main Liner 42" Diameter - 13.5 mm Thick	500	LF		\$ -
S-11.12	CIPP Main Liner 48" Diameter - 15.0 mm Thick	500	LF		\$ -
S-12.1	CIPP Main Liner 8" Diameter Thickness Variance $\pm$ 1.5 mm	1,000	LF		\$ -
S-12.2	CIPP Main Liner 10" Diameter Thickness Variance $\pm$ 1.5 mm	2,000	LF		\$ -
S-12.3	CIPP Main Liner 12" Diameter Thickness Variance $\pm$ 1.5 mm	2,000	LF		\$ -
S-12.4	CIPP Main Liner 15" Diameter Thickness Variance $\pm$ 1.5 mm	2,000	LF		\$ -
S-12.5	CIPP Main Liner 18" Diameter Thickness Variance $\pm$ 1.5 mm	1,000	LF		\$ -
S-12.6	CIPP Main Liner 21" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.7	CIPP Main Liner 24" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.8	CIPP Main Liner 27" Diameter Thickness Variance $\pm$ 1.5 mm	501	LF		\$ -
S-12.9	CIPP Main Liner 30" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.10	CIPP Main Liner 36" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.11	CIPP Main Liner 42" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.12	CIPP Main Liner 48" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-13.1	CIPP Main Pre-Liner 8" Diameter	600	LF		\$ -

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-13.2	CIPP Main Pre-Liner 10" to 12" Diameter	600	LF		\$ -
S-13.3	CIPP Main Pre-Liner 15" to 18" Diameter	500	LF		\$ -
S-13.4	CIPP Main Pre-Liner 21" to 27" Diameter	400	LF		\$ -
S-13.5	CIPP Main Pre-Liner 30" to 36" Diameter	200	LF		\$ -
S-13.6	CIPP Main Pre-Liner 42" to 48" Diameter	150	LF		\$ -
S-14.1	Wastewater Bypass Pump-Around Setup - 8" Diameter and Less	55	EA		\$ -
S-14.2	Wastewater Bypass Pump-Around Setup - 10" to 12" Diameter	20	EA		\$ -
S-14.3	Wastewater Bypass Pump-Around Setup - 14" to 21" Diameter	15	EA		\$ -
S-14.4	Wastewater Bypass Pump-Around Setup - 22" to 30" Diameter	5	EA		\$ -
S-14.5	Wastewater Bypass Pump-Around Setup - 32" to 48" Diameter	5	EA		\$ -
S-15.1	Wastewater Bypass Pump-Around Operation - 8" Diameter and Less	75	DAY		\$ -
S-15.2	Wastewater Bypass Pump-Around Operation - 10" to 12" Diameter	40	DAY		\$ -
S-15.3	Wastewater Bypass Pump-Around Operation - 14" to 21" Diameter	30	DAY		\$ -
S-15.4	Wastewater Bypass Pump-Around Operation - 22" to 30" Diameter	15	DAY		\$ -
S-15.5	Wastewater Bypass Pump-Around Operation - 32" to 48" Diameter	10	DAY		\$ -
S-20	Removal & Sealing of Protruding Service Connections	10	EA		\$ -
S-22	Service Reconnection	500	EA		\$ -

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-23	CIPP Liner Material Testing	10	EA		\$ -
S-24.1	CIPP Liner Testing - FELL Testing - 8" to 12" Diameter	3,500	LF		\$ -
S-24.2	CIPP Liner Testing - FELL Testing - 14" to 21" Diameter	500	LF		\$ -
S-24.3	CIPP Liner Testing - FELL Testing - 22" to 30" Diameter	500	LF		\$ -
S-24.4	CIPP Liner Testing - FELL Testing - 32" to 48" Diameter	200	LF		\$ -
	MISCELLANEOUS - GROUP II				
M-13	Allowance for Contract Amendment - Group II	--	--	\$ 100,000.00	\$ 100,000.00
SANITARY SEWER - GROUP II TOTAL:					\$ 100,000.00
	SANITARY SEWER - GROUP III (Service Lateral CIPP Lining)				
S-24	Initial Service Lateral CCTV From Main	250	EA	\$ 290.00	\$ 72,500.00
S-25	Initial Service Lateral CCTV Inspection From Clean Out	25	EA	\$ 5.00	\$ 125.00
S-26	CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF	200	EA	\$ 3,597.00	\$ 719,400.00
S-27	CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral	30	EA	\$ 3,825.00	\$ 114,750.00
S-28	CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral	30	EA	\$ 7,600.00	\$ 228,000.00
S-29	CIPP Lateral Lining, Up To 15 LF (From Access Structure)	10	EA	\$ 3,385.00	\$ 33,850.00
S-30	CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29)	10,000	LF	\$ 70.00	\$ 700,000.00

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-31	Replacement or Installation of Cleanouts - Not In Bulk	20	EA	\$ 1,500.00	\$ 30,000.00
S-32	Replacement or Installation of Cleanouts - Bulk Installation (10 or more within localized area)	75	EA	\$ 1,400.00	\$ 105,000.00
S-33	Replacement or Installation of Cleanouts - Dewatering - Targeted Areas	90	EA	\$ 1,500.00	\$ 135,000.00
S-35	Clean-Out Restoration in Grass/Mulch Area	75	EA	\$ 1,300.00	\$ 97,500.00
S-36	Clean-Out Restoration in Asphalt Area	5	EA	\$ 1,450.00	\$ 7,250.00
S-37	Clean-Out Restoration in Concrete Driveway	10	EA	\$ 1,500.00	\$ 15,000.00
S-38	Clean-Out Restoration in Paver Driveway	10	EA	\$ 2,500.00	\$ 25,000.00
	MISCELLANEOUS - GROUP III				
M-13	Allowance for Contract Amendment	--	--	\$ 50,000.00	\$ 50,000.00
SANITARY SEWER - GROUP III TOTAL:					\$ 2,333,375.00



CITY OF ST. PETERSBURG

ENGINEERING & CAPITAL IMPROVEMENTS DEPARTMENT

SAN Annual CIPP Lining FY20 ST. PETERSBURG, FLORIDA

PROJECT NO. 20013-111

Plans, specifications and details governing the Work to be accomplished under Project No. 20013-111 have been prepared for the City of St. Petersburg by Engineering & Capital Improvements Department, One Fourth Street North, St. Petersburg.

All communication pertaining to this project shall carry the reference,
"CITY PROJECT NO. 20013-111"



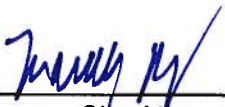
Brijesh Prayman, P.E., ENV SP
Director, Engineering & Capital Improvements

APPROVED AS TO CONTENT

**SAN Annual CIPP Lining FY20
Project No. 20013-111**

CITY OF ST. PETERSBURG, FLORIDA

Approved on the assumption that the QUALIFICATION REQUIREMENTS; BID BOND; BIDDER SECURITY/BIDDER INFORMATION; AGREEMENT; PUBLIC CONSTRUCTION BOND; SUBCONTRACTOR SUMMARY; APPRENTICE/DISADVANTAGED WORKER UTILIZATION PLAN WORKSHEET; INSTRUCTIONS TO BIDDERS; and GENERAL CONDITIONS FORMS are the latest approved versions with the only variation being in the SUPPLEMENTAL INSTRUCTIONS TO BIDDERS a which I have read and approved. This was the only CONTRACT STANDARDS SUPPLEMENTAL that was included. I assume a CERTIFICATE OF INSURANCE form will be included. No opinion is offered on the TECHNICAL SPECIFICATIONS.

By: 
City Attorney (or designee)

Date: 4/17/20

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REQUIRED BIDDER DOCUMENTS *(Attached, PDF and Excel Documents)*

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Qualification Requirements

BID FORMS

Subcontractor Summary

Apprentice/Disadvantaged Worker Utilization Plan Worksheet

Pay Items - Price Page

Bid Bond

Bidder Security and Bidder Information

Agreement Template *(attached, for informational purposes)*

Public Construction Bond Template *(attached, for informational purposes)*

CONTRACT SPECIFICATIONS

CONTRACT STANDARDS

Instructions to Bidders

General Conditions

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

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SIB-2 Article I-5 - Submission of Bids

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- 1.02 Scope of Work
- 1.03 Field Order/Work Order
- 1.04 Estimated Quantities
- 1.05 Plans and Specifications
- 1.06 Permits
- 1.07 Project Sign
- 1.08 Project Work Hours/Field Supervision
- 1.09 Project Schedule Documentation
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- 1.11 Maintenance of Storm Drainage System
- 1.12 Prevention, Control, and Abatement of Erosion and Water Pollution
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**CONTRACT STANDARDS: INSTRUCTIONS TO
BIDDERS AND GENERAL CONDITIONS FOR
ANNUAL WATER/WASTEWATER PROJECT**



City of St. Petersburg, Florida

Engineering & Capital Improvements Department

Contract Standards for Annual Water/Wastewater Projects

December 2019

CONTRACT STANDARDS

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INSTRUCTIONS TO BIDDERS

ARTICLE I-1 GENERAL INFORMATION

The construction work called for within this bidding package involves work for the City of St. Petersburg as Owner. Bidders are cautioned to carefully follow the instructions of this section to help ensure that their Bids are responsive to the requirements as presented herein.

ARTICLE I-2 DEFINITIONS OF TERMS

In addition to the definition of terms provided in this Instructions to Bidders section, the definitions set forth in the Agreement and the General Conditions apply to this Instructions to Bidders section.

ADDENDA/ADDENDUM – Written or graphic instruments issued prior to receipt of Bids which modify or interpret the Contract Documents, Plans and/or Specifications by additions, deletions, clarifications and/or corrections.

ALTERNATES – Bid price for additive or deductive items to the base Bid.

BID DOCUMENTS – Bid forms and Bid bond forms making up the Solicitation issued by the City for this Project.

BIDDER – Individuals or entities submitting Bids for the Project.

BID OPENING – The stage in the solicitation process in which the Bids are publicly opened by the City and read aloud.

NOTICE OF CONTRACT AWARD – Written notice by the City to the apparent successful Bidder stating award of the Project.

RECORDED BIDDERS – All Bidders to which the City has sent the Solicitation and all Bidders that attended the pre-Bid conference.

TOTAL BID PRICE – The total Contract price for the Bid, which includes the base Bid price and Alternates.

ARTICLE I-3 EXAMINATION OF BID PACKAGE DOCUMENTS

3.1 Completeness of Bid Package

The physical makeup and content of the Contract Documents are designed to be complete for the preparation and submittal of Bids. However, the Bidder shall verify to its own satisfaction that all material issued to the Bidder including Addenda, is complete. Should the Bidder discover that a page, sheet, or other item is missing, it shall so notify the City and the City will forward the missing item(s) to the Bidder. After Bids have been submitted, no claims of ignorance of the requirements of bidding or of construction, due to such missing material, including Addenda, will be recognized.

3.2 Bidder's Responsibility to the Project

The submission of a Bid will constitute an incontrovertible representation by the Bidder that it has or will comply with all provisions of the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for the performance of the Work, and that the Bidder has thoroughly reviewed the Plans and Specifications and has included all required labor and material in its Bid.

Inasmuch as it is not standard practice to detail all controls, wiring, piping and appurtenances, etc. required to render each piece of equipment functional on the Plans, the Bidder is cautioned to ensure that its Bid includes all such items necessary to permit the equipment to function as intended in a manner that meets all applicable codes, is free from defects and abnormal conditions, and provides a complete and operational system.

3.3 Conflicts in the Documents

Should any particular requirement in the Plans and/or Specifications for the Project appear to a Bidder to be in disagreement with other requirements in the Contract Documents, or if a Bidder is unsure of the intent or meaning of any particular requirement of the Contract Documents, the Bidder shall immediately notify the City.

If such notifications are received by the City prior to the deadline for questions indicated in the Solicitation, the City will, if deemed by the City to be warranted, issue a written clarification or an Addendum to all Recorded Bidders.

3.4 Contract Completion Time

The City will require that Work under this Contract be completed within the time limit stipulated in the Contract Documents, and Bidders must give consideration to this requirement when submitting Bids. If a Bidder is of the opinion that more time should be allowed for accomplishing the Work, a request for such extra time may be made in writing to the Procurement and Supply Management Director. For consideration, said request must be received by this office prior to the deadline for questions indicated in the Solicitation. If the Procurement and Supply Management Director deems it to be in the best interest of the City to revise the time requirement, an Addendum will be issued and furnished to all Bidders.

ARTICLE I-4 BID GUARANTY

4.1 Certified Check or Bid Bond

Bids shall be accompanied by a certified check, cashier's check or Bid Bond in the amount of not less than 5% of the Total Bid Price. The certified check or Bid Bond, and the monies payable thereon, shall be paid into the funds of the City of St. Petersburg, Florida, as liquidated damages, if the Bidder fails to execute the written Contract and furnish the required Public Construction Bond within ten (10) calendar days following Notice of Contract Award. The Bid Bond shall be furnished by a Surety company duly authorized to do business in the State of Florida. The Surety company shall have a rating classification of "A" and a financial category of Class VII as evaluated in the current Best's Key Rating Guide, Property – Liability.

4.2 Return of Checks

Bid securities submitted by Bidders in the form of a certified check or cashier's check will be held or deposited into the funds of the City of St. Petersburg and will be refunded or returned to the parties submitting same not later than thirty (30) days after execution of the Contract. In the event that all Bids are rejected, checks will be refunded to all Bidders within fifteen (15) calendar days after date of rejection.

ARTICLE I-5 SUBMISSION OF BIDS

5.1 Submission of Bids

The Bidder shall submit a complete Bid electronically through the City's iSupplier portal. Bids will be received as stipulated in the Solicitation until the time and date specified in the Solicitation.

5.2 Bid Form

Bids shall be made upon the forms supplied within the iSupplier Solicitation. Each Bidder must state in its Bid the price for which the Bidder will perform the Work as required by the Bid Documents.

5.3 Basis of Bid Prices

The Bid Documents, together with any Addenda, which are furnished to prospective Bidders during the advertising period shall become the basis of the Contract.

Unless otherwise provided in the Bid Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work including the costs incurred by the Contractor in complying with all the provisions and requirements of the Contract Documents.

Each unit price will be deemed to include an amount considered by the Bidder to be adequate to cover the Bidder's overhead and profit for each separately identified item.

5.4 Bid Preparation

All applicable pages of the Bid shall be completed and all required attachments must be provided.

All prices for lump sum or unit price work shall be given in numerals. Bid prices must be entered on the Bid for all items, unless directed otherwise on the Bid.

Failure to complete the Bid price and questionnaire sections and to provide completed required attachments will render the Bid non-responsive.

5.5 Addenda

If, in the judgment of the Procurement and Supply Management Director, an Addendum is required, a copy of such will be posted on the Procurement and Supply Management Department's web page. All Recorded Bidders will be notified of the Addendum and will be

provided with the electronic link to the web page. All Addenda shall become part of the Contract Documents. No other interpretations or clarifications issued prior to the Bid Opening will have legal effect.

The sole obligation of the Procurement and Supply Management Director with respect to distribution of Addenda is to ensure that a copy of each Addendum is posted on the City's procurement web page and to notify all Recorded Bidders. Each Bidder bears the responsibility to review and/or download the Addenda and to satisfy itself prior to submitting its Bid that its Bid is responsive to all Addenda issued.

5.6 Bid for Alternates

To be responsive, all Bids shall include costs for Alternates. Unless otherwise specified, any Bid which does not include the base Bid plus each and every Alternate may be rejected as being non-responsive. The City may select any combination or reject any or all Alternates as best serves the interest of the City.

5.7 Period Bid Remains in Effect

Bids for the Work covered by this Contract may be held by the City for a period of ninety (90) days after Bid Opening and shall continue in full effect and not be subject to withdrawal during that period until a Contract has been executed with a Bidder. If no Contract has been executed within the ninety-day period, any Bid may be withdrawn or nullified by either party or be deemed to be confirmed and extended in time for as long as permitted by the Bidder submitting each such Bid.

ARTICLE I-6 EXAMINATION OF THE SITE

6.1 Familiarity with Site Conditions

It shall be the responsibility of Bidder to examine the site of the proposed Work. Before submitting a Bid, Bidders shall inform themselves fully of the conditions relating to the cost of construction materials and labor under which the Work will be prosecuted, and shall make whatever site investigations or site tests they deem necessary. Should a Bid be accepted, the Bidder will be responsible for any and all errors in its Bid resulting from its failure to perform such examinations, inform itself of such conditions, or do such investigations and tests.

6.2 Extents and Locations of Subsurface Conditions

The Plans show the existing surface and other underground structures likely to affect the prosecution of the Work insofar as they have been determined, but the information shown is not guaranteed as being correct or complete. Bidders are expected to examine the Plans, and the location of the Work upon the ground, and consult various utility companies if deemed necessary, in order to judge for themselves the potential circumstances affecting the cost of the Work or the time required for its completion.

ARTICLE I-7 TABULATION OF THE BIDS

7.1 Correction of Mathematical Errors

Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the

correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

7.2 Preparation and Distribution of Bid Tabulation

All Bids received in conformity with the Contract Documents will, as soon as practicable, be tabulated and the tabulation shall be posted in iSupplier.

ARTICLE I-8 REJECTION OF BIDS OR AWARD WITHIN BUDGET AMOUNT

8.1 Rejection of Bids

The City reserves the right to reject any or all Bids, in whole or in part, when the City determines it is in the City's best interest to do so.

8.2 City Budget

The City reserves the right to award the Contract to the lowest responsible Bidder for an amount equal to the City's budget for the Work.

ARTICLE I-9 WAIVER OF IRREGULARITIES

In evaluating the Bids, the City reserves the right to waive any and all minor irregularities.

ARTICLE I-10 DISQUALIFICATION OF BIDDERS

Each Bidder, by submitting its Bid, states that neither Bidder nor Bidder's agents, nor any other party acting on Bidder's behalf, has paid or agreed to pay, directly or indirectly, to any person, firm, corporation, or employee of the City, any money or valuable consideration for assistance in procuring or attempting to procure the Contract herein referred to, and further agrees that no such money or reward will be hereafter paid.

Any or all Bids will be rejected if there is any reason for believing that collusion exists among the Bidders, and participants in such collusion will not be considered in future Bids for the same Work.

ARTICLE I-11 RECOMMENDATION OF AWARD OF CONTRACT

11.1 Standard for Award

Contracts will be awarded to the lowest responsible and responsive Bidder whose Bid meets the requirements and criteria set forth in the Solicitation. In awarding any Contract, the City Council may reject any Bid determined by the City Council not to be in the best interest of the City.

11.2 Factors Determining Whether a Bidder is Responsible

In making the determination of whether a Bidder is responsible, the City reserves the right to take into account and give reasonable weight to:

- A. Whether the Bidder has the necessary personnel, facilities, equipment, ability, experience, financial resources and special qualifications to perform the Work in a satisfactory manner within the time specified;

- B. Whether the Bidder or any Subcontractor possesses any City-, County-, or State-approved certification required to perform the Work;
- C. Whether the Bidder's references confirm the Bidder's experience qualifications;
- D. Whether the Bidder's references confirm the Bidder has the required resources to do the Work;
- E. The Bidder's default under, or failure to complete, other contracts;
- F. The Bidder's non-compliance with applicable Laws, including any citations from the Occupational Safety and Health Administration (OSHA) in the last three years;
- G. Whether the Bidder has had claims made against it alleging wage violations and/or discrimination in the last three years;
- H. The Bidder's involvement in ongoing litigation, including any final judgments that have not been satisfied;
- I. The Bidder's performance of previous satisfactory work for the City, including fulfillment of warranties;
- J. Evidence that the Bidder provides a drug-free workplace; and
- K. Evidence that all employees who will work on the Project have completed or will complete the OSHA 10-hour training course prior to performing any work on the Project.

11.3 Factors Rendering Bidders Non-Responsive

Any Bidder that submits a Bid that does not conform in all material respects to the requirements set forth in the Solicitation, including but not limited to any requirements to submit documentation, will be rendered non-responsive.

11.4 Recommendation of Award

Upon review and consideration of the relevant factors, the Procurement and Supply Management Director, the Engineering & Capital Improvements Director, the funding agency (if applicable), and the Design Professional will determine the lowest responsible and responsive Bidder, and a recommendation for City Council award will be made by the Procurement and Supply Management Director.

The City reserves the right to award the Contract to the lowest responsible Bidder for an amount equal to the City's available budget for the Work, which may be greater or less than the lowest responsible Bidder's Contract total(s) in the Proposal. The City reserves the right to reject any or all Bids, or to delete any part of the Work.

ARTICLE I-12 SPECIAL PROVISIONS DUE TO FEDERAL FINANCING

If this Project is to be financed, in whole or in part, by the Federal Government, all applicable requirements of the Davis Bacon Act as amended shall be complied with by Contractor.

The Davis Bacon Act, as amended, includes the provisions of the President's Executive Orders #11246 and #11375, Titles VI and VII of the Civil Rights Act of 1964, and sets forth criteria for the following: (a) Labor Standards, (b) Procedures for compliance with the Davis Bacon Act, (c) Mandatory clauses which shall be included in all contracts which are subject to provisions of the Davis Bacon Act, (d) Apprentice and trainee employment requirements in all contracts in excess of \$10,000 where the Davis Bacon Act applies, (e) Instructions for completing Payroll Form WH347, and (f) Contractor responsibilities under the Davis Bacon Act.

If Federal or State funds are partially or fully funding this Project, the Contractor will be required to submit a Payment and Performance Bond for 100% of the cost of construction.

ARTICLE I-13 SUBCONTRACTORS

13.1 Prior Approval

No part of the Contract shall be sublet without the prior written approval of the Owner. If the Contractor should sublet any part of this Contract, the Contractor shall be as fully responsible to the Owner for acts and omissions of its Subcontractor and of the persons either directly or indirectly employed by its Subcontractor, as it is for the acts and omissions of persons directly employed by the Contractor.

13.2 Subletting of Contract

The Contractor must complete at least 50% of the Total Bid Price with its own organization based on unit Bid prices, unless otherwise specified in the contract documents or approved in writing by the Engineer. The contract amount upon which the 50% requirement is computed includes the cost of materials and manufactured products which are to be purchased or produced by the Contractor under the contract provisions.

In order to meet this 50%, the Contractor shall not purchase any materials for a subcontracted item nor shall Contractor place other contractor's employees on Contractor's payroll. The term "own organization" shall be construed to include only workers employed and paid directly by the Contractor and equipment owned or rented by Contractor, with or without operators.

Each Bid shall include the name and place of business of each intended Subcontractor who will perform work or render services to the Contractor along with the portion of Work and cost of that Work to be completed by each Subcontractor.

Contractor may not utilize third-tier subcontractors for the Project unless the Contract is for a federally funded project.

The Contractor who is awarded the Project may not change or substitute Subcontractors or the portions of the Work to be performed or materials to be supplied from those identified in its Bid except upon written approval of the Engineer for the following situations:

- A. Subcontractor fails or refuses to execute a written contract for the scope of work specified at the price specified;
- B. Subcontractor is not appropriately licensed to perform the scope of work;

- C. Subcontractor becomes bankrupt or insolvent;
- D. Subcontractor is ineligible to perform the work on the Project;
- E. Subcontractor fails or refuses to perform its subcontract;
- F. Engineer determines the work performed by the Subcontractor is substantially unsatisfactory and not in substantial accordance with the Plans and Specifications;
- G. Subcontractor is substantially delaying or disrupting the progress of the Work.

ARTICLE I-14 NONDISCRIMINATION

In carrying out the Contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or disability. The Contractor shall take affirmative action to ensure that applicants for employment and employees are treated in accordance with all applicable local, state, and federal laws regarding race, color, religion, sex, national origin or disability.

All employment decisions of the Contractor with respect to employees and employee applicants, including but not limited to, initial employment upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rates of pay or other forms of compensation, training and apprenticeship shall be without discrimination against the employee or employee applicant because of disability, race, color, religion, sex, or national origin. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause. Failure to adhere to the above procedures is considered a violation of the Contract with the City and may subject the violator to debarment from future City contracts.

ARTICLE I-15 WITHDRAWAL OF BIDS

Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the deadline for submitting Bids. A request for withdrawal or a modification must be in writing and signed by a person duly authorized to do so; and, in case signed by a deputy or subordinate, the principals' proper written authority to such deputy or subordinate must accompany the request for withdrawal or modifications.

Withdrawal of a Bid will not prejudice the rights of a Bidder to submit a new Bid prior to the Bid date and time.

If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with the City and within five (5) calendar days thereafter demonstrates to the reasonable satisfaction of the City that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid and the Bid security will be returned. Thereafter, the Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

ARTICLE I-16 PUBLIC ENTITY CRIMES

Contractor is hereby notified of the provisions of Section 287.133(2)(a), Florida Statutes, related to prohibitions on persons or affiliates who have been placed on the convicted vendor list following a conviction for a public entity crime.

ARTICLE I-17 SMALL BUSINESS ENTERPRISE PROGRAM

17.1 Participation by SBE Contractors and Subcontractors

Unless otherwise prohibited, all Contractors entering into a construction contract with the City agree to be subject to and comply with the requirements for designating a percentage of the Work for small business enterprises (as defined in Section 2-232), or demonstrating and documenting a good faith effort to do so, as those requirements are set forth in Chapter 2, Article V, Division 4, of the St. Petersburg City Code, as may be amended from time to time (collectively, "SBE Requirements"). The ability of a Contractor to perform the Work with its own workforce will not excuse the Contractor from complying with the SBE Requirements. The designated Small Business Enterprise percentage requirement for the Work is set forth in the Qualification Requirements section of the Solicitation.

17.2 Acknowledgment with Bid

All Bidders shall respond in the Qualification Requirements section of the Solicitation that they have read, understand, and will comply with the SBE Requirements. A Bidder's failure to submit a response in the Qualification Requirements section of the Solicitation renders the Bid non-responsive.

ARTICLE I-18 APPRENTICE EMPLOYMENT

18.1 Apprentice Requirements

If the Total Bid Price is equal to or greater than one million dollars (\$1,000,000), all Contractors entering into a construction contract with the City agree to be subject to and comply with the requirements for employing apprentices, or demonstrating and documenting good faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 7 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Apprentice Requirements").

18.2 Acknowledgment with Bid

All Bidders shall respond in the Qualification Requirements section of the Solicitation that they have read, understand, and will comply with the Apprentice Requirements. A Bidder's failure to submit a response in the Qualification Requirements section of the Solicitation renders the Bid non-responsive.

ARTICLE I-19 DISADVANTAGED WORKERS

19.1 Disadvantaged Worker Requirements

If the Total Bid Price is equal to or greater than one million dollars (\$1,000,000), all Contractors entering into a construction contract with the City agree to be subject to and comply with the requirements for employing disadvantaged workers, or demonstrating and documenting good

faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 8 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Disadvantaged Worker Requirements").

19.2 Acknowledgment with Bid

All Bidders shall respond in the qualification requirements document that they have read, understand, and will comply with the Disadvantaged Worker Requirements. A Bidder's failure to submit a response to the qualification requirements shall render the Bid non-responsive.

ARTICLE I-20 RESPONSIBLE WAGE

20.1 Responsible Wage Requirements

If the Total Bid Price is equal to or greater than one million dollars (\$1,000,000), all Contractors entering into a construction contract with the City agree to be subject to and comply with the responsible wage requirements set forth in St. Petersburg City Code Chapter 2, Article V, Division 9, as those requirements may be amended from time to time, (collectively, the "Responsible Wage Requirements").

20.1 Acknowledgement with Bid

All Bidders shall respond in the qualification requirements document that they have read, understand, and will comply with the Responsible Wage Requirements. A Bidder's failure to submit a response to the qualification requirements shall render the Bid non-responsive.

ARTICLE I-21 CONSIDERATION OF SEA LEVEL RISE AND RESILIENCY

It is the policy of the City to apply the consideration of sea level rise and resiliency to the City's decision-making, including in the procurement of City construction projects. Bidders are encouraged to provide documentation addressing the following:

- A. Whether the Project considers the latest regional best available science regarding the effects of sea level rise, climate-related vulnerability and resiliency in St. Petersburg;
- B. Whether the Project affects an area that is vulnerable to the impacts of sea level rise;
- C. Whether the Project will increase the resiliency of the City with respect to sea level rise;
- D. Whether the Project is compatible with the City's sea level rise mitigation and resiliency efforts.

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GENERAL CONDITIONS

ARTICLE G-1 DEFINITION OF TERMS

In addition to the terms set forth in the Agreement, the following terms as used in the Contract are respectively defined as follows:

ALTERNATES – Bid price for additive or deductive items to the Base Bid in the Proposal.

BID – The solicitation response the Contractor submitted on the prescribed proposal form setting forth the prices for the Work to be performed.

BUSINESS DAYS – Every day other than Saturdays, Sundays, or City-designated holidays.

CHANGE ORDER – A written order to the Contractor prepared by the City, executed as required by the Contract, describing, authorizing and recognizing a change in the Work, an adjustment in the prices for the Work set forth in the Bid, and, if applicable, an adjustment to the Field Order Completion Time. A Change Order may be utilized to substitute work at no cost, to authorize additional (extra) work or to authorize the deduction of work. A Change Order signed by the Contractor indicates its agreement therewith.

CITY INSPECTOR – Duly authorized project representative assigned by the Manager, Engineering Construction. The City Inspector may be a City employee or an employee of a Design Professional employed by the City.

DESIGN PROFESSIONAL – The person or entity under separate contract with the City to provide Engineering/Architectural services, and, if noted at the pre-construction conference, may provide construction administration, construction inspection, or other project-related services for the Project.

ENGINEER – The Director of the City Engineering & Capital Improvements Department, or an authorized representative.

FIELD ORDER – A document (i) authorizing the Contractor to proceed with work defined in a single Work Order or multiple Work Orders, (ii) establishing the date on which the Contractor is to commence performance of the Work, and (iii) providing a timeline for completion of that work. Field Orders are assigned a unique number for recordkeeping purposes.

FINAL PAYMENT – The final payment made by the City after Final Completion has been achieved by the Contractor. Final Payment releases all moneys due to the Contractor for Work performed under a Field Order.

FINAL COMPLETION – Completion of all work required under the Contract for each Field Order to the satisfaction of the City. Completion includes not only construction of Work but also the completion of the punch list items, which may include submittal of as-built drawings approved by the City, warranty documents, Operation and Maintenance Manuals, and all other documentation required by the Contract.

LAWS – All federal, state, and local statutes, rules, regulations and ordinances, the federal and

state constitutions, and the orders and decrees of lawful authorities having jurisdiction over the matter at issue.

MANAGER, ENGINEERING CONSTRUCTION – Duly authorized representative of the Engineer.

NOTICE TO PROCEED – Official written notice provided by the City to the Contractor for each annual period of the Contract, upon which the Contractor shall be prepared to initiate commencement of the Work under the Contract upon receipt of Field Order(s).

PAY ITEMS – Descriptions of specific work, methods of measurement, and basis of payments outlined in the bid form attached to the Solicitation, and used by a Bidder to determine the Total Bid Price.

PLANS/CONTRACT PLANS – All Field Orders, Work Orders, Worklists, and associated combination of City atlas maps, GIS maps, drawings, and City surveyor established vertical/horizontal control data furnished by the City describing the scope, extent, character, and location of the Work related to each Field Order, Work Order, or Worklist within the overall Project, and which form the basis of the Contractor's As-Built Drawings/Records. City Standard Details are also included with the Plans by reference.

SAMPLES – Physical examples which illustrate materials, equipment, or workmanship and established standards by which the Work will be judged.

SCHEDULE OF VALUES – A breakdown of costs for the various construction activities associated with each pay item in the Solicitation.

SHOP DRAWINGS – All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier, or distributor and which illustrate the equipment, material, or some portion of the Work required by the Contract.

SOLICITATION – All documents included in the solicitation issued by the City for the Work, including but not limited to the Notice to Bidders, Invitation to Bid, and Instructions to Bidders, and any addenda thereto.

SPECIFICATIONS – Those portions of the Contract consisting of written technical descriptions of, and requirements applicable to materials, equipment, construction systems, standards and workmanship as applied to the Work, and all administrative details, procedures and requirements. Specifications include all divisions herein.

SUBCONTRACTOR – A Subcontractor is a person or entity who has a contract with the Contractor to perform any of the Work at the site.

SUBSTANTIAL COMPLETION – The stage in the progress of the Work set forth in a Field Order when the Work is sufficiently complete in accordance with the Contract so that the City can occupy or utilize the Work for its intended use. Substantial Completion is further defined in the Contract Documents.

SUPERINTENDENT – Contractor employee in charge of and responsible for the coordination all Contractor field personnel, construction crews and Subcontractors which perform work under

the Project. Superintendent shall be available to the Engineer at all times and meet all of the qualifications required as part of the Contract Documents.

SURETY – The corporate body which is bound with and for the Contractor and which engages to be responsible for its payment of all debts pertaining to, and for its acceptable performance of, the Work for which it has contracted.

WORK – The construction and services required by the Contract, whether completed or partially completed, including all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

WORKLIST – A tabulated list comprised of a single Work Order or multiple Work Orders and associated utility asset data.

WORK ORDER – A document attached to a Field Order detailing work to be performed. Work Orders are assigned a unique number for recordkeeping purposes.

ARTICLE G-2 REPRESENTATIONS AND WARRANTIES

Execution of the Contract by Contractor is a representation that the Contractor is familiar with the Project site, is familiar with the local conditions under which the Work is to be performed, and that it has correlated personal observations with the requirements of the Contract. Familiarity with the Project site and local conditions includes, without limitation: (1) the condition and layout of the Project site and surrounding locale, including marine and subsurface conditions; (2) available labor supply and costs; (3) available subcontractors and suppliers; (4) the prevailing climate, including the impact on construction operations of rain, and other weather events, based upon averages documented by the National Weather Service; (5) available material and equipment and related costs; and (6) other similar issues. Contractor may not make any claim whatsoever for additional time or money arising from its failure to familiarize itself with the Project site in accordance with the representations set forth in this Article.

Contractor has informed the City, and hereby represents to the City, that it has experience in performing work similar to the Work identified in the Contract, and that it is well acquainted with the components that are properly and customarily included within such a Project and the requirements of applicable Laws including but not limited to building, labor, safety, licensing or environmental Laws and local building codes, building standards, and trade practices affecting the Project. The City agrees to furnish or approve, in a timely manner, information required by the Contractor.

The time limits stated in the Contract are of the essence.

ARTICLE G-3 PROJECT SCHEDULE

The Contractor shall comply with the requirements of the article headed "Project Schedule Documentation" of the Technical Specifications, Section 1 - General.

ARTICLE G-4 INTENT AND USE OF THE CONTRACT

4.1 Relationship Between Documents

The Contract comprise the entire Contract between the City and the Contractor concerning the

Work. They may be altered only by a modification. The Specifications are accompanied by the Plans which are duplicates of Plans on file with the City Engineering & Capital Improvements Department.

The documents comprising the Contract are complementary; what is called for by one portion is as binding as if called for by all portions. The table of contents, titles and headings contained in the Contract are solely to facilitate reference to pertinent provisions of the Contract, and shall in no way affect the interpretation of the provisions to which they refer. Further, in the event any particular parts of the Contract are found to be unenforceable, no such event shall affect the enforceability or applicability of any other parts of the Contract.

In the event a conflict between the Plans and the Specifications arises, the Contractor shall notify the Engineer who shall interpret and rule on the true intent.

4.2 References to Other Documents

Reference to standard specifications, manuals or codes of a technical society, organization or association, or to the code of a governmental authority, whether such reference is specific or by implication, shall mean the latest standard specification, manual or code in effect at the time of opening of the Bids unless otherwise specifically stated and shall be as binding as other Project Specifications. However, no provision of a referenced standard specification or manual (whether or not specifically incorporated by reference in the Contract) shall change the duties and responsibilities of the City, or the Contractor or any of their agents or employees from those set forth in the Contract.

When used in the Contract, the following abbreviations have the meaning shown unless stated otherwise:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
AREA	American Railway Engineering Association
ASHRAE	American Society of Heating, Refrigerating, & Air Conditioning Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preserver's Association
AWS	American Welding Society
AWWA	American Water Works Association
CISP	Cast Iron Soil Pipe Institute
CRSI	Concrete Reinforcing Steel Institute
DEP	Department of Environmental Protection, State of Florida
DIPRA	Ductile Iron Pipe Research Association
DOT or FDOT	Department of Transportation, State of Florida
DOT-SSRBC or FDOT-SSRBC	Department of Transportation, Standard Specification for Road & Bridge Construction (English Units)
FDEP	Florida Department of Environmental Protection
FHWA	Federal Highway Administration
FM	Factory Mutual
EPA or USEPA	United States Environmental Protection Agency
IEEE	Institute of Electrical and Electronics Engineers

MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NSF	NSF International
OSHA	United States Department of Labor, Occupational Safety and Health Administration; and Occupational Safety and Health Act
PCA	Portland Cement Association
PCI	Pre-stressed Concrete Institute
SBCCI	Southern Building Code Congress International
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SSPC	Steel Structures Painting Council
UL	Underwriters Laboratories, Inc.

4.3 Contract Document Ownership

Neither the Contractor nor a Subcontractor, manufacturer, fabricator, supplier or distributor shall have or acquire title to or ownership rights in the Plans, Specifications, or other documents (or copies of same) prepared by or through the City and they shall not reuse them in whole or in part, on extensions of this Project or on another project without prior written consent of the City including any specific written verifications or adaptations.

4.4 Intent of the Plans

It is the intent of the Plans to provide the Contractor the best information available regarding the location and layout of the existing and proposed utilities. The Contractor shall carefully use this information and conduct exploratory excavations to verify the locations of existing utilities where any excavation is required.

4.5 Intent of the Specifications

The intent of the Specifications is to provide the Contractor with the best practical information regarding the quality of materials and work to be performed at the site. Contractor shall be responsible for ensuring that the material standards required are met and that the manner of performing all work is of the highest quality.

4.6 Intent of the Contract

It is the intent of the Contract to describe a complete Project to be constructed in accordance with the Contract. All work that may reasonably be inferred from the Specifications or Plans as being required to produce a complete and functional result shall be supplied whether or not it is specifically mentioned. When words which have a well-known technical or trade meaning are used to describe the Work, materials or equipment, in all cases those words shall have that meaning.

The apparent silence of the Specifications as to any detail, or the 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 be used, and that only materials and workmanship of the best quality shall be used, and interpretation of the Specifications shall be made upon that basis.

Payment for the items quoted in the Bid shall also include all costs of any other work, materials and equipment necessary to make the Work complete with the intent of the Project. Work not specified, 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 was specifically delineated or described.

4.7 Record Documents

The Contractor shall maintain in a safe place at the site one (1) record copy of all Plans, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarification in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to the Engineer for reference.

4.8 Records Retention

The Contractor shall keep and maintain complete records related to this Contract during the term of the Contract, through the guarantee period identified in ARTICLE G-45, GUARANTEE PERIOD and for the retention periods set forth in the most recent General Records Schedule GS1-SL for State and Local Government Agencies. All records shall be kept and maintained in accordance with generally accepted accounting principles.

ARTICLE G-5 OMISSIONS OR ERRORS IN THE CONTRACT

Should anything be omitted from the Contract Plans or Specifications which is necessary to permit a clear understanding of the Work, or should there be any error in any of the various instruments furnished, the Contractor shall not perform the Work and shall immediately notify the City of such omissions or errors. Upon receipt of such notification, the City will respond accordingly.

In the event of the Contractor's failure to follow this procedure, it shall make good any damage to or defect in its work caused hereby. The Contractor will not be allowed to take advantage of any omission or error on the Plans, as full instructions will be furnished by the City regarding the intent of the Contract.

ARTICLE G-6 INTERPRETATIONS

When, during the course of the progress of the Work, a question arises as to the intent of the Contract, the scope of Work to be performed, or the labor or materials to be supplied, such questions shall, prior to the Work being performed, be referred to the Engineer for formal determination. All such referrals must be made prior to the Work being performed. Any Work performed prior to receipt of written instruction shall be considered to have been performed outside the scope of the Contract and performed at no cost to the City.

If, upon the receipt of a question concerning the Work, the Engineer determines that the Work referred to must be performed by the Contractor at no increase in price to the Contract, the City Inspector will issue an interpretation on a form entitled "Field Order", which upon issue, shall be signed by the Contractor acknowledging receipt. In the event the Contractor disagrees with such an interpretation, it must register a protest by Certified Mail with the Engineer within ten (10) days following the date of issuance of the Field Order by the City Inspector. However, the Contractor shall immediately proceed with the instruction given in the Field Order.

If, upon receipt of a question concerning the Work, the Engineer determines that the Work referred to lies outside the Contractor's scope of Work, the Engineer will not issue a Field Order but rather will initiate the procedures for the execution of a Change Order as specified in ARTICLE G-34, CHANGES IN THE WORK.

Interpretations of the requirements of the Contract may be issued as Field Orders by the Engineer or the City Inspector at any time during the course of the construction. The Contractor, at all times, is required to immediately execute the instructions of all issued Field Orders.

ARTICLE G-7 APPLICABLE LAWS AND REGULATIONS

The Contract shall be governed by the laws of the State of Florida. Venue for any action brought in state court shall be in Pinellas County, St. Petersburg Division. Contractor and the Work shall comply at all times with all applicable Laws. If the Contractor finds that the Work is or may be in conflict with applicable Laws, the Contractor shall give, prior to performing such Work, the City prompt written notice, specifying each conflict. Upon receipt of such notice, if warranted, the City will eliminate each conflict by issuance of an appropriate Change Order.

Contractor is required to be familiar with the Laws applicable to the Work. If Contractor performs any Work contrary to such Laws, the Contractor shall bear sole liability for all consequences.

ARTICLE G-8 ROYALTIES AND PATENTS

The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

If a particular invention, design process, product or device is specified in the Contract for use in the performance of the Work and if to the actual knowledge of the City its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the City in the Contract.

The Contractor shall defend at its expense, pay on behalf of, hold harmless and indemnify the Indemnified Parties (as hereinafter defined) from and against any and all Claims (as hereinafter defined), including but not limited to costs, expenses and attorneys' and experts' fees at trial and on appeal, whether or not a lawsuit is filed, which Claims are alleged or claimed to have arisen out of or in connection with, in whole or in part, directly or indirectly, the infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device.

ARTICLE G-9 ACCIDENT PREVENTION

Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of applicable Laws, and existing building and construction codes shall be observed. Machinery, equipment, and other hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, and OSHA's Safety and Health Standards (29 CFR 1926/1910) U. S. Department of Labor, to the extent that such provisions are not in contravention of applicable Laws and the Accident Prevention Manual, City of St. Petersburg, Florida.

ARTICLE G-10 PUBLIC CONVENIENCE AND SAFETY

10.1 Requirements for the Protection of the Work, Personnel, and Property

The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent and mitigate damage, injury or loss resulting from its construction activities to:

- A. All employees on the Work and all other persons who may be affected thereby;
- B. All the Work, and all materials and equipment to be incorporated therein, whether installed, in storage on or off the site under the care, custody or control of the Contractor or any of its Subcontractors or Sub-Subcontractors;
- C. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall give all notices and comply with all applicable Laws bearing on the safety of persons or property of their protection from damage, injury or loss.

The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying City and users of adjacent utilities.

No Contractor shall cut away any timber, dig under any foundations or into any walls or other parts, or in any case allow the same to be done without the full knowledge and consent of the City, and shall be held responsible for any damage resulting from any violations of the provisions of this clause. Approved excavation under foundations shall be backfilled concrete by and at the expense of the Contractor requiring such excavation.

When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

The Contractor shall promptly remedy all damage or loss to any property caused in whole or in part by the Contractor, any Subcontractor, any Sub-Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone whose acts any of them may be liable and for which the Contractor is responsible except damage or loss attributable to the acts or omissions of the City or anyone directly or indirectly employed by the City, or by anyone for whose acts the City may be liable, and not attributable to the fault or negligence of the Contractor.

10.2 Public Convenience

The Contractor shall conduct its work so as to interfere as little as possible with private business or public travel. It shall, at its own expense, whenever necessary or required, maintain barricades, maintain lights, and take such other precautions as may be necessary to protect life and property, and it shall be liable for all damages occasioned in any way by its act or neglect or that of its agents or employees. The Contractor is responsible, where necessary, to provide

temporary sidewalks for the safe passage of pedestrian traffic. The Contractor shall comply with the State of Florida Manual on Traffic Control and Safe Practices.

The Contractor shall cooperate with the City of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

In the event of interruption to underground or overhead utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall immediately alert the occupants of nearby premises as to any emergency that the Contractor may create or discover at or near such premises. The Contractor shall then notify the City and the City or operator of the utility facility of the disruption and shall cooperate with the said utility City or operator in the restoration of service. If water service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

During all work under this Project, the Contractor, through the use of water or other City-approved means, shall institute a continuous dust abatement program to the extent that reasonable precaution shall be taken by the Contractor to prevent the emission of fugitive particulate matter into the atmosphere. Access to private property is to be maintained at all times. It is the Contractor's responsibility to develop construction schedules and methods to assure compliance with this requirement.

ARTICLE G-11 NOISE ABATEMENT

The Contractor shall comply with applicable Laws related to noise, including the City's noise ordinance.

ARTICLE G-12 WORK DAYS

Except for special operations that may be necessary to maintain, check, and protect work already performed, all work shall normally be discontinued on Saturdays, Sundays, and City-designated holidays. Should the Engineer approve the Contractor's performing work on Saturdays, Sundays, or City-designated holidays, and such work, in the Engineer's opinion, requires City inspection, the Contractor shall pay the City the amount of Four Hundred Dollars (\$400.00) per eight (8) hour day or fraction thereof for each City inspector so assigned. Should it be desired to perform regular and continuous night work, the lighting, safety and other facilities which are necessary for performing such work at night must be provided by the Contractor, at its own cost and expense.

ARTICLE G-13 NO WAIVER OF RIGHTS

No inspection, orders, measurements, or certificates made by the Engineer, nor any payment or acceptance in whole or in part, nor extension of time, nor taking of possession by the City, shall operate as a waiver of the conditions of this Contract, or of any right to damages herein provided for. No waiver of one breach of the Contract shall be construed as a waiver of another breach.

Should an error be discovered in the partial or final estimates, or conclusive proofs of defective work or materials used by the Contractor be discovered after the Final Payment has been made,

the City reserves the right to claim and remove by process of law such sums as may be sufficient to correct the error or make good the defect in the Work and materials.

ARTICLE G-14 SEPARATE CONTRACTS

The City reserves the right to let other contractors do other work in connection with the Work. The Contractor shall afford such other Contractors or the City reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly coordinate its work with theirs.

ARTICLE G-15 COORDINATION OF THE WORK

It shall be the responsibility of the Contractor to set the pace of the Work and coordinate the Work of any and all other contractors, Subcontractors, and private utilities working at the site. The cost associated with those efforts shall be incorporated into the various bid prices for the Contractor's work.

This coordination shall include sufficient notifications of each of the other Contractors when they must be at the site to initiate portions of their work. These notifications should be logged by the Contractor in a construction log book.

Each contractor shall afford other contractors, Subcontractors and private and public utility companies reasonable opportunity for the introduction or storage of their materials and the execution of their work. Any contractor failing to do so shall be responsible for all damages or other costs associated with delays in work precipitated by such failure. If the City is performing work with the City employees, the Contractor shall provide reasonable opportunity to the City for the introduction and storage of materials and equipment and the execution of work. The Contractor shall properly connect and coordinate its work with the work of all other forces at the site.

If any part of a contractor's work is preceded by the work of the City, utility companies or any other Contractor, it shall, prior to the initiation of its work, inspect such other work and report to the Engineer any defects which render it unsuitable as related to its work. Failure by any Contractor to make such inspection shall constitute its acceptance of the other work as fit and proper for the reception of its work; except as to hidden defects or defects which may develop in the other work at a later date.

The Contractor shall do all cutting, fitting, and patching of its work that may be required to properly integrate it with work performed by other forces. The Contractor shall not endanger any work of others by cutting, excavating or otherwise altering such work, and shall only cut or alter such work with the consent of the entity whose work will be affected.

ARTICLE G-16 CONFERENCES AND CORRESPONDENCE

16.1 Pre-construction Conference

As soon as practical after the execution of the Contract occurs, a pre-construction conference will be scheduled to receive the Contractor's proposed construction schedule; to verify or clarify procedures for handling Shop Drawings and other submittals, to explain the procedure for processing Contractor's pay estimate forms; and to establish a general understanding among all persons who will be engaged in the construction activities. This conference shall be attended

by responsible individuals, representing the City, the Contractor and the Contractor's Subcontractors. The City will designate the time, date and place for this conference.

16.2 Correspondence to the Contractor

The business address given at the pre-construction conference shall be designated as the place where all notices, letters, and other communication shall be served, mailed to or delivered.

16.3 Correspondence to the City

The business address for correspondence to the City after the Notice to Proceed shall be determined at the pre-construction conference. Correspondence prior to the Notice to Proceed shall be mailed or delivered to the business addresses given in the Notice to Bidders.

ARTICLE G-17 CONSTRUCTION MEANS AND METHODS

Unless otherwise expressly provided in the Contract, the means, methods, techniques, sequences and procedures of construction shall be as such as the Contractor may choose; subject, however, to the City's right to reject means and methods proposed by the Contractor which will not produce the finished Work in accordance with the terms of the Contract or does not meet the highest standards of workmanship of the industry. The City may also direct means or methods more stringent than those proposed by the Contractor in the interest of alleviating hazards of the Work to persons or to property.

The approval or lack of approval by the City of the Contractor's means or methods of construction or the City's failure to exercise the right to reject such means and methods, shall not relieve the Contractor of its obligation to accomplish the result intended by the Contract; nor shall the exercise of, or failure to exercise such right to reject, create a cause of action for damages.

The Contractor shall be responsible to the City for the acts and omissions of its employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a Contract with the Contractor.

ARTICLE G-18 CONTRACTOR'S OBLIGATION TO PERFORM

The Contractor's obligation to perform and complete the Work in accordance with the Contract shall be absolute. No payment, act or statement by the City or by an employee or agent of the City for the duration of the Contract shall constitute an acceptance of work not in accordance with the Contract, nor shall it constitute a release of the Contractor's obligation to perform the Work in accordance with the Contract.

The Contractor agrees that work shall be prosecuted regularly, diligently, and uninterrupted at such a rate of progress as will ensure full completion within the time specified. It is expressly understood and agreed by and between the Contractor and the City that based upon the Contract Price, the time for the completion of the Work is a reasonable time for the completion of the same.

Should the Contractor cause damage to any other contractor on the Work, the Contractor agrees, upon due notice, to attempt to settle or otherwise resolve the claim with such Contractor. If such other contractor sues the City on account of any damage alleged to have been so

sustained, the City shall notify the Contractor, who shall defend such proceedings at its own expense, and if any judgment against the City arises there from, the Contractor shall pay or satisfy it and pay all costs incurred by the City.

ARTICLE G-19 RESPONSIBILITY OF THE CITY

19.1 Contractual Representative

The office of the Engineer and its designees will be the City's sole representative during construction. In the event that the City has hired an engineering or architectural firm to provide construction-related services for this Project, the City will designate a representative during construction at the pre-construction conference.

19.2 Issuance of Change Orders and Field Orders

Through the issuance of Field Orders and punch lists, the Engineer shall be the final City interpreter of the requirements of the Contract and the judge of the adequacy of the Work performed. The office of the Engineer will furnish, with reasonable promptness, such clarification, explanations or interpretations (Field Orders) of the Contract as are deemed necessary, which shall be consistent with the expressed or obvious intent of the Contract.

The office of the Engineer shall be the final judge as to the need for, the existence of, and the reasonableness of prices for extra work and deducted work.

No Field Orders or Change Orders can be issued by consultants hired by the City to provide construction-related services. These two forms can only be issued and/or executed by the authorized employees of the City.

19.3 Preparation of Additional Drawings

The City shall, if deemed necessary, furnish the Contractor further drawings as may be necessary to detail and illustrate the Work to be performed and the Contractor shall immediately conform its work to said drawings and said drawings shall become part of the Contract. Such drawings may also be issued as supplementary documents to either Field Orders or Change Orders.

ARTICLE G-20 CITY'S RIGHT TO DO WORK

The City reserves the right to furnish, at any time, materials and labor and to execute work, in addition to the Work of the Contractor, as the City may desire. Further, the City reserves the right to furnish, at any time, such materials and labor, and to execute, with City forces, Work covered by this Contract at which time a Change Order deducting the Work may be prepared and properly executed.

ARTICLE G-21 CITY'S RIGHT TO STOP OR SUSPEND WORK

The City shall have the right to stop or suspend the whole or any part of the Work to be performed, when, in the opinion of the Engineer, the Contractor is not performing the Work in accordance with the provisions of the Contract. However, this right of the City to stop the Work will not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other person or entity.

If it becomes apparent to the City that the Work should be suspended due to weather conditions, the City shall have the right to suspend the Work in order to protect the integrity of the Work items being suspended. In the event this occurs, the City will issue a notice of suspension to the Contractor stating the reasons for the suspension and the date on which the Work shall be resumed. The Contractor shall resume the Work on the date so fixed and shall be granted an increase in the Field Order Completion Time equal to the number of days of the suspension.

ARTICLE G-22 MATERIAL AND EQUIPMENT DELIVERY

Shipments of material to be used by the Contractor in the Work shall be scheduled for delivery to the work site only during the regular working hours of the Contractor unless the Engineer approves delivery outside of the regular working hours of the Contractor. If a delivery must be made during other than the normal working hours of the Contractor, its authorized agent shall be on duty to receive such material. No employees or agent of the City shall be authorized or requested to receive shipments designated for the Contractor.

ARTICLE G-23 STORAGE OF MATERIALS

23.1 Proper Storage

All materials and equipment incorporated in the Work shall at all times subsequent to shipment from the production or warehouse facilities of suppliers, and prior to their installation in final locations designated, be stored in clean, dry storage facilities acceptable to the City. Adequate storage facilities shall be maintained by the Contractor for the duration of the Project. The Contractor shall bear sole responsibility for the security of all storage facilities, and shall provide ready access to the City during all periods that construction activities are in progress, as well as at other reasonable times. Materials that are improperly stored may be rejected by the City without testing. Materials shall be placed so that inspection may be made promptly.

23.2 Use of Premises

The Contractor shall confine its equipment, apparatus, the storage of materials, and the operation of its workers to the limits indicated by applicable Laws and the direction of the Engineer. The Contractor shall not unreasonably encumber the premises. The Contractor shall diligently guard and protect all work and materials.

23.3 Use of Chemicals

All chemicals used during Project construction or furnished for Project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

ARTICLE G-24 QUALITY OF MATERIALS AND WORKMANSHIP

All materials and equipment furnished under this Contract shall be as specified or required and of a domestic origin or manufacture (unless otherwise specified). In the absence of a particular specification, materials and equipment shall be the best of their respective kinds, of a model or type currently being manufactured, of new stock, unused and not deteriorated. If required by the City, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

All Work contemplated and described shall be done in a good, substantial and workmanlike manner and shall be of the best quality.

ARTICLE G-25 SANITARY FACILITIES FOR CONSTRUCTION PERSONNEL

Temporary sanitary conveniences for use by all persons employed on the Work shall be supplied and maintained by the Contractor during the period of construction, at Contractor's expense, in sufficient number, and in such places as required by the County Public Health Unit and shall be approved by the City. All persons connected with the Work shall be obliged to use them, and any employees found violating these provisions shall be discharged from performing Work pursuant to the Contract unless otherwise agreed to in writing by the City. All necessary precautions including the care of employees, shall at all times be satisfactory to the City.

ARTICLE G-26 SUBCONTRACTORS

26.1 Division of the Work for Contractors

Neither the divisions and sections of the Technical Specifications, nor the Bid, nor the organization and designations of the Plans shall control the Contractor in dividing the Work among Subcontractors, or delineating the Work to be performed by a specific trade.

26.2 Contractor's Responsibility for Subcontractors

Contractors shall be fully responsible for all acts and omissions of their Subcontractors, and of persons and organizations directly or indirectly employed by them, and of persons and organizations for whose acts any of them may be liable to the same extent that the Contractor is responsible for the acts and omissions of persons directly employed by the Contractor. The Contractor is responsible for payment to Subcontractors pursuant to those terms and conditions of their respective agreements. When notified by the City in writing of an alleged payment deficiency of a Subcontractor, the Contractor shall respond in writing within seven (7) calendar days, with concurrence of non-payment to a Subcontractor, or the reason(s) why payment has not been rendered.

26.3 City's Responsibility to Subcontractors and Material Suppliers

The City may furnish, at the City's discretion, upon written request from any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to the Contractor on account for specific work performed. The City may also furnish, upon request, a copy of the Contractor's Public Construction Bond or alternate form of security.

When placed on notice, by a Subcontractor, of a Contractor's failure to pay the Subcontractor for work performed and paid for by the City, the City shall give notice to the Contractor and the Surety, requesting a written explanation to include amounts paid to date.

26.4 Agreement with Subcontractors

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract, assumes toward the City. Each subcontract

agreement shall preserve and protect the rights of the City under the Contract with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract, has against the City. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract. Contractor shall require that Subcontractors similarly make copies of applicable portions of such subcontract documents available to their respective proposed sub-subcontractors.

ARTICLE G-27 SMALL BUSINESS ENTERPRISE PROGRAM

Unless otherwise prohibited, Contractor agrees to be subject to and shall comply with the requirements for designating a percentage of the Work for small business enterprises (as defined in Section 2-232), or making a good faith effort to do so, as those requirements are set forth in Chapter 2, Article V, Division 4, of the St. Petersburg City Code, as may be amended from time to time (collectively, "SBE Requirements"). The SBE Requirements are hereby incorporated into the Contract as Contractor's obligations under the Contract. Accordingly, Contractor shall ensure that the Small Business Enterprise Percentage requirement set forth in the Qualification Requirements section of the Solicitation, including the cost of materials, goods and supplies, be performed or provided by City-certified Small Business Enterprises and comply with all other SBE Requirements. Failure to comply with the SBE Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 4 of the St. Petersburg City Code.

ARTICLE G-28 CONTRACTOR'S EMPLOYEES

The Contractor shall employ a qualified resident Superintendent and only competent and skillful personnel to do the Work. In the event the City notifies the Contractor in writing that any person employed to perform work at the site is, in the opinion of the City, disobedient, intemperate, incompetent, disorderly or otherwise unsatisfactory, the Contractor, on receiving such notice, shall immediately dismiss such person and shall not again employ that person on any part of the Work without the written consent of the City.

ARTICLE G-29 CONTRACTOR TO BE REPRESENTED

29.1 Office Supervision

The Contractor shall devote the office attention necessary to ensure the timely submission of schedules, progress estimates, Shop Drawings and samples of materials.

The Contractor shall devote the office attention necessary to ensure that materials are ordered with sufficient lead time to have them available at the site when needed to ensure that the Work progresses according to the progress schedule and in accordance with the Contract.

The Contractor shall further devote the office attention necessary to the Work to ensure that sufficient and properly skilled manpower is available and utilized at the site continuously to ensure that the Work progresses according to the progress schedule and in accordance with the Contract.

29.2 Field Supervision

The Contractor shall designate and keep on site at all times during the Work, a competent resident Superintendent, employed by the Contractor. Such designation shall be made at the pre-construction conference and shall include pertinent data as to address, phone numbers, etc. where said Superintendent may be contacted at any time of the day or night.

The Superintendent shall not be replaced without written notice and approval by the City except under extraordinary circumstances. Upon approval by the City of such change, all pertinent data (as stated previously in this section) shall be given by the Contractor to the City regarding the replacement.

The Superintendent will be the Contractor's representative at the site and shall have the authority to act on behalf of the Contractor. All communications given to the Superintendent shall be as binding as if given to the Contractor.

ARTICLE G-30 TESTS AND INSPECTIONS

30.1 Tests of Materials

The Contractor shall give the City timely notice of readiness of the Work for all inspections, tests, concurrence and acceptance for which the City's presence is mandated by the Contract.

If any Work required to be tested or inspected, is covered contrary to the written directive of the Engineer, it shall, if requested by the City, be uncovered for observation and recovered at the Contractor's expense.

If any applicable Laws require Work (or some part) to specifically be inspected, tested or approved, the Contractor shall have sole responsibility to ensure such inspection is performed by approved organizations and pay all costs for inspection.

In the event that the results of a test observed by the City indicates that the materials, equipment and/or workmanship, failed to demonstrate adequacy or reasonable expectation of the necessary function, the Contractor at its expense shall immediately undertake corrective action.

Upon completion of corrective action, the Contractor shall re-test in the presence of the City. This procedure shall be repeated as often as necessary, until all facilities constructed under this Contract have successfully demonstrated their ability to perform the functions for which they were designed and installed.

The Contractor shall furnish without cost to the City, manufacturers' certificates of conformity of materials to the Specifications as may be required by the Engineer.

The City may, at random, select samples of materials from the job in order to have same tested by a laboratory selected by the City, at the City's expense. If samples selected by the City do not conform to the Specifications, the entire lot from which the samples were taken will be rejected. All samples will be collected by the Engineer or its representative and shall be furnished by the Contractor without cost to the City. The City will be responsible for the cost of making all such tests, at no charge to the Contractor. All re-test of materials, including density tests and bacteriological tests, will be at the expense of the Contractor.

30.2 Inspections

Neither observations, nor tests, nor inspections by authorities so empowered, or approvals by the City or others so empowered, shall relieve the Contractor from its obligations to perform the Work in accordance with the Contract.

30.3 Defective Work

When ordered by the Engineer, the Contractor shall promptly, either correct all defective work, whether or not fabricated, installed or completed, or if the Work has been rejected by the City, remove it from the site and replace it with non-defective work.

If the Contractor fails within a reasonable time after written notice to correct defective work or to remove and replace rejected work as required by the City, or if the Contractor fails to perform the Work in accordance with the Contract, or if the Contractor fails to comply with any other provision of the Contract, the City may correct and remedy any such deficiency. The Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

The expense so charged will be deducted and paid out of such moneys as are or may become due under this Contract; or, if such moneys are not sufficient to meet said expense, the additional moneys shall be furnished by the Contractor. If the Contractor refuses or neglects to provide the necessary moneys, they shall be provided by its Surety. In exercising the rights and remedies under this Article the City shall proceed expeditiously.

To the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, and suspend the Contractor's services related thereto, take possession of the Contractor's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere.

The Contractor shall allow the City, the City's representatives, agents and employees such access to the site as may be necessary to enable them to exercise the rights and remedies under this Article. All direct, indirect and consequential costs of the City exercising such rights and remedies will be charged against the Contractor in an amount approved as to reasonableness by the Engineer, and a Change Order will be issued incorporating the necessary revisions to the Contract with respect to the Work. The City shall be entitled to an appropriate decrease in the Contract Price and if parties are unable to agree as to the amount thereof, the City may make a claim. The Contractor shall not be allowed an extension of the Field Order Completion Time because of any delay in performance of the Work attributable to the exercise by the City of the City's rights and remedies hereunder.

ARTICLE G-31 UNCOVERING OF WORK

31.1 Uncovering Work Requiring Prior Inspection

If any portion of the Work should be covered contrary to the prior request of the City or to requirements specifically expressed in the Contract, it must, if required in writing by the City, be uncovered for observation and shall be replaced at the Contractor's expense.

31.2 Uncovering Work Not Requiring Prior Inspection

If any portion of the Work has been covered which the City has not specifically requested to observe prior to being covered, the City may request to see such Work and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Contract, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the City. If such Work is found not to be in accordance with the Contract, the Contractor shall pay such costs unless it can be proven to the City that this condition was caused by the City or a separate contractor in which event the City or the separate contractor shall be responsible for the payment of such costs.

ARTICLE G-32 UNFORESEEN SUBSURFACE CONDITIONS

Requests by the Contractor for additional compensation relating to unforeseen subsurface conditions shall be limited to those differing materially from the Contract and other reports, information and data made available to the Contractor by the City or which can be judged as being reasonably unforeseeable by the Contractor. However, the Contractor shall notify the City within 24 hours upon encountering any unforeseen subsurface conditions and shall have the written approval of the City prior to the execution of any such work.

ARTICLE G-33 SUBSTITUTIONS DURING CONSTRUCTION

Subsequent to the signing of the Contract and by reason of conditions of availability, time of delivery or other element of supply, the Contractor may offer substitutions for the standards stipulated in the Contract. The decision to accept any such offer of substitution shall however lie solely with the City who will not only consider availability and time of delivery, but will also consider the aesthetic value of the proposed substitution, general differences in the knowledge of the product, the quality, efficiency, history of performance, operating costs, and also any architectural, engineering, inspection, testing or administrative expenses. Any adjustments in Contract Price and/or Field Order Completion Time shall be executed by appropriate Change Order. It shall be the intent herein that savings in cost which result from substitution subsequent to the signing of the Contract shall accrue in major part to the advantage of the City.

ARTICLE G-34 CHANGES IN THE WORK

34.1 Scope

The Contract Documents provide for a broad scope of work which represents the general nature of the type of work that the Contractor may be requested to perform under this Contract. When a Field Order is issued, it will include a Work Order, or multiple Work Orders, containing a specific description of the Work to be performed. Outstanding Work issued to the Contractor may be increased, decreased, and/or altered. Changes will be made in writing by the Engineer through a Change Order.

34.2 City's Right to Request Change Orders

The City may, without invalidating the Contract, order the Contractor to perform changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Price and the Field Order Completion Time being adjusted accordingly. All such changes in the Work must be authorized by a Change Order and shall be performed under the applicable conditions of the Contract. A Change Order may also be issued by the City

for a change in Contract Price or for the substitution of items of work at no net change to the Contract Price. In such an event, the Change Order shall contain the values of the Work items being substituted. Notwithstanding the foregoing, an increase in the Contract Price requires an amendment to the Agreement executed by Contractor and the City.

34.3 Recognition of Extra Work

Claims for extra compensation by the Contractor shall not be recognized and shall not be valid unless the Contractor has in its possession prior to the Work being performed, a properly executed Change Order including the extra work or a Field Order identifying the work. In the event the Contractor fails to obtain a written Field Order or Change Order prior to the said work being performed, the City will not be obliged to receive after-the-fact requests from Contractors for extra compensation and the said work shall be considered to have been performed within the scope of the Contract and performed at no cost to the City. Notwithstanding the foregoing, an increase in the Contract Price requires an amendment to the Agreement executed by Contractor and the City.

34.4 Determining Change Order Prices

The following method shall be used to determine the price of Change Order items:

If the Change Order involves items not listed on the original Bid, the Contractor must present the City with price quotes for the proposed Change Order items, on the basis of the cost of the Work plus a fee for overhead and profit. These quotes may be requested by the City either in terms of unit prices or as lump sum prices. The City retains the right to request and negotiate itemized pricing details for labor, mark-ups and fees as required to reach an agreement.

34.5 Disputes Regarding Change Order Prices

In the event that no agreement as to price can be arranged between the City and the Contractor for either extra work or for work to be deleted, the Engineer may, utilizing recognized cost data guidelines as a basis, determine and set a fair price for the Work and materials at issue. The Engineer's decision shall be final and binding upon all parties so concerned. If a Contractor does not agree with the determination of the Engineer, the Contractor shall immediately proceed with the Work, but may do so under written protest. In the event this occurs, the provisions of ARTICLE G-47, CLAIMS AND DISPUTES apply.

34.6 Contractor's Right to Request Change Orders

If the Contractor wishes to make a claim for an increase in the Contract Price due to events outside its control, it shall give the City written notice thereof within five (5) calendar days of the event giving rise to the Contractor's claim. No such claim shall be valid unless so made. Any change in the Contract Price resulting from such claim shall only be authorized by a properly executed Change Order.

If the Contractor elects to initiate a request for a Change Order, it is cautioned that no work relating to the request may be performed prior to issuance of a written Change Order. No oral communications, whether offered directly as confirmation of previous discussions or as hearsay will be acceptable with the exception of emergency work as outlined in Section 34.7 below.

34.7 Monetary Compensation for Delays

Requests for additional monetary compensation due to delays by the City, other Contractors working at the site, private utility companies, and unforeseen conditions, will not be considered by the City, including extended or unabsorbed home office overhead, adverse business or operational impacts, or field-related overhead not included in the lump sum or unit prices bid.

34.8 Unauthorized Work/Emergency Work

Additional work performed without a properly executed Change Order or written Field Order identifying the additional work will not entitle the Contractor to an increase in the Contract Price or an extension of the Field Order Completion Time, except in the case of clear and present emergency where the work must be performed immediately. However, in the case of a present emergency, the Contractor shall obtain approval from the Engineer prior to executing the Work.

34.9 Preparation of Change Orders

The Engineer is authorized to approve Change Orders for the City. If the exact scope of work for the proposed Change Order can be delineated and all prices are agreed to between the Contractor and the City, the scope and price are both to be entered on the Change Order form. When so completed and signed by both parties, the signed Change Order gives the Contractor immediate approval to proceed with the proposed work items.

If the scope of the proposed work can be delineated but the price cannot be agreed immediately, a Field Order may be issued by the Engineer describing the proposed work items and requesting a written proposal from the Contractor. In this case, the Contractor may proceed with the Work until the requested proposal is received by the City from the Contractor and is approved by the City through the issuance of a Change Order authorizing the Contractor to proceed with the Work.

If a Change Order involves an increase or decrease in the Field Order Completion Time, the Change Order may also be utilized to grant changes in the Field Order Completion Time and completion date if it can be shown that the critical path of construction has been altered by the Work covered by the Change Order.

34.10 Changes in Field Order Completion Time

The Field Order Completion Time may only be extended by a Change Order. The Contractor shall notify the Engineer in writing of any request for a time extension within five (5) calendar days of each occurrence. An increase in the Field Order Completion Time of performance may be granted by the City if the Contractor demonstrates to the satisfaction of the Engineer that:

- A. The delayed activity is critical relative to the Contract completion date;
- B. A delay in the Field Order completion is unavoidable by the Contractor.

In general, if the above conditions are met, additional time may be granted for the following reasons:

- A. Extremely abnormal and excessive inclement weather as indicated by the records of the local weather bureau for a five-year period preceding the Effective Date;

- B. Labor disputes or strikes not the fault of the Contractor;
- C. Change in scope of the Contract.

The determination made by the Engineer on an application for an extension of time shall be binding and conclusive on the Contractor.

Delays caused by failure of the Contractor or its material men, manufacturers, and dealers to submit or furnish approved Shop Drawings, materials, fixtures, equipment, appliances, or other material or required submittals on time or failure of Subcontractors to perform their work shall not constitute a basis for extension of time. Delays caused by the Contractor's failure to manage, coordinate, or organize the Work, or evaluate the site conditions shall not constitute a basis for extension of time.

ARTICLE G-35 SHOP DRAWINGS AND SUBMITTALS

35.1 Shop Drawings – General

The Contractor shall submit a list to the City showing manufacturers and equipment suppliers it proposes to use.

Shop Drawings shall be complete and detailed and shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Manufacturer's catalogs, pamphlets, descriptive literature, and performance and test data, may be considered only as supportive to required Shop Drawings as defined above.

Shop Drawings shall be checked and coordinated with the Work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Shop Drawings submitted without this stamp of approval shall be returned to the Contractor for resubmission.

Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:

- A. Number and title of the drawing;
- B. Date of drawing or revision;
- C. City Project name and Project number;
- D. Name of Contractor and Subcontractor submitting drawing;
- E. Clear identification of contents and location of the Work;
- F. Specification section title and number;
- G. Shop Drawing submittal number.

If Shop Drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in its letter of transmittal. If acceptable, proper adjustment in the Contract Price may be implemented where appropriate. If the Contractor fails to describe such variations, it shall not be relieved of the responsibility for executing the Work in accordance with the Contract, even though such Shop Drawings have been reviewed.

Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data. Where data on materials and equipment show various classes, sizes or options, the Contractor shall clearly indicate what is being furnished.

For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained. Each data submittal on materials and equipment shall have a cover page with a blank area 3-1/2 inches by 3-1/2 inches. The cover page shall display the following:

- A. Number and title of the data submittal;
- B. Date;
- C. City Project name and Project number;
- D. Name of Contractor and Contractor's approval stamp;
- E. Specification section title and number;
- F. Data submittal number.

Only the Engineer will utilize the color "red" in marking submittals.

35.2 Requirements

The Contractor shall submit to the Engineer for review and approval, such Shop Drawings, test reports and data on materials and equipment (hereinafter in this Article called Data), and material samples (hereinafter in this Article called Samples) as are required for the proper control of work, including but not limited to, those working drawings, Shop Drawings, Data and Samples for materials and equipment specified elsewhere in the Specifications and on the Plans.

Within thirty (30) calendar days after the Effective Date, the Contractor shall submit to the Engineer a complete list of preliminary items for which Shop Drawings, Data and Samples are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way, expressed or implied, relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Contract. This procedure shall precede submittal review of Shop Drawings, Data and Samples.

Shop drawings, Data and Samples (hereinafter in this Article called Submittals) shall be transmitted by a letter of transmittal. The letter of transmittal shall list the following information for each Submittal:

- A. City Project name and number;
- B. Number and title of Submittal(s);
- C. Name of manufacturer or fabricator;

- D. Submittal number as described below;
- E. Statement if Submittal deviates from the requirements of the Plans or Specifications.

Sequential page numbers shall be provided on Submittal pages, relating each page to the submitted number, as follows:

- A. The first page of the first item of the first transmittal shall carry the number 1.1-1. The prefix number 1 indicates an item covered in the first letter of transmittal. The suffix .1 (decimal one) indicates the first item in the list, and the -1 (dash one) indicates the first page of the Submittal covering item number one,
- B. Each particular separate item in the first transmittal package (for example, pipe, valves, fittings) should receive an individual Submittal number (1.1, 1.2, 1.3, etc.). If the first item is shown on four different pages, they should be numbered as follows: 1.1-1, 1.1-2, 1.1-3, and 1.1-4, and
- C. The first page of the first item submitted with the second Letter of Transmittal should carry the number 2.1-1.

Re-submittals should be indicated by following the above method with the inclusion of "R" and a sequential re-submittal number, for example 1.1R1, and 1.1R2 indicating the first and second re-submittal; the first page being 1.1R1-1, or 1.1R2-1, etc.

The Contractor shall maintain an accurate updated Submittal log and shall submit it with monthly pay requests. This log shall include the following items:

- A. Submittal description and number assigned;
- B. Date to Engineer;
- C. Date received by Contractor;
- D. Status of Submittal (approved/resubmit/rejected);
- E. Date of re-submittal and return (as applicable);
- F. Date material released (for fabrication), as applicable;
- G. Projected date of delivery to site;
- H. Status of O & M Manuals submittal.

The Contractor shall designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Submittals will be needed.

35.3 Contractor's Responsibility

Submittals shall indicate any deviations from requirements of the Contract. Failure of the Contractor to indicate such deviations shall make Contractor liable for not complying with Plans and Specifications.

Prior to preparation of Submittals, the Contractor shall determine and verify:

- A. Field measurements;
- B. Field construction criteria;
- C. Catalog numbers and similar information;
- D. Conformity with the Plans and Specifications.

The Contractor shall furnish the Engineer, if required, a schedule fixing the respective dates for the submission of Submittals, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

The Contractor shall not begin any of the Work covered by a Submittal returned for correction until a revision or correction thereof has been reviewed and returned to it approved, by the Engineer.

The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of the Work prior to the completion of the review by the Engineer of the necessary Submittals.

The Contractor shall submit to the Engineer all Submittals and schedules sufficiently in advance of construction requirements to provide no less than fourteen (14) calendar days for checking and appropriate action from the time the Engineer receives them.

The Contractor shall furnish Submittals complete with transmittal, and descriptive or product data in a Portable Document Format (PDF) electronic file(s). Each PDF file shall contain a single submittal or group of related Submittals. The Contractor shall furnish Submittals with appropriate comments, mark-ups, and notations in any single color other than red. The Engineer will review the Submittal and return to the Contractor the same PDF file with the Engineer's stamp and appropriate review comments, mark-ups, and notations in the color red.

When each Submittal has been completed to the satisfaction of the Engineer and received by the Contractor, the Contractor shall print in color and furnish two (2) complete sets of each Submittal to the Engineer.

35.4 Engineer's Review of Submittals

The Engineer's review of Submittals by the Contractor will cover only general conformity to the Specifications, and physical condition which affect the installation.

The review and approval of Submittals and schedules will be general, and shall not be construed:

- A. As permitting any departure from the Contract requirements;
- B. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
- C. As approving departures from details furnished by the Engineer, except as otherwise provided herein.

If the Submittals describe variations, and show a departure from the Contract requirements

which the Engineer finds to be in the interest of the City and to be so minor as not to involve a change in Contract Price or Field Order Completion Time, the Engineer may return the reviewed Submittals without noting an exception.

When reviewed by the Engineer, each of the Submittals will be identified as having received such review being so stamped and dated. Submittals noted "Not Acceptable" or "Revise and Resubmit" and with required corrections shown will be returned to the Contractor for the necessary revisions and re-submittal.

No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor, and will be considered "rejected" until resubmitted.

Re-submittals will be handled in the same manner as first submittals. On re-submittals, the Contractor shall direct specific attention, in writing or on resubmitted Submittal, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make corrections required by the Engineer.

If the Contractor considers any correction indicated on the Submittals to constitute a change to the Plans or Specifications, the Contractor shall give written notice thereof to the Engineer.

The Engineer will review a submittal/re-submittal a maximum of two (2) times after which the cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's charges to the City under the terms of the Design Professional agreement with the City, and also all of the City's costs.

When the Submittals have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

ARTICLE G-36 CHANGES IN SHIPPED MATERIAL

36.1 Materials Requiring Submittal Approval Prior to Shipment

If, after the execution of the Contract, the City initiates a Change Order eliminating material or equipment for which approval has been given under Shop Drawing procedures, the Contractor may claim invoiced costs of that material or equipment if:

- A. Materials and equipment have been ordered and are in transit or are stored at the Project site or other authorized place and cannot be returned to the supplier for restocking. The Contractor may also claim invoiced charges for freight and storage. The total claim may not exceed the cost bid for "materials" on the Contractor's Bid for that item;
- B. If the item can be restocked, the Contractor may claim reasonable costs for freight, storage, and restocking, but may not claim labor costs.

In the event such an event occurs involving materials and/or equipment in transit or in storage at the Contractor's risk (i.e. Shop Drawing submittal approval was not obtained by the Contractor through the complete and successful Shop Drawings and/or sample submittal procedures where required by the Contract), the City will have the option to pay for such materials and/or equipment, thereby taking ownership, or of rejecting the claim. If the City rejects the Contractor's

claim, the Contractor shall be fully and solely liable for costs and final disposition of the materials and/or equipment involved.

36.2 Materials Not Requiring Submittal Approval Prior to Shipment

If, after the execution of the Contract, the City initiates a Change Order eliminating material or equipment for which Shop Drawing submittal and approval are not required by the City, the Contractor may claim invoiced costs of that material or equipment if:

- A. Materials and equipment have been ordered and are in transit or are stored at the project site and cannot be returned to the supplier for restocking. The Contractor may also claim invoiced charges for freight and storage. The total claim cannot exceed the cost bid for material on the Contractor's Bid for that item. Materials or equipment paid for in this way shall become the property of the City;
- B. If the item can be restocked, the Contractor may claim reasonable costs for freight storage and restocking, but may not claim labor costs.

ARTICLE G-37 WORK IN INCLEMENT WEATHER

No work shall be done when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the Contractor, upon the direction of the Engineer, shall suspend all work indefinitely. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the Contractor at no cost to the City.

The Engineer shall have the authority to suspend work wholly or in part, for such period or periods as the Engineer may deem necessary due to unsuitable weather or such other similar conditions considered unfavorable for the suitable prosecution of the Work, or for such time as is necessary due to the failure on the part of the Contractor to perform any or all provisions of the Contract. If it should become necessary to suspend the Work for an indefinite period, the Contractor shall, at its own cost, take every precaution to prevent damage or deterioration of the Work performed and provide suitable temporary structures where necessary.

ARTICLE G-38 QUANTITIES OF WORK

38.1 Unit Price Items

For unit price items, the quantities listed on the Bid form are to be considered as approximate and are to be used for the comparison of Bids only. Even though the unit prices tendered by the Contractor are tendered for the scheduled quantities, the scheduled quantities of work to be performed and materials to be furnished may each be increased or diminished as provided herein without in any way invalidating the unit bid prices for those items.

For any annual renewal period, the unit prices will be adjusted based on the ratio of the "20 Cities Average Cost Index for Construction Cost and Common Labor (CCI)" as published in the "Construction Economics" section of the Engineer News Record for the month and year when the Contract is executed, and the then-current CCI during any annual or renewal period.

38.2 Lump Sum Items

For lump sum payment items, payment shall not exceed the amount bid by the Contractor on its

Bid. The Work, materials and equipment to be included in the lump sum bid price shall include all items necessary to produce a complete and properly functioning system, as intended. This shall include all connections, controls, wiring, supply lines, drain lines, etc., required to render the lump sum bid item functional as intended and able to pass all applicable codes, tests, and required inspections.

Partial payments to the Contractor (if applicable) for Work performed under lump sum items shall be based upon a Schedule of Values prepared by the Contractor and submitted within thirty (30) calendar days after issuance of the Notice to Proceed and approved by the City which shall apportion the lump sum price to the major components entering into or forming a part of the Work under the lump sum price.

ARTICLE G-39 AS-BUILT RECORDS

Plans/Contract Plans shall be the basis for the As-Built Records recorded and submitted by the Contractor. The Contractor shall keep and maintain one set of As-Built Records in good order and continuously maintained at each applicable job site as the Work progresses.

The Contractor shall mark and annotate neatly and clearly all project conditions, locations, configurations and any other changes or deviations which may vary from the details represented on the Plans, including revisions made necessary by Addenda, Shop Drawing, Change Order, Field Order, Work Order, and Worklist during the construction process.

Excavation limits, materials of construction, and horizontal and vertical location of the repair, replacement, or installation of all pipe and structures shall be identified. The type of (description) and horizontal and vertical location of all fittings, valves, adapters, couplings, and other appurtenances used to complete the work shall be identified. Additionally, the horizontal and vertical location of any pipes, structures, and appurtenances which are located or uncovered in the work area shall be identified. The horizontal and vertical dimensions shall be sufficient to locate the buried facilities in the future. Manholes, inlets, headwalls, and other drainage and access structures shall be dimensioned from the face of curb, roadway centerline, construction baseline where established, surveyed property/easements lines, or other permanent structures if needed. Location of new, repaired, replaced, or uncovered sewer laterals shall be dimensioned from the nearest downstream manhole. All access and drainage structure cover, ground level, and invert elevations shall be recorded. Cover elevation for man-entry access structures shall be North rim elevation. All storm inlets shall have recorded curb type, curb top, gutter, and throat elevations. Pipe invert elevations and size shall be recorded for every pipe connecting to a structure (including conflict pipes). All structure inside dimensions shall be identified. Size, material and elevations of all intersecting or parallel utilities within project excavation area shall be shown.

The basis of horizontal and vertical control shall be identified for all completed As-Built Records. All record elevations shall be referenced to City of St. Petersburg Datum (National Geodetic Vertical Datum of 1929 (NGVD29) + 97.00 ft). Where the Contractor is directed by the Engineer to complete a repair without an established benchmark per Florida State Plane Coordinates or City of St. Petersburg Datum, a temporary benchmark(s) shall be established for control and subsequently identified on the As-Built Drawings/Records. The As-Built Records shall be signed and dated by the Contractor and titled with the corresponding Field Order/Work Order number provided by the City.

ARTICLE G-40 OPERATION AND MAINTENANCE MANUALS

The Contractor shall compile manufacturer's operation and maintenance instructions for all equipment furnished by it under this Contract. As applicable for each category and item of equipment, information supplied shall include at least the information as may be unique and pertinent to a specific item for purposes of ensuring clarity and understanding of all normal operating and maintenance procedures and requirements.

All instruction information shall be submitted as a complete electronic version and as a complete set, assembled into a three-ring loose-leaf binder organized and indexed in the order of appearance in these Specifications. When instructions are applicable to a single unit assigned a tag number or other identification designation specified or shown on the Plans, the identification designation shall appear on the instruction. In cases where multiples of identical equipment (e.g. pumps, valves, filters, blowers, and similar like components) are covered by the same instructions, do not duplicate information; instead, list the identity designations for which instructions are common on the information sheets. If more than one binder is necessary for a set, overall information shall be divided into logical divisions, and each binder shall contain a table of contents specific to that binder. Additionally, each binder shall contain an overall table of contents to ensure that the reader is informed whether the binder in hand is all-inclusive, or only part of a series.

In all cases, information shall plainly identify all precautions, procedures, adjustments, and other actions on the part of the ultimate user that affect continuity of warranty coverage. The City will be responsible for the adequacy of maintenance subsequent to acceptance of each component of the facility, if the information supplied by the Contractor covers all requirements.

In the event of equipment failure attributable to improper or inadequate operation and/or maintenance acts on the part of the City, which in turn can be attributable to erroneous, inappropriate, or incomplete information furnished by the Contractor, the Contractor shall be solely responsible for prompt repair or replacement, including all costs for replacement parts or equipment, all transportation, and all labor. In such an event, the Contractor shall, in addition, procure and furnish appropriately corrected or supplementary operation and maintenance instruction to ensure against subsequent failure of equipment attributable to the same cause.

The first sheet of each section shall list the following information appropriate for each item (or multiples) for which all sheets immediately following apply:

- A. Manufacturer's name, address, and telephone number;
- B. Manufacturer's local distributor's or representative's name, address, and telephone number;
- C. The year of purchase, also, if different, the year of manufacture of the equipment;
- D. Equipment model and serial number(s). Include sub-listing for all assembly components (e.g. pumps, motors, variable speed devices, and other appurtenances).

The Contractor shall deliver four (4) complete operation and maintenance manuals and a complete electronic version of the same to the Engineer, as specified and approved by the Engineer.

ARTICLE G-41 CLEAN UP

As the Work progresses, and as may be directed, the Contractor shall remove from the site and dispose of debris and waste material resulting from its Work at an approved disposal site. Particular attention shall be given to minimizing any fire and safety hazard from materials or other combustible as may be used in connection with the Work, which shall be removed daily.

Any buildings included in the Contract shall be kept free from waste material at all times. Before completion of the Work, the Contractor shall thoroughly clean out all chambers, tanks, pits, vaults, channels, drains, pipe lines, conduits manholes, and miscellaneous appurtenant structures.

The Contractor shall be responsible for the final cleaning of floors, walls, glass, doors, windows and all other surfaces of structures, equipment and fixtures which have been affected by its work. The Contractor shall tear down and remove all temporary structures built by the Contractor. The Contractor shall restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the Work.

ARTICLE G-42 SUBSTANTIAL COMPLETION

When the Contractor believes the Work identified in a Field Order has reached Substantial Completion, the Contractor shall request the City Inspector to schedule an inspection of the Work. Within fifteen (15) business days after the request, the City Inspector will either (i) notify the Contractor that Substantial Completion has not been reached, or will (ii) perform the inspection and, provided the City Inspector agrees that the Work has reached Substantial Completion, the City Inspector will, within thirty (30) calendar days after the Work has reached Substantial Completion, develop a punch list of items required to reach Final Completion. Within five (5) calendar days after the City Inspector finishes developing and reviewing the punch list, the City Inspector will deliver the punch list to the Contractor. The Contractor shall complete all items on the punch list within thirty (30) calendar days after the punch list is delivered to the Contractor unless a longer period of time for completion is set forth in the punch list. When the Contractor believes that it has satisfactorily completed all items on the punch list, the Contractor shall so notify the City Inspector to schedule a final inspection of the completed Work to determine if Final Completion has occurred.

ARTICLE G-43 FINAL INSPECTION

The final inspection will be scheduled within five (5) business days after the City receives notification from the Contractor that all punch list items have been completed, or within five (5) business days after the Contractor makes a request for Final Payment.

ARTICLE G-44 PAYMENTS

44.1 Partial Payment

The City will pay the Contractor the Contract Price as provided in this Agreement.

The City will make partial payments monthly in accordance with the applicable Field Order (i.e., monthly as the Work proceeds or monthly for completed Work Orders only), on proper and complete application for payment request approved by the Engineer. In the preparation of application of partial payment, the Engineer may authorize material delivered on the site and

preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration if:

- A. Consideration is specifically authorized by the Contract; and
- B. The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform the Work.

In making partial payments, the Engineer may retain an amount that the City considers adequate to protect the City and will release to the Contractor all or a portion of any excess amount.

Contractor shall at all times monitor the total constructed quantities of all unit-priced Work and to promptly bring to the attention of the Engineer any Work which, if performed, will approach, equal or exceed the Contract Price for that annual period. Any work performed by the Contractor in excess of the Contract Price, without permission from the Engineer, will be done at the Contractor's expense.

In order to be considered complete, the Contractor's application for payment shall include the following supporting documents and As-Built Records described below in City approved format. All records shall be downloaded electronically to the City's file sharing location designated by the City at the Pre-Construction conference. After downloading all complete records pertaining to the Contractor's application for payment, the Contractor shall notify the City in writing by email of the payment request.

1. Transmittal - Shall be in Adobe PDF file format, using City approved file naming format and shall include: (i) Contractor's contact information and any invoice number(s) included with the application for payment, and (ii) Summary listing of total number of and type of files (PDF, Excel, .mpeg, Microsoft Access, etc.) submitted in each category listed below included with the current application for payment.
2. Summary of Quantity(s) which Defines Work Complete per Field Order - Shall be in Adobe PDF file(s) format, using City approved file naming format and shall include: A dated and signed Contractor summary in tabular format including but not limited to: start and end date for period of Work submitted, Contractor's address and contact information, Contract Price, value of approved Change Orders, total value of Work performed to date, retainage amount to date, stored materials, net amount earned on Contract to date, amount of previous invoices and payments, and balance due with the current invoice. Backup information provided shall include, in the same file or separate file, a tabular summary of all contract unit pay items and dollar totals used for the current invoice period, and previous invoice period.
3. Worklist(s) - Shall be in Microsoft Excel file(s) format, using City approved file naming format. Contractor shall provide the City supplied Worklist with Contractor As-Built data filled in for all completed Field Orders (rows of data) including but not limited to: Contractor invoice number, liner thickness, date completed, individual pay item quantities, Contractor comments, property address, or any other field required to adequately describe the work performed, actual conditions, or conditions different from original Plans.
4. As-Built Drawings/Records - Shall be in Adobe PDF file(s) format, minimum 300dpi, using City approved file naming format. Contractor shall provide all As-Built Records of Plan documents based on original Plans as provided by the City and related to the current

Summary of Quantity(s)/Pay Application including: any individual Field Orders, Work Orders, Worklist(s), and associated maps, plans, or drawings, and shall include construction start/end dates, total cost based on unit pay items, and any other changes as approved by the Engineer. Each map/plan/drawing page relevant to the current Summary of Quantity(s)/Pay Application shall be annotated or marked to clearly indicate what Work was completed and include any changes, additions, or conditions different from original Plans. Each individual Field Order, Work Order or Worklist form shall be collated/sorted with any supplemental maps/drawings pertaining to it either as individual files or one complete collated file. Additionally, each individual Summary of Quantity(s)/Pay Application shall include an itemized unit pay item summary.

5. CCTV Inspection Video(s) - Shall be in .mpeg or other City approved file format and shall conform to NASSCO LACP or PACP standards.
6. CCTV Inspection Video log(s) - Shall be in Adobe PDF file(s) format and shall conform to NASSCO LACP or PACP standards.
7. CCTV Inspection Database file(s) - Shall be in Microsoft Access file format and shall conform to NASSCO LACP or PACP database format and standards.

If an improper payment request is submitted by the Contractor, the City shall notify the Contractor in writing and indicate the corrective action needed to make the payment request proper, within twenty (20) business days after receipt of the payment request by the City. Upon receipt of a corrected and proper request for payment, the City will make payment or notify the Contractor in writing of corrective action needed, within ten (10) business days of receipt.

The Contractor shall notify the Engineer of any payment disputes in accordance with ARTICLE G-47, CLAIMS AND DISPUTES.

In the event this Article conflicts with the Local Government Prompt Payment Act, the provisions of such act shall control.

44.2 Payment for Materials Stored On- and Off-Site

In general, the City will not pay for materials stored on- or off-site, unless the Technical Specifications specifically stipulate that payment will be made for the materials before being incorporated into the Work and that the conditions established herein have been met.

A. Payment for Materials Stored Off-Site:

The City, if stipulated in the Technical Specifications, will consider providing payment for materials or equipment stored off-site provided the following conditions are met:

1. The material or equipment is in conformity with approved Shop Drawings and has been inspected by the Engineer;
2. The material or equipment is to be specifically manufactured for the Project and cannot be readily utilized or diverted to another project;
3. The fabrication period is greater than six (6) months;
4. The storage of materials or equipment shall meet the City's requirements for security, bonding, licensing, and title;

5. The City reserves the right to make payment on a progress or total basis of up to 75% of the invoice amount, to be paid in full or monthly installments;
6. The Contractor shall furnish evidence that materials or equipment, suitably stored and paid by the City, has been paid in full and that the Contractor has good title to the materials or equipment, free of liens, claims, or encumbrances. This proof shall be submitted to the City within thirty (30) calendar days of receipt of payment by the City for the materials or equipment;
7. The Contractor shall furnish a breakdown of labor and material at the time of submittal of schedule of values.

B. Payment for Materials Delivered On-Site:

The City, if stipulated in the Technical Specifications, will consider payment for special materials delivered to the site, at the rate of 75% of the invoice cost, provided such materials have been inspected and found to meet the Specifications. Said materials shall meet the applicable conditions as specified for payment for materials stored off-site. The balance of such invoice value will be paid when such materials incorporated into them become part of the Project.

44.3 The City's Right to Decline, Reduce or Delay Payments

The City may, with prior notice to the Contractor, decline, reduce, or delay the processing of payment requests or, because of subsequently discovered evidence or subsequent observations, may nullify, delay or reduce the whole or any part of any payment previously issued, to such extent as may be necessary in the City's opinion to protect the City from loss because of one or more of the following conditions:

- A. Defective or damaged Work not being expediently remedied;
- B. Third party claims filed or evidence indicating probable filing of such claims;
- C. Failure of the Contractor to promptly pay Subcontractors for labor or materials;
- D. Written notice from the Surety that (i) its prior consent to the payment is revoked or (ii) that the City should withhold from the payment a specified amount (in addition to the regular retainage amount);
- E. Evidence that the Work cannot be completed for the unpaid balance of the Contract;
- F. Damage to the City or another contractor;
- G. Persistent failure to carry out the Work in accordance with the Contract;
- H. Persistent failure to comply with orders of the City;
- I. Evidence that liquidated damages will be assessed the Contractor;
- J. Failure of the Contractor to accelerate its Work to get back on schedule.

When the above condition(s) are removed, payment shall be made for amounts withheld because of them.

44.4 Final Payment

After the Contractor has completed all Work under the Field Order; made all final inspection punch list corrections to the satisfaction of the Engineer; delivered all schedules, guarantees, warranties, bonds, test results, As-Built Records, operations and maintenance manuals, records, occupancy permits, and sworn affidavits to the City; and submitted all other documents to the City, as required by the Contract, the Contractor may make application for Final Payment.

The procedures established and submittals required herein for partial payments shall apply to the Final Payment as well.

Upon completion and submittal of such, the unpaid balance of the Contract will be paid to the Contractor in accordance with the Local Government Prompt Payment Act.

The Final Payment estimate for the Contract shall reflect fully and accurately the total quantities of Work actually performed.

The making and acceptance of Final Payments shall constitute:

- A. A waiver of all claims by the City against the Contractor, except claims arising from unsettled liens, from defective work appearing after final inspection, or from failure to comply with the Contract or the terms of any special guarantees specified therein; however, it shall not constitute a waiver by the City of any rights in respect of the Contractor's continuing obligations under the Contract;
- B. A waiver of all claims by the Contractor against the City.

ARTICLE G-45 GUARANTEE PERIOD

In addition to any other warranties that may exist, including but not limited to any warranties set forth in the Specifications or supplemental Specifications, the Contractor shall unconditionally guarantee together with its Surety all materials and workmanship incorporated in this Contract for a period of two (2) years from the date of Final Completion. The Contractor shall submit a notarized affidavit attesting to such guarantee period prior to Final Payment. Should defects develop within the guarantee period, the Contractor shall, upon written notice of same, promptly remedy the defects and reimburse the City for all damage to other Work if caused by the defects or caused by correcting defects of the Work.

If the Contractor, after due notice, shall refuse or neglect to make good the defects as notified to the satisfaction of the City, then the City may and is empowered to proceed in the manner prescribed in the event of abandonment or forfeiture of the Work by the Contractor. The payment of claims for material and labor and other expenses shall be prerequisite to the termination of the guarantee period and to the release of the Sureties on the Public Construction Bond(s).

All representations and guarantees made in the Contract shall survive Final Payment and termination or completion of this Contract. This guarantee shall be exclusive of any manufacturer's guarantees or warranties exceeding this period.

ARTICLE G-46 LIENS

If a Subcontractor refuses to furnish a release or receipt in full, the Contractor shall furnish a bond satisfactory to the City to indemnify the City against loss due to any such lien or liens.

If any lien remains unsatisfied after all payments are made, the Contractor shall refund the City all moneys that the City may be compelled to pay in discharging such liens, including all costs and attorney's fees.

ARTICLE G-47 CLAIMS AND DISPUTES

47.1 Initial Referral to the Engineer

Claims, disputes and other matters relating to the acceptability of the Work, fair price determinations made by the Engineer, or interpretations by the City of the Contract pertaining to the execution and progress of the Work, shall be referred to the Engineer within ten (10) calendar days in writing by certified mail, with a request for a formal decision in accordance with this Article, which the Engineer will render in writing within a reasonable time.

Written notices of each claim, dispute or other matter shall be delivered by the claimant to the Engineer within ten (10) calendar days of the occurrence of the event giving use thereto, and written supporting data shall be submitted to the Engineer within fifteen (15) calendar days of such occurrence, unless the Engineer grants an extension of time for a specific purpose. It is a requirement of these provisions that all submitted supporting data relating to prices for Work shall be based upon recognized cost data guidelines. In its capacity as interpreter and judge of the submitted information, the Engineer will not show partiality and will not be liable for any consequences attributable to an interpretation or decision rendered in good faith in such capacity.

The Contractor may not delay the performance of Work required by the issuance of Field Orders and shall carry on the other work and maintain the overall progress of the construction schedule during all disputes or disagreements with the City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements except as the Contractor and the City may jointly otherwise agree to in writing.

47.2 Protesting the Engineer's Decision

In the event the Contractor refuses to accept the Engineer's decision concerning any dispute, the Contractor shall, within five (5) calendar days of the date of the Engineer's decision, submit a letter of protest to the Engineer, delineating the areas of the decision under protest. However, any such protest has no bearing on any Work requirements arising out of the Engineer's decision in that the Contractor must immediately perform the Work required in the decision so as to not hold up the progress of the Work at the Project.

Where a protest has been received from a Contractor, the Engineer will schedule an informal hearing to be held at a designated City office where the affected parties will meet to discuss and resolve the items under protest. If the item(s) under protest or dispute is not resolved at this informal meeting, and the Contractor is made aware of no appellate procedure thereafter, the Contractor is entitled to litigate the matter for resolution.

ARTICLE G-48 TERMINATION OF THE CONTRACT

48.1 Reasons for Termination

The City may terminate the Contract upon the occurrence of any one or more of the following conditions:

- A. If the Contractor repeatedly fails to supply sufficient skilled workers as directed by the City or suitable materials or equipment;
- B. If the Contractor disregards applicable Laws;
- C. If the Contractor otherwise violates in any substantial way any provisions of the Contract;
- D. If the Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
- E. If a petition is filed against the Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;
- F. If Contractor makes a general assignment for the benefit of creditors;
- G. If a trustee, custodian or agent of Contractor is appointed under applicable Laws or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property for the benefit of Contractor's creditors;
- H. Upon seven (7) calendar days' written notice to the Contractor, the City may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Contract. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which may include fees and charges of engineers and architects. In no event whatsoever will the City be liable to the Contractor for anticipated fees or profit on work not performed or for lost opportunity costs or for any consequential damages.

48.2 Settlement of Payment

If the City is permanently prohibited or enjoined from proceeding with the Work herein contemplated, the City may terminate this Contract and pay the Contractor a sum equal to all expenses legitimately incurred by it in connection with this Work, plus 10% of such expenses, less an amount equal to the sum of all partial payments previously made to the Contractor. The City shall pay this sum to the Contractor within thirty (30) calendar days after the City terminates the Contract pursuant to this section.

ARTICLE G-49 PUBLIC RECORDS

- A. Contractor shall (i) keep and maintain public records (as defined in Chapter 119, Florida Statutes) required by the City to perform the services and work pursuant to the

Contract; (ii) upon request from the City Clerk's Office, provide the City (at no cost to 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 under Florida laws regarding public records or other applicable Laws; (iii) ensure that public records in Contractor's possession that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by applicable Laws for the term and after the expiration or earlier termination of the Contract; and (iv) after the expiration or earlier termination of the Contract, at the City's request, either transfer, at no cost, to the City all public records in Contractor's possession within ten (10) calendar days following the City's request and/or keep and maintain any public records required by the City to perform the services and work pursuant to the Contract. If Contractor transfers all public records to the City upon final completion or earlier termination of the Contract, Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If Contractor keeps and maintains public records upon the expiration or earlier termination of the Contract, Contractor shall meet all applicable requirements for retaining public records in accordance with the Contract and all applicable Laws. At the City's request, all public records stored electronically by Contractor shall be provided to the City in a format approved by the City.

- B. **IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, AS TO CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE CITY CLERK'S OFFICE (THE CUSTODIAN OF PUBLIC RECORDS) AT (727) 893-7448, CITY.CLERK@STPETE.ORG, OR 175 FIFTH ST. N., ST. PETERSBURG FL 33701.**

- C. Nothing contained herein shall be construed to affect or limit Contractor's obligations including but not limited to Contractor's obligations to comply with all other applicable Laws and to maintain books and records pursuant to the Contract.

ARTICLE G-50 SCRUTINIZED COMPANIES

The Contractor hereby makes all certifications required under Florida Statute section 287.135, and the City may terminate the Contract as provided in Florida Statute section 287.135.

ARTICLE G-51 DISCHARGES BY CONTRACTOR AND CORRECTIVE ACTION PLANS

The spill or discharge of any substance (e.g., wastewater, fully or partially treated reclaimed water, line or tank washwater, etc.) by Contractor or its employees, agents or Subcontractors in violation of applicable Laws ("Discharge") shall constitute a default of this Contract.

In the event of a Discharge, Contractor shall immediately (i) report the Discharge to the Engineer and the City's Emergency Dispatch Center (727-893-7261) and (ii) control, contain, and stop the Discharge.

Within fifteen (15) days of a Discharge, the Contractor shall submit to the City a proposed corrective action plan for preventing future Discharges. Upon the City's acceptance of a

corrective action plan, Contractor's compliance with such plan shall automatically become a term of the Contract. Contractor's failure to comply with the corrective action plan, or Contractor's failure to prepare a corrective action plan that is acceptable to the City, shall constitute a default of the Contract. Contractor's compliance with a corrective action plan shall not relieve Contractor of liability for damages as set forth below. In the event of a conflict between the Contract and the corrective action plan, the Contract shall prevail.

In addition to Contractor's indemnity obligations under the Contract that may arise in connection with a Discharge, Contractor agrees that the following damages will be readily ascertainable and that the appropriate remedy is the recovery of actual damages from Contractor. Such actual damages include: (i) damage to property (City and third-party) arising from a Discharge, (ii) fines imposed on the City by the Florida Department of Environmental Protection ("FDEP"), including fines imposed on the City pursuant to Consent Order OGC 16-1280 between the City and FDEP, and (iii) costs incurred by the City as a result of such Discharge, including costs imposed on the City pursuant to Consent Order OGC 16-1280 between the City and FDEP. In addition to those readily ascertainable damages set forth above, the Contractor acknowledges that the City will suffer other indirect damages (including reputational damages) due to a Discharge that are not readily ascertainable and agrees that the Contractor shall pay the aggregate amount of \$5,000 per Discharge to the City as agreed reasonable and proportionate liquidated damages, not as a penalty. The Parties acknowledge that the recovery of liquidated damages and actual damages constitutes a combination of remedies rather than an impermissible election of remedies under Florida law.

The City shall deduct all damages owed by Contractor pursuant to this Article from amounts due to Contractor under the Contract. In the event that the amount owed to Contractor is less than the amount of damages Contractor is required to pay the City pursuant to this Article, Contractor shall remit the amount of such damages owed to the City pursuant to this Article within ten (10) days after receipt of an invoice from the City.

The obligations and liabilities of Contractor resulting from a Discharge as set forth in this Article shall not limit Contractor's other obligations and liabilities set forth in the Contract or under applicable Laws.

ARTICLE G-52 INDEMNIFICATION

- A. The Contractor agrees to indemnify, hold harmless, assume legal liability for, save and defend the City, its officers, employees, contractors, elected and appointed officials, representatives and agents (collectively, "Indemnified Parties") from and against any and all claims, liens, suits, actions, damages, liability, assertions of liability, losses, costs and expenses in law or in equity, of every kind and nature whatsoever, (collectively, "Claims"), whether or not a lawsuit is filed, including but not limited to costs, expenses and attorneys' and experts' fees at trial and on appeal and Claims for bodily injury or death of persons and or damage to property, which Claims may occur or be alleged to have occurred by or on account of or arising out of, in whole or in part (i) the negligence, recklessness, or intentional wrongful misconduct of Contractor, its Subcontractor(s), employees, agents or representatives in the performance of the Contract; or (ii) the failure of the Contractor, its Subcontractor(s), employees, agents or representatives to comply with applicable Laws arising out of the Contract; or (iii) any act, omission, or default of the Contractor, its Subcontractor(s), employees, agents or representatives arising from Contractor's, Contractor's Subcontractor(s)', employees', agents' or representatives' performance of the Contract;

- B. The City will promptly notify the Contractor of any Claim(s) against the Indemnified Parties. The Contractor shall have the right to control the defense of any Claim(s) subject to the foregoing indemnification to the extent of the indemnification. The Contractor also shall have the right to settle any such Claim(s) provided that the Contractor pays the entire amount of such settlement and there is no finding of fault against the Indemnified Parties;
- C. The provisions of this Article are independent of, and will not be limited by, any insurance required to be obtained by the Contractor or its Subcontractor(s) pursuant to the Contract or otherwise obtained by Contractor or its Subcontractor(s).

ARTICLE G-53 INSURANCE

The Contractor shall provide the City with Certificates of Insurance on a standard ACORD form or other documentation acceptable to the City reflecting all coverages prior to commencing operations and at each subsequent policy renewal. Certificates shall name the City of St. Petersburg as an additional insured and show the City of St. Petersburg as the Certificate Holder. Certificates shall also indicate the use of any endorsements that are required in the Contract. No insurance policy required herein may be canceled, non-renewed, or adversely changed without thirty calendar days written notice to the City. Insurance shall be maintained at all times by the Contractor until Final Completion except for completed operations coverage which shall be maintained for a period of at least one (1) year beyond Final Completion. Completed operations coverage shall not serve to limit the liability of the Contractor.

Certificates of Insurance shall be delivered to the Director of the City's Procurement and Supply Management Department. Failure to provide Certificates or failure to renew insurance shall not relieve the Contractor of the responsibility to provide insurance as required. At the City's request, the Contractor and all its Subcontractors shall provide complete certified copies of any insurance policies, including endorsements, for the City's review. Receipt of Certificates of Insurance which indicate less coverage than required does not constitute a waiver of the Contractor's obligation to fulfill the insurance requirements herein.

The Contractor may, at its option, provide the limits of liability as set out herein by a combination of the policies described herein, including an Umbrella or Excess Liability Insurance Policy. Any Excess or Umbrella insurance policy must provide coverage on at least a following form basis.

If the insurance carried by the Contractor has broader coverage than required in the Contract, then that broader coverage, including but not limited to additional insured requirements, shall be the requirements in the Contract. If the Contractor's insurance limits are greater than the limits set forth herein, then the Contractor's policy limit shall be the required limit in the Contract. Any policy wording, including but not limited to wording contained in an Additional Insured Endorsement or Limits of Insurance provision, indicating that the limit of insurance available to an additional insured is the lesser of the contract requirement or applicable limit in the declarations, shall not apply to the Contract. The City shall have Additional Insured coverage to the Contractor's policy's full limit should it be greater than what is required in the Contract.

Approval of the insurance by the City shall not in any way relieve or decrease the liability of the Contractor. It is expressly understood that the City does not in any way represent that the specified limits of liability or coverage or policy forms are sufficient or adequate to protect the interest or liabilities of the Contractor.

The Contractor's deductibles or self-insured retention may be disapproved by the City and shall be reduced or eliminated at the option of the City. All responsibility for payment of any sums resulting from any deductible provisions, corridor, or self-insured retention conditions of the policy or policies shall remain with the Contractor.

All of the insurance required under the Contract shall be in effect under enforceable policies issued by insurers licensed to do business in the State of Florida and be rated "A-" or better by a rating agency such as A.M. Best or its equivalent.

The insurance coverages and limits are set at the sole discretion of the City and are subject to change or revision as the need arises. The City may, at its sole discretion, change or increase the required insurance coverage and limits from time to time and shall provide thirty (30) calendar days' notice to the Contractor. Failure of the Contractor to comply with any changes or increases within thirty (30) calendar days of receipt of written notice from the City shall be considered a material default of the Contract.

The Contractor hereby waives all subrogation rights of its insurance carriers in favor of the Indemnified Parties. This provision is intended to waive fully, and for the benefit of the Indemnified Parties, any rights or claims which might give rise to a right of subrogation in favor of any insurance carrier.

53.1 Workers' Compensation Insurance

A. Coverage:

The Contractor shall obtain and maintain during the life of the Contract, Workers' Compensation Insurance for all of Contractor's employees employed at the Project site. Coverage should include Employers Liability and Voluntary Compensation.

If any work is subcontracted, the Contractor shall require each Subcontractor to provide Workers' Compensation Insurance for all the Subcontractor's employees unless such employees are covered by the Workers' Compensation Insurance afforded by the Contractor.

The Contractor and Subcontractors shall purchase any other insurance or coverage required by law for the benefit of their employees.

B. Limits:

Workers' Compensation - as required by Florida Law.

Employer's Liability - \$100,000 each employee, each accident, and \$100,000 each employee/ \$500,000 policy limit for disease.

53.2 U.S. Longshore and Harbor Worker's Act Insurance

A. Coverage:

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, including but not limited to work on or about navigable waters, Contractor shall obtain and maintain U.S. Longshore and Harbor Worker's Act Insurance as required by law, including Jones Act coverage where appropriate.

B. Limits:

As required by Federal Law.

53.3 Commercial General Liability Insurance

A. Coverage:

The Contractor shall obtain and maintain Commercial General Liability Insurance providing coverage for bodily injury, property damage, and personal and advertising injury which may arise from operations under this Contract, whether such operations be by the Contractor or by any Subcontractors, or any of their agents, representatives, guests, employees, invitees or anyone contracting with the Contractor or by anyone directly or indirectly employed by any of them.

Coverage shall be provided by ISO Commercial General Liability coverage form CG 00 01 04 13 or similar form acceptable to the City. Coverage shall also be in occurrence form.

Explosion, collapse and underground hazards shall be covered by the Contractor's and Subcontractor's Commercial General Liability Insurance.

A separate general aggregate limit of liability shall apply to the Project. If the Contractor works on more than one (1) project under the Contract, a general aggregate shall apply to each of such projects. The project(s) shall be specifically described in the endorsement.

B. Limits:

Each Occurrence Limit: \$2,000,000.

General Aggregate Limit applicable per Project: \$2,000,000.

Products and Completed Operations Aggregate Limit: \$2,000,000.

Personal and Advertising Injury Limit: \$2,000,000.

Damage to Rented Premises Limit: \$100,000.

53.4 Commercial Automobile Insurance

A. Coverage:

The Contractor shall obtain and maintain Commercial Automobile Insurance providing liability coverage for "any auto", which shall include, but not be limited to, all leased, owned, non-owned, and hired vehicles.

B. Limits:

\$1,000,000 combined single limit each occurrence for bodily injury and property damage.

53.5 Builder's Risk Insurance

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, Contractor shall obtain and maintain Builder's Risk Insurance insuring the Contractor's work at the site to the full Contract Price and naming the City as a loss payee and additional insured. This insurance shall insure the interests of the City, the Contractor, and all

Subcontractors in the Work and shall insure against special form causes of loss, including collapse during construction, windstorm, and flood. Valuation shall be for replacement cost (including fees and charges of engineers, architects, attorneys and other professionals). The Contractor shall obtain and maintain similar property insurance on equipment, materials, supplies and other property and portions of the Work stored on or off site or in transit. Builder's Risk Insurance shall be endorsed to permit occupancy until such time as the facilities are completed and accepted by the City and written notice of that fact has been issued by the City.

53.6 Pollution/Environmental Liability Insurance

A. Coverage:

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, Contractor shall obtain and maintain Pollution/Environmental Liability Insurance, covering sudden and gradual pollution conditions including the discharge, release, or escape of fumes, vapors, smoke, acids, alkalis, asbestos, toxic chemicals, liquids or gases, waste materials, or other contaminants, irritants, or pollutants into or upon any structure, land, body of water, or atmosphere. Coverage shall include bodily injury, property damage, loss of use of tangible property whether or not it has not been physically injured or destroyed, cleanup and remediation costs, penalties or fines, and defense costs including costs incurred in the investigation or adjustment of the claim. Coverage may be provided by a stand-alone policy or by endorsement(s) to one of Contractor's other policies. Coverage shall be provided both for the use of pollutants on site and during transit. If the policy is on a claims made basis, it must include the retroactive date of coverage and shall be maintained for at least two (2) years past the date that the Work is completed.

B. Limits:

\$2,000,000 per occurrence.

53.7 Professional Liability Insurance

A. Coverage:

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, Contractor shall obtain and maintain Errors and Omissions or Professional Liability insurance appropriate to the Contractor's profession. If the policy is on a claims made basis, it must include the retroactive date of coverage and shall be maintained for at least two (2) years past the date that the Work is completed.

B. Limits:

\$2,000,000 per occurrence.

ARTICLE G-54 PUBLIC CONSTRUCTION BOND

The Contractor shall furnish a Public Construction Bond executed by a Surety company duly authorized to do business in the state of Florida on a form approved by the City Attorney or designee. The amount of the Public Construction bond shall be equal to 100% of the Contract Price, as security for the faithful performance of this Contract and as security for the payment by the Contractor of all persons performing this Contract. The Surety shall have a rating classification of "A" and a financial category of Class VII as evaluated in the current Best's Key Rating Guide, Property - Liability.

In lieu of the Public Construction Bond, the Contractor may furnish to the City an alternative form of security in the form of cash, money order, certified check, cashier's check, an irrevocable letter of credit, or a security of a type listed in Chapter 625, Part II, of the Florida Statutes and acceptable to the City Attorney. Any such alternative form of security shall be subject to the same conditions as those applicable to the Public Construction Bond required by this section and Chapter 255 of the Florida Statutes.

The Public Construction Bond shall remain in effect for at least one (1) year beyond the date of Final Completion.

If at any time during the term of the Contract, the City deems the Surety or Sureties upon such Public Construction Bond to be unsatisfactory or, if for any reason such Public Construction Bond ceases to be adequate to cover the performance of the Work, the Contractor shall, at its expense within ten (10) days after the receipt of notice from the City to do so, furnish an additional Public Construction Bond or Public Construction Bonds in such form and amount, and with such Surety or Sureties the City deems satisfactory. In such event, no further payment to the Contractor will be deemed to be due under the Contract until such new or additional security for the faithful performance of the Work is furnished in a manner and form satisfactory to the City.

When the Work has been completed in accordance with the Contract Documents and accepted by the City, it is mutually agreed and understood that the Contractor, together with his Surety, shall fully and unconditionally guarantee, for a period of not less than one (1) year from date of Final Completion, all materials and labor (workmanship) incorporated in the Project. This guarantee is exclusive of any manufacturer's guarantees or warranties exceeding this period.

Alternative forms of security will be returned to the Contractor not later than thirty (30) calendar days following the expiration of the guarantee period.

ARTICLE G-55 APPRENTICES REQUIREMENTS

If the Contract Price is equal to or greater than one million dollars (\$1,000,000), Contractor agrees to be subject to and shall comply with the requirements for employing apprentices, or demonstrating and documenting good faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 7 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Apprentice Requirements"). The Apprentice Requirements are incorporated into the Contract as Contractor's obligations under the Contract. Accordingly, Contractor shall ensure that at least 15 percent of all hours of work be performed by apprentices (as defined in Section 2-262 of the St. Petersburg City Code) in accordance with the Apprentice Requirements and comply with all other Apprentice Requirements. Contractor's failure to comply with the Apprentice Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 7 of the St. Petersburg City Code.

ARTICLE G-56 DISADVANTAGED WORKERS REQUIREMENTS

If the Contract Price is equal to or greater than one million dollars (\$1,000,000), Contractor agrees to be subject to and shall comply with the requirements for employing disadvantaged workers, or demonstrating and documenting good faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 8 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Disadvantaged Worker Requirements"). The Disadvantaged Worker Requirements are incorporated into the Contract as Contractor's

obligations under the Contract. Accordingly, Contractor shall ensure that at least 15 percent of all hours of work be performed by disadvantaged workers (as defined in Section 2-269 of the St. Petersburg City Code) in accordance with the Disadvantaged Worker Requirements and comply with all other Disadvantaged Worker Requirements. Contractor's failure to comply with the Disadvantaged Worker Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 8 of the St. Petersburg City Code.

ARTICLE G-57 RESPONSIBLE WAGE REQUIREMENT

If the Contract Price is equal to or greater than one million dollars (\$1,000,000), Contractor agrees to be subject to and shall comply with the responsible wage requirements set forth in St. Petersburg City Code Chapter 2, Article V, Division 9, as those requirements may be amended from time to time, (collectively, the "Responsible Wage Requirements"). The Responsible Wage Requirements are incorporated into the Contract as Contractor's obligations under the Contract. Accordingly, Contractor shall pay its employees for any hours worked pursuant to the Contract in accordance with the Responsible Wage Requirements and comply with all other Responsible Wage Requirements. Contractor's failure to comply with the Responsible Wage Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 9 of the St. Petersburg City Code.

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3-yr w/ 2-yr renewal, Field Order Basis

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

In cases where this Supplemental Instructions to Bidders and the standard Contract Standards Instructions to Bidders do not agree, this Supplemental Instructions to Bidders will govern.

SIB-1 ARTICLE I-13 - SUBCONTRACTORS

Sub Article 13.2 - Subletting of Contract: Delete all the first and second paragraphs of the sub article's text and replace with the following:

"The Contractor must complete at least 75% of the Total Bid Price with its own organization based on unit Bid prices. The contract amount upon which the 75% requirement is computed includes the cost of materials and manufactured products which are to be purchased or produced by the Contractor under the contract provisions.

In order to meet this 75%, the Contractor shall not purchase any materials for a subcontracted item nor shall Contractor place other contractor's employees on Contractor's payroll. The term "own organization" shall be construed to include only workers employed and paid directly by the Contractor and equipment owned or rented by Contractor, with or without operators."

SIB-2 ARTICLE I-5 - SUBMISSION OF BIDS

Sub Article 5.6 Bid for Alternates: Delete the text and replace with the following:

"The City may select any combination or reject any or all Alternates (Sanitary Sewer - Group I, Sanitary Sewer - Group II or Sanitary Sewer - Group III) as best serves the interest of the City."

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION 1 - GENERAL

1.01 LOCATION OF THE WORK SITE AND ACCESS

The proposed Work for the Project is within the limits of the City of St. Petersburg's wastewater service area. The wastewater pipe assets to be rehabilitated will be Citywide as located in the Plans. The Bidder may review a list of anticipated Work locations under the Initial Term of this Project (Appendix I).

Access to the Work site shall be over public streets and rights-of-way. Any damage to existing pavement or other surface improvements, attributable to the Contractor's activities, shall be restored to equal or better condition by the Contractor at the Contractor's expense. Portions of the Work will be in rear easements of residential areas.

1.02 SCOPE OF WORK

The essential portions of the proposed Work for the Project are summarized as follows:

The Contractor shall furnish all labor, material, equipment and services necessary for wastewater pipe rehabilitation using Cured-In-Place-Pipe (CIPP) lining. The Work shall be completed at locations identified on the Plans within the City of St. Petersburg's wastewater service area, and shall include, but is not limited to; obtaining permit approvals; maintenance of traffic; bypass pump around and/or diversion of wastewater flows; cleaning, removal and disposal of all sand, rubble, deposits, and other accumulated debris in the host pipe and manholes; Closed Circuit Television (CCTV) video inspection of the host pipe prior to rehabilitation; construction of CIPP Main Liners; reconnection of service laterals; CCTV video inspection after liner construction; testing of CIPP liners; Project site cleanup and restoration; and all other incidentals as required and directed by the Engineer to complete the Work.

The list of anticipated Work locations under the Initial Term of this Project is not inclusive and may change as repairs are completed, damaged pipes are discovered, and the City's prioritization schedule changes; however, it may represent the kinds of repairs that are anticipated to be assigned under this Project.

Estimated quantities and Contract Pay Items are listed in the Proposal. Procedures for partial payment and final payment of Field Orders and associated Work Orders is established in *Contract Standards, General Conditions "Article G-44 - Payments"*. As described under this agreement, partial payment will not be requested or made more often than monthly as the work proceeds and is applicable only for completed Work Orders.

1.03 FIELD ORDER/WORK ORDER

Each asset (pipe segment, manhole, etc.) to be rehabilitated and the type/nature of rehabilitation will be authorized by the issuance of Field Orders/Work Orders. A Field Order will be associated with one or more Work Orders issued on individual Work Order form(s) or a Worklist (tabular list of multiple Work Orders and associated assets in Excel/PDF format) and will establish the timeline for required commencement and completion of the Work. Field Orders, Work Orders or Worklist will be issued in City approved format and delivered either electronically or by hard copy to the

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Contractor.

Each individual Work Order form, or Work Order (spreadsheet row) in a Worklist, will contain the available pertinent information for the associated asset(s) such as Work Order number, the upstream and downstream manhole identification numbers (sanitary gravity mains), nominal host pipe diameter, approximate length of pipe, the upstream and downstream rim to invert depth, host pipe material, GIS identification distance tag value representing a distance from a downstream manhole (applies to sanitary laterals only), and any other Engineer comments describing requirements and specific directions for Work required.

Along with each individual Work Order form or Worklist, corresponding supplemental maps/drawings which may consist of highlighted or notated Utility Atlas/GIS Map(s), proposed plan drawings, As-Built or Record Drawings, or any combination thereof, will be issued to the Contractor showing the location of the assets, and any additional directions/requirements regarding the Work. Field Orders, Work Orders combined with any associated supplemental Utility Atlas/GIS Map(s), proposed plan drawings, As-Built or Record Drawings, or details issued along with it, will together be considered the Plans. The Contractor shall locate, uncover, and verify the manholes and access structures associated with each pipe segment to be rehabilitated prior to commencing Work. The Plans issued represent the best practical information available regarding the location and layout of the existing utilities. The Contractor shall refer to them for additional information including, but not limited to, rights-of-way widths, sanitary sewer easement widths, and general location of utilities with respect to property lines. The accuracy of the utility location information and dimensions are not guaranteed. The Contractor shall verify location and size of all existing utilities prior to starting the Work. Other Field Order/Work Order formats may be used as determined by the Engineer.

As the Work progresses, the Contractor shall utilize the Plans to continuously maintain As-built Records of the Work. The Contractor will be required to supply and fill in as-built attributes relating to each Work Order/Worklist including but not limited to: contractor invoice number, liner thickness, lining material, work start date, completion date, property address served (laterals only), unit pay item quantities for the Work rendered per asset (for a Worklist only), unit pay item quantities for the Work rendered per each individual Work Order, pipe length, pipe diameter, pipe invert elevations, manhole rim and invert depths and elevations, manhole material, host pipe material, private lateral material (where missing or a deviation from original Plans), contractor comments, or any other field necessary to adequately describe the work performed, actual conditions, or deviation from original Plans. The original data and formulas contained in any Worklist issued by the City shall not be altered in any way, however the Contractor may add additional records (rows) or columns (data fields) as necessary to describe the Work in more detail, use for scheduling, tracking, record keeping purposes, or to communicate details and progress of the Work with the City.

Examples of acceptable completed As-built Records, including completed individual Work Order forms, Worklist forms, and as-built drawings, are included in the Appendix of the Technical Specifications. Any deviation from this approved format shall be approved by the Engineer.

Field Orders/Work Orders for various tasks may require prioritization by the Engineer. The Contractor shall accomplish the Work in accordance with a given chronological sequence and amend the sequence of outstanding Field Orders/Work Orders as the Engineer deems necessary. The Engineer shall notify the Contractor in writing of any such changes and unless notified otherwise, the Contractor shall proceed with the Work in the order in which it was issued. From

time to time, the Engineer may issue an Emergency Response Work Order. The Contractor shall as soon as possible inform the Engineer of the equipment and manpower that he intends to mobilize. If this is acceptable and the Engineer agrees, the Contractor shall immediately begin mobilizing equipment, manpower, supervision, and materials necessary to facilitate the Work. Work that qualifies and is authorized for an Emergency Work Order and response will include payment under the unit pay item "G-1.1, Emergency Response".

The Contractor's superintendent or other City approved representative shall attend monthly meetings with the City to discuss scheduling and sequencing of Work and receive prioritization of outstanding and future Work issued by the City to the Contractor. The day and time of month for these meetings shall be agreed to at the pre-construction meeting prior to the Contractor starting Work on the Project. The Schedule for beginning and completion of Work on each Field Order/Work Order shall be in accordance with Technical Specifications Section 1.09 "Project Schedule Documentation".

1.04 ESTIMATED QUANTITIES

The estimated quantities for the unit price Pay Items listed in the Proposal are to be considered as representative only and are to be used for the comparison of Bids and Pay Items, and determining amounts for which the Bid and Construction Bonds shall be furnished. Even though the unit prices tendered by the Contractor are tendered for the scheduled quantities, the scheduled quantities of work to be performed and materials to be furnished may each be increased or decreased without in any way invalidating the Bid unit prices for those Pay Items. The Engineer reserves the right to vary the estimated quantities or to delete the Work and the corresponding Contract Pay Items from the Contract. The Contractor will be compensated for Work actually performed as described in the Field Orders/Work Orders or authorized by the Engineer, all in accordance with the unit prices or lump sum prices contained in the Proposal. The Bidder shall quote in the Proposal a unit price or lump sum price for which he will perform the Work for each of the Contract Pay Items.

1.05 PLANS AND SPECIFICATIONS

Technical Specifications Sections 1 and 20 through 27 have been prepared specifically for this Project. Other Technical Specifications sections are City Standards and only the applicable portions of them govern the Work to be performed. Where the Plans and Specifications are not in agreement, the Plans shall govern. Where a specifically prepared Technical Specification section is not in agreement with City Standards Technical Specifications, the specifically prepared section shall govern.

The Contractor shall furnish all labor, equipment, and materials to complete each Field Order/Work Order and all miscellaneous and appurtenant work complete in place as specifically described and included under each Contract Pay Item as shown, specified, or directed by the Engineer in accordance with the obvious or expressed intent of the Contract and related Plans (Field Order(s), Work Order(s), Worklist, associated maps/drawings, City Standard Details and any City furnished control points).

The Technical Specifications for the Project that reference FDOT-SSRBC pertain to *Florida Department of Transportation FY 2019-20 - Standard Plans for Road and Bridge Construction, including applicable interim revisions*, except as noted in the Technical Specifications "Section 8 - Paving Materials" and "Section 9 - Roadway Construction".

1.06 PERMITS

The City will obtain all construction permits required for the Work by FDEP, FDOT, CSXRR, SWFWMD, Army Corps of Engineers, Pinellas County Coastal Management, Pinellas County Highways, US Coast Guard, and Pinellas County Health Department. The Contractor shall be required to comply with all provisions of such permits regarding workmanship, schedules, notification of starting construction, and other conditions under which the permits are issued. A copy of any permits, if necessary, will be issued to the Contractor with the applicable Field Order/Work Order.

The Contractor shall obtain and pay for all other Federal, State, or County permits, licenses, and other authorizations required for the prosecution of the Work, including the cost of all Work performed in compliance with the terms and conditions of such permits, licenses, and authorizations, whether performed by the Contractor or by others.

1.07 PROJECT SIGN

The City shall furnish the Project sign. The Contractor shall mount the sign at a location mutually agreed by the Engineer and the Contractor and maintain it for the duration of the Project.

If the sign becomes unusable due to damage, vandalism, or any means other than Contractor activity, the City will furnish a replacement sign at no cost to the Contractor. If the sign is damaged by Contractor activity, the Contractor shall replace the sign in-kind at no additional cost to the City.

Payment for installing and maintaining the Project sign shall be incidental to construction costs of the Project for the duration of the Contract. The sign will remain the property of the City upon completion of the Project.

No sign other than as shown on the Plans and/or as specified, either by the Contractor, any subcontractor, or any material supplier, will be allowed on the Project site.

1.08 PROJECT WORK HOURS/FIELD SUPERVISION

Normal work hours for the Project are Monday through Friday, 8:00 a.m. to 5:00 p.m., excluding City-designated holidays. Emergency work may be required to be performed after hours, on Saturday, Sunday and City-designated holidays, and shall be subject to advance approval by the Engineer.

The Contractor shall designate and keep on site at all times during the Work, a competent resident Superintendent, employed by the Contractor accordance with the *Contract Standards, General Conditions "Article G-29.2 - Field Supervision"*.

1.09 PROJECT SCHEDULE DOCUMENTATION

The Contractor shall commence Work within 10 consecutive calendar days after the Notice to Proceed is received by the Contractor (unless such time is extended in writing by the Engineer). The Contractor shall commence Work on each Field Order/Work Order within 10 consecutive calendar days after it is received by the Contractor (unless such time is extended in writing by the Engineer). For a Work Order in which an Emergency Response has been requested, the repair

shall be done as quickly as possible, as approved by the Engineer. If the Contractor does not believe that the repair for an Emergency Response Work Order can be made within the agreed schedule, he shall notify the Engineer in writing before accepting the Work Order. The Work shall be performed uninterrupted until completed. The Contractor shall make every effort to expedite the repair. The Contractor shall be deemed to have accepted responsibility for completion of all Field Orders/Work Orders by the contract term listed in the Agreement or the expiration of funds, whichever comes first, unless the Contractor notifies the Engineer in writing within 10 consecutive calendar days after any Field Order/Work Order is received by the Contractor. The Contractor shall pursue each Field Order/Work Order with expeditious continuity until the Work is complete.

The contractor's weekly crew locations shall be provided to the Engineer in a City approved electronic file format and method (email) ahead of the start of any Work.

A Field Order/Work Order with various tasks may require prioritization by the Engineer. The Contractor shall accomplish the Work in accordance with a given specified sequence, if included in the Field Order/Work Order, and amend the sequence of outstanding tasks as the Engineer deems necessary. The Engineer shall notify the Contractor in writing of any such changes and unless notified otherwise, the Contractor shall proceed with the Work in the order in which it was issued.

Following acceptance of the CIPP Main Liner installation for each gravity main by the Engineer, the Contractor shall immediately reconnect service laterals; construct CIPP Lateral Liners where required; and complete Post - CCTV video inspection, testing of CIPP liners, project restoration work, and other associated tasks within 30 consecutive calendar days.

The Engineer may order the Contractor to proceed with the Work at a faster rate or to add additional crew(s) should a backlog of Field Orders/Work Orders develop.

If the Work does not progress at a satisfactory rate, is otherwise deemed unsatisfactory by the Engineer, or is not completed within the approved timeframe, the City in its sole discretion reserves the right to terminate the Contract and re-advertise the Work at any time. No additional compensation beyond the unit prices bid for Work completed will be allowed the Contractor because of such termination.

If the Engineer requests the Contractor to perform Work outside of normal working hours as defined during the Preconstruction Conference, the inspection fee will be waived and the Contractor compensated as provided under the *Contract Standards, General Conditions "Article G-34 - Changes in the Work."*

1.10 STORM PREPAREDNESS PLAN

Within 15 days of the date of Notice to Proceed, the Contractor shall file with the Engineer a Storm Preparedness Plan. The plan shall outline the necessary measures which the Contractor proposes to perform at no additional cost to the City upon the issuance of an official storm warning issued by the National Weather Service.

In the event of inclement weather, or at the Engineer's direction, the Contractor shall carefully protect the Work, private property affected by the Work, and stored materials against damage or injury from the weather. If, in the opinion of Engineer, any portion of the Work or materials is damaged or injured by reason of failure on the part of the Contractor to protect the Work, such

Work and materials shall be removed and replaced at the Contractor's expense.

1.11 MAINTENANCE OF STORM DRAINAGE SYSTEM

The Contractor shall be responsible at all times to maintain the operation of existing stormwater facilities, or, when existing stormwater facilities are removed or taken out of service, to provide equivalent capacity alternate forms of stormwater removal adequate to prevent upstream or downstream flooding in excess of existing conditions. This responsibility shall include the installation of temporary connections, bypass pumping, or other temporary means necessary until the stormwater system is fully operational. All stormwater removed from the system shall be discharged back to the stormwater system.

1.12 PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION

The Contractor shall be responsible for prevention, control, and abatement of erosion, siltation, and water pollution resulting from construction of the Project until final acceptance of the Project.

The Contractor shall implement all appropriate turbidity management practices at the point of discharge into a storm drainage system, gutter, or other conveyance to ensure that state water quality standards are not violated at the point where the storm drain, gutter, or other conveyance discharges into a surface water.

All necessary provisions shall be taken to ensure compliance with:

- A. Water quality standards of the State of Florida. Attention is called to Chapter 62-302, Florida Administrative Code, and in particular, the requirements that turbidity shall not exceed 29 NTUs above background level. Adequate silt containment procedures and equipment shall be used to control turbidity, at no additional cost to the City.
- B. *Contract Standards, General Conditions "Article G-51, Discharges by Contractor and Corrective Action Plan"*.

1.13 CONTAMINANTS CONTAINMENT/DISPOSITION

Prior to the installation of well points for dewatering, the Contractor shall visually inspect the Work area for indications of existing ground water monitoring, wells, or metal caps at grade. The Contractor shall review the Work area for monitoring wells or abandoned fuel tanks, and shall notify the Engineer in writing if any of the above items exist.

If during the dewatering activities the spoil water becomes odorous (excluding sulfur odor) or the spoil water is discolored (excluding tannic acid or iron), the Contractor shall stop the dewatering activities and shall notify the Engineer in writing of such, and request direction.

When Work activities encounter or expose any abnormal condition that may indicate the existence of a hazardous or toxic waste, Work activities shall stop in the vicinity of the abnormal condition and the Contractor shall notify the Engineer immediately. The presence of tanks or barrels; discolored earth, metal, wood, or groundwater; visible fumes; abnormal odors; excessively hot earth; smoke; or other conditions that appear abnormal, may be signs of hazardous or toxic wastes and shall be treated with extraordinary caution.

Every effort shall be made by the Contractor to minimize the spread of any hazardous or toxic waste into uncontaminated areas. The Contractor's operations shall not resume until directed in writing by the Engineer.

Disposition of the hazardous or toxic waste will be made in accordance with the requirements and regulations of any City, County, State, or Federal agency having jurisdiction. Any permit required for the hauling and disposing of this material shall be obtained by the Contractor at his expense prior to commencing hauling operations. Where the Contractor performs work necessary to dispose of hazardous or toxic waste, and the Contract does not include Pay Items for disposal, payment may be made as provided in the *Contract Standards, General Conditions "Article G-32 - Unforeseen Subsurface Conditions"*.

1.14 FIELD ENGINEERING

If required by the Engineer, the Contractor shall establish and provide all vertical and horizontal control points for this Project including benchmarks. The Contractor shall provide the field layout surveying necessary to properly construct the Work from City-furnished control points or reference points indicated on the Plans.

All field layout surveying shall be performed under the supervision of a Professional Land Surveyor (Chapter 472, Florida Statutes). The Contractor shall submit the name and registration number of said Surveyor to the Engineer. The Engineer reserves the right to check all survey staking and to require adjustments or re-staking by the Contractor in the event that conflicts or errors are detected.

Water pressure pipelines that are 8-inch or less diameter shall be installed with the required cover using horizontal control stakes provided by the Contractor. Storm drains, sanitary sewers, sanitary pressure pipelines, and water pressure pipelines greater than 8-inch diameter shall be installed using an approved method for line and grade control. Methods for line and grade control shall be submitted to the Engineer for approval, as specified for shop drawings. Sketches shall be provided by the Contractor showing vertical adjustment necessary for pressure pipelines to adequately clear storm drains and other utilities, unless otherwise shown on the Plans.

1.15 INSPECTION AUTHORITY

The Engineer has ultimate responsibility for Contract administration and inspection for this Project which includes all plans issued pursuant to the Contract Documents. The Engineer may assign field inspection responsibilities to a Design Professional and/or City Inspector.

Each step of construction is subject to approval by the Engineer prior to proceeding with a subsequent step in accordance with the *Contract Standards, General Conditions "Article G-30 - Tests and Inspections"* and as supplemented herein.

During the progress of the Work and up to the date of final acceptance, the Contractor shall at all times afford representatives of the City, the County, the State, the Department of Environmental Protection, the Department of Labor, or any other agency with jurisdiction, a reasonable, safe, and proper facility for observation of the Work done or being done at the site and also of the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

The Project line of authority will be presented at the Preconstruction Conference.

1.16 SEQUENCE OF OPERATION

The Work may involve other Contractors. Therefore, the Contractor shall carefully coordinate its Work activities and that of any subcontractors with the City Inspector so as to minimize disruption of service to the residents, to minimize pump around pumping, and to avoid scheduling conflicts between various disciplines of work. In that regard, the following general sequence of preparation and construction activities shall be adhered to unless the Contract or conditions warrant otherwise.

A. General - Pipeline Rehabilitation Work

The Sequence of Work shall in general conform to the following order:

1. The Engineer will determine the Work required, and will issue the Contractor Field Orders/Work Orders authorizing the necessary rehabilitation work.
2. Upon receipt of the Field Orders/Work Orders from the Engineer and prior to commencing work, the Contractor shall obtain all permits, and develop and submit for approval a schedule for the Work detailing plans for night operations, pump around pumping, and traffic control. Those pipe segments requiring rehabilitation that are adjacent to each other shall be scheduled for rehabilitation at similar times to minimize the mobilization effort, pump around set-ups, and traffic control where feasible.
3. Store materials (when applicable) at locations and in a manner as approved by the Engineer. Equipment and materials shall not be stored or strung in residential areas more than 3 days in advance of lining installation unless otherwise approved in writing by the Engineer.
4. Perform neighborhood notification not less than 7 days prior to commencement of Work in the rights-of-way, in accordance with the article headed "Neighborhood Notification" in this Section of the Technical Specifications.
5. Setup and maintain pump around pumping in accordance with the article headed "Pump Around Pumping" in this Section of the Technical Specifications.
6. Perform host pipe and access structure cleaning in accordance with the requirements of the Technical Specification Section headed "Cleaning of Wastewater System".
7. Perform pre-CCTV inspection of host pipe to be lined in accordance with the requirements of the Technical Specification Section headed "Closed Circuit Television Inspection".
8. Review pre-CCTV inspection reports and notify the Engineer of any host pipe condition and existing lateral locations which may prevent proper completion of lining.
9. Construct CIPP liner in accordance with the requirements of the Technical Specifications Section headed "Cured-In-Place-Pipe (CIPP) Liners".
10. Reconnect service laterals in accordance with the requirements of the Technical Specifications Section headed "Cured-In-Place-Pipe (CIPP) Liners".
11. Remove pump around pumping setup.
12. Perform post-CCTV inspection and test the liner, if required, in accordance with these

Technical Specifications. Make repairs as necessary.

13. Restore the ground surface (when applicable) in accordance with these Technical Specifications.

B. Utility Companies

Utility companies may be present on the Work site adjusting their facilities and installing new facilities. The Contractor's work shall be scheduled in such a manner as to minimize conflicts with various utility companies.

C. Clean Up

The Contractor shall clean up the site for each phase of Work in accordance with the Contract Documents before proceeding to a subsequent phase of Work, unless otherwise approved by the Engineer.

1.17 MOBILIZATION

Mobilization shall include all preparatory work and operations necessary to begin the Project, including moving of personnel, equipment, plant, and all else necessary to commence work.

If a separate Pay Item is included for mobilization, payment will be as specified for that Pay Item. If no Pay Item is included, costs for mobilization shall be included with the costs for the major Work items included in the Proposal.

1.18 TEMPORARY TRAFFIC CONTROL

The Contractor shall provide required traffic controls for all roadways directly affected by construction activities within the Project limits. The Contractor shall notify the Special Events Division for the City a minimum of 2 working days prior to any construction affecting traffic flow. A Temporary Traffic Control plan drawing shall be submitted for review by the Engineer prior to each lane closure or opening during the course of construction. All traffic control devices utilized during construction shall be provided by the Contractor and meet the requirements set forth in the latest revision of U.S. Department of Transportation Federal Highway Administration's "Manual on Uniform Traffic Control Devices" and the Florida State Department of Transportation's "Design Standards."

Failure or refusal, on the part of the Contractor, to install, maintain and/or position traffic control devices promptly, fully, and in an acceptable manner, shall be sufficient cause for the City, after 24-hour notice, to perform the traffic control with its own organization, or to contract with any other individual, firm, or corporation to perform the required traffic control. All costs and expenses incurred thereby shall be charged against the defaulting Contractor, and the amount thereof deducted from any money due, or which may become due the Contractor, or shall be charged against the Contract Bond. Any Work performed as described by this paragraph, shall not relieve the Contractor in any way of their responsibility for the Work performed by them.

Traffic control shall be performed so that vehicular traffic shall be maintained with at least one 10-foot wide lane in each direction at all times. Temporary lanes, drainage modifications and temporary plates must be constructed by the Contractor at Contractor expense.

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The Contractor shall arrange his Work so that there will be as little disruption of traffic as possible. Vehicular traffic shall have access to residences and businesses. Pedestrian traffic shall be maintained.

The Contractor will conform to FDOT or Pinellas County regulations for scheduling when working in FDOT or Pinellas County roadways.

Two traffic lanes/two-way traffic shall be kept open at all times in State and County roads.

An acceptable detour route shall be developed by the Contractor to redirect traffic when and where necessary, with the approval of the Special Events Division for the City.

Temporary lanes shall be constructed with a minimum 1-inch thick asphaltic concrete surface over a 6-inch thick limerock base compacted to 98% of the maximum density in accordance with AASHTO T-180. In no case, for any period of time, shall a pavement cut in the pre-existing pavement, or in a temporary traffic bypass road be utilized for traffic without a hot mix asphaltic concrete patch or surface having been applied. Temporary lane striping/markers shall be applied by the Contractor at the end of each work day, on all asphaltic concrete courses except the final surface course. All temporary pavement markings shall conform to the 2012/2013 FDOT Design Standards.

It is understood that partial or complete removal of the existing pavement and base is necessary on certain residential streets in the process of construction. Ingress and egress for residential streets to residences and businesses driveways shall be maintained on either graded compacted dirt, roadway base or a sanded prime coat temporary roadway at all times during the construction process other than for the period of two days at a time when drainage construction, roadway base construction, or curb construction passes directly in front of a specific driveway. In those instances, the Contractor shall notify the owner two days in advance of limiting access to the owner's driveway. Temporary road maintenance shall be provided by the Contractor to maintain a level, safe driving surface free of excessive dust. Damage caused to temporary roadways shall be repaired by the Contractor at the Contractor's expense. Excavated material and construction material shall not be stockpiled in such manner as to unnecessarily hinder or confuse traffic adjacent to work where a partial road closure is in effect. If the Contractor's operations cause traffic hazards, the Contractor shall be responsible to rectify those hazards.

Temporary Traffic Control plan drawings shall be prepared by the Contractor for each specific location, giving the correct name of the street and of the intersecting streets between which closure and/or partial closure is sought. Permission shall be given for specific dates and hours, and such dates and hours must be closely observed. Partial closure is the condition when a portion of normal traffic can be permitted although one or more traffic lanes will be out of service.

At least 72 hours before starting any Work the Contractor shall obtain a Closure Permit from the appropriate County or State agency for any traffic lane or street closure required. Street Closure Permits shall be submitted to the Engineer before starting any Work. No changes to approved Street Closure Permits will be permitted without prior approval.

1.19 MATERIALS AND EQUIPMENT

All materials, appurtenances, and types of construction shall be in accordance with the Contract Documents and shall in no event be less than that necessary to conform to the requirements of

all applicable laws and regulations.

All materials and equipment to be incorporated into the Work shall be new, unused, and correctly designed. They shall be of standard first grade quality, produced by expert workmen, and be intended for the use for which they are offered. Materials or equipment which, in the opinion of the Engineer, are inferior or of a lower grade than indicated, specified, or required, will not be accepted.

Only "Asbestos-Free" materials shall be incorporated into the Work, unless the Contract Documents specifically call for otherwise. Material suspected of being Regulated Asbestos Containing Material (RACM), includes but is not limited to: thermal and acoustic insulation, joint compound, mastic, adhesive, vinyl floor tile and sheeting, ceiling tile, plaster, wall board, roofing felt, and shingle. Shop drawings for material or equipment suspected of being RACM shall list all contents, shall be noted "Asbestos-Free," and shall be screened by the Contractor prior to submittal to confirm that it is "Asbestos-Free." All materials delivered to the Project site shall have been approved through the shop drawing procedure and shall be in their original labeled and unopened containers.

In the event that asbestos-containing material installed by the Contractor is discovered either during construction, following completion of construction, or following acceptance of the Contract Work by the City and closeout of the Contract, it will be the responsibility of the Contractor to pay all costs incurred to remove and replace those materials, including repair or replacement of all adjacent materials which are affected by the abatement process.

1.20 MANUFACTURER

The names of proposed manufacturers, manufacturers' representatives, suppliers, and dealers who are to furnish materials, fixtures, equipment, appurtenances, or other fittings, shall be submitted by the Contractor to the Engineer for approval in accordance with the *Contract Standards, General Conditions "Article G-35 - Shop Drawings and Submittals"* to afford proper investigation and checking. No manufacturer will be approved for any materials, fixtures, equipment, appurtenances, or other fittings to be furnished under this Contract unless the manufacturer is of good reputation and has a plant of ample capacity. The Contractor shall, upon the request of the Engineer, be required to submit evidence that the manufacturer has manufactured a product similar to the one specified and that the product has been used for a like purpose for a sufficient length of time to demonstrate its satisfactory performance. All transactions with the manufacturer and subcontractors shall be through the Contractor.

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.

1.21 SAMPLES

The Contractor shall, when required, submit to the Engineer for approval, typical samples of material and appurtenances. The samples shall be properly identified by tags and shall be submitted sufficiently in advance of the time when they are to be incorporated into the Work so that rejections thereof will not cause delay. A letter of transmittal from the Contractor requesting approval shall accompany all such samples.

1.22 EQUIVALENT QUALITY

In the Contract Documents, whenever an article, material, apparatus, equipment, or process is called for by trade name or by name of a patentee, manufacturer, or dealer, or by reference to catalog of a manufacturer or dealer, it shall be understood as intending to mean and specify the article, material, apparatus, equipment, or process designated, or, upon approval of the Engineer, any equal thereto in quality, finish, design, efficiency, and durability, and equally serviceable for the purposes for which it is intended.

Whenever material or equipment is submitted for approval as being equal to that specified, the submittal shall include sufficient information and data to demonstrate that the material or equipment conforms to the Contract requirements. The decision as to whether or not such material or equipment is equal to that specified shall be made by the Engineer. Upon rejection of any material or equipment submitted as the equivalent of that specifically named in the Contract, the Contractor shall immediately proceed to furnish the designated material or equipment.

Neither the approval by the Engineer of alternate material or equipment as being equivalent to that specified, nor the furnishing of the material or equipment specified, shall in any way relieve the Contractor of responsibility for failure of the material or equipment, due to faulty design, material, or workmanship, to perform the functions required of them by the Contract Documents.

1.23 SERVICE OF MANUFACTURER'S REPRESENTATIVE

The Contract amount shall include the cost of furnishing a competent and experienced representative of the equipment manufacturer who shall assist the Contractor, when required, to install, adjust, test, and place in operation the equipment, in conformity with the Contract Documents. After the equipment is placed in operation, the representative shall make all adjustments and tests required by the Engineer to prove that the installed equipment is in proper and satisfactory operating condition. The representative shall instruct personnel designated by the Engineer in the proper operation and maintenance of such equipment.

1.24 MATERIAL AND EQUIPMENT DELIVERY AND STORAGE

In conformance with the *Contract Standards, General Conditions "Article G-22 - Material and Equipment Delivery"* and *"Article G-23 - Storage of Materials"* the Contractor shall deliver materials in ample quantities to ensure the most speedy and uninterrupted progress of the Work to complete the Work within the allotted time. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the Work of any related contractor. The Contractor shall provide space for storage of materials and equipment.

Materials stored along roads and rights-of-way shall be placed in a manner that will not endanger or restrict pedestrian or vehicular traffic.

1.25 WATER PURCHASE

Water used in connection with this Project may be purchased from the Water Resources Department, 1650 Third Avenue North, St. Petersburg, Florida, in accordance with the provisions of applicable ordinances, procedures, and regulations.

1.26 SPECIAL CONSIDERATIONS FOR WORK

A. Staging Area

The Contractor's use of any property for storage of materials, parking of trailers, employee parking, and other uses, shall be as shown on the Plans. If no area is designated, the Contractor shall submit a staging plan to the Engineer for approval prior to mobilizing to the site.

Contractors shall restrict operations to approved staging areas and parking areas. Use of unpaved areas for roadways and parking shall not be permitted unless approved in writing by the Engineer.

On-site, temporary fuel storage will not be allowed unless the method of storage is pre-approved in writing by the Engineer. All fuel storage shall be properly contained to prevent accidental spills from leaking into the surrounding environment.

B. Utilities

The Contractor shall provide telephone and sanitary facilities for his employees. Upon written approval of the Engineer, the Contractor may connect to existing plant electrical and water outlets, if not in use by the City, and if use of these utilities does not affect operation of the plant.

C. Employee Dress and Appearance

All Contractors, subcontractors, sales representatives, and their employees, shall be appropriately dressed. All workers and employees working at the plant shall wear shoes, pants, and shirts.

D. Unloading and Delivery of Materials and Equipment

The Contractor shall have adequate staff and equipment at the site to receive materials and equipment. City employees and City equipment shall not be used to assist the Contractor in receiving deliveries.

E. Use of City Facilities

Except as otherwise authorized in writing by the Engineer, the Contractor shall not use City telephones, restrooms, break rooms, or other facilities provided for City employees' comfort.

The Contractor shall not use the City's mailing address to receive mail. The City will not accept mail for the Contractor addressed to City offices or mail box.

F. Cleanup

Any waste or extra materials (including sandblast, rubble, brush, dirt, trash, sludge, packing crates, boxes, etc.), or equipment and materials replaced, will be the Contractor's responsibility for proper disposal. Disposal on-site or use of City dumpster may be allowed upon Contractor written request and upon receipt of written permission from the Engineer.

The Contractor shall do a thorough cleanup of the construction area daily.

All wire scraps, pipes, fittings, paper scraps, boxes, paint cans, scrap metal, and other scraps, shall be cleaned up daily. Metal scrap may be placed in the City's scrap metal dumpster located at the plant.

If the work is in an area of existing plant structures, the floors shall be swept clean and equipment that was soiled by the construction shall be dusted, on a daily basis.

Any damage to the existing work location, equipment, grass, landscaping, pavement, or surrounding structures, shall be restored to as good as or better condition by the Contractor as soon as the Contractor has completed work in the area of the damage, or as directed in writing by the Engineer.

G. Painting

1. All exposed interior and exterior pipes, conduits, and equipment shall be painted to protect the metal. The number of coats, mil thickness, etc., shall be as specified in the Contract Documents or Plans or as directed by the Engineer.
2. Unless otherwise specified, finished coating on new or reconstructed Work shall be painted to match the existing color coding. The existing color coding may be obtained from the Engineer upon request.
3. No lead base paint, including primer, may be used. All paint systems shall have low Volatile Organic Compounds (VOCs).
4. All coatings that come in contact with drinking water shall comply with Florida Administrative Codes and be approved by the United States Environmental Protection Agency (EPA), the NSF International, the Underwriters Laboratories Inc. (UL), or other FDEP/EPA approving agency. This approval must be in writing and a copy of the approval shall be submitted with the shop drawings.
5. Voids between beams, walls, tanks, slabs, and other steel or iron surfaces which would prohibit coating for rust protection must be sealed using an approved sealant.

H. Miscellaneous

1. The Contractor shall not assume that existing valves can be closed and drip-proof. After closing valves, the Contractor shall conduct adequate tests to determine the leakage of the valve and shall submit a procedure to the Engineer for handling this leakage during the shutdown period.
2. Coordination of the Contractor's work that requires special procedures of the plant operating personnel shall be shown on the Project Schedule and shall be reconfirmed with the Engineer 48 hours prior to the required special procedure. The Engineer reserves the right to deny or reschedule work, if such action is needed due to operating demands, personnel availability, or other factors that will impact the City's use of the facility. The Engineer may grant a time extension to the Contract period if rescheduling impacts the completion time.

1.27 FIELD OFFICE AND APPURTENANT STRUCTURES

A field office is not required for this project. If the Contractor elects to utilize a field office, the following requirements apply:

Any optional field office and appurtenant structures for use by the Contractor shall be temporary. Permanent facilities shall not be used for field offices or for storage. Structures may be new or used, but must be serviceable, adequate for the required purpose, and shall be in compliance with all applicable codes or regulations.

Any optional field office chosen by the Contractor shall not be located within temporary or permanent easements or street rights-of-way and shall be furnished, installed and maintained during the entire construction period by the Contractor at his own expense. Location of any temporary structure shall be approved by the Engineer prior to installation, providing such uses will not interfere in any manner with the construction of the Work or the operation of existing facilities. No payment for such facilities will be made by the City. The Contractor shall be responsible for all permits, leases, fees, and other costs associated with a field office.

All security requirements for such facilities shall be provided and maintained by the Contractor.

Before the Final Payment will be paid, and as directed by the Engineer, the Contractor shall clean up the area, remove any temporary facilities, finish grade, and restore the area to its original condition as determined by the Engineer.

1.28 TRUCK HAUL ROUTES

Haul routes to and from the work site shall utilize streets designated as truck routes as a first priority for the maximum possible distance. As a second priority, arterial or collector streets may be used. Residential streets shall be used for the least possible distance. The Contractor shall submit the intended truck haul routes for the Engineer's written approval prior to beginning the Work. The haul route submission(s) shall document the full length of the haul routes within the City Limits of St. Petersburg. All truck beds containing soil, aggregate, or other loose material shall be covered.

1.29 WORK IN STREETS AND HIGHWAYS

All Work within streets and highways shall be subject to the regulations and requirements of the appropriate agencies. Streets and highways are under the jurisdiction of the City of St. Petersburg, Pinellas County, and/or the Florida Department of Transportation for this Project.

Methods and materials of construction used in restoration within such streets and highways shall conform to the requirements, inspection, and approval of the duly authorized representatives of the appropriate agency having jurisdiction. Restoration Work shall include: removal and replacement of pavement, sidewalk, curb, and gutter; replacement of storm drainage facilities; excavation and backfilling; and storage of materials and equipment.

1.30 WORK ON PRIVATE PROPERTY

In the event that, in the opinion of the Contractor, obtaining a temporary construction easement outside the limits of the rights-of-way, of City-owned property, or of the easement(s) obtained by

the City is necessary or desirable, it shall be the sole responsibility of the Contractor to obtain such temporary easement from the owner of the property. If such easement is obtained by the Contractor, it shall contain provision to hold the City harmless from any operations of the Contractor within the easement limits. The Contractor shall not conduct construction operations on private property outside the limits of the rights-of-way, of City-owned property, or of the easement(s) obtained by the City unless a copy of the Temporary Construction Easement Agreement is filed with the Engineer.

Upon completion of Work in easements, the Contractor shall restore the property, including all fences or other structures disturbed by his operations, to as good as or better than the condition in which it was found at the start of the Project.

1.31 NEIGHBORHOOD NOTIFICATION

Not less than 7 days prior to the commencement of Work in the rights-of-way, the Contractor shall notify all residents and businesses along the construction route with an approved printed door hanger notice indicating the scheduled date of construction, the type of construction, and the Contractor's and Superintendent's name, address, and telephone number. The notice shall contain wording indicating that the property owners or businesses should remove from the rights-of-way any bush, flower, planting, landscaping materials, etc., that they wish to save. The door hanger text and a list of residents and businesses to which the notification has been delivered shall be compiled and submitted to the Engineer prior to the Contractor commencing Work in a particular block. After such notification, any such item remaining in the rights-of-way and requiring removal shall be removed and disposed of by the Contractor. Restoration of such items will not be required of the Contractor, except for sodding of disturbed yard and parkway areas. However, the Contractor shall exercise reasonable caution in order to avoid damaging such items where possible.

1.32 UTILITIES

Prior to construction, the Contractor shall familiarize himself with the location of all existing utilities and facilities within the Project Site and with the applicable provisions of the *Contract Standards, General Conditions "Article G-10 - Public Convenience and Safety"*.

The Contractor shall notify utility companies at least 48 hours, excluding Saturdays, Sundays, and legal holidays, prior to excavation. Utility companies shall be contacted by calling the utility notification center "Sunshine" at 1-800-432-4770. The City will furnish to the Contractor the available records of City utilities. The Contractor shall locate and mark all City utilities for his reference and for use by utility companies. The Contractor shall act as the City's agent for locating and marking City underground utilities within the Project limits, in accordance with the Florida Underground Facilities Damage Prevention and Safety Act (FS 556).

In all cases where existing utility lines may be interfered with by the Work, the Contractor shall give a minimum of 48 hours' notice to the owners of such utilities to permit them to relocate the lines prior to construction. Existing utilities will be shown on the Plans (City Atlas Maps, GIS maps and Intersection drawings) insofar as information is reasonably available. However, it will be the Contractor's responsibility to brace, preserve and protect all existing utilities whether shown on the Plans or not.

1.33 COORDINATION OF SERVICE INTERRUPTIONS

The Contractor shall provide at least 24 hours advance written notice to all customers to be affected by any work requiring disruption of access to their property or interruption of their water service or sanitary sewer service. Disruption in sanitary sewer service shall not exceed 4 hours.

1.34 SAFEGUARDING SURVEY MARKS

The Contractor shall safeguard all existing property monuments, benchmarks, and other survey marks adjacent to and within the Project limits, and shall bear the cost of re-establishing them if disturbed or destroyed.

1.35 TREE PROTECTION

Particular care shall be taken by the Contractor to protect trees during construction by erecting approved barricades to prevent unnecessary damage to trunk and roots during construction. Such barriers shall protect the area within the dripline.

The Contractor shall protect branches and roots to the maximum extent possible and prune branches and roots that interfere with construction in accordance with American Forestry Association Standards under the direction of an ISA certified arborist. The proof of registration of the certified arborist shall be provided to the Engineer. Trees that are trimmed shall be trimmed in a balanced shape around the full perimeter of the tree to obtain the best possible appearance, as directed. Roots over 2-inch diameter shall be preserved wherever possible. If root pruning is required, roots shall be cut cleanly.

Temporary soil deposits, concrete block, concrete wash, or solvents shall not be placed within the dripline. The grade within the dripline shall be preserved. If adjacent grade is altered, protective measures such as those described in the Florida State Division of Forestry "Tree Protection Manual for Builders and Developers" shall be constructed to protect the tree(s) from deleterious effects of the grade change.

The Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval from the Engineer. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.

Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment, dumping or other operations, protect such trees by placing boards, planks, or poles around them.

Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition. The Engineer will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and disposed of.

All scars made on trees by equipment, construction operations, or by the removal of limbs larger than one inch in diameter shall be coated as soon as possible with an approved tree wound

trimming. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears, under the supervision of a certified arborist. Tree trimming with axes will not be permitted. Climbing ropes shall be used where necessary for safety.

Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of a certified arborist, shall be immediately removed and replaced in kind and maintained until growth is assured. The Contractor's responsibility for removal shall include securing a tree removal permit and removal of the trunk and root ball to 24 inches below the ground. Replacement trees shall meet the requirements for tree planting in the right of way contained in the Contract and shall be guaranteed for one year. Such removal and replacement shall be entirely at the expense of the Contractor.

1.36 TREE REMOVAL, REPLACEMENT OR RELOCATION

As required by *St. Petersburg City Code "Chapter 16. Article XV. Division 5. Tree and Mangrove Protection"* a permit is required to remove any native tree or palm greater than 2-inch diameter measured 4.5 feet above the ground.

Upon receipt and review of any Plans and corresponding Field Order/Work Order(s), the Contractor shall respond in accordance with the time limits set forth under Technical Specifications Section 1.09 "Project Schedule Documentation" and Section 1.03 "Field Order / Work Order" and notify the City Inspector prior to commencing Work of any trees that may interfere with or prevent access to the Work and will require pruning or removal. The City may elect to perform this Work with its own forces, through a separate contract, or may request the Contractor to perform and coordinate any portion of this Work including the cost of any required permitting and all applicable provisions of said regulations or permit. Where requested, the Contractor shall secure such permit(s) at his own expense by contacting the City's Arborist at 727-893-4249. Payment for requested tree pruning and removal is not a part of the Pay Items in the Proposal, and the cost will be negotiated with the Contractor on an as-needed basis. Regardless of the entity performing the Work, the Contractor shall be responsible for scheduling an on-site meeting with the City Inspector, Certified Arborist who will perform or supervise the required tree Work, and the Contractor's Superintendent to review the work site, agree to needed scope, and mark which trees are to be pruned or removed. The Contractor shall not remove any trees without the approval of the Inspector.

The cost of tree removal and obtaining the tree removal permits shall be included in the cost of the appropriate associated Contract Pay Item under which the Work is to be performed. The Contractor shall remove trees as required and approved by the Engineer whether or not said trees are shown on the Plans. Trees that have to be removed, except for Australian pine, Brazilian pepper, punk, and other exempt species, shall be replaced as directed. Replacement trees shall be of native species at least 8-feet tall and at least 3-inch caliper diameter.

1.37 SALVAGED MATERIALS

The Contractor shall not proceed with demolition of existing materials or equipment without prior written approval from the Engineer for the method of disposal. All materials which are not returned to the City yard shall be disposed in an approved disposal site. The Engineer may request confirmation of the site's approval for disposal of the specific materials.

Salvaged materials shall be loaded on Contractor trucks and returned to the City's Water

Resources Complex, 1650 Third Avenue North, St. Petersburg, Florida. The City will designate the specific location at the yard for placement of salvaged materials by the Contractor.

The following materials shall be removed and returned by the Contractor:

- A. Fire hydrants, manhole frames and covers, inlet grates, and concrete catch basin covers shall be salvaged and each placed in a designated location at the City yard.
- B. Granite curb shall be salvaged, individually unloaded, and neatly placed at a designated location in the City yard.
- C. Red paving brick (free of asphalt) and sidewalk hexblock shall be palletized on City-furnished pallets and delivered to the City yard.
- D. Asphalt millings, if called for by the Engineer, shall be transported to the City yard and dumped in a pile at a designated location in the City yard.

1.38 SHOP, FIELD AND LABORATORY TESTING

The Engineer may require testing by certified personnel of certain materials to be incorporated in the Work, such as: soils density, pavement, concrete pipe and appurtenances, and welds. In the event any such testing is required by the Engineer, a detailed description will be found in these Contract Documents concerned with the specific item of Work.

Where reference is made in the FDOT-SSRBC for design mixes, tests of materials, or work performed, or where in the opinion of the Engineer, tests are required to ascertain compliance with the Specifications, the Contractor shall have such tests made by an approved testing laboratory. No additional payment will be made for these tests.

1.39 SOILS DENSITY TESTS

Soils density testing shall be performed by the City at no cost to the Contractor. Retesting of failed tests, in excess of ten percent of tests performed, shall be at the expense of the Contractor. The Contractor may have independent soils compaction tests performed, at no cost to the City; however, the results of these tests may not constitute a basis for acceptance or rejection of the Work.

All soils used in backfill shall be compacted with suitable equipment in layers as specified. Maximum density shall be defined as the oven-dried density in pounds per cubic foot of the soil at optimum moisture content as determined by the latest revision of AASHTO T180.

Prior to any backfill operation, a representative sample of the backfill material shall be taken by certified personnel, and tested in a certified laboratory as approved by the Engineer, to determine the relationship between the moisture content and density of the material when compacted in accordance with AASHTO T180.

When the densities and corresponding moisture contents for the sample material have been plotted as specified, a curve shall be produced. The moisture content corresponding to the peak of the curve shall be termed the "optimum moisture content" of the sample under the above described compaction.

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At least one representative sample, as described above, shall be taken thereafter for every significant observed change in soil characteristics or as ordered by the Engineer.

The maximum density of the representative sample as herein specified shall become the basis for determining the in-place percentage of maximum density required in the Technical Specification for the specific item of Work.

In-place density testing shall employ the use of nuclear equipment in accordance with the latest revision of AASHTO T238 Method B "Density of Soil and Soil-Aggregate in Place by Nuclear Methods."

In-place density shall be taken upon completion of each compaction layer or more often as ordered by the Engineer.

1.40 AS-BUILT RECORDS

As specified in the *Contract Standards, General Conditions "Article G-39 As-Built Drawings"* the Contractor shall:

- A. Keep and maintain one set of redline prints, As-Built Drawings, in good order and legible condition to be continuously marked-up at the job site, and shall be available for inspection by the Engineer at all times during the Project.
- B. Mark and annotate all Project conditions, locations, configurations and any other changes from the original Contract Documents, including revisions made necessary by Shop Drawings and Change Orders during the construction process.
- C. Record the horizontal and vertical locations, in the plan and profile, of all buried utilities that differ from the locations indicated or which were not indicated in the Contract Documents, and buried (or concealed) construction and utility features which are revealed during the construction period.
- D. Comply with requirements set forth in the Florida Administrative Code, Chapter 5J-17.

Project control points shall be shown on the drawings and noted in the following tabular format:

Point Number	Northing	Easting	Elevation	Description	Location Reference
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The basis of the horizontal and vertical control points and the respective datums shall also be referenced.

The final As-Built Drawings shall electronically update the original As-Bid Drawing in AutoCAD. All As-Built changes shall be made on a new layer as directed below:

<u>Layer Name</u>	<u>Layer Description</u>	<u>Color</u>
AB-SAN	All Sanitary As-Built Pipes, Structures and Text	Green
AB-STRM	All Stormwater As-Built Pipes, Structures and Text	Magenta

AB-WTR	All Water As-Built Pipes, Structures and Text	Blue
AB-REC	All Reclaimed As-Built Pipes, Structures and Text	Purple
AB	Any Additional As-Built Changes Required	Red

Prior to placing new potable water mains in service, the Contractor shall provide the Engineer intersection drawings, as specified, for the water mains.

1.41 PUMP AROUND PUMPING

A. General

The Contractor shall be responsible for the adequate and safe control of wastewater flows through the collection system where Work is being performed. Wastewater bypass pump around pumping shall consist of furnishing, installing, and maintaining all power, primary and standby pumps, storage tanks, transport, appurtenances and pump around piping required to maintain existing flows and services. Wastewater pump around pumping shall be done in such a manner as not to damage private or public property, or create a nuisance or public menace. The pumped wastewater shall be in an enclosed hose or pipe that is adequately protected from traffic, and shall be redirected into the wastewater collection system that has adequate capacity to accept the flow, or stored and transported for proper disposal. Dumping or free flow of wastewater on private property, gutters, streets, sidewalks, or into the stormwater system is prohibited. No wastewater shall be allowed to leave the approved collection system. The Contractor shall locate and configure his bypass piping to minimize any disturbance to traffic, access to adjacent property, and existing utilities, and shall obtain the approval of piping locations from the Engineer. The Contractor shall maintain existing traffic patterns and access to adjacent property by elevating or burying the bypass piping, or through the use of flow-through ramps, as approved by the Engineer. Under no circumstances can portions of the wastewater system be removed from service for periods of time in excess of that approved by the Engineer.

B. Submittals

The Contractor shall submit wastewater bypass pump around pumping and/or diversion plans for review and approval by the Engineer at least 14 days prior to the Work. In some cases, verbal confirmation of the plan and approval with the Engineer or City Inspector may be used in lieu of a written plan. The Contractor shall notify the City Inspector assigned to the project a minimum of 48 hours prior to commencing with the pump around operation. Failure to receive approval by the Engineer or City Inspector may result in the Contractor's work being halted at no cost to the City. The submittal shall include the following information:

1. Drawing/Sketch indicating the location of temporary plugs and pump around discharge lines. (the sketch shall include street names and City manhole ID numbers).
2. Capacities of pumps, prime movers, standby equipment and storage tanks.
3. Design calculations (when required) proving adequacy of pump around system and

selected equipment.

4. Corresponding traffic control plan (where applicable) in accordance with the article headed "Traffic Control" in this Section of the Technical Specifications.
5. Acoustical information of pumps to confirm compliance per the *Contract Standards, General Conditions "Article G-11 - Noise Abatement"*.
6. Emergency response plan in the event of failure of the pump around pumping system.

C. Job Conditions and Preparation

The Contractor shall be responsible to assess conditions and capacities of existing wastewater system in order to implement an acceptable pump around pumping plan at no additional cost to the City. The pump around pumping systems shall be of sufficient capacity to handle existing flows plus additional flows that may occur during periods of high tide or rainfall. The Contractor shall supply the necessary pumps, conduits, storage tanks, and other equipment to not only divert flow around the manhole or pipe section in which Work is to be performed, but also to transmit the flow into downstream wastewater system, pump stations, and/or wastewater treatment facility without surcharge or overflow. Backup of wastewater in lateral connections within the areas being rehabilitated is prohibited.

D. Wastewater Pump Around Pumping

The Contractor will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and pump around pumping systems. The Contractor shall retain full responsibility for adequately and safely pumping or transporting wastewater flow on a continuous basis. The Contractor shall take all necessary precautions including constant monitoring of pump around pumping to ensure that no wastewater backup or spill occurs.

Pumps shall be self-priming type or submersible electric, in good working order, with a working pressure gauge. All power must be supplied by the Contractor. All pumps used must be constructed to allow dry running for extended periods of time to accommodate the cyclical nature of wastewater flows. When pumping is in operation, all engines shall be equipped in a manner to keep the pump noise to a minimum and comply with the *Contract Standards, General Conditions "Article G-11 - Noise Abatement"*. Contractor shall provide stand-by pumps of adequate capacity and spare parts for pump(s) and piping shall be kept on site as required.

When pump around pumping operations are complete, piping shall be drained into the wastewater system prior to disassembly.

1.42 SUBSTANTIAL COMPLETION

The applicable items below must be accomplished in order to achieve Substantial Completion:

- A. All systems and components have been tested and are properly functioning.
- B. Utilities are connected and operating normally.
- C. Contractor has met acceptance conditions of all permits.

- D. Project is accessible for intended use and by normal traffic.
- E. Draft As-Built Drawings in an AutoCAD format provided to the City Inspector.

END OF SECTION

SECTION 2 - EXCAVATION AND BACKFILL

2.01 GENERAL

The Work in this section includes furnishing all labor, materials, tools, and equipment for excavation and backfill of roadways, sidewalks, curbs, driveways, pipelines, and structures. The Work also includes removing and disposing of leftover material, and furnishing and placing off-site fill.

Bidders shall examine the site of the Work, make their own additional soil borings and tests, and make their own determination of the character of materials and the conditions to be encountered on the Work; their Proposal shall be based upon their own investigation.

Standards referenced in this section are the latest revision of the following specifications:

AASHTO T 99	"Method of Test for Moisture-Density Relations of Soils Using a 2.5-Kg (5.5-lb) Rammer and a 305-mm (12-14) Drop"
AASHTO T 180	"Method of Test for Moisture-Density Relations of Soils Using a 4.54-Kg (10-lb) Rammer and a 457-mm (18-in) Drop"
ASTM C 33	"Specification for Concrete Aggregates"
ASTM D 1557	"Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort"
DOT-SSRBC Section 110	"Clearing and Grubbing"
DOT-SSRBC Section 120	"Excavation and Embankment"
DOT-SSRBC Section 901	"Coarse Aggregate"
DOT-SSRBC Section 902	"Fine Aggregate"
DOT-SSRBC Section 921	"Portland Cement and Blended Cement"
DOT-SSRBC Section 923	"Water for Concrete"
DOT-SSRBC Section 929	"Fly Ash, Slag, Microsilica and Other Pozzolanic Materials for Portland Cement Concrete"
FS 553.60-553.64	Florida Trench Safety Act Statute
29 C.R.R., S. 1929.650 Subpart P	OSHA Trench Excavation Safety Standard

2.02 TRENCH SAFETY

The Contractor shall be responsible for maintaining safety at each excavation. The Contractor shall adhere to the Florida Trench Safety Act (FS 553.60-553.64), OSHA trench excavation safety

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standards (29 CFR, Subpart P, 1926.650), and OSHA trench excavation shielding, sloping, or sheeting requirements. Inspections required by OSHA trench excavation safety standards shall be provided by the Contractor's "competent person," as defined by OSHA 29 CF, Subpart P, 1926. The Contractor's "competent person" shall be identified at the Project preconstruction meeting.

The Contractor certifies by submitting the bid and subsequently executing this Contract, that all trench excavation done within his control shall be accomplished in strict adherence with OSHA trench safety standards, the Florida Trench Safety Act, and public safety.

The Contractor also agrees to produce or obtain, prior to award of the subcontracts, identical certification from subcontractors who will perform trench excavation, and to retain such certification for at least three years following Final Acceptance.

The Contractor shall consider all available geotechnical information when designing the trench excavation safety system. If sufficient geotechnical information is not available, the Contractor may obtain such to support the requirements set forth above, at no additional cost to the City.

2.03 WORK IN WETLANDS, MANGROVES AND PRESERVATION AREAS

Strict adherence to all permits is required. Damage to wetlands, periodically wet areas, mangroves, and preservation areas is prohibited. Any such damage by the Contractor shall be duly rectified at no additional cost to the City and as approved by the regulatory agencies.

2.04 CLEARING AND GRUBBING

All clearing and grubbing Work shall conform to all applicable requirements of DOT-SSRBC Section 110 "Clearing and Grubbing" except as modified herein.

The Contractor shall remove only those trees and bushes necessary to complete the specified Work. Not all the trees and bushes have been located or shown on the Plans. The Contractor shall flag those trees and bushes to be removed. All other trees and bushes shall be protected as specified in Technical Specifications section headed "General," subsection headed "Tree Protection."

All roots, stumps and other debris shall be removed to a depth not less than 12 inches below a bearing surface. The disturbed surface shall be backfilled, graded, and compacted as specified.

No tree or bush shall be removed without the approval of the Engineer. The Contractor shall obtain all necessary City or County permits for each tree to be removed. Tree removal shall conform to the provisions of the Technical Specifications section headed "General," subsection headed "Tree Removal and Replacement."

2.05 ROADWAY EXCAVATION

The extent of excavation shall be as shown on the Plans or otherwise approved by the City, and shall include roadway excavation and/or filling and grading, together with the removal of trees, bushes, existing asphalt, concrete, or other material, as required to facilitate construction and restoration as directed by the City.

All excavation Work shall conform to all applicable requirements of DOT-SSRBC Section 120 except as modified herein.

2.06 TRENCH EXCAVATION

Mechanical excavation shall be terminated at least 2 inches above the proposed pipe bed and trench bottom, then shaped and compacted so as to provide uniform bearing on the barrel of the pipe. Particular care shall be taken to recess the bottom of the trench at the bell of the pipe to relieve the bell of all load.

A minimum trench width shall be maintained, allowing room for the jointing and proper compaction of the backfill. If material is encountered that is unsuitable in the opinion of the Engineer, it shall be removed by the Contractor and replaced with acceptable material compacted in place as specified. In the event the Contractor excavates below the elevation required without approval, the Contractor shall backfill with approved materials compacted to obtain a suitable trench bottom, all to the satisfaction of the Engineer and at no additional cost to the City.

The amount of open trench shall be limited so that no more than 100 feet of open trench in advance of the backfilling operation will remain at the end of that working day. All open trench shall be protected by the Contractor with barriers, warning devices, and traffic control devices, which shall be kept in the correct position, properly directed, anchored when required, and clearly visible at all times. The barriers, warning devices, and traffic control devices shall be suitably lighted at all times when vehicular traffic lights are required.

2.07 STRUCTURE EXCAVATION

Excavation shall be of the size and depth required for construction of structures and their foundations. Unsuitable material encountered shall be removed to the depth required to obtain sound foundation material or as ordered by the Engineer. Over-excavated areas shall be filled with approved backfill material compacted as specified, at no additional cost to the City.

Unsuitable existing soil shall be removed and replaced with compacted material, as approved by the Engineer and as specified in the subsection herein headed "Excavation of Unsuitable Material."

2.08 EXCAVATION OF UNSUITABLE MATERIAL

Unsuitable material shall include rock, concrete, and boulders. Unsuitable soft material shall include logs, muck, other soft soils, organic soils, and other soils as specified or as ordered by the Engineer to be unsuitable.

All excavation of unsuitable material shall conform to all applicable requirements of DOT-SSRBC Section 120 except as modified herein.

Unsuitable material encountered below or within the roadway stabilized subgrade, the trench bottom, or a structure bottom, shall be removed by the Contractor to the limits established by the Engineer and disposed of from the Work area at an approved disposal area. Unsuitable material shall be replaced with approved material and compacted as specified.

No additional payment will be made for backfill material obtained from any source and used to replace any unsuitable material except as otherwise specified. Limerock shall not be used as backfill material.

2.09 SHEETING, SHIELDING AND SLOPING

All excavations shall be properly sheeted, shielded, or sloped to the required slope to furnish safe working conditions, to prevent shifting of material, to prevent damage to structures or other Work, and to avoid delay to the Work, all in accordance with applicable safety and health regulations. The minimum sheeting and shielding for trench excavations shall meet the general trenching requirements of the Florida Trench Safety Act and OSHA standards.

The sheeting and shielding shall be of adequate strength and quantity for the purpose intended. Any sheeting extending below the level of above the top of pipeline shall be cut off as ordered by the Engineer and left in place. In addition, the Engineer may order the Contractor to cut off and leave in place any sheeting, shielding, or other approved support where required to protect construction, property, or existing facilities or utilities.

Damages resulting in the installation or removal of sheet piling shall be rectified by the Contractor at no additional cost to the City.

2.10 DEWATERING

All pipeline and appurtenances shall be laid entirely in a dry trench. All foundations and structure walls shall be constructed or installed in a dry excavation.

Before commencing any excavation at the site of the Work, the Contractor shall submit to the Engineer for review, the methods, equipment, and arrangement of facilities proposed for dewatering and disposal of water at the site and of all water entering any excavation or other part of the Work from any source whatsoever.

Water discharged from dewatering equipment shall be carried into surface drainage facilities, except water quality treatment systems, and shall not be discharged into sanitary sewer lines. The Contractor shall prevent water from puddling in streets or on private properties. The depositing of dirt in storm drains or ditches, and the staining of existing facilities, are not allowed.

Adequate standby facilities shall be provided to ensure that the excavation will be kept dry in the event of power failure or mechanical breakdown. Facilities for the removal and disposal of water shall be of sufficient capacity to keep the excavation dry under all circumstances with one-half of the facilities out of service. If well points are used, provision shall be made for removing and resetting individual well points without taking the system of which they are a part out of service.

The City reserves the right to require the Contractor to replace noisy equipment in order to keep disturbance to a minimum.

The cost of dewatering and disposal of water shall be included in the unit quantity for each appropriate item bid.

Refer to the Technical Specifications Section headed "General," subsection headed "Contaminants Containment/Disposition," for requirements concerning encountered groundwater contaminates.

2.11 BORROW MATERIAL

Any borrow excavation Work shall consist of the excavation and satisfactory utilization of material from areas provided by the Contractor when necessary material is not available from the normal

excavation or grading operations. This Work shall conform to DOT-SSRBC Section 120 except as modified herein.

If additional fill material is required, it shall be City approved material supplied and compacted by the Contractor. All compaction under roadway, alley, driveway, curb, walk, or other improved surface shall be to a density as specified. Unless otherwise directed by the City, all material not required for construction shall be removed from the premises and disposed of by the Contractor.

2.12 BEDDING MATERIAL

Where shown, ordered, or required, the Contractor shall place bedding material prior to placing pipelines, structures, or slabs. Bedding material may be either excavated approved native sand, concrete sand, gravel, or reclaimed concrete. Limerock is not allowed.

Off-site bedding material shall be sand or gravel. Sand bedding material shall be a clean concrete sand of uniform gradation between sieve sizes No. 4 and No. 50. All particles shall pass a 3/8-inch sieve and no particles shall pass a No. 100 sieve.

Gravel bedding material shall meet the requirements of ASTM C33 and shall be coarse aggregate, DOT Size No. 67 (3/4-inch to No. 4) or approved equal.

Reclaimed concrete bedding material shall be graded to meet the size requirements as specified for gravel bedding.

Bedding material, where required, shall be placed in lifts and compacted in a manner to achieve the specified density as described elsewhere.

If gravel or reclaimed concrete bedding is used, an impermeable groundwater barrier shall be placed at 100-foot intervals.

The impermeable groundwater barrier shall consist of a 10 mil sheet of polyethylene covering the full cross sectional area of the gravel, embedded 6 inches into the trench sides and bottom, and extending to the top of the bedding. The barrier shall be offset a minimum of 2 feet from any culvert or pipe joint. Ends and splice points shall be lapped a minimum of 12 inches.

2.13 STRUCTURAL SLAB BEDDING

Structural slabs for manhole bases, footings, and similar structures shall be placed on approved compacted bedding material and leveled as specified and/or as shown.

2.14 BACKFILL COMPACTION

All backfill shall be compacted as specified herein and shall meet the following minimum density as determined by the AASHTO T-180 method for backfill outside the rights-of-way and in City streets, and by the AASHTO T-99 method if in County or State rights-of-way.

AASHTO T-180 Method C or D will be used for stabilized subgrade and base compaction tests, and Method A or B will be used for backfill testing, or as directed by the Engineer or jurisdiction.

	<u>T-180</u>	<u>T-99</u>
Roadway stabilized subgrade	98%	N/A*
Roadway base	98%	N/A*

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Curb base	98%	N/A
Sidewalk and driveway base	98%	N/A
Pipe bedding	98%	100%
Pipe backfill - under pavement	98%	100%
Pipe backfill - under grass	95%	100%
Structure base slabs	100%	N/A
Structure backfill	98%	N/A

*Roadway stabilized subgrade and base material shall meet LBR requirements as specified in the Technical Specifications section headed "Roadway Construction," subsections headed "Stabilized Subgrade" and "Roadway Base."

Moisture content of backfill material shall be controlled in order that compaction occurs when the material is within +/- 2 percent of optimum as developed by the Modified Proctor moisture-density relationship set forth in ASTM D-1557. To control the moisture content, the Contractor shall mechanically rework or aerate the backfill material as necessary prior to compaction.

2.15 BACKFILLING OF TRENCH

Backfilling shall be accomplished with suitable material, and shall commence only after the pipelines have been laid and tentatively accepted by the City. The space between the pipe and the sides of the trench shall be packed full by hand-shoveled earth free from lumps or debris.

The backfill material shall be placed in 6-inch lifts and compacted, using approved tampers to the required compaction, to a point 12 inches over the top of the pipe. The remaining backfill (under areas other than roadways) shall be placed in uniform lifts not greater than 12 inches thick (or less as approved for mechanical equipment available) and tamped to the required compaction. Backfill under roadways shall be compacted in 6-inch lifts.

2.16 BACKFILLING STRUCTURES

Backfill around structures shall be of suitable job-excavated material, suitable off-site fill material, or other material approved by the Engineer. Such backfill shall extend from the bottom of the excavation or top of bedding to the bottom of pavement base course, the bottom of lawns or lawn replacement, the top of the existing ground surface, or to such other grades as may be shown or required.

The backfill shall be placed in uniform lifts not greater than 12 inches thick, and thoroughly compacted in place.

2.17 BACKFILLING UNDER ROADWAYS

Backfill placed under roadways and other paved surfaces shall be compacted in 6-inch lifts and thoroughly compacted in place, with suitable equipment as specified herein.

2.18 DISPOSING OF LEFTOVER MATERIAL

The Contractor shall bring the surface to the same level as existed prior to the excavation. All leftover material shall be hauled from the site and disposed of by the Contractor. Leftover material shall not be stored in or along rights-of-way or easements.

2.19 ADJACENT FACILITIES

The Contractor shall be responsible for the protection, removal, and replacement of all adjacent structures, utilities, trees, shrubbery, curbs, culverts, headwalls, fences, City-maintained signs, and other miscellaneous City-maintained structures encountered during the course of the Work.

2.20 TEMPORARY SUPPORTS

Temporary supports for 16-inch and larger pressure and gravity pipes shall be designed by the Contractor and submitted to the City as required by the *Contract Standards, General Conditions "Article G-35 - Shop Drawings and Submittals"*. Temporary supports that include a structural beam, or other such member(s), shall be designed, signed and sealed by a Professional Engineer.

2.21 FLOWABLE FILL

Where shown on the Plans, or where ordered by the Engineer, the Contractor shall backfill a void area or an excavation with flowable fill. Flowable fill may be shown, or ordered, to fill abandoned pipes, abandoned underground steel storage tanks, trench backfill, washout area under structural slabs or behind walls, or other similar locations.

Flowable fill shall be produced and delivered to the site. Placing of flowable fill shall be by chute, pumping, or other approved methods. Flowable fill shall be placed to the designated fill line without vibration. The Contractor shall take all necessary precautions to prevent any damage caused by hydraulic pressure of the fill during placement prior to hardening. Flowable fill shall not be used for pipe bedding and backfill in the zone from the bottom of a pipe to 12 inches above the top of pipe.

Flowable fill shall consist of materials conforming to DOT-SSRBC Sections as follows:

Cement (Type I or II)	Section 921	"Portland Cement and Blended Cement"
Fly ash (Type F)	Section 929	"Fly Ash, Slag, Microsilica and Other Pozzolanic Materials for Portland Cement Concrete"
Fine aggregate (sand)	Section 902	"Fine Aggregate"
Water	Section 923	"Water for Concrete"

The Contractor shall submit a proposed flowable fill design mix that will produce a flowable fill meeting the strength requirements specified herein, using the following materials:

	<u>Pounds per cubic yard</u>
Cement (Type I or II)	50 - 200
Fly ash (Type F)	0 - 2,000
Fine aggregate (sand)	2,500 - 3,000
Water	325 - 550

Note: 6-inch to 10-inch slump

Flowable fill material shall be proportioned to produce a 28-day compressive strength approximately as follows:

	<u>Pounds per square inch</u>
Pipe trench backfill	50 - 150

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Fill abandoned pipes or tanks	30 - 150
Under slabs, behind walls	300 - 1000

Note: Density in place 115 to 145 pounds per cubic foot.

Not more than 60 minutes shall elapse between the start of moist mixing and the placement of the flowable fill.

Flowable fill placed on slopes shall have a reduced slump with a reduction in water, and shall be able to be shaped as required.

The Contractor shall place the flowable fill in such a manner as to eliminate all cavities.

Flowable fill shall not be placed in salt water. When within a tidal area, the flowable fill shall be placed immediately after the salt water has receded.

When flowable fill is used adjacent to ductile iron pipe, the pipe shall be polyethylene encased.

END OF SECTION

SECTIONS 3 THROUGH 9 -- NOT USED

SECTION 10 - SANITARY SEWER CONSTRUCTION

10.01 GENERAL

The Work in this section includes construction of sanitary sewer gravity pipes, force mains, manholes, and appurtenances.

Sanitary Sewers are to be constructed at locations indicated on the Plans. The City reserves the right, however, to make minor changes in grade and/or alignment as the Work progresses.

All Work shall be fully completed within the established limits as outlined for the various Pay Items listed in the Proposal. It is not the intent of the City to allow additional compensation for obstructions, interferences, or similar contingencies on this Project.

All force main pipe and fittings shall be furnished and installed in accordance with the applicable requirements of the Technical Specifications sections headed "Piping Materials: Ductile Iron Pipe," "Piping Materials: PVC Pressure Pipe," "Piping Materials: Miscellaneous," and "Pressure Pipe Construction."

At the ends of the sections where adjoining pipelines have not been completed and are not ready to connect, temporary bulkheads or plugs (as specified herein) approved by the Engineer shall be installed. All such bulkheads or plugs shall be removed when they are no longer needed or when ordered by the Engineer.

All pipelines shall be tested and closed circuit television video (CCTV) inspected. Any leak or defect shall be repaired and re-televised. Tests shall be conducted in accordance with these Specifications.

PVC pipe for gravity sewers shall be tested for allowable deflection. Tests shall be conducted in accordance with the requirements of these Specifications.

Connections between dissimilar gravity pipe materials or diameters shall be made as specified herein.

Connections between pressure pipes shall be made with solid sleeves as specified herein.

The ends of all new sanitary laterals shall be marked by witness posts or protruding galvanized pipe, as directed by the Engineer. Witness posts shall be 4-inch diameter PVC pipe filled with concrete; 4 to 5 feet of the pipe shall be exposed and wrapped with green tape. The 1-inch diameter galvanized pipe shall protrude 1 inch above grade.

The following Standards are referenced in this section:

ASTM C 12	"Practice for Installing Vitrified Clay Pipe Lines"
ASTM C 76	"Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe"
ASTM C 443	"Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets"

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ASTM C 478	"Standard Specification for Precast Reinforced Concrete Manhole Sections"
ASTM C 1107	"Standard Specification for Packaged Dry, Hydraulic-Cement Grout (NonShrink)"
ASTM D 2321	"Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications"
ASTM D 3034	"Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings"
ASTM D 3753	"Standard Specification for Glass-Fiber-Reinforced Polyester Manholes@
ASTM F 477	"Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe"
ASTM F 679	"Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings"
UNI-B-6-98	"Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe" Uni-Bell Plastic Pipe Association, Dallas, Texas

10.02 DATA TO BE SUBMITTED

The Contractor shall submit shop drawings in accordance with the *Contract Standards, General Conditions "Article G-35 - Shop Drawings and Submittals"*, for the following materials:

- Piping materials
- Fittings and couplings
- Grouting rings
- Pipe-to-manhole connectors
- Precast manholes
- Fiberglass manholes
- Castings
- Wall sleeves
- Special construction methods
- Interior cementitious coating (including applicator's certification from manufacturer)

10.03 MATERIALS

All materials shall be furnished by the Contractor, unless otherwise noted on the Plans. All materials shall be new and of the best quality available. Materials not specifically specified shall confirm to applicable provisions of the DOT-SSRBC.

- A. **Piping Materials:** Sanitary sewer pipe shall either be green in color or shall be white with continuous colored green ink lettering or shall be continuously painted green along the top 1/3 of the pipe with 2-part high build epoxy-polyamide paint. All sanitary sewers shall be installed accompanied by green colored metallic identification tape laid 1 foot above the pipe, cut every 10 feet.

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1. Ductile iron pipe and fittings for force mains or gravity sewers shall conform to the Technical Specifications section headed "Piping Materials: Ductile Iron Pipe."
2. PVC gravity sewer pipe and fittings 4-inch through 15-inch, intended for non-pressure service, shall comply with ASTM D 3034, Type PSM; a dimension ratio of SDR 26 and a minimum pipe stiffness of 115 psi shall be used. Joints and gaskets shall comply with ASTM F 477. PVC fittings for use on 4-inch through 15-inch PVC pipe shall be Harco Gasketed PVC Sewer Fittings as manufactured by Harrington Corp. or approved equal.

PVC gravity sewer pipe and fittings 18-inch through 27-inch, intended for non-pressure service, shall comply with ASTM F 679, with T-1 wall thickness and a minimum pipe stiffness of 46 psi. Joints and gaskets shall comply with ASTM F 477.

3. PVC pressure pipe and fittings for force mains or gravity sewers shall conform to the Technical Specifications section headed "Piping Materials: PVC Pressure Pipe." Fittings shall be PVC or ductile iron as specified, as directed by the Engineer.
4. High Density Polyethylene (HDPE) profile wall pipe, and Corrugated High Density Polyethylene (CHDPE) pipe for gravity sewers shall conform to the Technical Specifications section headed "Piping Materials: Miscellaneous."
5. High Density Polyethylene (HDPE) pressure pipe for force mains shall conform to the Technical Specifications section headed "Piping Materials: Miscellaneous."
6. Fiberglass Reinforced Polymer Mortar Pipe (FRPMP) for micro-tunneling (18-inch and larger) and gravity sewer mains (28-inch through 48-inch) shall conform to Technical Specifications section headed "Piping Materials: Miscellaneous."

B. Other Materials

1. Castings for manholes and cleanouts shall be cast iron of the sizes, shapes, and catalog references shown on the Plans. Where no reference is made on the Plans, castings shall be equivalent in quality to those manufactured by U.S. Foundry. Unless otherwise noted, all castings shall be designed for an HS-20 truck loading. Castings shall be marked "Sanitary Sewer."
2. Concrete, reinforcing, and masonry for precast, cast-in-place, or site assembled manholes and structures shall conform to the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel."
3. Precast manholes shall be manufactured as specified herein and in accordance with the sizes and details shown on the Plans, and with the approved shop drawings.
4. Fiberglass Reinforced Polyester (FRP) manholes shall be manufactured in accordance with ASTM D 3753, the sizes and details shown on the Plans, and the approved shop drawings.

10.04 CONNECTIONS TO EXISTING SANITARY SEWERS

The Contractor shall connect new sanitary sewers to existing sanitary sewers as shown on the Plans and as specified.

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All connections to existing sanitary sewers shall be by Flex-Seal Adjustable Repair Coupling Series MR-ARC with Series 316 stainless steel shear rings as manufactured by Mission Rubber Company or approved equal. All couplings shall be centered between pipe ends and shall be tightened at both ends by Series 316 stainless steel clamps or approved equal.

The Engineer shall be notified at least two working days prior to making final connections. The time at which the connections are to be made shall be subject to approval by the Engineer.

10.05 CONSTRUCTION OPERATIONS

Pipes shall be laid in open cut, except when another method, such as jacking, augering, directional drilling, or tunneling, is shown on the Plans, specified, or ordered.

- A. No excavations shall be left open over a weekend. All pavement openings shall be completely repaired within seven days of opening.
- B. Sanitary sewers may be constructed in short tunnels to protect trees, shrubs, and existing surface or subsurface utilities and structures. Short tunnels shall be constructed to the lengths shown on the Plans, specified, or directed by the Engineer. No separate payment will be made for short tunnels.
- C. Temporary fences, where required, shall be "wood and wire fence" or other suitable fencing as approved by the Engineer.
- D. In the course of the Work, it will be necessary to install the sanitary sewer under or closely adjacent to existing culverts and other storm and water main facilities. Where so indicated on the Plans, the Contractor shall remove storm drains to permit construction of the sanitary sewer and shall then reconstruct the storm drain. Where removal and reconstruction are not indicated on the Plans, the Contractor shall protect all existing storm and water main facilities which are shown on the Plans or located in the field during the course of the Work.
- E. Sewers crossing water mains may be required to be constructed of ductile iron pipe, PVC pressure pipe, or heavy wall PVC pipe (SDR 26) as ordered by the Engineer, to conform to DEP and Pinellas County Public Health Unit requirements.

Sanitary sewers and service laterals which cross under the new water pipe with less than 18 inches clear vertical separation, or which cross over the new water pipe, shall be replaced with ductile iron pipe or PVC pressure pipe, or heavy wall PVC pipe (SDR 26) for 10 feet on both sides of the new water main, or as directed by the Engineer.

- F. All ground surfaces disturbed by the Contractor shall be restored to their original condition in conformance to City Standards and to the Technical Specifications section headed "Surface Restoration."
- G. Sanitary sewers shall not be cut or pumped around without an approved sanitary sewer pump-around plan and submittal of same, a minimum of 72 hours prior to implementation, to the Water Resources Department Dispatch, 727-893-7261. The pump-around plan shall include size of pipes and pumps, and discharge location.

10.06 LAYING AND JOINTING PIPELINES

- A. Ductile iron pipelines, PVC pressure pipelines, and HDPE pressure pipelines for force mains

shall be laid and jointed as specified in the Technical Specifications section headed "Pressure Pipe Construction." Retainer glands used for PVC force mains shall be UL listed or FM approved and shall have factory certification for pressures up to 188 psi.

- B. PVC, concrete, and FRPMP gravity pipelines shall be laid in conformance to applicable requirements of ASTM C 12 for concrete pipe, ASTM D 2321 for PVC pipe, and ASTM D 3262 and D 4161 for FRPMP.
- C. **Line and Grade:** Sewers shall be laid to exact line and grade using approved methods consistent with common practice and approved by the Engineer. All line and grade controls shall be furnished by the Contractor.
- D. **Pipe:** Before the pipe is jointed in the trench, the outside of the spigot end and the inside of the bell shall be thoroughly cleaned, wiped, and brushed out to ensure that no dirt or foreign material gets into the finished line. Each pipe shall be inspected for defects and cracks prior to being lowered into the trench. Any cracked or otherwise rejected pipe shall be immediately removed from the site. All pipeline work must be performed in the presence of the Engineer. When work is not in progress, water shall be kept out of the pipe, and the pipe shall be kept closed by means of a test plug.
- E. **Service Connections:** Service lateral connections shall conform to City Standard Details and shall be installed as indicated or as directed by the Engineer. The Contractor shall locate and record the exact position of such service lateral connections and include actual data on the As-Built Drawings to be furnished to the City.
- F. **Watertight Plugs:** Watertight plugs of an approved type shall be installed in the ends of all pipe at times when pipe laying is not in progress or as ordered to prevent any contaminated material or vermin from entering the pipe.
- G. Excavation and backfilling shall conform to the Technical Specifications, Section 2 - "Excavation and Backfill."

10.07 MANHOLE CONSTRUCTION

- A. **Brick Manholes:** Brick manholes shall be constructed in accordance with the details shown on the Plans and these Specifications. Twenty-four hours shall elapse between the pouring of the slab and the beginning of laying the brick work.
 - 1. **Base Slabs:** Bases shall be cast in place on a level, compacted trench bottom.
 - 2. **Mortar:** Brick shall be laid in mortar that has been machine mixed for a minimum of 1.5 minutes before water is added, and then mixed until a homogeneous mixture is obtained. Mortar of improper consistency and/or partly set shall not be used in the Work. The brick shall be laid with 3/8-inch nominal mortar joint, and care shall be taken to produce true and smooth alignments, particularly for the inside surfaces.
 - 3. **Brick:** Clay brick shall be as specified in the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel."
 - 4. **Exterior and Interior Brick Surface:** Exterior and interior brick surface of manholes shall be given a 3/4-inch application of cement plaster. This plaster shall be the same type mix as the mortar in which the bricks are laid, and it shall be applied in 2 applications. Any

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visible seepage through the manhole walls shall be corrected by the Contractor.

5. **Inverts:** Inverts shall be formed using poured-in-place concrete conforming to the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel" and shall have a minimum strength of 2,500 psi. Invert pipe (stub out) shall not extend more than 6 inches outside manhole walls (as measured to back of bell), and shall be grouted with the same mortar used for making mortar joints.
 6. **Exterior Epoxy Coating:** A protective coal tar epoxy coating of Carboline (formerly Kop-Coat) Bitumastic 300-M, or approved equal, shall be applied to the exterior surfaces of manholes. One coat shall be applied to the outside and shall yield a final dry film thickness of 9 mils.
 7. **Interior Cementitious Coating:** A dense and durable concrete lining of 100 percent pure fused calcium-aluminate cementitious lining of SewperCoat PG as manufactured by Kerneos Inc., shall be applied in accordance with manufacturer's recommendations, to all interior surfaces of manholes including walls, benches, flow channels, and inverts. Lining shall have a final minimum thickness of 1/2 inch.
 8. **Manhole Wall Penetrations:** New brick manholes shall have a grouting ring. New wall penetrations and repair penetrations, for connections to existing manholes, shall be core-drilled and a grouting ring shall be installed. Grouting ring shall be WS Series Waterstop Grouting Ring as manufactured by Press-Seal Gasket Corporation or Engineer approved equal. Installation shall be in accordance with manufacturer's recommendations. Non-shrink grout shall comply with ASTM C 1107. Material shall be 1107 Advantage Grout manufactured by Dayton Superior, Burke Multi-purpose Grout as manufactured by Burke Company, or approved equal.
- B. **Precast Concrete Manholes:** Precast manholes shall be constructed in accordance with the details shown on the Plans. Full shop drawing information including design, materials, fabrication details, and installation methods of the proposed precast manholes shall be submitted to the Engineer as specified.
1. **Base Slabs:** Base slabs for precast manholes 48-inch in diameter shall have a minimum thickness of 8 inches as detailed on the Plans. The diameter of the base slab shall be as detailed on the Plans. Reinforcement shall be placed with 2 inches of concrete cover over the top row of steel. Base slabs for precast manholes shall be cast with the lower manhole section and placed on a level, compacted trench bottom.
 2. **Riser Sections:** Riser sections, grade rings, and tops shall comply with ASTM C 478 with the exception that Article No. 11 shall be deleted. Base riser sections shall be provided with preformed pipe holes to fit the connectors. The tops of pipe holes shall not be within 4 inches of the bell or socket portion of the riser.
 3. **Riser Joints:** Riser joint shall conform to ASTM C 443, to the manufacturer's recommendations and as shown on the Plans. Riser shall be jointed with rubber, plastic, or preformed bituminous joint sealing compound equal to Ram-Nek as manufactured by K.T. Snyder.
 4. **Manhole Sizes:** Manhole sizes up to 10 feet in depth (invert to bottom of brick adjustment ring) shall be a minimum of 48-inch inside diameter for 18-inch diameter and smaller pipe. Manholes over 10 feet in depth shall be the specified diameter for a minimum of 6 feet

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above the manhole invert; the remaining portion may, at the Contractor's option, be reduced to 48-inch diameter. In no case shall the manhole diameter be less than that required to adequately enclose the sewer pipe.

5. **Tops:** Tops shall have a minimum opening 24 inches in diameter for pipes 18-inch and smaller and 32-inch minimum for pipes 21-inch and larger, with an 8-inch wide flange at the top. For Type I manholes, only concentric cones are acceptable.
 6. **Top Grades:** Top grades of precast manholes shall be established so that a minimum of 3, but no more than 6, courses of brick are placed under the ring and cover casting.
 7. **Inverts:** Inverts shall be formed using poured-in-place concrete conforming to the Technical Specifications section headed "Concrete, Masonry and Reinforcing Steel" and shall have a minimum strength of 2500 psi.
 8. **Drop Inlets:** Drop inlets shall be provided where directed by the Engineer or shown on the Plans, and such drop inlets shall conform to details shown on the Plans.
 9. **Exterior Epoxy Coating:** Coating shall be applied to the outside surfaces of precast manholes as specified for brick manholes.
 10. **Interior Cementitious Coating:** Coating shall be applied to the inside surfaces of precast manholes as specified for brick manholes.
 11. **Manhole Wall Penetrations:** Manhole wall penetrations for precast manholes shall be as specified for brick manholes.
 12. **Pipe-to-Manhole Connections (for New Precast):** Pipe-to-manhole connections shall be made with a flexible watertight connector such as Kwik Seal or PSX: Positive Seal as manufactured by Press-Seal Gasket Corporation, or Kor-N-Seal I connectors for pipe sizes up to 15-inch and Kor-N-Seal II connectors for pipe sizes 15-inch through 30-inch as manufactured by NPC Inc. Pipe-to-manhole connection shall be installed by the precaster for new manholes, unless specified otherwise.
- C. **Fiberglass Reinforced Polyester (FRP) Manholes:** The construction of FRP manholes shall conform to the details on the Plans. Full shop drawing information including design, materials, fabrication details, and installation methods of the proposed fiberglass manholes shall be submitted to the Engineer as specified.

FRP manhole shall be a one piece unit consisting of a watertight base and corbel section with a concentric cone, as manufactured by LF Manufacturing, Containment Solutions, or an approved equal.

A minimum wall thickness of 0.318 inch shall be used for 48-inch diameter manholes. A minimum wall thickness of 0.50 inch shall be used for manholes larger than 48-inch diameter.

All manholes shall have a U/V inhibitor that is homogeneous with the resin mixture.

All FRP manholes shall have a minimum 20 year manufacturer=s warranty against corrosion and structural defects.

All FRP manholes shall have a minimum AASHTO HS-20 axle loading.

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1. **Base Slabs:** FRP manhole base slabs shall be precast or cast-in-place concrete and shall conform to the thickness specified in the details on the Plans. Cast-in-place concrete base slab reinforcement shall be placed with 3 inches of concrete cover in accordance with the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel."

Cast-in-place base slabs for FRP manholes shall be cast in place on a level, compacted bottom.

2. **Watertight Bottom:** The FRP manhole shall have a resin fiber-reinforced bottom and a 2 and 1/2-inch-wide anti-floatation flange as a homogeneous part of the bottom section. The manhole bottom shall be a minimum 1/2-inch thick.

For FRP manhole depths greater than 10 feet, the manufacturer shall install a minimum of two 1 and 1/2-inch-deep by 3 and 1/2-inch-wide stiffening ribs. Stiffening ribs shall be completely enclosed with resin fiber-reinforcement.

3. **Anchors and Washers:** FRP manholes shall be anchored to the cast-in-place concrete base slab with 316 stainless steel Kwik Bolt II Wedge anchors and washers as manufactured by Hilti, or approved equal. The size, number of anchors, and embedment depth shall be as shown on the Plans. The anchors shall be installed a minimum of 1 and 1/2 inches from the outer edge of the anchoring flange and shall be equally spaced around the circumference of the manhole bottom.
4. **Manhole Height:** No fiberglass manhole shall have less than 4 feet clear inside height (measured from invert of bench to finished grade.)
5. **Inverts:** Inverts shall be as shown on the Plans.

A concrete invert may be formed in the field using poured-in-place concrete conforming to the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel" and shall have a minimum strength of 2,500 psi.

6. **Stub Outs:** FRP stub outs shall be installed as shown on the Plans or directed by the Engineer, in accordance with approved shop drawings.

Pipe-to-manhole connectors for new manholes shall be installed by the FRP manhole manufacturer, unless specified otherwise. Connections for 4-inch through 15-inch pipe shall be made with a Kor-N-Seal boot as manufactured by NPC Inc., or approved equal, and laminated sleeve, as shown in the details on the Plans. Connections of 18-inch and larger shall be with a Link-Seal connector as manufactured by Pipeline Seal & Insulator Inc., or approved equal, and laminated sleeve as shown on the details on the Plans.

Laminated sleeves shall be formed using resin and fiberglass of same type and grade as used in the fabrication of the fiberglass manhole. Laminated sleeves may be factory installed or field installed. Field installation shall be by a manufacturer's certified representative or a Contractor-certified person.

All holes cut into the FRP manhole shall be by core methods recommended by the manhole manufacturer. A minimum of 12-inch clear wall between cutouts shall be maintained in all directions for each cored hole.

10.08 TESTING OF SEWER PIPELINES

A. Pressure Pipelines

Pressure sanitary sewer pipelines shall be tested in accordance with the applicable requirements of the Technical Specifications section headed "Pressure Pipe Construction." Pressure sanitary sewer pipelines shall not be disinfected.

B. Gravity Pipelines

1. Gravity pipelines shall be tested for infiltration, exfiltration, deflection, or low pressure air test, at the Engineer's direction. The Contractor shall provide a closed circuit television video camera inspection, in the presence of the City (or engineer) for all sanitary sewer pipe repairs and all new sanitary sewer construction. The video tape, CD, or DVD shall include time and date, footage, and audio describing any pipe abnormality; also, a CCTV inspection log shall be provided with each completed inspection. Any sewer pipeline found to be unacceptable by the Engineer shall be corrected, repaired, or replaced as directed by the Engineer, at no additional cost to the City.
2. **Infiltration Test:** Upon completion of a section of sewer line, a test for infiltration shall be conducted as directed by the City Inspector. Dewatering of the line to be tested shall terminate at least 2 days prior to the infiltration test. The maximum infiltration allowed in a 24-hour period shall not exceed 200 gallons per inch of diameter per mile of sewer from any section between successive manholes. If the infiltration exceeds the allowable limits, the line shall be further checked and repaired by the Contractor until the infiltration requirements have been met. If any particular location indicates concentrated infiltration, such location shall be investigated and corrected regardless of the overall infiltration requirement.

Groundwater level measuring pipes shall be installed at manholes. The groundwater level shall be measured prior to testing. If the groundwater level is at least 2 feet above the highest section of the work being tested, infiltration methods of measurement shall be used. If there is insufficient groundwater head to perform infiltration testing, exfiltration tests will be made.

3. **Exfiltration Test:** If, in the opinion of the City Inspector, the position of a sewer line is above the normal groundwater table, the Engineer may direct the Contractor to perform an exfiltration test. The maximum allowable exfiltration during a 24-hour period shall not exceed 200 gallons per inch of diameter per mile of sewer from any section between successive manholes. An allowance of an additional 10 percent of gallonage shall be permitted for each additional 2 feet of head over a basic 2-foot minimum internal head.

The exfiltration test shall be performed by plugging the upstream and downstream manholes of the test section, filling the line with water, and maintaining a minimum of 2 feet head of water in the section of line being tested. The rate of exfiltration shall be calculated from the water level drop in the upstream manhole during the 24-hour test period.

4. **Low pressure air test:** At the direction of the City Inspector or Engineer, each pipeline reach may alternatively be tested with air pressure (minimum 3.5 psi, maximum 5 psi) in accordance with UNI-BELL UNI-B-6-98 "Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe." The system passes the test if the pressure drop due to

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leakage through the pipe or pipe joints is less than or equal to 0.5 psig over the time period described below.

Minimum time period for a 0.5 psig pressure drop

The time period for the test shall be calculated from UNI-B-6-98 as follows:

- T = 28.33 DK,
T = Shortest time, in seconds allowed for the air pressure to drop 0.5 psig,
K = .000419 DL, but not less than 1.0,
D = Nominal pipe diameter in inches, and
L = Length of pipe being tested in feet.

5. **Deflection Test:** Prior to final acceptance of the Project, all PVC pipelines shall be deflection tested. The Contractor or a City-approved test lab shall perform the deflection testing at the expense of the Contractor. The deflection test shall be performed a minimum of 7 days after the base has been compacted and sealed.

The PVC pipe/soil system has been designed so that the maximum installed deflection does not exceed 5 percent and 7.5 percent of the base inside diameter of the pipe as listed in the following table:

<u>Nominal Size</u> (inches)	<u>Base Inside Diameter</u> (inches)	<u>5% Deflection after 7 Days Mandrel</u> (inches)	<u>7.5% Deflection after 30 Days Mandrel</u> (inches)
ASTM D 3034 SDR-26			
8	7.488	7.11	6.93
10	9.342	8.87	8.64
12	11.102	10.55	10.27
15	13.575	12.90	12.56
ASTM F 679 TYPE T-1			
18	16.976	16.13	15.70
21	20.004	19.01	18.50
24	22.480	21.36	20.79
27	25.327	24.06	23.43
ASTM F 679 TYPE T-2			
18	17.054	16.20	15.77
21	20.098	19.09	18.59
24	22.586	21.46	20.89
27	25.446	24.17	23.54

The Contractor shall have the option of testing for 5 percent deflection after the base has been compacted and sealed for 7 days; or for 7.5 percent deflection after the base has been compacted and sealed for 30 days.

If the pipe fails the 7-day, 5 percent deflection test, the Contractor shall immediately

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conduct a 7.5 percent deflection test. If the pipe passes the 7.5 percent deflection test, the Contractor has the option of repairing that section at that time or waiting until a minimum of 30 days after the base has been compacted and sealed and then re-testing for a maximum of 7.5 percent deflection.

If the pipe fails the 7.5 percent deflection test after 7 days or at 30 days, the Contractor shall repair that section immediately.

If the Contractor performs the deflection testing rather than employing a City-approved test lab, the following shall apply:

- a. The Contractor shall furnish the mandrel, labor, materials, and equipment necessary to perform the tests as approved by the Engineer. The mandrel shall be pulled through by hand or a hand operated reel in the presence of the Engineer. Prior to performing the deflection tests, the Contractor shall submit to the Engineer certification that the 9-arm mandrels are preset as stated above. Each mandrel shall be engraved with the following:
 - Serial Number
 - Nominal Pipe Diameter
 - Either "ASTM D 3034" year, "SDR-26", or "ASTM F 679" year; and either "Type T-1" or Type T-2"
 - Percent deflection as stated above
- b. If the mandrel fails to pass any section of pipe, the Contractor shall excavate and make all repairs (section replacements) necessary to correct the excessive deflection. The Contractor shall then backfill, re-compact, reseal the permanent pavement base, and retest the line. If the mandrel fails to pass a second time, the affected section shall be replaced. Re-rounding shall not be permitted.

END OF SECTION

SECTIONS 11 THROUGH 12 -- NOT USED

SECTION 13 - SURFACE RESTORATION

13.01 GENERAL

The Work in this section includes restoring and maintaining pavements and pavement bases, curbing, sidewalks, driveways, and grass surfaces that are disturbed, damaged, or destroyed during the course of the Work under this Contract.

The quality of workmanship and materials used in the restoration shall produce a surface equal to or better than the condition before the Work began.

Prior to restoration, the Contractor shall saw cut and remove all existing pavement within 2 feet of the edge of the excavation, or within such widths as may be ordered by the Engineer.

Compaction of soil and base materials shall be tested using the AASHTO T 180 method.

Surface restoration workmanship and materials shall conform to the applicable sections of the DOT-SSRBC.

All dirt areas disturbed shall be restored with sod, unless otherwise specified.

The City reserves the right to delete any or all of the restoration work.

13.02 ROADWAY RESTORATION

Where the installation of pipe or structures occurs within an existing roadway, the limits of excavation shall be saw cut leaving a straight and square edge. The upper portion of the trench backfill shall be replaced with a compacted shell, crushed (reclaimed) concrete, or limerock base as shown on the Plans, and paved to match the surrounding surface. Replacement base material shall be the same as the existing base. Roadway restoration shall conform to the detail for "Flexible Pavement Restoration."

13.03 TEMPORARY PAVEMENT

Immediately upon completion of backfilling, the pavement surfaces damaged or destroyed shall be temporarily restored by placing a shell (DOT-SSRBC Section 913), crushed (reclaimed) concrete (DOT-SSRBC Section 204 applicable sections), or limerock (DOT-SSRBC Section 911) base on the backfilled, compacted subgrade, and an adequate temporary asphaltic patch as shown or as approved by the Engineer. Shell, crushed (reclaimed) concrete, or limerock shall be used as a base for all bituminous pavements.

Temporary work shall be maintained in a suitable and safe condition for traffic until the permanent pavement is laid or until final acceptance of the Work.

13.04 SHELL BASE

Shell base shall be constructed on the prepared subgrade to not less than 98 percent of maximum density, in accordance with the requirements of DOT-SSRBC Section 250. The minimum compacted thickness of shell base shall conform to the detail for "Flexible Pavement Restoration."

13.05 LIMEROCK BASE

Limerock base shall be constructed on the prepared subgrade to not less than 98 percent of maximum density, in accordance with the requirements of DOT-SSRBC Section 200. The minimum compacted thickness of limerock base shall conform to the detail for "Flexible Pavement Restoration."

13.06 CRUSHED (RECLAIMED) CONCRETE BASE

Crushed (reclaimed) concrete base shall be constructed on the prepared subgrade to not less than 98 percent of maximum density, in accordance with the requirements of DOT-SSRBC Section 204. The minimum compacted thickness of crushed (reclaimed) concrete base shall conform to the detail for "Flexible Pavement Restoration."

The minimum limerock bearing ratio (LBR) value shall be 150.

13.07 ASPHALTIC CONCRETE PAVEMENT

A prime coat shall be applied to the prepared base in accordance with DOT-SSRBC Section 300 prior to permanent asphaltic concrete pavement.

Unless specified elsewhere, all permanent asphaltic concrete pavement replacement shall be Type SP-1 and shall be constructed in accordance with the requirements of DOT-SSRBC Sections 320, 330, and 331. Compacted thickness shall conform to the detail for "Flexible Pavement Restoration."

13.08 BRICK PAVEMENT

Construction of brick pavement shall follow the details as shown on the Plans and City standard practice using City standard paving brick or red clay brick conforming to ASTM C 32, Grade SS with City standard dimensions.

Streets with exposed brick surface shall be restored with brick. Brick pavers removed from streets that are not to be restored with brick shall remain the property of the City of St. Petersburg. Bricks not required for restoration, even those that have been overlaid with asphalt, shall be delivered by the Contractor to the City of St. Petersburg Maintenance Storage Yard, 3rd Avenue North and 17th Street. Brick streets that are restored shall be restored to a condition of a new well-defined and contoured cross section with a surface appearance equal to or better than that which previously existed.

Bricks which are broken or damaged by the Contractor shall not be reused. Replacement bricks shall be purchased from the Maintenance Storage Yard. The Contractor shall obtain the current brick charge from the Stormwater, Pavement and Traffic Operations Department, Pavement Maintenance, phone 727-893-7260.

Brick street abutting asphalt pavement shall have a minimum 6-inch-wide flush Type "A" Header Curb.

13.09 CURB AND GUTTER

All permanent restoration of street curb, or curb and gutter, shall be of the same type and thickness as the curb, or curb and gutter, which abuts. The grade of the restored curb, or curb and gutter, shall conform to the grade of the existing adjacent curb, or curb and gutter, so that positive drainage is maintained.

13.10 CONCRETE SIDEWALK

The restoration and construction of concrete sidewalks shall conform to applicable requirements of DOT-SSRBC Section 522 and the Plans, and shall be constructed where shown on the Plans and directed by the City. Sidewalk expansion joints with bituminous filler shall be installed at a maximum of 50-foot intervals on center, and struck joints shall be spaced equidistant with walk width (joints wider than 6 feet shall be spaced as directed by the City). Where new construction is to be tied into existing facilities, the old material is to be removed back to the nearest construction joint, or sawcut to a straight line as directed by the Engineer. The soil under sidewalks and driveways shall be compacted to 98 percent of the maximum density.

New sidewalks shall be 4 inches thick. Concrete pour for walk construction shall be made only on dampened subgrade. A soft broom finish shall be given the walk surface as directed by the Engineer.

Sidewalks crossing driveways shall be constructed according to the Specifications for concrete driveways.

Curb ramps for physically handicapped shall be constructed at all locations where sidewalks cross the curb or where directed by the Engineer. Those existing sidewalks which are removed to accomplish associated work as a part of this Project shall be replaced with a curb ramp when the sidewalk crosses the curb. The cost of curb ramps shall be included in the appropriate proposal item for sidewalk restoration.

Where sidewalks are replaced, the replacement shall be the full width of the walk and the minimum length shall be 60 inches. Restoration of adjacent lawn is incidental to sidewalk replacement and no separate payment will be made therefore.

13.11 HEXAGON BLOCK SIDEWALK

The restoration and construction of hexagon block sidewalks shall conform to the details shown on the Plans and City standard practice using City standard hexagon blocks.

The soil under sidewalks and driveways shall be compacted to 98 percent of the maximum density. New hexagon block sidewalks shall be 2 inches thick.

Curb ramps for physically handicapped shall be constructed at all locations where sidewalks cross the curb, or where directed by the Engineer. Those existing sidewalks which are removed to accomplish associated work as a part of this Project shall be replaced with a curb ramp when the sidewalk crosses the curb. The cost of curb ramps shall be included in the appropriate Pay Item for sidewalk restoration.

Where sidewalks are replaced, the replacement shall be the full width of the walk. Restoration of adjacent grass is incidental to sidewalk replacement and no separate payment will be made therefore.

Hexagon block removed from a sidewalk that is not to be restored with hexagon block shall remain the property of the City of St. Petersburg. Hexagon block not required for restoration shall be delivered by the Contractor to the City of St. Petersburg Maintenance Storage Yard, 3rd Avenue North and 17th Street, St. Petersburg, Florida. Hexagon block that is broken or damaged by the Contractor shall not be reused. Replacement hexagon block may be purchased from the Maintenance Storage Yard. The Contractor shall obtain the current hexagon block charge from the

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Stormwater, Pavement and Traffic Operations Department, Pavement Maintenance, phone 727-893-7260.

13.12 DRIVEWAY AND PARKING LOT

Except as otherwise specified, all permanent restoration of base and surface of driveways, parking aprons, and sidewalks shall match the materials, thicknesses, elevations, lines, and grades of the existing construction, all to the Engineer's satisfaction. Patching of Portland cement driveway areas will not be allowed between joints or dummy joints.

For areas where streets are to be paved, or where more than 50 percent of the driveway apron is disturbed, concrete or brick driveways shall be replaced in kind. All other driveways, including shell and dirt, shall be restored with an asphalt concrete surface from the street to the property line or front of sidewalk, as directed by the Engineer.

All base compaction under driveways shall be to a minimum density of 98 percent of the maximum density.

13.13 DRIVEWAY - ASPHALT

Residential asphalt driveway restoration shall include 1-inch thick asphaltic concrete surface over 2 inches of compacted sand-asphalt hot mix base, or 5 inches of compacted limerock or shell base.

Commercial asphalt driveway restoration shall be constructed of 1-inch thick asphaltic concrete surface over 8 inches of limerock base compacted in 2 lifts.

13.14 DRIVEWAY - CONCRETE

The restoration and construction of concrete driveways shall conform to applicable requirements of DOT-SSRBC Section 522 and the Plans, and shall be constructed where shown on the Plans and directed by the Engineer.

Residential concrete driveway restoration shall be 5 inches thick and shall include placing a single layer of 6-inch by 6-inch wire mesh (WWF 6 x 6 - W1.4 x W1.4).

Commercial concrete driveways shall be 6 inches thick with a double layer of 6-inch by 6-inch wire mesh (WWF 6 x 6 - W1.4 x W1.4).

13.15 DRIVEWAY - PEAGRAVEL

Where less than 50 percent of the driveway apron is disturbed, peagravel driveways shall be restored to match the existing driveway. Peagravel driveway restoration shall include asphalt treated shell base 5 inches thick after compaction to a minimum density of 98 percent of the maximum.

13.16 DRIVEWAY - SHELL

Where less than 50 percent of the driveway apron is disturbed, shell driveways shall be restored to match the existing driveway. Shell driveway restoration shall be 5 inches thick after compaction to a minimum density of 98 percent.

13.17 GRASS

A. Seeding

Seed shall be sown as soon as practical after paving, pipeline, or other work has been completed.

Seeding where shown or ordered shall be accomplished in a manner satisfactory to the Engineer. All work and materials shall meet the applicable requirements DOT-SSRBC, Sections 570, 981, and 982. Prior to seeding, fertilizer shall be applied at a rate as recommended by the manufacturer.

The type grass seed to be sown shall be of the same variety as the grass removed or as is predominately adjacent, as approved by the Engineer. Seed sown in cooler months, which will not germinate until spring, shall be over seeded with Rye grass seed or other approved winter variety.

B. Sodding within Street Rights-of-Way

Sod shall be planted as soon as practical after paving, pipeline, or other work has been completed.

All work and materials shall meet the applicable requirements DOT-SSRBC Section 575 (Sodding).

Sodding shall be done as directed by the Engineer, using only material which, in the opinion of the Engineer, is healthy and free of weeds, and (unless specified otherwise by the Engineer) of the same variety predominating at time of removal. Sod may be St. Augustine, Bahia, or other varieties as selected by the Engineer.

Sod shall be planted within 72 hours of being cut. Only moist, green sod having a virile root system may be planted. Sod shall be cut into adjacent sod to provide a smooth surface, and "top dressed" where necessary. Sod shall be rolled or tamped after planting to provide a uniform and consistent grade.

C. Grass Maintenance

The Contractor shall properly water and otherwise maintain all seeded and sodded areas for a minimum of 60 consecutive calendar days after completion of seeding or sodding operations. After the 60 days, and upon receipt of written request from the Contractor, the Engineer will inspect the areas for acceptance by the City. Any area that is washed or eroded, fails to show a uniform stand of healthy, vigorous grassing, or does not appear to be otherwise developing satisfactorily, shall be reseeded or re-sodded and maintained until suitable for acceptance by the Engineer.

In the event that the stand of grass is found to be contaminated by weeds or other undesirable growth, the Contractor will be required to effectively eliminate such undesirable growth at his own expense.

13.18 EXPANSION JOINT MATERIAL

Expansion joint material for concrete pavement surfaces, including sidewalks and driveways, shall

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be the bituminous strip type, 1/2-inch thick, and shall conform to applicable requirements of DOT-SSRBC Section 932.

END OF SECTION

SECTIONS 14 THROUGH 19 -- NOT USED

SECTION 20 - PAY ITEM DESCRIPTIONS

20.01 INTRODUCTION

It is the intent of the City to itemize major construction associated with the Project as Pay Items in the Proposal, and specify method of measurement and payment for all listed Pay Items. As may be noted below, incidental work which may be associated with a specific Pay Item is to be included in the cost proposed by the bidding contractor for that Pay Item. The City will not allow for additional compensation beyond those Pay Items included in the Proposal. It is important therefore that all Bidders fully acquaint themselves with all Plans, Specifications, City Standard Details, and other details pertaining to the Work.

Work not shown or called out in either the Plans or the Specifications, but necessary in carrying out the intent of the Project 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. No additional compensation will be considered for this associated and necessary Work.

The Contractor shall not use contingency Pay Items without prior written approval from the Engineer.

Pay Items have a prefix to assist the City in charging the Work to the proper accounting code and to assist in describing the Scope of Work. If no Pay Item exists for Work within a prefix class for that type Work, a similar Pay Item in another prefix may be used, as approved by the Engineer.

Prefixes used are:

- G - General
- S Sanitary Sewer
- M - Miscellaneous

20.02 GENERAL – G

Work under this classification applies to Work related to other prefix classifications.

Pay Item G-1.1 Emergency Response

Payment for Emergency Response will be made for each emergency response to a location to Work on one or more related Work Orders assigned to the Contractor as described in the Technical Specification section headed "Work Orders" and authorized by the Engineer. For an Emergency Response, the Contractor and Engineer shall discuss and agree upon the particular aspects involved, and then perform the Work in accordance with the time frame so agreed upon and described in the Technical Specification section headed "Project Schedule". Payment will include all costs associated with securing current Work site, if necessary, and all preparatory Work and operations necessary to mobilize manpower, equipment, supervision, and materials to a different site at the earliest feasible date within 24 hours of notification from the Engineer.

Work covered under this pay item does not include normally issued Work Orders or changes to

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Work Orders that may be prioritized or reprioritized to be performed in the sequence so specified by the Engineer.

Pay Item G-2.1 Traffic Control

Payment for Traffic Control will be made per day for a lining location. Measurement will be for the actual number of days. Time for setup and take down will not be included. Traffic Control shall be in accordance with the requirements of DOT SSRBC Section 102. A lining location for Traffic Control shall be defined as Work to be performed between access manholes regardless of the length or number of intermediate manholes or pipe segments included. Payment shall include all materials, labor, equipment, and supplies necessary to setup, maintain, and take down the Traffic Control setup in and around a lining location, and specifically includes, but is not limited to, all signs, barricades, warning lights, markers, flagmen, restoration, and all other appurtenant work as specified to control traffic on typical four lane urban roads. This includes roadways designated by the City as Collectors and Arterials, and Pinellas County and FDOT roadways. Traffic Control for lining locations other than as described in this Pay Item is considered customary traffic control and no separate payment will be made for Traffic Control at those locations.

Payment for Traffic Control will be excluded when the Contractor is not actively pursuing the completion of the Work (including correction of deficient Work) under the various Pay Items in this Section. Variable message boards, crash cushions, barrier walls, off-duty police, striping, and ramps are not included in the Work under this Pay Item.

20.03 SANITARY SEWER – S

Pay Items S-1.1	Sewer Main Cleaning and CCTV Inspection - 8" Diameter and Less
S-1.2	Sewer Main Cleaning and CCTV Inspection - 10" to 12" Diameter
S-1.3	Sewer Main Cleaning and CCTV Inspection - 14" to 18" Diameter
S-1.4	Sewer Main Cleaning and CCTV Inspection - 20" to 27" Diameter
S-1.5	Sewer Main Cleaning and CCTV Inspection - 30" to 48" Diameter

Payment for Sewer Main Cleaning and CCTV Inspection will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for; full segment CCTV inspection including any reverse setups where necessary dictated by field conditions; CCTV inspection data, video and log; normal cleaning which includes, but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Routine normal cleaning and pre/post-CCTV inspection required as part of any CIPP lining work is not applicable to this Pay Item. This Pay Item only pertains to CCTV inspections/cleaning ordered by the City independent of issued CIPP lining work, or issued CIPP lining pre-inspection work that results in the documentation of defects/conditions that require corrective action before CIPP lining pre-CCTV inspection work can proceed. Separate Pay Items are provided for Specialty Cleaning under Pay Items S-3.1 through S-3.5, and for routine normal cleaning and pre/post-CCTV inspection associated with CIPP work under Pay Items S-11.1 through S-11.12.

Pay Item S-2 Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection

Payment for Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection will be made per each service lateral inspected only in conjunction with Work under Pay Items S-1.1 through S-1.5, regardless of depth or overall length. Measurement will be for each service lateral inspected by approved lateral CCTV equipment. Payment shall include all materials, labor, equipment, and supplies necessary for; full lateral CCTV inspection from the main including any reverse setups (from cleanout to the main, where clean-out exists) where necessary dictated by field conditions; locating the lateral and placing a City approved marker over top of the lateral at the property line and any alignment changes; CCTV inspection data, video and log; transfer of inspection information (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; normal cleaning which includes, but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No payment will be made for inspection of laterals where the lateral termination point can be seen clearly from the mainline inspection or which does not require launching of the lateral inspection camera from the main or insertion from the top down via a City cleanout.

Pay Items S-3.1 Specialty Cleaning – 8” Diameter and Less
S-3.2 Specialty Cleaning – 10” to 12” Diameter
S-3.3 Specialty Cleaning – 14” to 18” Diameter
S-3.4 Specialty Cleaning – 20” to 27” Diameter
S-3.5 Specialty Cleaning – 30” Diameter and Greater

Payment for Specialty Cleaning will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Measurement will be based on a minimum of 50 linear feet of pipe, or the actual length of the Specialty Cleaning performed, but not necessarily for the entire pipe segment length. Specialty Cleaning of only joints within a pipe segment, or portion thereof, shall count as 2.5 feet of equivalent pipe length (For Example: 400 feet of 8” pipe with 5 ft joints, clean all joints = 80 joints x 2.5 ft = 200 feet of specialty cleaning). Equivalent joint length shall not be counted in addition to the length of a pipe segment, or portion thereof, where continuous Specialty Cleaning has been performed. Payment shall include all materials, labor, equipment, and supplies necessary for Specialty Cleaning of wastewater pipe, and specifically includes, but is not limited to; the complete removal and disposal of all accumulated debris within the pipe including grease, roots, joint sealant, tuberculation, and other adherent deposits through the use of special equipment; restoration; and all other appurtenant work as specified. Specialty Cleaning is in addition to Normal Cleaning which is covered under Pay Items S-1.1 through S-1.5 or under Pay Items S-11.1 through S-11.12 depending on the nature of the work. Payment also includes mobilization, demobilization, and customary traffic control.

Pay Items S-4.1 Chemical Sealing of Host Pipe – 10” Diameter and Less
S-4.2 Chemical Sealing of Host Pipe – 12” to 15” Diameter
S-4.3 Chemical Sealing of Host Pipe – 18” to 24” Diameter
S-4.4 Chemical Sealing of Host Pipe – 27” Diameter and Greater

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Payment for Chemical Sealing of Host Pipe will be made per each host pipe for the applicable pipe diameters listed in the Proposal, regardless of depth, overall length, or the number of infiltration points sealed. Measurement will be for a host pipe between manholes. Payment shall include all materials, labor, equipment and supplies necessary for the Chemical Sealing of Host Pipe in conjunction with/prior to CIPP liner installation, and specifically includes, but is not limited to; sealing excessive infiltration at pipe joints and other defects; controlling the flow of wastewater with the use of temporary plugs; disposal of debris; post-rehabilitation CCTV inspection video and log; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control. A separate Pay Item S-5 is provided Chemical Sealing - Grout material.

Pay Item S-5 Chemical Sealing – Grout

Payment for Chemical Sealing – Grout will be made per gallon. This Pay item is applicable only in conjunction with Pay Items S-4.1 through S-4.4. Payment shall include all materials, labor, equipment and supplies for chemically sealing excessive infiltration at pipe joints and other defects at specified locations for Chemical Sealing of Host Pipe prior to CIPP liner installation.

Pay Item S-6 Additional Access Cost

Payment for Additional Access Cost will be made per each access location. Measurement will be for a liner installation where both the upstream and downstream manhole are not readily accessible by standard equipment, e.g., when located in rear easements. Payment shall include all additional labor, equipment, materials and supplies to complete the CIPP Liner installation in locations with limited access. The Contractor shall attempt to schedule and stage the Work to permit the lining of multiple, contiguous pipe segments from an accessible manhole where feasible. The costs associated with removal/replacement of trees, shrubs, sheds, landscaping, etc. as necessary to access the Work locations are not included in the Pay Items, and these costs will be negotiated with the Contractor as required to complete the Work.

Pay Item S-7 Chemical Sealing Service Lateral Connections

Payment for Seal Service Lateral Connections will be made per each service regardless of the connection diameter or host pipe diameter, and regardless of depth or overall length of the host pipe. Payment shall include all materials, labor, equipment, and supplies necessary for grouting the annular space between the liner and host pipe at the service lateral connection and 18-inches of the service lateral connection at the main; controlling the flow of wastewater with the use of temporary plugs, post-rehabilitation CCTV inspection video and log; disposal of debris; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

This is for standalone Work ordered and not in conjunction with CIPP lining requirements. There is a separate pay item for both reinstating and chemical sealing of laterals in conjunction with CIPP main lining work under Pay Item S-22, Service Reconnection.

20.04 SANITARY SEWER – S-II – Group II (CIPP Main Lining)

Pay Items S-11.1	CIPP Main Liner 8” Diameter – 6.0 mm Thickness
S-11.2	CIPP Main Liner 10” Diameter – 6.0 mm Thickness
S-11.3	CIPP Main Liner 12” Diameter – 6.0 mm Thickness

S-11.4	CIPP Main Liner 15" Diameter – 7.5 mm Thickness
S-11.5	CIPP Main Liner 18" Diameter – 9.0 mm Thickness
S-11.6	CIPP Main Liner 21" Diameter – 9.0 mm Thickness
S-11.7	CIPP Main Liner 24" Diameter – 10.5 mm Thickness
S-11.8	CIPP Main Liner 27" Diameter – 10.5 mm Thickness
S-11.9	CIPP Main Liner 30" Diameter – 12.0 mm Thickness
S-11.10	CIPP Main Liner 36" Diameter – 12.0 mm Thickness
S-11.11	CIPP Main Liner 42" Diameter – 13.5 mm Thickness
S-11.12	CIPP Main Liner 48" Diameter – 15.0 mm Thickness

Payment for the installation of CIPP Main Liner will be made per linear foot for the applicable pipe diameters and minimum thickness listed in the Proposal, regardless of the depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for the CIPP Main Liner installation, and specifically includes, but is not limited to; normal cleaning which includes but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; post-cleaning/pre-rehabilitation CCTV inspection data, video and log; liner installation; liner sampling and storage of samples for testing; sealing liner connections at manholes; matching existing manhole lining to the CIPP liner; matching existing flow channels and surfacing to the liner to minimize turbulence; cleaning, removal and disposal of all sand, rubble, deposits, and other accumulated debris after liner installation; post-rehabilitation CCTV inspection data video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Separate Pay Items are provided for Specialty Cleaning.

Pay Items S-12.1	CIPP Main Liner 8" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.2	CIPP Main Liner 10" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.3	CIPP Main Liner 12" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.4	CIPP Main Liner 15" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.5	CIPP Main Liner 18" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.6	CIPP Main Liner 21" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.7	CIPP Main Liner 24" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.8	CIPP Main Liner 27" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.9	CIPP Main Liner 30" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.10	CIPP Main Liner 36" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.11	CIPP Main Liner 42" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.12	CIPP Main Liner 48" Diameter Thickness Variance $\pm$ 1.5 mm

Payment for CIPP Main Liner Thickness Variance will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Liner thickness may be varied due to field conditions requiring a change in the specified minimum thickness. The per linear foot price for CIPP Main Liner Thickness Variance will be added to, or deducted from, the per linear foot price of the Main Liner for the applicable pipe diameter listed in Pay Items S-11.1 through S-11.12. The Main Liner per linear foot price will be adjusted for each 1.5 mm thickness variance increment. Liner thickness shall be in accordance with Technical Specification Section headed "Cured-In-Place-Pipe (CIPP) Liners" unless otherwise approved by the Engineer in writing.

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Pay Items S-13.1	CIPP Main Pre-Liner 8" Diameter
S-13.2	CIPP Main Pre-Liner 10" to 12" Diameter
S-13.3	CIPP Main Pre-Liner 15" to 18" Diameter
S-13.4	CIPP Main Pre-Liner 21" to 27" Diameter
S-13.5	CIPP Main Pre-Liner 30" to 36" Diameter
S-13.6	CIPP Main Pre-Liner 42" to 48" Diameter

Payment for the installation of CIPP Main Pre-Liner will be made per linear foot for the applicable pipe diameters and minimum thickness listed in the Proposal, regardless of the depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for the CIPP Main Pre-Liner installation, and specifically includes, but is not limited to; normal cleaning which includes but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; post-cleaning/ pre-rehabilitation CCTV inspection data, video and log; liner installation; liner sampling and storage of samples for testing; sealing liner connections at manholes; cleaning, removal and disposal of all sand, rubble, deposits, and other accumulated debris after liner installation; post-rehabilitation CCTV inspection data video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Pay Items S-14.1	Wastewater Bypass Pump-Around Setup – 8" Diameter and Less
S-14.2	Wastewater Bypass Pump-Around Setup – 10" to 12" Diameter
S-14.3	Wastewater Bypass Pump-Around Setup – 14" to 21" Diameter
S-14.4	Wastewater Bypass Pump-Around Setup – 22" to 30" Diameter
S-14.5	Wastewater Bypass Pump-Around Setup – 32" to 48" Diameter

Payment for Wastewater Bypass Pump-Around Setup will be made per each setup for the applicable pipe diameters listed in the Proposal. Measurement will be for each setup regardless of the length of pump-around or number of pipe segments included. Payment shall include all materials, labor, equipment and supplies necessary for the Wastewater Bypass Pump-Around Setup, and specifically includes, but is not limited to; pumping and backup equipment; alarm systems; fittings, connectors, adapters, temporary piping; excavation; pipe supports; flow through ramps; restoration; and all other appurtenant work as specified in accordance with the Technical Specifications Section headed "General" to set up and take down the Wastewater Bypass Pump-Around system. Payment also includes mobilization, demobilization, and customary traffic control.

Wastewater Bypass Pump-Around shall be defined as the removal of wastewater from the wastewater collection system, pumping it around the upstream manhole and pipe segment(s), and returning it to the wastewater collection system downstream of the pipe segment(s) being lined. A separate Pay Item is provided for Wastewater Bypass Pump-Around Operation.

Pay Items S-15.1	Wastewater Bypass Pump-Around Operation – 8" Diameter and Less
S-15.2	Wastewater Bypass Pump-Around Operation – 10" to 12" Diameter
S-15.3	Wastewater Bypass Pump-Around Operation – 14" to 21" Diameter
S-15.4	Wastewater Bypass Pump-Around Operation – 22" to 30" Diameter
S-15.5	Wastewater Bypass Pump-Around Operation – 32" to 48" Diameter

Payment for Wastewater Bypass Pump-Around Operation will be made per day for the applicable pipe diameters listed in the Proposal. Measurement will be for the actual number of days. Time for setup and take down will not be included. Payment shall include all materials, labor, equipment

and supplies necessary for the Wastewater Bypass Pump-Around Operation. Payment for Wastewater Bypass Pump-Around Operation will be excluded when the Contractor is not actively pursuing the completion of the Work, including correction of deficient Work. Payment for Normal Cleaning will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for Normal Cleaning, and specifically includes, but is not limited to; the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Pay Item S-20 Removal & Sealing of Protruding Service Connections

Payment for Removal & Sealing of Protruding Service Connections will be made per each service regardless of the connection diameter or host pipe diameter, and regardless of depth or overall length of the host pipe. Payment shall include all materials, labor, equipment and supplies necessary for the Removal & Sealing of Protruding Service Connections, and specifically includes, but is not limited to; removing the protruding service lateral connection by internal cutting or other remote methods; grouting the main/ lateral connection and 18-inches of the service lateral connection at the main; disposal of debris; post-rehabilitation CCTV inspection video and log; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

No separate payment will be made for Traffic Control and Wastewater Bypass Pump-Around when associated with installation of CIPP liners under this Contract.

Pay Item S-22 Service Reconnection

Payment for Service Reconnection will be made per each service regardless of the connection diameter or host pipe diameter, and regardless of depth or overall length of the host pipe. Payment shall include all materials, labor, equipment, and supplies necessary for the service reconnection, and specifically includes, but is not limited to; reconnecting service lateral by internal cutting or other remote methods; grouting the annular space between the liner and host pipe at the service lateral connection and 18-inches of the service lateral connection at the main; post-rehabilitation CCTV inspection video and log; disposal of debris; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and traffic control. No additional payment will be made for service reconnections made by excavation.

Pay Item S-23 CIPP Liner – Material Testing

Payment for CIPP Liner Material Testing will be made per each test. Measurement will be for a set of tests completed for a liner installation and accepted by the Engineer. Payment shall include all materials, labor, equipment, supplies, and expenses necessary for CIPP Liner Testing, and specifically includes, but is not limited to; preparing samples; coordinating with the Independent Laboratory; submitting the results to the Engineer; and all other appurtenant work as specified. The cost to obtain and store samples for testing, and any retesting of samples is not included in this Pay Item.

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Pay Items S-24.1	CIPP Liner Testing - FELL Testing - 8" to 12" Diameter
S-24.2	CIPP Liner Testing - FELL Testing - 14" to 21" Diameter
S-24.3	CIPP Liner Testing - FELL Testing - 22" to 30" Diameter
S-24.4	CIPP Liner Testing - FELL Testing - 32" to 48" Diameter

Payment for CIPP Liner – FELL Testing will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of the depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, supplies, and expenses necessary for FELL (Focused Electrode Leak Location) Testing of post CIPP liner installations, in accordance with Electro Scan Inc's, (the equipment manufacturer) specifications, ASTM F2550-18, ASTM F1216, Section 8.2, and specifically includes, but is not limited to; transfer of test results (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; all mobilization, demobilization, and traffic control necessary to perform the work. Only Contractors licensed and certified by the equipment manufacturer shall be allowed to perform the Work.

20.04 SANITARY SEWER – S-III – Group III (CIPP Lateral Lining)

Pay Item S-24 Initial Service Lateral CCTV From Main

Payment for Initial Service Lateral CCTV From Main will be made per each lateral. Measurement will be for each lateral regardless of length, and shall include the entire City owned portion, from the mainline to the cleanout, property line or point where inspection equipment cannot pass due to pipe conditions. Payment shall include all materials, labor, equipment and supplies necessary for Locating, Cleaning & CCTV Inspection of Laterals as required or as ordered by the Engineer, and specifically includes, but is not limited to, locating the lateral and placing a City approved marker over top of the lateral at the property line and any alignment changes; post-cleaning/ pre-rehabilitation CCTV inspection of the lateral from the main pipe to the termination point of the public lateral or to the property line using specialty equipment from within the main pipe; removal and disposal of all sand, rubble, deposits, and other accumulated debris; CCTV inspection database, video and log; transfer of inspection information (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; restoration, and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

Pay Item S-25 Initial Service Lateral CCTV Inspection From Clean Out

Payment for Initial Service Lateral CCTV Inspection From Clean Out will be made per each lateral. Measurement will be for each lateral regardless of length, and shall include the entire City owned portion, from the cleanout to the mainline, or point where inspection equipment cannot pass due to pipe conditions. Payment shall include all materials, labor, equipment and supplies necessary for Locating, and CCTV Inspection of Laterals as required or as ordered by the Engineer, and specifically includes, but is not limited to, locating the lateral and placing a City approved marker over top of the lateral at the property line and any alignment changes; pre-rehabilitation CCTV inspection of the lateral from the cleanout to the mainline; CCTV inspection database, video and log; transfer of inspection information (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; restoration, and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

Pay Item S-26 CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF

Payment for CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF will be made per each lateral liner installed. Measurement will be actual installed liner length along the lateral pipe from the wall of the mainline pipe towards the cleanout or property line / easement line, for up to the initial 15 linear feet for a standard lateral wye or tee configuration lateral at the main. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-27 CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral

Payment for CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral will be made per each lateral liner installed for this configuration. Measurement will be actual installed liner length along the vertical stack plus horizontal lateral pipe from the wall of the mainline pipe towards the cleanout or property line / easement line, for up to the initial 15 linear feet for the vertical stack and connecting lateral. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-28 CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral

Payment for CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral will be made per each lateral liner installed for this configuration. Measurement will be actual installed liner length along the vertical stack plus each horizontal lateral pipe from the wall of the mainline pipe towards the cleanouts or property lines / easement lines, for up to the initial 15 linear feet for the vertical stack and connecting laterals. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner

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installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-29 CIPP Lateral Lining, Up To 15 LF (From Access Structure)

Payment for CIPP Lateral Lining, Up To 15 LF (From Access Structure) will be made per each lateral liner installed from a connecting access structure. Measurement will be actual installed liner length along the lateral pipe from the wall of the access point towards the cleanout or property line / easement line, for up to the initial 15 linear feet. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-30 CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29)

Payment for CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29) will be made per linear foot of liner installed beyond 15 feet. Measurement will be actual installed liner length along the lateral pipe in excess of the initial 15 linear feet installed under Pay Items S-26 to S-29.

Pay Item S-31 Replacement or Installation of Cleanouts – Not in Bulk

Payment for replacement or installation of cleanouts will be made per each cleanout replaced or installed up to (6) feet deep. Payment shall include all customary traffic control, mobilization, demobilization, excavation, backfilling, compacting, materials, labor, equipment, supplies, cleanup, and testing required for furnishing and installing new cleanouts in accordance with City Standard Details and up to (5) feet of public lateral piping downstream from the Right-of-Way or Easement boundary where City ownership starts. Work issued and payment under this Pay Item will include one or more cleanouts installed at various locations as needed.

Separate Pay Items are provided for surface restoration (Pay Items S-35 through S-38), and dewatering if required in conjunction with clean-out installation (Pay Item S-33).

Pay Item S-32 Replacement or Installation of Cleanouts - Bulk Installation (10 or more within localized area)

Payment for replacement or installation of cleanouts will be made per each cleanout replaced or installed up to (6) feet deep. Payment shall include all customary traffic control, mobilization, demobilization, excavation, backfilling, compacting, materials, labor, equipment, supplies, cleanup, and testing required for furnishing and installing new cleanouts in accordance with City Standard Details and up to (5) feet of public lateral piping downstream from the Right-of-Way or Easement boundary where City ownership starts. Work issued and payment under this Pay Item will include a minimum of at least (10) cleanouts within a contiguous or clustered localized area of a few blocks distance.

Separate Pay Items are provided for surface restoration (Pay Items S-35 through S-38), and dewatering if required in conjunction with clean-out installation (Pay Item S-33).

Pay Item S-33 Replacement or Installation of Cleanouts – Targeted Area – Dewatering

Payment for replacement or installation of cleanouts - targeted area - dewatering will be made per each dewatering system employed to complete Pay Items S-31 and S-32. Payment shall include all labor, equipment, and materials required for set up and operation of dewatering pumping equipment by well point or open sump methods. The well point dewatering system shall stabilize the trench bottom and remain in operation until backfilling and compacting operations are complete.

This Pay item is only applicable in conjunction with replacement or installation of cleanouts in targeted areas (Pay Items S-31 and S-32).

Pay Item S-35 Clean-Out Restoration in Grass/Mulch Area

Payment for Clean-Out Restoration in Grass/Mulch Area will be per each clean-out installed in grass or mulch area under Pay Items S-31 and S-32. Payment shall include furnishing all labor and materials to replace the lawn/mulch area, including rolling sod, erosion protection, and watering a minimum of (14) days or until final acceptance by the Engineer. Type of lawn and mulch shall match existing.

Pay Item S-36 Clean-Out Restoration in Asphalt Area

Payment for Clean-Out Restoration in Asphalt Area will be made per each per each clean-out installed in asphalt area in conjunction with work under Pay Items S-31 and S-32. Payment shall include furnishing all labor and materials for saw cutting, removal, and disposal of the old surface and placing asphaltic concrete on a prepared base in accordance to the City's Standard Details and Technical Specifications for flexible pavement restoration. All tie-in elevations shall match existing.

Pay Item S-37 Clean-Out Restoration in Concrete Driveway

Payment for Clean-Out Restoration in Concrete Driveway will be made per each driveway restored in conjunction with work under Pay Items S-31 and S-32. Each restoration will cover a driveway/walkway removed/replaced for an area of up to 80 square feet (8' x 10'). Any area

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above or below this threshold shall be quantified by half increments (Example 1.5 = up to 120 sq ft of concrete placement). Payment shall include furnishing all labor and materials for saw cutting, removal, and disposal of the old driveway/walkway where directed, and constructing the new driveway base and top course in accordance to the City's Standard Details and Technical Specifications for driveway restoration.

Pay Item S-38 Clean-Out Restoration in Paver Driveway

Payment for Clean-Out Restoration in Paver Driveway will be made per each per each clean-out installed in a paver driveway in conjunction with work under Pay Items S-31 and S-32. Payment shall include furnishing all labor and materials for removal, storing, protecting and reinstalling the existing paver surface on a prepared base in accordance to the City's Standard Details and Technical Specifications for driveway restoration. All tie-in elevations shall match existing.

20.04 MISCELLANEOUS - M

The Pay Item(s) described under this classification of Work will be full compensation for all labor, equipment, material, and services necessary to construct or install items, structures, and other miscellaneous Work complete which are required of the Project.

Pay Item M-13 Allowance for Contract Amendment

The proposal includes an allowance for various extra work contingencies. Any amount of extra work and/or alterations to the proposed Work charged to the allowance shall be fully documented and authorized by the Engineer as follows.

- A. The Contractor shall include in the Contract Total Price the allowance so named in the Proposal Form.
- B. The Contractor shall not proceed on any additional Work to be covered by the allowance until authorized in writing by the Engineer.
- C. The Contractor shall cause the Work so covered to be done by such subcontractors or suppliers, and for such sum within the limit of the allowance as authorized by the Engineer.
- D. Prior to final payment, an appropriate change order will be issued as recommended by the Engineer to reflect actual amounts due to the Contractor on account of Work covered by the allowance, and the Contract Total Price shall be correspondingly adjusted.
- E. The allowance shall not be used for incidental work shown on the Plans or specified in the Contract Documents, or for other work required to render the Project complete.

END OF SECTION

SECTION 21 - CURED-IN-PLACE-PIPE (CIPP) LINERS

21.01 GENERAL

The Work in this section includes furnishing and installing cured-in-place pipe (CIPP) liners. Main Liners are typically installed in wastewater gravity mains between two adjacent manholes or access structures, for the various nominal host pipe diameters and the liner thicknesses listed in the Proposal.

The Contractor shall furnish all materials, labor, equipment, and services necessary for liner installation including, but not limited to: traffic control, wastewater bypass pump around and/ or diversion, cleaning and closed circuit television (CCTV) video inspection of the pipe segment to be lined, Main Liner construction, service lateral reconnection, final CCTV video inspection, testing of the CIPP liner, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

21.02 GOVERNING STANDARDS

The following references are part of this Specification. In case of conflict between the requirements of this Specification and those of the listed documents, the requirements of this Specification shall prevail. The latest edition of the following references shall be used:

<u>Reference</u>	<u>Title</u>
ASTM D543	Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents
ASTM D790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D903	Standard Test Method for Peel or Striping Strength of Adhesive Bonds
ASTM D1600	Standard Terminology for Abbreviated Terms Relating to Plastics
ASTM D2990	Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep Rupture of Plastics
ASTM D3839	Standard Practice for Underground Installation of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
ASTM D5813	Standard Specification for Cured-In-Place Thermosetting Resin Sewer Piping Systems
ASTM F412	Standard Terminology Relating to Plastic Piping Systems
ASTM F1216	Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of Resin-Impregnated Tube

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ASTM F1743	Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-In-Place Installation of Cured-In-Place Thermosetting Resin Pipe
ASTM 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)
ASTM F2304	Standard Practice for Sealing of Sewers Using Chemical Grouting
ASTM F2454	Standard Practice for Sealing Lateral Connections and lines from the mainline Sewer Systems by the Lateral Packer Method, Using Chemical Grouting
ASTM F2550-18	Locating Leaks in Sewer Pipes by Measuring Variation of Electric Current flow through the Pipe Wall

21.03 QUALIFICATIONS

The Contractor's qualifications are addressed in item 12 of the Engineering Project Questionnaire. Additionally, the Contractor shall be certified and/ or licensed by the liner manufacturer(s) as an approved installer for the products referenced in this specification. The CIPP Main Liner Manufacturer/ Assembler shall have supplied a minimum of 500,000 linear feet of successful wastewater collection system installations in North America of the product to be furnished for this Project. The Contractor shall provide a list of installation projects including the project name, contact information, and year installed as required by the Engineer.

21.04 PRODUCTS

A. All products used shall conform to these Specifications.

1. Lateral Liners shall consist of a factory assembled one-piece CIPP liner that provides a resin impregnated full circular wrap in the main at the service connection and a verifiable non-leaking connection at the junction between the main and lateral pipe. The Lateral Liner shall be suitable for both wye or tee connections. The connecting end of the lateral tube shall be shaped to match the aperture and curvature of the main tube. The lateral tube and main tube shall be sealed by use of a flexible cured adhesive/sealant. No devices other than the resin impregnated full circular wrap at the main will be permitted to affect the connection between the main and lateral pipe. The length of the full circular wrap material inside the main shall be at least 12-inches beyond the circular edge of the lateral pipe opening, and of a continuous cross section. The thickness of the liner within the main and lateral pipe shall be designed for thickness as specified in this Section. Subject to these Specifications, the following products and Manufacturers or Assemblers are acceptable: "Service Connection Seal" by BLD Services, LLC and "T-Liner" by LMK Enterprises. No other products will be accepted.
2. Chemical grout designed for injection shall be: AV-100 chemical grout as manufactured by Avanti International, or approved equal.
3. All products used shall conform to the City of St. Petersburg Water Resources Department's most recent Approved Product List at the time of bidding. Where there are conflicts, the Technical Specifications shall prevail.

21.05 WARRANTY

- A. The Contractor shall warrant each lined pipe segment against any defects which will affect the integrity, quality or strength of the product such as materials, surface preparation, lining application, and workmanship for a period of 2 years from the date of final acceptance of the Work. The Contractor shall, within 1 month of written notice thereof, propose an acceptable method and repair any defects that may develop during the warranty period in a manner acceptable to the Engineer and at no cost to the City. Defects specifically include, but are not limited to, evidence of visible leakage of groundwater through/ around the CIPP liner; foreign inclusions, dry spots, or delamination of any portion of the CIPP liner as visible from CCTV video inspection; and wrinkles or separation of any part of the CIPP liner from the host pipe to the extent that the installed CIPP liner inside diameter is 95 percent or less than the design inside diameter of the CIPP liner. No wrinkles in the CIPP liner will be allowed within 4 feet of liner terminations at manholes.
- B. The Contractor shall warrant and save harmless the City and Engineer against claims for patent infringement and any loss thereof.

21.06 SUBMITTALS

- A. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
1. Details on all lining materials and resins.
 2. Name of resin supplier and liner material supplier.
 3. Certification that the Contractor is licensed or approved by the manufacturer(s) to install the product(s) referenced in this Specification.
 4. Manufacturer's or Assembler's certification that the liner materials are in compliance with these Specifications, and the codes and standards referenced herein.
 5. Manufacturer's or Assembler's guidelines for storage procedures and temperature control, handling and inserting the liner, curing requirements and details, service connection methods, and trimming and finishing.
 6. Manufacturer's or Assembler's guidelines for factory and/ or field (whichever applies) wet out procedures including: volume of resin per unit of liner, roller gap setting, mixing ratios and procedures for resin and catalyst/ hardener, shelf life of resin, pot life of resin, and required wet out procedure to ensure full saturation.
 7. Manufacturer's or Assembler's requirements and procedures for minimum and maximum pressures, temperatures, and time durations to be used during liner inversion, curing, and cool down, and for relieving static head after the liner is cured.
 8. Contractor's procedures, testing, and details of all component materials required for sealing CIPP Liners from groundwater infiltration/ migration at manholes, lateral connections and lateral liner termination points: including hydrophilic rubber seals or gaskets, grout or pressure grouting.
 9. The Contractor shall provide field measurements and liner sizing calculations, signed and sealed by a professional engineer registered in the State of Florida, that demonstrate the liner wall thickness design for each pipe segment in accordance with

the structural requirement contained in this Specification, and that the liner has been properly undersized to avoid the creation of wrinkles or folds. The liner wall thickness shall be increased as required based on actual pipe ovality determined by the pre-installation CCTV video inspection.

- B. The Contractor shall submit wastewater bypass pump around and/ or diversion plans to the Engineer a minimum of 14 days prior to the liner installation for review and approval. In some cases verbal confirmation of the plan and approval with the Engineer or City Inspector may be used in lieu of a written plan. The Contractor shall notify the Engineer a minimum of 48 hours prior to commencement of the pump around operation. Failure to receive approval by the Engineer or City Inspector may result in the Contractor's Work being halted at no cost to the City.

The Contractor shall submit drawings that identify the liner insertion, wastewater bypass pump around locations and methods with sufficient detail to assure that the Work can be accomplished without spill or discharge of wastewater. The wastewater bypass pump around plan shall include an emergency response plan to be followed in the event of a failure of the pumping system.

- C. The Contractor shall submit a Maintenance of Traffic (MOT) plan, permit applications, and other supporting documents to the Engineer for review and approval a minimum of 14 days prior to the implementation of the MOT plan. The Contractor shall notify the Engineer a minimum of 24 hours prior to commencing MOT operations. The MOT documents shall be coordinated with the wastewater bypass pump around and/ or diversion plans.
- D. Submit certification of licensing and training as specified for all Contractors/Subcontractors who will be utilized to perform FELL (Focused Electrode Leak Locating) testing that meets ASTM F2550-18, Standard Practice for Locating Leaks in Sewer Pipes by Measuring the Variation of Electric Current Flow Through the Pipe Wall.

21.07 MATERIALS

A. Pre-Liner

1. A pre-liner shall be installed, where approved by the City, in CIPP lined sections where active infiltration and moisture would impact the CIPP curing process or quality of the liner tube. The contractor shall notify the City of any such conditions prior to lining.
2. The pre-liner shall be Griffolyn Type 55 by Reef Industries, or approved equal, and shall meet the following minimum specifications:

Property	ASTM Test Method	Value
Weight	D-2103	29 LB/1000 FT2
3" Load @ Yield	D-882	82 LBF
3" Load @ Break	D-882	31 LBF 1,900 psi
3" Elongation @ Break	D-882	360%
Tongue Tear	D-2261	15 LBF
Trapezoidal Tear	D-4533	24.5 LBF
PPT Resistance	D-2582	25 LBF

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Dart Impact Strength	D-1709	1.4 LBF
Cold Impact Strength	D-1709	-20° F
Permeance	E-96	0.059 Grains

B. Liner Tube

1. The liner tube shall consist of one or more layers of flexible needled felt or an absorbent non-woven felt fabric that meets the standards referenced herein. The tube shall be constructed to withstand installation pressures and curing temperatures, and be compatible with the resin system used. The liner shall be fabricated to a size and thickness that, when installed, will fit the internal circumference of the host pipe without any annular space between the liner and existing pipe wall, will have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.
2. The wet out tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the required design wall thickness.
3. The tube shall be sewn or flame bonded to a size that when installed will tightly fit the internal circumference and length of the host pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.
4. The outside layer of the tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.
5. The tube shall be homogeneous across the entire wall thickness containing no intermediate elastomeric layers. No material shall be included in the tube that may cause delamination in the cured liner. No dry or unsaturated layers shall be evident.
6. The wall color of the interior surface of the liner after installation shall be a light reflective color so that a clear, detailed examination with CCTV inspection equipment may be made. Colored resin is not permitted.
7. Seams in the tube shall be stronger than the non-seamed felt.
8. The outside of the tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 feet. Such markings shall include the manufacturer's name or identifying symbol.
9. The liner shall be fabricated from materials which when cured, will be chemically resistant to withstand internal exposure to constituents normally present in domestic wastewater.
10. The minimum tube length shall be that deemed necessary by the Contractor to effectively span the distance from the inlet to the outlet of the respective manholes or access structures, unless otherwise specified. The Contractor shall verify the lengths in the field before impregnation of the tube with resin. An individual liner insertion operation may be made over multiple contiguous pipe segments as determined in the field by the Contractor and reviewed by the Engineer.

C. Resin

1. The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system compatible with the fabric liner material, host pipe and other products

the resin may contact. The resin system, when properly cured within the tube composite, shall meet the standards and physical properties referenced herein, and those to be utilized in the design of the CIPP liner for this Project. The resin shall produce CIPP liners complying with the structural and chemical resistance requirements of this Specification.

2. Resin shall not be subjected to ultraviolet light and shall form no excessive bubbling or wrinkling during curing.

D. Hydrophilic End Seals

1. Each CIPP liner shall be installed with approved hydrophilic seals where the liner terminates, passes through access structures, or interfaces through an opening in a main liner connection (lateral liner), so to form a watertight compression seal at terminating ends.

21.08 STRUCTURAL REQUIREMENTS

- A. The CIPP liner shall be designed as per ASTM F1216, Appendix X1. The CIPP liner design shall assume no bonding to the original host pipe wall.
- B. The Contractor must have performed long-term testing for flexural creep of the CIPP liner material to be installed. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (tube and resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for this 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 design.
- C. The layers of the cured CIPP liner shall be uniformly bonded. It shall not be possible to mechanically separate any two layers such that the layers separate cleanly or a probe moves freely between the layers. If separation of the layers occurs during testing of field samples, new samples will be cut from the Work. Any reoccurrence may cause rejection of the Work.
- D. The CIPP liner material shall conform to the structural properties, as listed below.

Minimum Physical Properties

<u>Property</u>	<u>Test Method</u>	<u>Cured Composite min. per ASTM F1216</u>
Flexural Modulus	ASTM D790	300,000 psi
Flexural Strength	ASTM D790	4,500 psi
Flexural Modulus	ASTM D2990 (long term)	150,000 psi

- E. The required CIPP liner wall thickness shall be based, as a minimum, on the physical properties in Section 17.08D of this Specification, in accordance with the design equations in the Appendix of ASTM F1216, and the following design parameters:

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Design Safety Factor	=	2
Retention Factor for Long-Term	=	1% - 50%
Flexural Modulus to be used in Design (as determined by Long-Term tests described in Section 17.08B)		
Ovality	=	5%
Groundwater Depth (above invert)	=	Assume at Existing Grade
Soil Depth (above crown)	=	Based on field measurements
Soil Modulus	=	700 psi
Soil Density	=	120 pcf
Live Load	=	AASHTO HS - 20
Design Condition	=	Fully Deteriorated
Enhancement Factor	=	7.0
Poisson's Ratio	=	0.3

- F. The CIPP liner material shall conform to the minimum wall thicknesses, as listed below:

Minimum Wall Thicknesses

<u>CIPP</u>	<u>Thickness</u>
4"-6"	3.0 mm
8"-12"	6.0 mm
15"	7.5 mm
18"-21"	9.0 mm
24"-27"	10.5 mm
30"-36"	12.0 mm
42"	13.5 mm
48"	15.0 mm

- G. Any layers of the tube that are not saturated with resin prior to insertion into the host pipe shall not be included in the CIPP liner wall structural thickness computation.

21.09 PREPARATION

- A. It shall be the responsibility of the Contractor to locate all manhole access points, verify that they are open and accessible for the Work, and arrange access to these points. The Contractor shall notify the City Inspector of access structures that cannot be opened due to obstruction by permanent structures. The Contractor shall be responsible to make all necessary provisions to ensure service conditions and structural conditions of the host pipe are suitable for installation and warranty of the liner. Provisions include, but are not limited to, temporary wastewater bypass pump around, temporary service interruption of service laterals, confirming the locations of all lateral service connections prior to installing and curing the CIPP liner, correction of obstructions/ defects, and controlling excessive infiltration.

B. Cleaning of Wastewater System

The Contractor shall remove all debris from the pipe segments and manholes that will interfere with the CIPP liner installation. Cleaning shall conform to the requirements of

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Technical Specification Section headed "Cleaning of Wastewater System". The City shall provide a dump site for all debris removed from the wastewater system during the cleaning operation. Unless stated otherwise, these are the Northeast Water Reclamation Facility located at 1160 62nd Avenue NE, or the Northwest Water Reclamation Facility located at 7500 26th Avenue North, St. Petersburg, Florida.

It shall be the responsibility of the Contractor to clear the pipe segment of obstructions such as solids, roots, iron scale, excessive joint sealant, and grease that will interfere with and prevent the insertion of the CIPP liner and a tight fit with the host pipe. Specialty cleaning as defined under Technical Specification Section headed "Cleaning of Wastewater System" shall be authorized by the Engineer when required. When specialty cleaning is specifically called for by the Project, the Contractor shall have the responsibility of coordinating the timing of specialty cleaning with the immediate installation of the CIPP liner within 24 hours. If desired, the Engineer may arrange for others to perform the specialty cleaning necessary and the Contractor shall notify the Engineer a minimum of 7 days in advance of their planned CIPP liner installation date so that the specialty cleaning can be accomplished prior to the planned CIPP lining installation.

Protruding laterals which are determined to interfere with the Main Liner installation shall be removed by remote cutter in accordance with Technical Specification Section headed "Removal of Protruding Service Connections". This work shall be done in conjunction with wastewater system cleaning activities.

C. Pre-installation CCTV Inspection

The pre-installation CCTV Inspection of the existing host pipe shall be performed by experienced personnel trained in locating breaks, obstacles, obstructions and service connections in accordance with the requirements of the Technical Specification Section headed "Closed Circuit Television Inspection". The Contractor shall note locations of any conditions, which may prevent proper installation of the CIPP liner into the host pipe or cause defects in the final product so that these conditions can be corrected prior to the liner installation. If CCTV video inspection reveals a condition such as a protruding service connection, dropped joint, pipe deformation, active infiltration or a collapse that may adversely impact inversion, installation, curing, or the final integrity of the CIPP liner, then the Contractor shall immediately notify the Engineer/Inspector and allow same to view the defect during the inspection. The Contractor and Engineer shall coordinate arrangements for correction of the defect. CCTV video inspections documenting and coordinating such conditions prior to the pre-installation CCTV inspection will be applicable for separate payment as described under "Section 20 Pay Item Descriptions". The pre-installation CCTV video inspection provided to the Engineer shall document the correction of any such condition and state of the host pipe prior to lining or pre-liner installation.

D. Point Repairs

Prior to CIPP liner installation, all conditions/ defects such as dropped joints, pipe deformation, active infiltration or a collapse that may adversely impact inversion, installation, curing, or the final integrity of the CIPP liner shall be repaired as authorized by the Engineer. If conditions which can only be corrected by open-cut repair are encountered after the Contractor has set up preparations (pump around or traffic control) for the Work to progress, the Contractor shall leave these items in place as directed if the Engineer needs to schedule

the completion of an open-cut repair and can do so within 5 business days. Otherwise, the Contractor shall demobilize if the Engineer must schedule the work at a later date.

1. To ensure proper installation, curing of the CIPP, and a defect-free liner, any active infiltration, shall be controlled using an approved chemical grout in accordance with manufacturer recommendations. Extraneous grout material which may come in contact with the CIPP liner shall be compatible with the resin system utilized. Extreme caution should be taken during leak sealing (pressure grouting) operations in order to avoid damaging the already weakened pipe. Excessive pumping of grout which might block a service lateral shall be avoided. Any main or service laterals blocked by the grouting operation shall be cleared immediately by the Contractor. Host pipe damage caused by improper use of grouting equipment or operator error shall be repaired at the Contractor's expense. Where internal grouting may not be a viable option, the Engineer may authorize, at the City's option, an external well point dewatering system to be employed to control active infiltration under extra work performed by the Contractor or City forces.
2. Severe offsets/ dropped joints, pipe deformations, grade defects or collapses shall be repaired by open-cut methods as directed by the Engineer. The repairs shall be at the Contractor expense if they resulted from the Contractor's improper use of equipment or procedures.

E. Pump Around of Wastewater

1. The Contractor shall provide wastewater bypass pump around and/ or diversion when required for completion of preparatory work and CIPP liner installation. Wastewater bypass pump around shall be performed in accordance with the requirements of the article "Pump Around Pumping" of the Technical Specification Section headed "General".
2. The Contractor shall schedule the Work or otherwise provide wastewater collection service to allow businesses to maintain their normal hours of operation.

F. Public Notification

The Contractor shall make every effort to maintain service throughout the duration of the Project. In the event that a service connection will be out of service, the maximum amount of time of no service shall be as approved by the Engineer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the wastewater system and informing them of the Work to be conducted, and when wastewater service will be off-line. The Contractor shall also provide the following:

1. Written notice to be delivered to each home or business 7 days prior to the beginning of Work being conducted on the pipe segment. The notice shall include the Contractor's name, the date the Work will commence, the duration of the Work, the type of Work and a local telephone number of the Contractor's onsite representative they can contact to discuss the Project or any problems which could arise.
2. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

21.10 INSTALLATION

A. Resin Impregnation

1. The uncured resin in the original containers and the un-impregnated liner tube shall be properly stored in accordance with the manufacturer's recommendations. The liner tube shall be thoroughly vacuum impregnated with catalyzed resin prior to installation. The materials and 'wet-out' procedure shall be subject to inspection by the Engineer. A resin and catalyst system that is compatible with the requirements of the method shall be used.
2. The impregnated liner tube shall be transported to and stored at the site in such a manner that it will not be damaged, exposed to direct sunlight, or result in any public safety hazard. If required, the impregnated liner tube shall be kept cool during shipment and storage. All materials shall be subject to inspection and review prior to installation. Alternatively, lateral liner tube may be impregnated at the Project location. The Contractor shall erect temporary facilities to ensure the liner tube, resin, and catalyst are properly stored, and the liner tube is suitably impregnated prior to installation. The volume of resin used shall be sufficient to fill all voids in the textile lining material at nominal thickness and diameter. The volume shall be adjusted by adding 5% to 10% excess resin for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe. No dry or unsaturated area in the mainline sheet or lateral tube shall be acceptable upon visual inspection

B. Main Liner Installation

1. The use of a pre-liner may be required on sewer lines where active infiltration would affect the quality of the installation. For individual line segments where the Contractor believes active infiltration may interfere with the proper installation, curing, and cured liner integrity, a pre-liner shall be installed as approved by the Engineer.
2. Contractor shall ensure that an Engineer approved procedure is followed for sealing the liner from all groundwater infiltration and migration at connections to and within all manholes. Hydrophilic sealing material shall be placed per the Manufacturer's recommended product guidelines and Contractor's/ Manufacturer's approved procedures prior to liner installation.
3. The impregnated tube shall be inserted through an existing manhole or access structure by means of the manufacturer's recommended installation process in accordance with ASTM F1216. The application of hydrostatic head, compressed air, or other means shall fully extend the CIPP liner to the next designated manhole or termination point and inflate and firmly hold the liner to the host pipe wall. A resin impregnated sample (wick) shall be retained by the Contractor to provide verification of the curing and for testing as required.
4. The liner tube shall be installed at a rate less than 10 feet per minute at all times.
5. If the CIPP liner installation fails, the Contractor shall be responsible for operating the pump around pumping equipment for the additional time required until the installation can be completed, at the Contractor's expense.

C. Lateral Liner Installation

1. The installation device shall be pulled into the main pipe using a cable winch or robotically

transported from the access point (manhole) to the service connection point with the use of CCTV to correctly position the device as required by the Manufacturer or Assembler. The resin impregnated liner materials shall be protected from contamination until positioned at the point of repair. CCTV documentation of the placement prior to curing shall be provided to the Engineer. Approved hydrophilic end seals shall be positioned at all terminating ends of the liner assembly in accordance with manufacture's product standards.

2. Lateral Liners shall generally be installed after completion of the main CIPP liner and extend no less than 2-feet to the property line, public easement line, City owned cleanout installed at those boundaries, or transition where the liner cannot proceed, as approved by the City. Where a City owned cleanout is located at the property boundary, the end of the lateral liner shall extend a minimum of 12" beyond any PVC to VCP transition point downstream of the cleanout. Prior to installation, it is the contractor's responsibility to verify all public easement and right-of-way widths and distances from the sewer main to all lateral liner termination points to ensure that the completed CIPP lateral liner length will extend to and includes the entire publicly owned portion.
3. The Lateral Liner shall include a full circle wrap at the main connection and will be entirely installed from the main to its termination point wherever feasible. Where physical conditions may dictate, and as approved by the Engineer, the Contractor may install remaining upstream portions of the required Lateral Liner length from the top down through a cleanout/access structure at the property line. There shall be at least a 12-inch overlap from any separately installed upper portion onto the lower portion of the Lateral Liner, and any lower portion installed from the main or downstream end shall extend at least 3 feet upstream into the lateral from the main pipe. Liner overlaps and termination points shall not occur at any pipe bends and shall always contain watertight end seals using a City approved product.
4. Lateral Liners installed for lateral pipe constructed with a vertical stack shall generally follow the requirements for standard laterals described above, except as modified herein. The Lateral Liner tube shall be installed from the bottom up through the lateral opening in the main pipe for the vertical stack portion of the lateral. The vertical stack lateral may provide service to more than one connection through a double wye or other connection(s) at the top of the vertical stack. The Contractor may choose to install the entire length of the Lateral Liner(s) from the bottom up to the property line or to install the portion of the Lateral Liner(s) beyond the vertical stack from the top down, from the property line to the vertical stack. The Contractor shall obtain written directive from the Engineer for the installation of any cleanout(s) required to install Lateral Liners and the installation of the lateral liner(s) in the portion of the lateral(s) connecting to and beyond (upstream of) the vertical stack to the property line. The portion of the lateral(s) beyond the vertical stack may be replaced based on field conditions, as directed by the Engineer.
5. The application of hydrostatic head, compressed air, or other means shall fully extend the liner to the required acceptable termination point and inflate and firmly compress the liner against the host pipe. Curing shall be done without pressure interruption with air or a mixture of air and steam for the proper duration of time per the resin manufacturer's recommendations.
6. The post rehabilitation CCTV inspection for the Lateral Liner installation shall be accomplished from within the main pipe with a pan and tilt camera clearly showing the liner termination joints and from within the lateral pipe to fully document the installation and termination joint within the lateral. A resin impregnated sample (wick) shall be

retained by the Contractor to provide verification of the curing process taking place in the lateral pipe and for testing as required.

D. Curing

1. If a heat source is required after placement is completed, suitable heat source and distribution equipment shall be provided. The equipment shall be capable of circulating hot water, air, and/ or steam throughout the section by means of a pre-strung hose which has been perforated in accordance with the manufacturer's recommendations or other methods acceptable by the Engineer to raise the temperature uniformly above the temperature required to affect a resin cure. This temperature shall be determined by the manufacturer based on the resin/ catalyst system employed. The manufacturer's recommended cure schedule shall be submitted and followed.
2. The heat source piping shall be fitted with continuous monitoring thermocouples to gauge the temperature of the incoming and outgoing water, steam, and/ or air supply. Water, steam, or air temperature during the cure period shall meet the requirements of the resin manufacturer as measured at the heat source inflow and outflow return lines. The Contractor shall provide standby equipment to maintain the heat source supply. An additional continuous monitoring thermocouple shall be placed between the impregnated felt tube and the pipe invert at the upstream and downstream manholes to determine the temperature during the cure. The temperature during the cure at the boundary between the pipe wall and the liner shall be as required by the resin manufacturer.
3. The initial cure shall be deemed to be completed when inspection of the exposed portions of the liner appears hard and sound and the remote temperature sensors indicate that an exotherm has occurred. The cure period shall be of duration and temperature recommended by the resin manufacturer during which time the recirculation of the water, steam, and/ or air and cycling of the heat exchanger continuously maintain the required temperature.
4. A data logger shall be used for Main Liners to continuously record temperature, pressure and time during heating, cure and cool down of the liner at the insertion and termination manholes. This data shall be retained by the contractor and provided to the Engineer upon request for each pipe segment within 10 days of the cure. Data files shall be uploaded to the City FTP site as designated at the pre-construction conference.
5. All sewer pipe greater than 18 inches in diameter shall use Vericure or approved equal

D. Cool Down

1. The cured liner shall be cooled to a temperature below 100 degrees F before relieving the static head or pressure in the lined pipe and returning normal flow back into the system. The cool down may be accomplished by introducing cool water or air into the lined pipe.
2. Care shall be taken in the release of the static head or pressure so that a vacuum will not develop which could damage the newly installed liner. Water for cooling shall be supplied by the Contractor. All materials other than the cured liner should be removed from the pipe by the Contractor.

E. Finished Liner

1. The finished liner shall be immediately inspected by the Contractor upon completion of curing. The finished liner shall be continuous over the length of the host pipe and free from all defects such as foreign inclusions, dry spots, pinholes, and delaminations, and from lifts, sags, and wrinkles larger than 5 percent of the design inside diameter of the liner.
2. The Engineer shall be immediately notified of any defects with the finished liner. The defective liner shall be repaired or replaced as approved by the Engineer, at the Contractor's expense.

F. CIPP Main Liner Termination and Connection in Manholes

1. **Liner Termination:** The liner shall achieve a watertight seal through the manhole channel/ invert and at the host pipe(s) where it enters/ exits any manhole. The use of fiber felt and a suitable resin system, hydrophilic rubber waterstops, or injection grouting methods compatible with the liner shall be used to ensure a watertight CIPP liner system at the pipe to manhole connections. CIPP liner entries at manholes shall be smooth and free of irregularities. The top half of the CIPP liner shall be neatly cut at the wall. The channel in the manhole shall be a smooth continuation of the pipe(s) and shall be merged with other pipes or channels. All manholes shall be individually inspected for liner cut off, benches and sealing Work. Any visible leaks through or around the CIPP liner shall be corrected by an approved method at the Contractor's expense.
2. **Manhole Rehabilitation:** The channel in the manhole shall be a smooth continuation of the liner and pipe(s) and shall be merged with other channels. Inverts and/ or benches shall be resurfaced/ repaired or constructed where necessary to provide a smooth flow channel. The manhole floor and base section shall receive an approved monolithic coating which is chemically compatible with the CIPP liner, and any chemical/ cementitious grout or repair material used in the manhole.

21.11 SERVICE RECONNECTION

- A. The Contractor shall be responsible for internally reopening the service connections to the lined pipe using a pivot-head CCTV video inspection camera and a remote cutting tool, or other method as approved by the Engineer. The use of remote cutting equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and manual reconnection is acceptable. The Contractor shall locate the service connections from inside the lined pipe, cut a hole matching the connection diameter, and grout the area where the service connection enters the lined pipe to produce a water tight seal approved by the Engineer. Grouting of service connections shall be accomplished using a "Logiball" type lateral packer to seal the first 18 inches of the service connection in accordance with the manufacturer's instructions and the Technical Specification Section headed "Chemical Sealing of Service Connections."

The Contractor shall provide a nearly full-diameter hole, free from burrs, loose or abraded material, hanging fibers or projections, and with a neat, smooth and crack-free edge. The hole shall be 95 percent minimum and 100 percent maximum of the original service connection diameter. The invert of the service connection shall match the bottom of the reinstated service opening. The Contractor shall certify he has a minimum of 2 complete

working cutters plus spare key components on the site before each installation. All cuttings shall be collected and disposed of properly.

- B. All service connections shall be reopened including those that go to unoccupied or abandoned buildings or vacant lots, unless directed otherwise by the Engineer. Begin reconnection of services immediately after liner curing and cool down is complete. The Contractor shall initially reopen each connection in an expeditious manner with a less than a full size opening to release wastewater temporarily stored in the service lateral. The Contractor shall then complete reconnection of all services within 24 hours. The Contractor shall immediately reopen any missed connections and repair any holes drilled in error. Faulty cuts shall be repaired by methods approved by the Engineer at no additional cost to the City.
- C. It is the intent of these Specifications that service connections be reopened without excavation. No additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

21.12 INSPECTION AND TESTING

A. Material

- 1. All material testing shall be performed and certified by a registered independent, third-party laboratory.
- 2. Wall thickness of samples shall be determined as described in ASTM F1216, Section 8 or ASTM F1743, Section 8. The minimum wall thickness at any point shall not be less than 87.5% of the design thickness as calculated in Section 17.08 of this Specification.
- 3. The Contractor shall obtain, prepare and store appropriate samples for all liners installed under this Contract. The Contractor shall provide samples of the cured lining material from the actual installed liner at a minimum of one set per each liner insertion setup. The preparation and testing of these samples shall be in accordance ASTM F1216, Section 8. The Contractor shall coordinate the required testing of the samples with the laboratory, and the City will pay for the initial testing of these samples in accordance with the pay item. The Contractor shall pay for the cost of retests made necessary by the failure of the samples to meet the specified requirements.
- 4. The cured liner shall be sampled and tested for flexural strength and flexural modulus (short term). Flexural strength and modulus shall be tested in accordance with the requirements of ASTM D790. The liner shall be in compliance with the physical properties stated in Section 17.08D of this Specification.
- 5. Corrosion resistance requirements shall be as stated in ASTM F1216, Section X2, Chemical Resistance Tests.
- 6. Water tightness of the liner will be tested as per ASTM F2550-18

B. Field

- 1. Up to 10 percent of the installed CIPP Main Liners may be tested for infiltration or exfiltration in accordance with ASTM F1216, Section 8.2 prior to service lateral reconnections or ASTM F2550-18 after services have been opened. The Contractor, or City if it elects to use its own forces, will inspect up to 10% of the completed lined pipes.

The lines and locations will be selected at the sole discretion of the City. Based on results of this inspection, the City reserves the right to increase the inspection quantity above 10% of the project length such that City is assured CIPP installation meet all contract documents and specifications. Testing shall exclude maximum pressure limitation (4.3 psi) at lowest end. Leakage testing shall be performed after all dry and non-bondable hoses and tubes are completely removed from the liner. If the liner fails the test, Contractor shall repair or replace liner as required until the tested segment passes. A failed exfiltration test on any liner may be cause for exfiltration testing to be increased, as directed by the Engineer.

2. After completion of the installation of Main Liners, service reconnections, and finish work at the manholes, the lined pipe and adjacent manholes shall be CCTV video inspected by the Contractor at his expense, as required by these Specifications.
- 3 Pre-installation and post-rehabilitation CCTV video inspections shall either be recorded on the same media or shall be referenced, if recorded on separate media. Acceptance of the Work shall be based on Engineer's review of the CCTV video inspection and all other post QA/QC inspection processes. Post-rehabilitation inspection activities shall not be performed in conjunction with cleaning operations and the liner wall shall be as dry as practical during this inspection (no dripping or splashing). The post-rehabilitation CCTV inspection at the lateral connection shall be performed with a pan and tilt camera. All CCTV video inspections delivered to the City shall be in accordance with the Technical Specification Section headed "Closed Circuit Television Inspection."

END OF SECTION

SECTION 22 - CLEANING OF WASTEWATER SYSTEM

22.01 GENERAL

The Work in this section includes cleaning of wastewater collection system components prior to inspection to permit proper Closed Circuit Television (CCTV) video inspection and rehabilitation. Wastewater system components shall be defined as access structures (including manholes, vaults, junctions, wet wells, and end of line cleanout), gravity main pipe segments between two adjacent access structures, and public service laterals between the gravity main and the property line.

The Contractor shall furnish all materials, labor, equipment, and services necessary for cleaning of wastewater collection systems including, but not limited to: traffic control, locating access structures, removal of roots and other materials that require the use of specialty equipment defined as specialty cleaning, disposal of waste and sediment, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

22.02 QUALIFICATIONS

The Contractor shall have experience in the cleaning of vitrified clay pipe, concrete pipe, and other pipe materials typically found in wastewater collection systems. Documentation of experience shall be furnished to the Engineer upon request. Refer to item no. 12 in the Engineering Project Questionnaire for minimum qualifications.

22.03 SUBMITTALS

The Contractor shall submit the cleaning equipment product data to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals".

22.04 PRODUCTS

A. Cleaning Equipment

1. The wastewater system shall be cleaned with industry standard truck-mounted high velocity hydro-cleaning equipment. No mechanical bucket machinery will be acceptable for the cleaning process. The equipment shall be provided with a minimum of 500 ft of one-inch ID high-pressure hose with a selection of high velocity nozzles, as required for the normal cleaning and specialty cleaning operations.
2. The equipment shall have a minimum usable water capacity of 1000 gal. The pumps shall be capable of delivering a minimum 60 gpm at 3000 psi. Pressure to the nozzle shall be regulated by a relief valve, adjustable from 0 to 1,500 psi minimum. The nozzles shall produce a scouring action from 15 to 45 degrees in all size pipes to be cleaned.

The equipment shall carry its own 1,000 gal water tank capable of holding corrosive or caustic cleaning or sanitizing chemicals, engines and pumps, and a hydraulically-driven hose reel. The equipment shall also include a high velocity washing hose for ancillary cleaning of the walls and floor of manholes. The hose shall have an adjustable nozzle capable of producing flow from a fine spray to a solid stream. All controls shall be located so that the equipment can be operated above ground. During hydro-cleaning, the Contractor shall restrict the flow level in the pipe to a maximum of 50 percent of the pipe diameter. Particular care should be taken to avoid flooding house connections during hydro-cleaning operations.

3. The Contractor shall provide equipment capable of removing all sand, dirt, rocks and other debris to allow unobstructed CCTV inspection of all internal pipe surfaces.
4. The Contractor shall certify that backup cleaning equipment, including machines, devices, tools, etc., is available and can be delivered to the site within 24 hours.
5. Any blockages of building service connections resulting from the cleaning or other items of work shall be removed by cleaning of the building connection by the Contractor, at his own expense. Any damage caused by flooding of building service connections shall be corrected by the Contractor, at his own expense.
6. The Contractor shall provide specialty cleaning equipment capable of mechanically removing all attached, hardened and/ or cemented debris including, but not limited to, roots, grease, calcification, tuberculation, joint sealant, other hardened or tightly adherent deposits, etc. which cannot be removed by the use of industry standard high velocity hydro-cleaning equipment alone. Specialty equipment shall include, but is not limited to, a root saw, spring blade root cutter chuck or approved equal. The use of specialty cleaning equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and manual removal is acceptable.
7. Lateral cleaning equipment shall be a remote control directional unit to launch a high pressure cleaning nozzle into a lateral connection from within the main pipe. The lateral cleaning jet shall be capable of 1500-1800 PSI, at up to 80 GPM. The launch unit shall be able to rotate 180 degrees to access the lateral opening position. The equipment shall be monitored by a video camera positioned adjacent to the lateral. The lateral cleaner shall be able to clean up to 75 linear feet into the lateral from the main. The equipment shall be LCS by Cues, Inc., Lateral Launcher by Logiball, Inc. or approved equal.

22.05 EXECUTION

A. Cleaning

1. After determining the preliminary requirements and the feasibility of effective CCTV inspection, the Contractor shall thoroughly clean all required pipe segments or public laterals as required to permit an unrestricted inspection by industry standard CCTV inspection equipment. Particular emphasis shall be afforded the removal of accumulated grease, roots, sand, rocks, bricks, sludge and other debris so that the CCTV inspection will clearly show all portions of the pipe being inspected. Acceptance of pipe segment cleaning shall be made upon the successful completion of the CCTV inspection and shall be defined as removing sufficient material to permit an unrestricted view of the pipe internal surfaces and to ensure an effective rehabilitation of the pipe segment, all to the satisfaction of the Engineer. If CCTV inspection shows the cleaning to be unsatisfactory,

the Contractor shall be required to repeat the cleaning and CCTV inspection of the pipe segment at no additional cost to the City.

2. Except during drought conditions, water required for the cleaning will be provided by the City at locations to be specified by the City. The City shall furnish and install water meters at all points where water is drawn from the City's supply. The City will charge a fee for the water used. A backflow prevention device shall be used to prevent contamination of the potable water system. The Contractor is responsible for any damage resulting from improper operation of hydrants. Do not use or obstruct a fire hydrant when there is a fire in the area.
3. The Contractor shall not waste water from the public water supply because of improper connections or from hydrants left open.
4. The Contractor shall remove all bricks, rocks, debris, sludge, dirt, sand, grease, roots and other materials from the pipe segment ordered to be cleaned, and collect and remove the resulting debris from the downstream manhole of the pipe segment. Passing waste material between manholes, causing accumulations of sand, system stoppages, or damage to the pumping equipment shall not be permitted. When necessary, a dam trap or weir and screen shall be temporarily installed in the downstream manhole in such manner that debris and solids shall be trapped and retained for subsequent removal.
5. Waste and debris cleaned from the pipe segment shall be removed at the downstream manhole by pumps or other means. The discharge and drainage stream shall be returned downstream to the wastewater collection system for disposal. Under no circumstances shall wastewater or solids be dumped onto the ground surface, street, or into ditches, catch basins or storm drains. All solid and semi-solid debris resulting from the cleaning operations shall be removed from the site and taken to the City's wastewater treatment facilities. The City's wastewater treatment facilities for disposal of solids from this Project are the Northeast Water Reclamation Facility located at 1160 62nd Avenue NE, or the Northwest Water Reclamation Facility located at 7500 26th Avenue North, St. Petersburg, Florida, unless directed otherwise by the Engineer. The Contractor is responsible for transporting the debris and must remove and properly dispose of excess water from the debris prior to disposal at the City's wastewater treatment facility.
6. Where access to manholes in easements and rights-of-way is required, the Contractor shall obtain permission from the homeowner for equipment access. Refer to the Technical Specification Section headed "General" for more information on Work in Private Property.
7. Barricades and warning signs shall be used in work areas and around open manholes. The Contractor shall furnish and maintain traffic controls and safety devices as required.
8. Normal Cleaning includes the removal of sludge, sand, silt, rocks, gravel and other loose and non-adhering debris regardless of the amount in an unlimited number of passes, and requires a minimum of two passes with the high velocity hydro-cleaning equipment. The first pass shall be restricted to 800 psi at the nozzle head. The second and subsequent passes shall be at 1200 psi.
9. Specialty Cleaning includes Normal Cleaning criteria and also consists of removal of all attached, hardened and/ or cemented debris including, but not limited to, roots, grease, calcification, tuberculation, joint sealant, other hardened or tightly adherent deposits, etc. which cannot be removed by the use of industry standard high velocity hydro-cleaning

equipment alone. Specialty Cleaning consists of an unlimited number of passes using specialty cleaning equipment (or other methods as approved by the Engineer) in conjunction with high velocity hydro-cleaning equipment. All pipes shall be restored to at least 95 percent of their nominal diameter. Joint sealant shall be removed to within ¼ inch of the pipe wall. Specialty Cleaning only for the removal of excessive joint sealant will generally not be required until just prior to lining of the pipe segment (if necessary), unless the joint sealant prevents the passage of the CCTV inspection equipment. Specialty Cleaning shall only be undertaken when specifically authorized by the Engineer.

10. Employ satisfactory precautions to protect the pipe and manholes from damage that might be inflicted by improper selection of the cleaning process or improper use of the equipment. Immediately notify Engineer if fresh soil, pieces of pipe, or other visible signs of potential problems occur during cleaning operation. When using hydraulically propelled devices, take precautions to ensure that the water pressure created does not cause damage or flooding to public or private property. Do not surcharge the wastewater beyond the elevation that could cause overflow of wastewater into area waterways or buildings, or onto the ground.
11. The Contractor shall clean upstream reaches of the system before the downstream reaches are cleaned. Hydro-cleaning equipment shall typically be inserted in the downstream manhole of the pipe segment, and the cleaning work shall proceed from upstream to downstream. Winching equipment used shall not damage the pipe or manholes.

B. Final Acceptance of Pipe Cleaning

Acceptance of pipe segment cleaning shall be made upon the successful review of the CCTV inspection by the Engineer. If the CCTV inspection shows the cleaning to be unsatisfactory, the Contractor shall be required to repeat the cleaning and CCTV inspection of the pipe segment until the cleaning is shown to be satisfactory. Such repeat cleaning and CCTV inspection shall be made at the Contractor's expense.

END OF SECTION

SECTION 23 - CLOSED CIRCUIT TELEVISION INSPECTION

23.01 GENERAL

The Work in this section includes Closed Circuit Television (CCTV) video inspection of wastewater collection system gravity main pipe segments and corresponding pipe laterals between adjacent access structures (including manholes, vaults, junctions, wet wells, and end of line cleanout. Post-cleaning/ pre-rehabilitation CCTV inspection shall be defined as video inspection of the interior of pipe after cleaning has been completed in accordance with the Specifications, and prior to any rehabilitation work, and shall verify that the pipe segment is clean and permits evaluation of the condition of the pipe. Post-cleaning/ pre-rehabilitation CCTV inspection shall identify the location of service connections and pipe segment defects that may require rehabilitation. Post-rehabilitation CCTV inspection shall be defined as video inspection to verify rehabilitation of a pipe segment has been completed in accordance with the Specifications.

The Contractor shall furnish all materials, labor, equipment, and services necessary for CCTV video inspection of wastewater collection system pipe including, but not limited to: traffic control, locating access structures, wastewater bypass pump around pumping and/ or diversion, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

23.02 QUALIFICATIONS

CCTV inspections shall be in compliance with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program and Lateral Assessment Certification Program (PACP/LACP) standards and performed by NASSCO PACP/LACP certified inspectors. The Contractor shall have experience in the CCTV inspection of vitrified clay pipe, concrete pipe, and other pipe materials typically found in wastewater collection systems. Refer to item no. 12 in the Engineering Project Questionnaire for minimum qualifications.

23.03 SUBMITTALS

- A. Submitted CCTV inspections become the property of the City. The Contractor shall maintain a master copy of all CCTV inspection data until final acceptance of the project. The CCTV inspection video shall not be edited. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
1. A complete listing of the number of and each major equipment type, including product brand name and product manufacturer, to be employed by the Contractor/ Subcontractor. All equipment manufacturer's operational guidelines for the equipment to be used.
 2. Video and data from CCTV inspection surveys shall be furnished on a portable Universal Serial Bus (USB) hard drive along with hard copy reports of inspection surveys. The

hard copies of the inspection reports shall be assembled in an orderly manner and submitted together in a binder. All final data for each completed location where payment is being requested shall be submitted in a single NASSCO PACP/LACP Data Exchange Format database (latest version).

3. Prior to the beginning of any work, a sample PACP/LACP database and video demonstrating compliance with the requirements above shall be submitted to the Engineer.

23.04 PRODUCTS

A. Equipment

1. **CCTV Equipment:** Select and use CCTV equipment that shall produce a high quality color video.
2. **Pipe Inspection Camera:** Produce a video using a pan-and-tilt, radial viewing, pipe inspection camera that pans ± 275 degrees and rotates 360 degrees. Use a camera with an accurate footage counter, which displays on the monitor the exact distance of the camera from the centerline of the starting manhole. Use a camera with camera height adjustment so that the camera lens is always centered at one-half the inside diameter in the pipe being televised. Only self-propelled cameras shall be used to provide an unobstructed view of the pipe. Provide a lighting system that allows the features and condition of the pipe to be clearly seen. A reflector in front of the camera may be required to enhance lighting in dark or large diameter pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 700-line resolution colored video picture. Picture quality and definition shall be to the satisfaction of the Engineer, if unsatisfactory, equipment shall be removed and no payment made for an unsatisfactory inspection.
3. **Lateral Inspection Camera:** Produce a video using radial viewing, pipe inspection camera that can be launched from the main pipe into the service lateral. Use a camera with an accurate footage counter that displays on the monitor both the exact distance of the lateral camera in the lateral from the main pipe and the mainline camera simultaneously. Use a centering device for the lateral camera to maximize protection and passage so that the camera lens is always centered in the pipe being televised. A Sonde locating receiver shall be attached to the camera to locate and mark the alignment and end of the public lateral at the property line surveyor's paint (green). The camera shall use a self-leveling and auto upright lateral camera to provide a properly oriented video. Provide a lighting system that allows the features and condition of the pipe to be clearly seen. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 700-line resolution colored video picture. Picture quality and definition shall be to the satisfaction of the Engineer, if unsatisfactory, equipment shall be removed and no payment made for an unsatisfactory inspection. The lateral inspection camera shall be the LAMP system by Cues, Inc., or approved equal.
4. **Video:** Video shall be recorded on a portable USB hard drive or other acceptable digital media, as required by the Engineer.
 - a. Only one pipe segment or public lateral inspection shall be permitted in each video file. The Contractor shall not be permitted to start a portion of a televised segment

on one video file and finish on another. Reverse inspections shall be included in the same video file or may be in a separate video file.

- b. Media identification labels are required. A label shall be attached to the USB hard drive with the following information:
 - 1) Project Name, Project Number and Site Location
 - 2) Contractor's name
 - 3) Inspection Type: Post-cleaning/Pre-rehabilitation, and Post-rehabilitation
 - 4) Wastewater Basin
 - 5) Video Filenames
 - 6) Date Submitted
5. The Contractor shall provide with each video a, up-to-date PACP/LACP compliant report that shall include the header data, pipe defects, service connections, and PACP/LACP Condition Grading System ratings for the structural and operational & maintenance defects.
6. The Contractor shall provide a detailed header at the beginning of each video file and log sheet. At a minimum the header shall include:
 - a. Project Name, Project Number and Site Location
 - b. Contractor's Name
 - c. Operator's Name and PACP & LACP Certification Number
 - d. Inspection Type: Post-cleaning/ Pre-rehabilitation, or Post-rehabilitation
 - e. Inspection Date
 - f. Wastewater Basin Number (if applicable)
 - g. Upstream and Downstream manhole numbers
 - h. Street Name and Number (Mainline Inspections Only)
 - i. Upstream and Downstream Rim to Pipe Invert Depth (Mainline Inspections Only)
 - j. Upstream and Downstream Grade to Pipe Invert Depth (Mainline Inspections Only)
 - k. Survey Direction (Upstream or Downstream)
 - l. Method of Flow Control (Not controlled, bypass, or plugging)
 - m. Pipe Shape and Size
 - n. Pipe Total Length
 - o. Pipe Surveyed Length
 - p. Pipe Joint Length
 - q. Pipe Material
 - r. Lateral service address (Lateral Inspections – if applicable)
 - s. Lateral GIS Location Tag Value or ID (Lateral Inspections – if applicable)
7. The Contractor shall superimpose a footage counter on the screen that runs continuously during the course of each video file. For Lateral inspections, both the mainline camera footage counter and the lateral launch camera footage counter shall be superimposed on the video capture screen continuously during the course of each video file.
8. Camera systems required for lateral inspection shall be able to be launched from a cleanout (from the top down) and capable to inspect 3, 4, and 6-inch lateral connections up to 100 ft in length. A sonde transmitter shall be included for pipe location and marking. The system shall also be capable of meeting all the requirements of Section 23.04, #4, 5, 6, and 7.

23.05 EXECUTION

A. Televising

1. After completion of cleaning in accordance with the requirements of Technical Specification section headed "Cleaning of Wastewater System", and prior to rehabilitation, conduct CCTV inspection of the pipe segment or public pipe lateral to document the condition of the pipe segment and to locate existing service connections. The CCTV inspections shall be of sufficient quality for the Engineer to evaluate the condition of the pipe, locate the service connections, and verify cleaning. Immediately after rehabilitation, televise the pipe segment to document completion of rehabilitation work and quality. Notify the City Inspector 24 hours in advance of any CCTV inspection so that the Engineer may observe inspection operations.
2. Perform CCTV inspection of pipe segments and public laterals as follows:
 - a. Perform post-cleaning/ pre-rehabilitation CCTV inspection immediately after pipe cleaning and before pipe rehabilitation work. Verify that the pipe is clean and ready for rehabilitation. Where a public lateral cannot be inspected fully from the main up to the property line, the inspection shall be performed from a clean-out if available. The above ground horizontal location of each lateral shall be marked every five (5) feet utilizing surveyor's paint (green) on an asphalt or concrete surface and surveyor's flags in grass. Approximate depth of laterals at these locations shall be recorded on the TV logs.
 - b. Collect post-cleaning/ pre-rehabilitation inspection video at each service connection for an extended period to better understand the flow from each service connection. The camera shall be positioned at each service connection for a sufficient duration to determine the nature of flow and condition of the connection (minimum of 15-seconds). If a service connection is in use, the Contractor shall pause the inspection until domestic flow has ceased. Any service connection inspection deemed unacceptable by the Engineer shall be re-televised by the Contractor at no additional cost to the City.
 - c. Perform post-rehabilitation CCTV inspection to confirm completion of rehabilitation work, including removal and replacement. Verify that the rehabilitation work conforms to the requirements of the Specifications. Provide a video showing the completed work, including the condition of restored service connections. The video shall be taken with dry or damp pipe walls (no dripping or splashing). Prepare and submit a report providing location of service connections along with the location of any discrepancies.
 - d. Videos shall pan beginning and ending manholes including pipe connection area to demonstrate that all debris has been removed. Camera operator shall slowly pan each service connection, significant defects, clamped joints, and pipe material transitions.
 - e. The accuracy of the measurements for location of defects, service connections, etc. cannot be stressed too strongly. Marking on cable, or the like, which would require interpolation for depth of manhole, shall not be allowed. The footage measurement device shall be accurate to one-tenth of a foot over the entire length of the pipe segment being inspected. Prior to recording the location of a defect, service connection, etc., slack in the cable of the CCTV inspection camera shall be taken up to assure the measuring device is designating proper footage. Accuracy of the measurement device shall be checked daily by use of a walking meter, roll-a-tape,

or other suitable means.

- f. Camera distortions, inadequate lighting, dirty lens, blurred/ hazy picture, or excessive debris, or excessive water depth shall be cause for rejection of the CCTV inspection for that pipe segment. Any pipe segment CCTV inspection deemed unacceptable by the Engineer shall be re-televised and a new video and report provided by the Contractor at no additional cost to the City. Payment for CCTV inspection and subsequent rehabilitation shall not be made until the Engineer approves the quality of the video and logs.
3. CCTV inspection video shall be continuous for a pipe segment between manholes. Do not leave gaps in the video of a segment between manholes and do not show a single segment on more than one video, unless specifically allowed by the Engineer.
4. Where access to manholes in easements and rights-of-way is required, the Contractor shall obtain permission from the homeowner for equipment access. Refer to the Technical Specification Section headed "General" for more information on Work in Private Property.

B. Flow Control

1. Perform CCTV inspection of one pipe segment at a time. Adequately control the flow in the segment being televised. The Contractor shall use pipe plugs in the upstream manhole to control the depth of flow where feasible. Do not exceed the depth of flow as follows:

<u>Pipe Diameter (Inches)</u>	<u>Depth of Flow (Percent of Pipe Diameter)</u>
6 - 10	10
12 - 24	15
>24	20

2. If the wastewater flow depth exceeds the maximum allowable during the CCTV inspection of a pipe segment, reduce the flow depth to an acceptable level by performing the CCTV inspection during minimum flow hours, by "Pump Around Pumping", by high-velocity jet nozzle or other acceptable dewatering means. Video made while floating the camera is not acceptable. Additionally, post-rehabilitation CCTV inspection shall be performed with the added requirement that the pipe walls are damp or dry (no dripping or splashing).

C. Passage of CCTV Camera

1. Do not propel the television camera through the pipe segment at a speed greater than 30 feet per minute and no slower than 15 feet per minute unless the inspection is stopped for service connection or defect viewing.
2. If the camera is unable to pass an obstruction during CCTV inspection of a pipe segment, televise the segment from the other direction (reverse setup) in order to obtain a complete CCTV inspection of the segment.
 - a. When the camera is proceeding in the opposite direction in order to survey on either side of an obstruction and a second obstruction is encountered away from the first obstruction, the inspection may be terminated and the Contractor shall be paid for

the length of the pipe segment inspected.

- b. The Engineer makes no guarantee that pipe segments specified for CCTV inspection are clear for the passage of the Contractor's cleaning and CCTV equipment. Select the appropriate equipment, tools, and methods for securing safe passage of the equipment. The Contractor shall be responsible for all costs associated with the retrieval of cleaning and CCTV inspection equipment that become stuck in the system. These costs include, but are not limited to, "Pump Around Pumping" and any resultant restoration, all in accordance with City standards. The City reserves the right to remove the Contractor's stuck equipment from the system if the Contractor fails to do so in a timely manner. All costs incurred by the City to remove the Contractor's stuck equipment from the wastewater system shall be paid by the Contractor.
3. The post-cleaning/ pre-rehabilitation CCTV inspection shall document that the pipe is ready to rehabilitate. Report any variations between previous reported (existing data) conditions and the actual conditions encountered to the Engineer.
4. The post-rehabilitation CCTV inspection shall document completion of the rehabilitation work and conformance to the Specifications. Provide a full 360-degree view of pipe, joints and service connections. Conduct post-rehabilitation CCTV inspection separately from cleaning operations in order to provide a clear view unobstructed by splashing or dripping.

D. CCTV Inspection Data Requirements

1. For each CCTV inspection survey (manhole to manhole, or lateral), provide the data/video in electronic format and a hard copy report. Electronic inspection data shall be submitted in a database compatible with current NASSCO PACP/LACP Data Exchange format. A single database shall be submitted with Payment Request once work is completed. The hard copy inspection report (pdf file format) shall include header information and provide a log of all pipe defects, service connections and other conditions indexed to the footage counter using current PACP/LACP format. The PACP/LACP compliant database as well as multiple pipe segment video files from the project locations, and hard copy PACP/LACP reports (in PDF file format) shall be uploaded or transferred to the City's File server in accordance with the Technical Specifications and submittal procedures as outlined at the Pre-Construction conference.
2. CCTV inspection video and data shall be captured in digital format and collected with current PACP/LACP certified software. The software shall be capable of exporting the most current version of PACP/LACP data exchange files. The software shall capture the inspection data in the PACP/LACP defect coding mode.
3. All CCTV inspections shall be performed referencing the City's correct wastewater asset names/formats and use City standard file naming conventions. The Engineer may provide the City's wastewater asset master list to the Contractor (where requested). The Contractor may not alter or edit the City's asset master list without prior approval from the Engineer. All CCTV inspections shall be created referencing the City's wastewater basin as the drainage area. All asset names and format used shall match City asset names within the City's wastewater asset master list or Plans. Where asset names on maps (which may reference older style name ids) conflict with asset names on Work Orders or Worklist, the Work Order of Worklist name shall govern.
4. The CCTV inspection video files shall be encoded using MPEG1 or MPEG2 standards,

and shall be capable of producing a minimum 700 line resolution color video picture, 30 frames per second, and bitrate of 1.5 megabit per second. Extraneous video coverage before and after the completion of the pipe segment CCTV inspection shall be edited out by the Contractor to minimize the size of the associated digital video file.

5. Filenames for gravity mains (video files and PACP reports): shall be created using a format of "Upstream MH ID (space) Downstream MH ID (space) Inspection Date (YYYYMMDD) (space) Type of Inspection (Pre or Post) followed by file extension".

Examples:

Gravity Main Inspection:

"N020-M125 N020-M130 20060705 Pre.mpg"

Gravity Main Inspection (Reverse Setup):

"N020-M125 N020-M130 20060705R Pre.mpg"

In the event an unknown manhole is discovered during an inspection, the unknown manhole between upstream N020-M125 and downstream N020-M130 shall receive a temporary designation of N020-A125. A 2nd manhole found between the above manholes would be designated as N020-B125. A new inspection shall be started for each pipe segment. The City will assign a permanent number at a later date.

6. Filenames for public lateral inspection (video files and LACP reports): shall be created using a format of "Upstream manhole identification# (space) Downstream manhole identification# (space) Inspection Date (YYYYMMDD) (space) GIS Location Tag Value (this is a label on City maps providing a lateral identification# and measured distance from the lateral's Downstream Manhole identification#) (space) Type of Inspection (Pre or Post) followed by file extension". In the event the lateral does not have a label (GIS Location Tag Value) on the plans the contractor is working from, the contractor shall use a measurement provided by the main line CCTV inspection counter combined with the direction of the survey ("D" for downstream, "U" for upstream). In the event the lateral connects to a node/manhole, the manhole identification# value will be use for the "GIS Location Tag Value". Where an inspection is performed from a City clean-out, "CO" shall be added after the lateral "GIS Location Tag Value".

Examples:

Lateral inspection (from main, lateral label or GIS Location Tag Value=53):

"N020-M125 N020-M130 20060705 53 Post.mpg"

Lateral inspection (from City clean-out "CO"):

"N020-M125 N020-M130 20060705 53CO Post.mpg"

Lateral inspection (lateral connected to a manhole, "N020-M130"):

"N020-M125 N020-M130 20060705 N020-M130 Post.mpg"

Lateral inspection(no "GIS Location Tag Value" on plans, use counter with direction):

"N020-M125 N020-M130 20060705 199D Post.mpg"

E. Field Quality Control

1. Contractor shall not allow wastewater or solids to be released from the wastewater

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system onto streets or into ditches, catch basins, stormwater drains, stormwater manholes, etc.

2. Acceptance of pipe cleaning and rehabilitation work is contingent upon the successful completion of the CCTV inspection. If the CCTV inspection video is not acceptable or shows that debris, solids, sand, grease, or grit remains in the pipe, the CCTV inspection and/ or cleaning shall be considered unsatisfactory. The cleaning and CCTV inspection of the pipe segment shall be repeated at the Contractor's expense until it is satisfactory.

END OF SECTION

SECTION 24 - CHEMICAL SEALING OF HOST PIPE

24.01 GENERAL

The Work in this section includes chemical sealing of the host pipe to reduce infiltration to an acceptable level prior to liner installation, to ensure that subsequent liner placement and curing is not adversely affected by the presence of excessive infiltration. Acceptable reduction of host pipe infiltration shall be defined as reducing infiltration at host pipe joints and other defects to a level that will ensure completion of liner installation in accordance with these Specifications.

The Contractor shall furnish all materials, labor, equipment, and services necessary for chemical sealing of active infiltration from inside the host pipe including, but not limited to: traffic control, locating access structures, wastewater bypass pump around and/ or diversion as necessary, removal and disposal of residual or excess grout material and debris from sealing operation, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

24.02 PRODUCTS

A. Sealing Materials

1. The sealing compound shall be Acrylic base gel – Avanti AV-100, AV-118, Urethane base gel – Avanti AV-350 or Acrylate base gel- Deneff AC-400 or approved equal, and shall be suitable for use in domestic wastewater collection systems. Handling, formulation and storage of the sealing gel compound shall be in strict conformance with the manufacturer's recommendations. The uncured gel shall be delivered to the site in unopened containers, with the date of manufacture clearly indicated, no uncured gel manufactured more than six months prior to the date of application shall be utilized. Residual sealing materials shall be removed from the wastewater collection system after injection to insure no flow reductions, restriction or blockage occur.
2. Icoset additive shall be added to the sealing compound for gel strengthening. The quantity of Icoset additive will be according to the manufacturer recommendation. The sealing compound admixture shall be adjusted to meet specified viscosity and reaction time.

24.03 SUBMITTALS

- A. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
 1. Gel compounds
 2. Installation equipment

24.04 EQUIPMENT

A. General

1. Sealing equipment shall consist of two separate pumping systems capable of supplying an uninterrupted flow of sealing materials to completely fill the voids and reduce infiltration. Pumps, fittings and hoses shall be designed to transport a high viscosity material and shall not be affected by acetone or ketone solvents.
2. Sealing materials shall pass from the pumping system through instant reading, controlled flow meters and then through a dual hose system into the sealing device. The device (referred to hereafter as a packer) shall be a cylindrical case of a size less than pipe size, with the cables at either end used to pull it through the host pipe.
3. Generally, the equipment shall be capable of performing the specified operations in pipes where flows do not exceed 25 percent without resorting to any method of flow control.
4. Air impervious inflatable sleeves shall be mounted over the cylinder with the ends of the sleeve sealed to the ends of the casting. The sleeves shall be so constructed that they can be expanded from the center to both ends. The center portion of the sleeve shall be sealed to the casing by a broad confining band. When the packer is inflated, two widely spaced annular bladders shall be formed, each having an elongated shape and producing an annular void around the confined portion of the sleeve. No sealing device which is expanded mechanically nor where the expansion sleeve is not continuous will be allowed in order to prevent damage to the pipe from excessive amounts of sealing pressures or air leakage in the center area of such sealing device. The sleeve shall be a low void packer.

24.05 EXECUTION

A. General

Sealing shall be by the pressure grout method. Generally, this shall be accomplished by forcing chemical sealing gel materials through a system of pumps and hoses into and through the joints or defects of the host pipe from the packer. The use of remote-controlled packer equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and a manual packer or other sealing method is acceptable. Jetting or driving pipes from the surface for exterior grouting of the host pipe shall not be allowed.

B. Grout Mixing

1. The Contractor shall mix all grout at the job site in the presence of the Engineer. No grout will be used on the job which has been mixed off site and is in the Contractor's tank when the truck drives on site. The Contractor's personnel shall follow the manufacturer's recommendations for the mixing and safety procedures to protect personnel from any adverse effects of the grouting compounds. Powder and additives shall be added and mixed at rates, which will minimize the formation of lumps within grout tanks solutions. All additives will be thoroughly mixed in the grouting component tanks.
2. Prior to application of grout for seal purposes, a pump test will be performed to determine

if equal quantities of grout are being pumped from the grout component tanks. Separate containers shall be used to capture the discharges from the grout component tanks. One gallon of grout shall be pumped and the pump strokes shall be counted. If unequal quantities are being pumped, the Contractor shall take corrective action. The pump test shall be repeated until equal quantities are pumped from the grout tanks.

3. During the grouting process, the Contractor shall monitor the grout component tanks to make sure that equal quantities are being pumped. If unequal levels are noted in the tanks, the pump test shall be repeated as described above. At the beginning of each day, when new batches of grout are mixed and when grout additives are modified to change gel times, a test shall be performed with quantities of grout to determine the grout mixture gel time. The Contractor shall have accurate scale(s) which shall be used to weigh the various non water grout solution components.

C. Host Pipe Sealing by Pressure Grout Method

1. The packer shall be positioned over the area of infiltration by means of a measuring device at the surface and the Closed Circuit Television (CCTV) camera in the pipe. Accurate measurement of the location of the defect to be sealed shall be made, using a portion of the packer as a "Datum" of measurement point or target. Such measurement, target or point shall also be used to obtain necessary measurement for positioning injection area of packer over the area to be sealed.
2. The packer sleeves shall then be pneumatically expanded and shall seal against the inside periphery of the pipe to form a void area at the joint or defect now completely isolated from the remainder of the pipe segment.
3. Into this isolated area sealant materials shall be pumped through the hose system at controlled pressures, which are in excess of groundwater pressures. The pumping, metering and packer shall be integrated so that proportions and quantities of materials and pressures for materials and sealing gel can be instantly monitored and regulated in accordance with the type and size of the leak, percentage of voids being filled, type of soil surrounding the pipe and the rate of flow of the sealing gel solution in relation to the back pressures. These parameters should follow the manufacturer's specifications and guidelines.
4. Upon completion of the injection, the television camera shall be moved to a position to observe and inspect the results of the injection. If inspection shows the seal was not effective, the process shall be repeated until infiltration has been reduced to an acceptable level for liner installation.
5. The packer shall be moved forward, wiping away the excess grout. The excess sealing material removed from the joint by the grouting equipment shall be flushed or pushed forward to the next downstream manhole, removed from the wastewater system and disposed of by the Contractor as specified by disposal of debris resulting from cleaning operations. In no case shall excess grout material be allowed to accumulate and be flushed down the system.
6. It is intended that chemical sealing shall be performed on host pipe immediately prior to the installation of the liner unless otherwise authorized by the Engineer. The Contractor shall notify the Engineer a minimum of 48 hours prior to commencing chemical sealing operation. The quantity of grout used shall be verified by the City Inspector.
7. Any part of the wastewater system damaged as a result of the Contractor's operations

shall be promptly repaired by, and at the expense of, the Contractor.

8. The Contractor shall perform CCTV video inspection of host pipe sealing, as required by the Engineer. The video shall be submitted to the Engineer for review and for permanent record. The video inspection shall comply with the applicable requirements of the Technical Specification section headed "Closed Circuit Television Inspection".

D. Cleanup

Residual sealing materials that extend into the pipe, reduce the pipe diameter, or restrict the flow shall be removed and disposed of by the Contractor at an approved site. Sealed joints shall be left reasonably "flush" with the existing pipe surface. Excessive residual sealing materials in the system shall be cleaned to remove the residual materials.

E. Disposal

Furnish equipment for collection of cleaning solvents used in the cleaning of the sealing equipment. Collected solvents shall be disposed of by an approved solvent recovery process. Disposal of cleaning solvents into the wastewater or stormwater collection systems is prohibited.

F. Wastewater Flow Controls

When wastewater flows are above the minimum requirements or inspection of the complete periphery of the pipe is necessary to effectively conduct the inspection and sealing operations, one or more of the following methods of flow control shall be used.

1. A plug shall be inserted into the pipe at a manhole upstream from the section to be inspected and/ or sealed. The plug shall be so designed that all or any portion of the wastewater flows can be released. During the inspection portion of the operation, flows shall be shut off or substantially reduced in order to properly inspect the pipe at the invert. After the inspection is complete, flows shall be restored to normal or not more than 1/4 of the pipe diameter during the sealing operation. The Contractor will be responsible for preventing backups and overflows.
2. Where pumping is required, in the opinion of the Engineer, to assure completion of the inspection and sealing work, the Contractor will be required to furnish pumping and bypassing equipment. Refer to the requirements of article "Pump Around Pumping" of the Technical Specification Section headed "General".

END OF SECTION

SECTION 25 - CHEMICAL SEALING OF SERVICE CONNECTIONS

25.01 GENERAL

The Work in this section includes chemical sealing of the service connections (laterals) to reduce infiltration within the lateral to an acceptable level and to seal the annular space between the liner and host pipe at service connections. Accordingly, the Engineer will base acceptance of this portion of the Work on retesting of the joints sealed and inspection of the joints with Closed Circuit Television (CCTV) video inspection.

The Contractor shall furnish all materials, labor, equipment, and services necessary for chemical sealing of active service connections from within the main pipe using a CCTV camera and inversion tube, and including, but not limited to: traffic control, locating access structures, wastewater bypass pump around and/or diversion as necessary, removal and disposal of residual or excess grout material and debris from sealing operation, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

25.02 PRODUCTS

A. Sealing Materials

1. The sealing compound shall be Acrylic base gel – Avanti AV-100, AV-118, Urethane base gel – Avanti AV-350 or Acrylate base gel- Deneff AC-400 or approved equal, and shall be suitable for use in domestic wastewater collection systems. Handling, formulation and storage of the sealing gel compound shall be in strict conformance with the manufacturer's recommendations. The uncured gel shall be delivered to the site in unopened containers, with the date of manufacture clearly indicated, no uncured gel manufactured more than six months prior to the date of application shall be utilized. Residual sealing materials shall be removed from the wastewater collection system after injection to insure no flow reductions, restriction or blockage occur.
2. Icoset additive shall be added to the sealing compound for gel strengthening. The quantity of Icoset additive will be according to the manufacturer recommendation. The sealing compound admixture shall be adjusted to meet specified viscosity and reaction time.

25.03 SUBMITTALS

- A. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
1. Gel compounds
 2. Installation equipment

25.04 EQUIPMENT

A. General

1. Sealing equipment shall consist of two separate pumping systems capable of supplying an uninterrupted flow of sealing materials to completely fill the voids and reduce infiltration. Pumps, fittings and hoses shall be designed to transport a high viscosity material and shall not be affected by acetone or ketone solvents.
2. Sealing materials shall pass from the pumping system through instant reading, controlled flow meters and then through a dual hose system into the sealing device. The device (referred to hereafter as a packer) shall be a cylindrical case of a size less than pipe size, with the cables at either end used to pull it through the host pipe.
3. Generally, the equipment shall be capable of performing the specified operations in pipes where flows do not exceed 25 percent without resorting to any method of flow control.
4. Air impervious inflatable sleeves shall be mounted over the cylinder with the ends of the sleeve sealed to the ends of the casting. The sleeves shall be so constructed that they can be pneumatically expanded from the center to both ends. The center portion of the sleeve shall be sealed to the casing by a broad confining band. When the packer is inflated, two widely spaced annular bladders shall be formed, each having an elongated shape and producing an annular void around the confined portion of the sleeve. No sealing device which is expanded mechanically nor where the expansion sleeve is not continuous will be allowed in order to prevent damage to the pipe from excessive amounts of sealing pressures or air leakage in the center area of such sealing device. The sleeve shall be a low void packer.
5. Lateral service sealing is accomplished with a "Logiball" lateral packer. The objective of the lateral service packer is to seal the annular space and lateral service connection to the liner and the first 18-inches of the service connection pipe.

25.05 EXECUTION

A. General

Sealing shall be by the pressure grout method. Generally, this shall be accomplished by forcing chemical sealing gel materials through a system of pumps and hoses into and through the joints or defects of the service connection and into the annular space from the packer. The use of remote-controlled packer equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and a manual packer or other sealing method is acceptable. Jetting or driving pipes from the surface for exterior grouting of the host pipe shall not be allowed.

B. Grout Mixing

1. The Contractor shall mix all grout at the job site in the presence of the Engineer. No grout will be used on the job which has been mixed off site and is in the Contractor's tank when the truck drives on site. The Contractor's personnel shall follow the manufacturer's recommendations for the mixing and safety procedures to protect personnel from any adverse effects of the grouting compounds. Powder and additives

shall be added and mixed at rates, which will minimize the formation of lumps within grout tanks solutions. All additives will be thoroughly mixed in the grouting component tanks.

2. Prior to application of grout for seal purposes, a pump test will be performed to determine if equal quantities of grout are being pumped from the grout component tanks. Separate containers shall be used to capture the discharges from the grout component tanks. One gallon of grout shall be pumped and the pump strokes shall be counted. If unequal quantities are being pumped, the Contractor shall take corrective action. The pump test shall be repeated until equal quantities are pumped from the grout tanks.
3. During the grouting process, the Contractor shall monitor the grout component tanks to make sure that equal quantities are being pumped. If unequal levels are noted in the tanks, the pump test shall be repeated as described above. At the beginning of each day, when new batches of grout are mixed and when grout additives are modified to change gel times, a test shall be performed with quantities of grout to determine the grout mixture gel time. The Contractor shall have accurate scale(s) which shall be used to weigh the various non water grout solution components.

C. Host Pipe Sealing by Pressure Grout Method

1. Air testing laterals shall be accomplished by isolating the area to be tested with the lateral service packer and by applying positive pressure into the isolated void area. A CCTV camera shall be used prior to positioning the lateral packer. A sensing unit shall be used for continuous monitoring of the void pressure. This sensing unit shall be located within the void area and will accurately transmit continuous pressure readout to the control panel.
2. Joint testing and grouting for laterals will utilize a "Logiball" type system. The packer ends (end elements, sleeves) shall be expanded using controlled air pressure. The expanded ends shall seal against the inside periphery of the pipe to form a void area at the lateral, now completely isolated from the remainder of the pipe segment. Into this isolated area, sealant materials shall be pumped through the hose system at controlled pressures that are in excess of groundwater pressures. The pressure device shall accurately show psi to the nearest one tenth (0.1) pound and shall instantly respond to and record any change in the void pressure. The joint shall be tested with a gauge pressure of one-half psi per foot of depth of lateral pipe as measured by the deeper of the two manholes between which the lateral is located, or a minimum of 4 psi, whichever is larger. The pumping unit, metering equipment, and the packer device shall be designated so that proportions and quantities of materials can be regulated in accordance with the type and size of the leak being tested or sealed, percentage of voids being filled, type of soil surrounding the pipe and the rate of flow of the sealing gel solution in relation to the back pressures. These parameters should follow the manufacturer's specifications and guidelines and be reviewed with the Engineer prior to the beginning of any grouting activities.
3. The test procedure will consist of applying air pressure into each isolated void area. To isolate a void, a lateral sealing packer shall be positioned straddling the lateral. The operator shall insert an inflatable inversion tube and inflate the packer ends to isolate the lateral. Once the designated pressure in the isolated void is displayed on the meter of the control panel, the application of air pressure will be stopped and a thirty-second waiting period will commence. The void pressure will be observed during this period. If

the void pressure drop is greater than that allowed in the following Air Test Table, the lateral shall be considered to have failed the air test and shall be grouted as specified herein.

AIR TEST TABLE

<u>Initial Void Pressure (psi)</u>	<u>Void Pressure After 30 Seconds</u>
12 - 11	4.8 - 4.4
11 - 10	4.4 - 4.0
10 - 9	4.0 - 3.6
9 - 8	3.6 - 3.2
8 - 7	3.2 - 2.8
7 - 6	2.8 - 2.4
6 - 5	2.4 - 2.0

4. After completing the air test for each individual lateral specified herein, the lateral packer shall be deflated, with the void pressure meter continuing to display void pressure. If the void pressure does not drop to approximately zero, the equipment shall be adjusted to provide a zero void pressure reading at the monitor.
5. An air pre-test is not required for lateral sealing of service connections in main pipes that have been lined, as lateral sealing is required regardless of air test results. Pre and post-tests, and quantity of grout pumped shall be logged.
6. Lateral sealing begins if the lateral does not pass the air test as described above. The lateral packer shall remain in position, thus maintaining the isolated void. Chemical grout sealant will be pressure injected through the lateral packer into the annular space between the inversion tube and the lateral pipe. Under pressure, the grout material shall be then forced out into the soil through leaking joints and pipe defects. The amount of chemical grout pumped is based on the number of pump strokes delivered to each lateral. The number shall be recorded on the sealing log.
7. Upon completion of the lateral sealing procedure, the lateral shall be air tested to verify the sealing of the connection. The air test will be the same as outlined above. If the sealed lateral fails the air test, the grouting procedure shall be repeated at no additional cost to the City. This sequence of air testing, grouting and subsequent air testing shall be repeated until either the lateral is sealed or it is determined that the grout consumption is too high and may result in the blockage of the lateral pipe. The final determination to stop subsequent attempts to seal a lateral will be made jointly between the Engineer and the Contractor.
8. The Contractor shall verify lateral flow after the successful sealing of each lateral. With the lateral packer in position, the inversion tube shall be retracted and air pressure injected into the lateral. Should a pressure build in the lateral and not drop to zero in a few seconds, the packer will be moved off the connection and the connection shall be viewed with a television camera. With the camera viewing the connection point, an attempt will be made to obtain a water flush by the occupant. If no water is viewed during this procedure, it shall be assumed that the building service connection is blocked with grout and the responsibility to clear the lateral will be the Contractor's at no additional cost to the City.

9. The Contractor shall attach a notification form to the door of each home or building for which laterals have been grouted. This notification to the occupant shall state the following:

The lateral service connection to (address)_____ was grouted on (date) _____.

If any blockage of wastewater flow occurs, please call (emergency number) _____.

Any blockages that occur as a result of the lateral sealing operations will be cleared by the Contractor.

10. All activities shall be video inspected during both the air testing and sealing operation. The video shall be submitted to the Engineer for review and for permanent record. The video shall display at a minimum the date, manhole numbers, footage to the lateral, and void pressure readout. In addition, the data obtained during this operation shall be recorded on a lateral testing and sealing log provided by the Contractor. The log shall specify conditions of each service lateral sealed including break-in-service connection, lined pipe, etc.

D. Cleanup

Residual sealing materials that extend into the pipe, reduce the pipe diameter, or restrict the flow shall be removed and disposed of by the Contractor at an approved site. Sealed joints shall be left reasonably "flush" with the existing pipe surface. Excessive residual sealing materials in the system shall be cleaned to remove the residual materials.

E. Disposal

Furnish equipment for collection of cleaning solvents used in the cleaning of the sealing equipment. Collected solvents shall be disposed of by an approved solvent recovery process. Disposal of cleaning solvents into the wastewater or stormwater collection systems is prohibited.

F. Wastewater Flow Controls

When wastewater flows are above the minimum requirements or inspection of the complete periphery of the pipe is necessary to effectively conduct the inspection and sealing operations, one or more of the following methods of flow control shall be used.

1. A plug shall be inserted into the pipe at a manhole upstream from the section to be inspected and/ or sealed. The plug shall be so designed that all or any portion of the wastewater flows can be released. During the inspection portion of the operation, flows shall be shut off or substantially reduced in order to properly inspect the service connection invert at the main pipe. After the inspection is complete, flows shall be restored to normal or not more than 1/4 of the pipe diameter during the sealing operation. The Contractor will be responsible for preventing backups and overflows.
2. Where pumping is required, in the opinion of the Engineer, to assure completion of the inspection and sealing work, the Contractor will be required to furnish pumping and bypassing equipment. Refer to the requirements of article "Pump Around Pumping" of

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the Technical Specification Section headed "General".

END OF SECTION

SECTION 26 - REMOVAL OF PROTRUDING SERVICE CONNECTIONS

26.01 GENERAL

The Work in this section includes internally removing protruding service connections and excess mortar in wastewater pipe segments between access structures (including manholes, vaults, junctions, wet wells, and end of line cleanout), and scheduled to be rehabilitated. Remove only those service connections that protrude sufficiently, as specified herein and which are determined to interfere with the pipe rehabilitation. The intent is to remove the minimum number of protruding service connections necessary to allow the pipe segment to be rehabilitated.

The Contractor shall furnish all materials, labor, equipment, and services necessary for removal of protruding service connections including, but not limited to: traffic control, locating access structures, wastewater bypass pump around pumping and/or diversion as necessary, removing all dirt and debris caused by protruding service removal, disposal of waste and sediment, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

26.02 PRODUCTS

A. Equipment

1. Protruding service connections shall be removed using internal, remote-controlled intruding pipe cutting equipment. The use of remote-controlled equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and manual removal is acceptable. Excavation and replacement of protruding connections will not be allowed except under special situations authorized in writing by the Engineer.
2. The equipment shall consist of a main body containing a rotating head assembly equipped with carbide cutting edges. The rotating cutting head shall be driven by air or by electricity and shall be capable of cutting concrete, vitrified clay pipe or other materials commonly used for pipe construction with the exception of cast iron or steel.
3. The equipment shall be self-propelled or pulled through the pipe using winches and a cable set up between adjacent manholes.
4. The equipment shall be positioned using a Closed Circuit Television (CCTV) camera in conjunction with the cutter assembly.

26.03 EXECUTION

A. Performance

1. The Contractor shall remove all service connections specified herein that inhibit pipe segment rehabilitation methods. The Contractor is required to remove protruding

connections to the point where they are flush with the inside wall of the pipe.

2. The Contractor shall maintain a complete record of all protruding connections that were removed, and furnish two (2) copies of this record at the completion of this work.
 - a. The list shall show the date, street, and pipe segment (by manhole numbers), station and location (left, right and top) of each connection removed.
 - b. The list shall also show similar data for any connections that were not successfully removed, as well as the reason why removal was unsuccessful.
3. The Contractor shall protect existing main pipe and service laterals from damage caused by improper use of the equipment. Damage to a main pipe or service lateral caused by removal of a protruding connection shall be repaired immediately, as directed by the Engineer, at the Contractor's expense. Any increase in infiltration at the service connection caused by the Contractor's removal of the protruding connection shall be chemically sealed by the Contractor at no additional cost to the City, in accordance with the Technical Specification Section headed "Chemical Sealing of Service Connections".
4. The Contractor shall remove all dirt and debris from the wastewater system following completion of protruding connection removal.

B. Inspection

1. Contractor shall provide CCTV video inspection of protruding service connection prior to removal, recording location and footage to service connection. Following successful completion of removal, Contractor shall perform post-construction CCTV inspection.
2. Post-cleaning/ pre-rehabilitation and post-rehabilitation CCTV inspections shall be as specified in the Technical Specifications section headed "Closed Circuit Television Inspection." Video and data shall be submitted to the Engineer. Video and data shall become the property of the City.

END OF SECTION

SECTION 27 - WASTEWATER STRUCTURE REHABILITATION

27.01 GENERAL

The Work in this section includes furnishing and installing wastewater access structure (manhole) components and coatings for rehabilitation, structural enhancement, and corrosion protection of existing wastewater manholes, for the various diameters listed in the Proposal. Wastewater access structures include, but are not limited to, manholes, vaults, junctions, and wet wells.

The Contractor shall furnish all materials, labor, equipment, and services necessary for wastewater manhole component replacement and coating installation including: traffic control, pump around pumping and/or diversion of wastewater flows, void repair, inflow/infiltration elimination, surface preparation, structure component and coating installation, testing, surface restoration, and cleanup of the Work site.

27.02 GOVERNING STANDARDS

The following Standards are referenced in this section:

ASTM	C31	"Standard Practice for Making and Curing Concrete Test Specimens in the Field"
ASTM	C78	"Flexural Strength of Concrete"
ASTM	C109	"Standard Test Method for Compressive Strength of Hydraulic Cement Mortars"
ASTM	C157	"Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete"
ASTM	C267	"Chemical Resistance of Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes"
ASTM	C293	"Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)"
ASTM	C307	"Standard Test Method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacing"
ASTM	C308 Modified	"Standard Test Method for Working, Initial Setting, and Service Strength Setting Times of Chemical-Resistant Resin Mortars"
ASTM	C309	"Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete"
ASTM	C321	"Standard Test Method for Bond Strength of Chemical-Resistant Mortars"

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ASTM	C469	"Static Modulus of Elasticity & Poisson's Ratio of Concrete Compression"
ASTM	C496	"Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens"
ASTM	C531	"Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes"
ASTM	C579	"Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes"
ASTM	C580	"Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes"
ASTM	C596	"Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement"
ASTM	C666	"Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing"
ASTM	C807	"Set Time of Hydraulic Cement Mortar"
ASTM	C882	"Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear"
ASTM	C905	"Standard Test Methods for Apparent Density of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes"
ASTM	C1090	"Shrinkage Test"
ASTM	C1138	"Standard Test Method for Abrasion Resistance of Concrete (Underwater Method)"
ASTM	C1202	"Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration"
ASTM	D543	"Resistance of Plastics to Chemical Reagents"
ASTM	D638	"Tensile Properties of Plastics"
ASTM	D695	"Compressive Properties of Rigid Plastics"
ASTM	D790	"Flexural Properties of Unreinforced and Reinforced Plastics"
ASTM	D1622	"Standard Test Method for Apparent Density of Rigid Cellular Plastics"
ASTM	D1623	"Standard Test Method for Tensile And Tensile Adhesion Properties of Rigid Cellular Plastics"

ASTM	D2126	"Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging"
ASTM	D2584	"Volatile Matter Content"
ASTM	D2842	"Standard Test Method for Water Absorption of Rigid Cellular Plastics"
ASTM	D3846	"Standard Test Method for In-Plane Shear Strength of Reinforced Plastics"
ASTM	D4258	"Standard Practice for Surface Cleaning Concrete for Coating"
ASTM	D4259	"Standard Practice for Abrading Concrete"
ASTM	D4541	"Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers"
ASTM	D4787	"Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates"
ASTM	F2414	"Practice for Sealing Sewer Manhole Using Chemical Grouting"
ASTM	F2551	"Practice for Installing a Protective Cementitious Liner System in Sanitary Sewer Manholes"
ACI	503	"Use of Epoxy Compounds with Concrete"
SSPC/ NACE	SP-13/ NACE 6	"Surface Preparation of Concrete"

27.03 DEFINITIONS

- A. **Coating Systems:** includes surface description, surface preparation, required dry film thickness, and the number and application procedure of the prime and finish coatings. Systems are defined and identified in the article headed "Coating System Specification Sheets" in this Section of the Technical Specifications.
- B. **Field Coating:** the application of the coating system in an existing manhole or structure.
- C. **Dry Film Thickness (DFT):** the thickness of a fully cured coating or coating system.
- D. **Wet Film Thickness (WFT):** the thickness of a coating while wet.
- E. **Volatile Organic Content (VOC):** the portion of a coating that is a compound of carbon, is photo chemically reactive, and evaporates during drying or curing, expressed in g/L or lbs/gal as defined in ASTM D3960.
- F. **Solvents:** Those chemicals used to dilute the liquid coating either for thinning the coating or for cleanup.
- G. **Lead Containing:** any coating that contains any detectable amount of lead.

- H. **Hard To Reach:** areas that may not be accessible with spray equipment but can be reached by brush, mitt, or roller.
- I. **Inaccessible Areas:** areas such as back-to-back angles, skip welds, and other areas that a brush, mitt, or roller cannot contact the surface.
- J. **Manhole Floor:** the bench, channel and invert of the manhole containing the concrete/brick floor of a manhole generally shaped as a fillet to direct incoming flows to the outlet piping and to minimize solids buildup, the wall/bench joint, the shaped flow-ways within the bench, the bench/channel joint, and the invert which is the line of the lowest elevation along the bottom of the channel(s).
- K. **Manhole Wall:** that part of the manhole extending from the bench/wall joint to the bottom of the cone/corbel.
- L. **Manhole Cone/Corbel:** the reducing section which tapers concentrically or eccentrically from the top wall joint to the bottom of the chimney or the ring (frame) casting where there is no chimney.
- M. **Manhole Chimney:** the narrow vertical section built from brick or concrete adjusting rings extending from the top of the cone/corbel to the bottom of the frame casting.
- N. **Leaks/Infiltration:** presence of water, or indications of water, inside the manhole caused by subsurface water entering the manhole from the exterior through cracks, fractures, holes, broken seals, or other means.
- O. **Inflow:** surface water generally entering into a manhole through or under the manhole cover, frame, frame seal, chimney wall, or at the cone/corbel chimney joint.
- P. **Void:** as defined in ACI.
- Q. **pH:** a measure of acidity and alkalinity.
- R. **Bug Holes:** small regular or irregular cavities, not exceeding 15mm in diameter, resulting from the entrapment of air bubbles of formed concrete during placement and compaction.

27.04 QUALIFICATIONS

- A. The Contractor's qualifications are addressed under item 12 of the Proposal Questionnaire. The Contractor shall be certified and/or licensed by the coating system manufacturer(s) as an approved Applicator for the products referenced in this section.
- B. The Applicator shall be the person responsible for the actual Work, either as the foreman or the person actually applying the coating system.

27.05 SUBMITTALS

The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":

- A. List of materials including coatings, repair materials, grouts, and blasting abrasive material

proposed for use.

- B. List of equipment and certification by the individual coating manufacturer that the application equipment is sufficient to adequately apply the coating.
- C. For each coating system, provide the manufacturer's application guidelines including:
 - 1. Surface preparation guidelines.
 - 2. Primer type, where required.
 - 3. Maximum wet and dry thickness per coat.
 - 4. Minimum and maximum curing time between coats, and atmospheric conditions for each.
 - 5. Curing time before submergence in municipal wastewater.
 - 6. Thinner to be used with each coating.
 - 7. Ventilator requirements.
 - 8. Allowable application methods.
 - 9. Maximum storage life.
 - 10. Material safety data sheets.
 - 11. Interpretation of batch code numbers.
 - 12. Minimum and maximum relative humidity requirements.
 - 13. Minimum and maximum surface temperature requirements.
 - 14. Minimum and maximum ambient temperature requirements.
 - 15. Manufacturer's recommended application procedure.
- D. Shop Drawings for frame and cover castings.
- E. Product Data for manhole cover inserts.
- F. Provide information on planned surface preparation procedures including, when relevant, abrasive media, minimum water cleaning pressure and flow rate (e.g. 5000 psig @ 4 gpm) , nozzle types (e.g. zero degree rotating nozzle), etc. for coating systems specified. Surface preparation methods shall be based upon the conditions of the substrate and the requirements of the protective coating to be applied. Whichever method(s) are used, they shall be performed in a manner that provides a uniform, sound, clean neutralized surface. At the request of the Engineer, the Contractor shall test for adverse chemical conditions that may hinder overall product performance.
- G. Maintenance of Traffic Plan including, but not limited to, specific dates that the Maintenance of Traffic Plan shall be in place.
- H. Wastewater Pump-Around Pumping plan, where required.
- I. List of all test equipment to be used, copies of the adhesive and equipment's instructions, adhesives, calibration procedures, MSDS sheets, and copies of all reference standards

related to the test equipment.

- J. Coating thickness calculations: Signed and sealed designs shall be prepared and submitted by a Qualified Engineer, licensed in either the state of liner application or in the state in which the headquarters of the liner Manufacturer is located, for each coating system where design parameters are identified in Section 21.12, "Coating System Specification Sheets" .

27.06 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. General

1. Deviations from the manufacturer's printed instructions will not be allowed unless approved in writing by the Engineer.
2. In the event of a discrepancy between the Contractor's, manufacturer's or City Inspector's testing equipment, all parties shall check equipment in question for proper function and calibration.
3. Where there is a conflict between the manufacturer's recommendations and these Technical Specifications, the manufacturer's recommendations shall govern.
4. Test equipment and procedures shall be the same throughout the Contract.
5. **Quality Control:** Contractor shall be responsible for the quality control of the coatings applied including surface preparation, testing, verifying access, dimensions, configuration, pipe connections, appurtenances, and details of each manhole prior to commencing any Work as well as remedial work to be completed as identified by inspection at the given check points.
6. **Quality Assurance:** City Inspector shall approve the Contractor's Work regarding surface preparation and quality control of the coatings applied. This documentation in no way relieves the Contractor of the responsibilities described under this Contract. The City Inspector may conduct tests on ambient conditions, pH and surface temperature, coating(s) applied, wet and dry film thickness, coating type coating batch numbers, and other tests.

B. QA/QC Check Points

1. **pH Testing:** Prior to surface preparation for cementitious coating application, measure and record pH of the manhole interior surface and other parameters as required by coating manufacturer to verify acceptable existing substrate conditions for application of the specified product and to document compliance with warranty requirements. After surface preparation and prior to coating system being applied to the interior of a manhole (excluding coatings to only the interior of a chimney), measure and record pH of the manhole interior surface in at least two locations as approved by the City Inspector. Adjust if required by the coating system manufacturer and per NACE 6/SSPC SP 13 Table 1 for severe service.
2. **Concrete surface tensile strength:** After surface preparation (including repair and resurfacing products) and prior to a polymer coating system being applied to the interior of a manhole (excluding coatings to only the interior of a chimney and spot type only repairs) measure and record the results of a minimum of two concrete surface tensile strength tests, without glue failures, per manhole at locations as directed by the City Inspector. Tests shall be per ASTM D4541 as modified herein. Utilize a 20 mm test dolly and portable pull-off adhesion tester. Document test failure mode. Failure of the

dolly adhesive shall require retesting. If the concrete surface tensile strength is less than 200 psi (NACE 6/SSPC SP 13 Table 1 for light service) notify manufacturer and Engineer for approval before applying coating. (Destructive testing as defined herein shall be performed on the initial manhole coated with a particular coating system. After the initial test, 10% of the manholes coated may require testing as selected by the Engineer. Initial and additional testing required due to test failures shall be at the Contractor's expense.)

3. **Wet Film Thickness (WFT):** During coating system application, measure and record WFT of the coating in at least four locations in the manhole (one in a chimney) or as directed by the City Inspector. Use an industry standard WFT gage (ASTM D4414) designed for thick coatings. Minimum WFT thickness is specified for each product in the article headed "Coating System Specification Sheets" in this Section of the Technical Specifications.
4. **Surface Moisture:** After preliminary surface preparation and prior to a polymer coating system being applied to the interior of a manhole, measure and record surface moisture of the manhole interior surface in at least two locations per ASTM D426 and use a DELMHORST ACCUSCAN moisture meter using a 0 to 100 relative scale.
5. **Blotter Test:** Upon startup of abrasive blasting, compressed air shall be checked daily for oil and water by blotter test per ASTM D4285.
6. **Anchor Profile of Surface:** After preliminary surface preparation and prior to coating application to the interior of a manhole (excluding coatings only for interior of a chimney) compare and record anchor profile by comparison to various grits of sand paper.
7. **Surface Preparation:** Shall be accepted by the coating system manufacturer prior to the application of the coating system.
8. **Ambient Conditions:** Measure and record the test results for relative humidity, manhole wall surface temperature, dew point and ambient temperature to ensure compliance for materials applied.
9. **Coating Adhesion:** After polymer coating system application and cure, measure and record the results of a minimum of two adhesion tests, without glue failures, per manhole at locations within the manhole as directed by the City Inspector. Tests shall be per ASTM D4541 as modified herein. Utilize a 20 mm test dolly and portable pull-off adhesion tester. Document test failure mode, whether failure is within the substrate, failure is within the coating, or failure is at the coating/substrate interface. Failure of the dolly adhesive shall require retesting. If the testing damages the coating, spot repair the test location while following manufacturer's recommendations. Failure at the coating/substrate interface with less than 10% of substrate adhered to the coating and less than 100 psi pull-off strength, shall be deemed a coating system failure and the Contractor shall remove the coating to soundly adhered edges, re-perform surface preparation procedures, and recoat the failed surfaces, at the Contractor's expense. Low pull-off strength values (<150 psi) may require additional testing/evaluation to determine potential adhesion defects at the sole discretion of the Engineer. (Destructive adhesion testing as defined herein shall be performed on the initial manhole coated with a particular coating system. After the initial test, 10% of the manholes coated may require testing as selected by the Engineer. Initial and additional testing required due to test failures shall be at the Contractor's expense.)
10. **Holiday Testing:** The finished polymer coating shall be inspected per ASTM D-4787

"Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates", using high-voltage spark testing equipment with variable settings. Test voltage shall be set at an initial 100 volts per mil (4,000 volts per mm) of specified film thickness, and then increased as needed to compensate for relative conductivity of the concrete substrate by spark testing an induced holiday at furthest extension of test probe from grounding location. Once test voltage is determined, it shall be used throughout that area, and then re-determined again every time a new ground is made. Detected holidays shall be marked and repaired per coating manufacturer's recommendations. Contractor shall be responsible to provide necessary Holiday Testing equipment for final inspection. Pinhole testing shall be accomplished using a Tinker Razor Holiday Detector, San Gabriel, CA, Model AP/W or an Engineer approved equal model. A test voltage of 100 volts/mil is recommended. This test shall identify and allow for the repair of pinholes in order to ensure a continuous pinhole-free coating. (Testing shall only be required where full depth manhole coating is specified.)

27.07 CONTAINMENT AND SITE CONDITIONS

- A. No grouting materials, solvents, chemicals, blasting media, or debris of any sort shall be allowed to be discharged to the wastewater collection system. Water from pressure washing (>100 psi) may be allowed to enter the system after any debris has settled, when it demonstrated to the satisfaction of the City Inspector that no debris will enter the collection system. Water applied at less than 100 psi and containing common, household strength detergents, which are used strictly for rinsing the interior surfaces of the structure, may be allowed into the system as long as no debris are washed into the system. All odors noticeable by the average person shall be confined to an area within 10 feet of the structure. The Contractor shall provide odor control equipment or methods so odors are confined and in conjunction with closed space entry or other safety requirements.
- B. Provide environmental controls such as ventilators if the cure time of the coating is slowed by the presence of coating or solvent vapor, and heaters and/or dehumidification as necessary to meet coating application requirements.
- C. Applicator shall conform to all local, state, and federal regulations including those set forth by OSHA, RCRA, and the EPA.

27.08 WARRANTY

The Contractor shall unconditionally guarantee all manhole rehabilitation Work in this Contract against defects of materials and workmanship for a period of 3 years under normal use, operation, and service in accordance with the requirements of the *Supplemental General Conditions* article headed "Guarantee Period".

The Contractor and cementitious coating manufacturer shall warrant all cementitious manhole coating Work in this Contract against defects of materials and workmanship for a period of 10 years under normal use, operation, and service. The Contractor shall provide all testing and prepare all required installation reports, warranty registration documentation, etc. and submit same to the coating manufacturer and Engineer on behalf of the City. The Contractor shall furnish a warranty certificate from the cementitious coating manufacturer indicating acceptance and commencement of the warranty period. The Contractor and coating manufacturer shall, within one (1) month of written notice thereof, propose an acceptable method and repair any defects

(including all labor and materials) that may develop during the warranty period in a manner acceptable to the Engineer and at no cost to the City. Defects shall be defined as: visible leakage of groundwater into the manhole or separation of any part of the coating from the host manhole or coating interfacing joints.

27.09 MATERIALS

- A. **Coating Products:** Blended calcium aluminate cementitious manhole coating systems shall be Product A-1, A-2 or A-3 (these products shall contain no ordinary Portland cement). Pure calcium aluminate cementitious manhole coating systems shall be Product B-1, B-2, or B-3. Polymer manhole coating systems shall be Product C-1 or C-2. Geopolymer manhole coating system shall be Product E-1. No other products will be accepted.
- B. **Repair and Resurfacing Products:** Repair materials must be compatible with specified manhole coating products and selected to minimize curing time. The following products may be accepted and approved as compatible:
1. Deneef AC 40, Avanti AV 100, or approved equal pressure grout for infiltration elimination.
 2. 100% solids, solvent-free epoxy grout specifically formulated to be suitable for top-coating with the specified coating product(s).
 3. Factory blended, rapid setting, high early strength, fiber reinforced, non-shrink repair mortar that can be troweled or pneumatically spray applied, and specifically formulated to be suitable for top-coating with the specified coating product(s).
 4. Products specifically designed for thin (1/4-inch or less) applications shall be used for channels needing to be raised to match or transition with CIPP (cured-in-place pipe) liners. Product shall be SikaTop 123 PLUS, or approved equal. Where manholes with CIPP liners are scheduled to receive a coating, any channel repair materials shall be as recommended by the specific coating manufacturer.
- C. **Brick Masonry and Precast Concrete Grade Adjustment Rings**
1. Bricks shall be new, first quality, sound, hard, uniformly burned, regular and uniform in shape and size. Under burned or salmon brick shall not be acceptable. Only whole brick shall be used. Bricks shall conform to ASTM C32, Grade SS.
 2. Precast concrete grade adjustment rings shall conform to the requirements of ASTM C 478. Precast adjustment rings shall not be less than 2 inches thick or be of multiple piece construction. To accommodate steep surface grades, non-uniform precast grade adjustment rings may be manufactured to 2 inches thick on one side and 3 inches thick on the opposite side.
 3. Precast concrete grade adjustment rings shall provide structural capacity equal to or greater than the existing or specified manhole frame casting, and shall not affect the opening size or surface appearance.
 4. Mortar shall be factory blended, rapid setting, high early strength, fiber reinforced, non-metallic, chloride free, non-shrink or low-shrink repair mortar that can be troweled.
- D. **Frame and Cover Castings**
1. Grey Iron castings shall conform to the requirements of ASTM A48 Class 35 B, unless

otherwise specified, and be designed for HS-20 load rating.

2. Castings shall be manufactured true to pattern, and component parts shall fit together in a satisfactory manner. They shall be smooth and well cleaned by shot blasting. Circular manhole frame and cover castings shall be furnished with machined horizontal bearing surfaces. Frame and cover castings of the same nominal size shall be interchangeable.

E. Internal Chimney Sealant

1. The chimney sealant shall be minimum 100 mils thick of corrosion resistant aromatic flexible urethane resin coating applied to the inside wall of the chimney and manhole frame casting. The product shall have a minimum elongation of 800% and a Durometer of 75. The seal shall remain flexible allowing repeated vertical or horizontal movements of the manhole frame due to frost lift, ground movement or the thermal movement of pavements.
2. The chimney sealant shall have a minimum tensile and adhesion strength of 1150 PSI and 175 lb. per linear inch respectively. The chimney sealing system shall conform to the physical requirements of ASTM D412. The chimney sealant shall be Flex-Seal Utility Sealant as manufactured by Sealing Systems, Inc. or approved equal.

F. Manhole Cover Insert

1. The insert body shall be manufactured of 304 stainless steel with a minimum thickness of 18 gauge. The insert shall have a deep-dish bowl design to allow for easy removal of the manhole cover. The insert shall be designed to provide a sufficiently loose fit in the manhole frame casting to allow for easy removal.
2. The insert body gasket shall seal against the frame casting, be made of closed cell neoprene, and affixed to the insert body with a pressure-sensitive adhesive. The gasket shall have a minimum thickness of 1/8 inch and be installed by the manufacturer.
3. The insert body shall have a handle made 3/16" plastic coated 304 stainless steel cable installed on the side of the bowl and attached with two 304 stainless steel round head bolts with flat washers and self-locking nuts.
4. The manhole cover insert and components shall be manufactured of materials resistant to corrosion from atmospheres containing hydrogen sulfide and dilute sulfuric acid. The manhole cover insert shall be InflowShield as manufactured by Inflow Systems, Inc. or approved equal.

G. Standardization: Materials, supplies, and articles provided shall be the standard products of the manufacturers and coating system specified. Coatings in a particular system shall be the products of a single manufacturer.

H. Delivery, Storage and Handling: Deliver materials for field application to the job site in their original, unopened, undamaged containers. Each container shall bear the manufacturer's name brand, batch number, date of manufacture, and storage life. Coatings shall be stored in enclosed structures and shall be protected from weather, excessive high or low temperatures, and spills. Coatings exceeding storage life recommended by the manufacturer or that have been visibly damaged shall be removed from the site. Coating materials are to be stored and handled in accordance with their material safety data sheets.

27.10 REPAIR AND PREPARATION

- A. **Repair of Bench and Channel:** Manhole bench, flow channels, and inverts shall be repaired and/or constructed as directed in order to provide smooth flow characteristics and transition of flow through the manhole.
1. Contractor shall prepare, clean, and repair/rebuild manhole bench and flow channel(s) in the same manner as described above. Remove obstructions and loose materials from bench prior to shaping the channel and invert. Using brick and repair/resurfacing mortar, form a smooth, U-shaped channel having a minimum depth of one-half pipe diameter across the floor of the manhole using approved manhole rehabilitation materials. The top edge of the bench at the manhole wall shall be set at an elevation above one-half diameter of the adjacent pipe(s) and sloped at 1-inch per foot to drain toward the flow-through channel and outgoing pipe, and to intersect the channel edge at the one-half diameter level. Active flow shall be diverted as required to allow sufficient setting time for material used.
 2. Form a smooth transition with a reshaped channel invert and a raised manhole bench to eliminate sharp edges on the pipe, bench, channel, or invert. Build up and smooth the invert of manhole to match flow line of the connecting pipes. Channel build-up and surface preparation for manholes to be coated shall be in accordance with the article headed "Preparation" in this Section of the Technical Specifications.
 3. Finished benches, channels and inverts shall be smooth and without defects which would allow for accumulation of debris. Finished benches, channels and inverts shall conform to the Standard Details included in the Appendix.
- B. **Repair/Replacement of Chimney and Frame and Cover Casting**
1. **Frame and Cover Casting:** Frame and cover castings shall be replaced with Contractor or City furnished frame and covers, as directed. Frame and cover replacement varies according to manhole type and shall be performed in accordance with the requirements of the Contract Documents and City Standards included in the Appendix. The existing castings shall be salvaged and delivered to the designated location.
 2. **Chimney:** Manholes that have defective chimneys, frames and/or covers, or covers below grade will be designated for adjustment or replacement of the frame and cover. The Work shall include the following:
 - a. Saw cut and remove existing asphaltic or concrete pavement. Existing brick or paver stone pavement shall be carefully removed without cutting and salvaged for reuse. Excavate to at least 6 inches below the bottom of the chimney replacement.
 - b. Remove the existing manhole frame and cover casting, salvage and reuse the existing casting where adjustment is required, or deliver the salvaged casting to the designated location where replacement is required. Frames broken during removal or handling by the Contractor shall be replaced at the Contractor's expense.
 - c. Remove loose, cracked, broken, deteriorated, deficient or otherwise unsound existing chimney materials as required or directed by the Engineer. Existing Portland cement brick shall be removed and replaced regardless of condition. Where existing frame and cover castings are being replaced with a larger frame and cover casting, the existing chimney/corbel shall be removed and replaced as

- required to provide a chimney that matches the opening of the larger replacement frame casting. Existing surfaces shall be cleaned and prepared for chimney replacement.
- d. Replace existing chimney with new specified materials. The elevation and horizontal position of the frame shall be adjusted as necessary by installing precast grade adjustment rings or a sufficient number of brick and mortar rows to obtain the desired elevation. The frame and cover elevation and cross slope shall match the existing adjacent pavement. The frame and cover elevation shall be minimum 1 inch above existing grade in unpaved areas, or higher as directed by the Engineer. No materials other than the prepared mortar bed shall be used to obtain final elevation and slope of the frame. The prepared mortar bed shall be minimum 1/2 inch thick.
 - e. Backfill the excavation and restore surfaces to a condition equal or better than the existing condition prior to construction, in accordance with the requirements of the Contract Documents.
- C. **Elimination of Infiltration:** Infiltration shall be considered as "Minor" or "Severe". (1) "Minor" infiltration consists of water penetration of the manhole structure, appearing as a wet stain or a minute flow (trickle) of water on the interior surface of the manhole. (2) "Severe" infiltration consists of multiple leaks penetrating an area or of single leaks that spray into the interior of the manhole which require drilling through the manhole structure and pumping grout by the use of pressurized injection grouting equipment to stop active leaks. Contractor shall ensure that all visible leaks are eliminated in accordance with the Contract Documents and the coating manufacturer's material recommendations prior to surface preparation and coating application.
1. **"Minor" infiltration:** If observed within the manhole structure after surface preparation is complete, the area shall be prepared and a product specifically formulated for infiltration control and recommended by the specified manhole coating manufacturer(s) shall be used to stop minor infiltration flows in accordance with the product manufacturer's guidelines.
 2. **"Severe" infiltration:** Requires manhole drilling and pressure grouting. The products used for pressure grouting shall be installed in accordance with the manufacturer's guidelines. Substitute materials shall meet manhole coating manufacturer's recommendations for the particular manhole coating system specified.
 - a. Manhole grouting shall only be performed where approved and after associated Work such as CIPP lining.
 - b. Chemical grouting shall be performed beginning at the bottom of the manhole continue up as required to seal all points of severe infiltration.
 - c. Grouting, once commenced, shall be completed without stoppage. In case of equipment breakdown, wash out grouting system sufficiently to ensure fresh grout and adequate bond and penetration will occur upon restart. Maintain grout pressure until grout has set.
 - d. Grout travel shall be verified by migration of grout to defects or adjacent injection holes.
 - e. Injection holes shall be cleaned and patched with waterproof quick setting mortar as recommended by grout manufacturer.

D. General Coating Preparation

1. Surfaces to be coated shall be cleaned and prepared per the coating manufacturer's recommendations. Before applying coating, all contaminants including wastewater, oil, grease, dirt, rust, loose mill scale, waxes, efflorescence, sealers, salts, old coatings, and other foreign substances shall be removed. Oil and grease shall be removed before mechanical cleaning (hydro-blasting) is started. Where mechanical cleaning is accomplished by abrasive blast cleaning, the abrasive used shall be washed, graded and free of contaminants which might interfere with the adhesion of the coating.

Steam cleaning, detergent, industrial degreasers, and/or hot water shall be used to clean wall surfaces unless this is contrary to the recommendations of the specific coating system manufacturer. Acid solutions shall not be used.
2. As necessary, wastewater flow shall be stopped, bypassed or diverted for the preparation and application of the coating product(s).
3. Contractor shall prepare, clean, and seal all manhole wall penetrations in accordance with coating manufacturer's recommendations and as approved by the Engineer. Bench, channel, invert, chimney, and frame and cover casting repairs and/or replacements shall be completed before coatings are applied.
4. During surface preparation and coatings application, all nearby equipment, vehicles, structures, etc. shall be protected from blasting grit, dust and over sprayed, dropped or spilled materials. Surfaces adjacent to a proposed leading edge of coating application shall be taped-off or otherwise protected.
5. Clean cloths and clean fluids shall be used in solvent cleaning.
6. Contractor shall inspect all surfaces specified to receive a protective coating prior to surface preparation. Contractor shall notify Engineer of any noticeable disparity in the surfaces which may interfere with the proper preparation or application of the repair mortar and coating. Surface profile created by mechanical cleaning shall be per the coating manufacturer's recommendations.
7. Damaged surfaces shall be observed by the City Inspector before repairs are made. Where concrete or brick deterioration in a manhole structure is severe, structural integrity may need to be restored prior to application of coating, at Engineer's approval.
8. All active infiltration must be eliminated prior to proposed repair with materials as recommended by the coating manufacturer.
9. Plug or place covers over all pipe openings to prevent extraneous material from entering the wastewater system.

E. Surface Preparation of Concrete and Masonry Surfaces

1. **Concrete:** prepare per SSPC SP13/NACE 6 "Surface Preparation for Concrete," and the coating manufacturer's recommendations. All leaks evidenced by indications of infiltration, shall be plugged with materials as recommended by coating manufacturer. Surface profile created by abrasive blasted surfaces shall be per the manufacturer's recommendation for the coating system.
2. **Brick Manhole:** prepare per the coating manufacturer's recommendations. Contractor shall remove all oil, grease, chemicals and paints or protective coatings by chemical cleaning prior to hydro-blasting or abrasive blasting. All foreign particles and attacked

or unsound mortar shall be removed from the joints. All leaks evidenced by indications of infiltration, shall be plugged with materials as recommended by coating manufacturer. Loose brickwork and voids in the mortar joints shall be re-grouted with repair materials to provide a void free smooth surface for coating application.

3. Loose or protruding brick, mortar and concrete shall be removed by using a mason's hammer and chisel. The surface to be repaired must be clean and free of any loose materials.
4. Repair products shall be used to fill bugholes, holes, honeycombs, for patching of deep craters, voids or spalled areas of concrete, and/or smoothing transitions between components prior to coating installation. Products used must be compatible with the specified coating system(s), and used/applied in accordance with the repair product manufacturer's recommendations. Materials used shall be recommended by the coating system manufacturer.
5. Resurfacing/repair products shall be mixed, applied, allowed to cure, and treated per their manufacturer's recommendations, before they are coated. The Contractor shall ensure that resurfacing/repair and/or patching materials are fully cured before final surface preparation or coating application. The Contractor shall follow manufacturer's cure schedule before over coating.
6. Surfaces which are to be coated shall be allowed to dry to the moisture content recommended by the coating manufacturer.

F. Coating Interface with Adjoining Construction Materials

1. Coating product(s) shall interface with adjoining construction materials throughout the manhole structure to effectively seal and protect concrete or masonry substrates from infiltration and attack by corrosive elements. Procedures and materials necessary to effect this interface shall be as recommended by the coating product(s) manufacturer and approved by the Engineer. Termination points of the polymer coating product(s) shall have a minimum three (3) inch interface overlap with each pipe penetration. Termination points of the cementitious coating product(s) shall have flush interface abutting each pipe penetration. Wastewater flow shall be stopped, bypassed or diverted for the preparation and application of the coating product(s) to the invert and interface with pipe materials.
2. **CIPP Liners:** Polymer manhole coatings shall be chemically compatible with and have the ability to bond with the external or internal (with required surface preparation) surface of CIPP liners. Where manholes are coated in conjunction with CIPP lining activities by others, coating shall take place after pipe lining and utilize the existing wastewater Pump-Around Pumping setup where possible. Resurfacing/repair products shall be selected to minimize curing time. Manhole surface preparation and repair materials prior to coating shall be placed within the invert, channel, and benches at proper depth to allow for proper coating thickness, interface matching with CIPP profile, and minimum three (3) inch overlap of polymer coatings with CIPP terminal edges (internally or externally) in the invert, channel, benches, and remaining areas. The coating shall be monolithic with piping and manhole components. The CIPP surface to be interfaced with and overlapped with polymer coatings shall be clean and remain protected prior to coating. Surface preparation of internal CIPP surfaces shall require wire brushing or other approved means prior to coating to ensure bonding.

- G. **Final Cleaning:** The Contractor shall ensure that all surfaces to be coated are free of dust, moisture, and condensation. Nearby surfaces shall be cleaned to prevent contamination of substrate or freshly applied coatings.

H. **Internal Chimney Sealant Application**

1. All loose and protruding mortar and brick that would interfere with the seal's performance shall be removed and the manhole frame casting, chimney and cone/corbel cleaned by wire brushing. Prepare the surface as required by the manufacturer.
2. Active infiltration shall be corrected in accordance with the requirements of the article headed "Elimination of Infiltration" in this Section of the Technical Specifications prior to installing the internal chimney sealant. Resurfacing/repair products shall be completely cured in accordance with the manufacturer's requirements prior to installing the internal chimney sealant. The substrate surface must be free of sand, loose debris, dust, dirt, oil, grease or chemical contamination. A blower may be required to completely dry the substrate surface as recommended by the manufacturer.
3. Ensure the frame casting and structure is clean and dry prior to applying the adhesive primer. Brush the adhesive primer onto the casting and structure surfaces where the sealant is intended to adhere, in accordance with the requirements of the manufacturer.
4. The chimney sealant shall be evenly brush applied to the required thickness after the adhesive primer has dried, in accordance with the requirements of the manufacturer.
5. The chimney sealant shall be applied and extend vertically from 1-inch above the frame seal to 2-inches below the chimney and cone/corbel joint. The chimney sealant shall be applied and extend vertically from 1-inch above the frame seal to 12-inches below the frame seal for brick manholes where the frame is installed directly on the cone/corbel.

I. **Manhole Cover Insert Installation**

1. The Contractor shall accurately measure the existing frame and cover casting prior to ordering the manhole cover insert.
2. The manhole frame casting seat shall be free of all dirt, debris, rust and scale prior to the installation of the manhole cover insert. The insert shall be fully seated around the frame casting seat to ensure against water seepage between the insert and frame casting, and as recommended by the manufacturer.

27.11 COATING MATERIAL APPLICATION

- A. **Workmanship:** Coating shall be conducted in accordance with the requirements of SSPC, Good Painting Practice, Volume 1.
1. Coated surfaces shall be free from significant runs, drips, ridges, waves, laps and brush marks, etc. Coats shall be applied so as to produce an even film of uniform thickness.
 2. Coating equipment shall be designed for application of the materials specified.
 - a. Compressors shall have traps and filters to remove water and oils.
 - b. Spray equipment shall be equipped with mechanical agitators, pressure gages, and pressure regulators, and spray nozzles of the proper sizes and functioning in a manner suitable to perform the Work.

- c. The spray equipment shall be specifically designed to accurately ratio and apply the specified protective coating materials and shall be regularly maintained and in proper working order. Spray application equipment must be approved by the coating manufacturer and shall be used to apply each coat of the protective coating.

3. Each coat shall be applied evenly and sharply cut to line.

B. Coating Properties, Mixing, and Thinning

1. Coating shall provide a monolithic film with coverage of all specified surfaces and interfacing joints. Undercoats shall be sanded as required to provide a surface suitable for the proper application and adhesion of subsequent coats. Coating shall be thoroughly stirred, strained, and kept at a uniform consistency during application.
2. Coatings shall be mixed in accordance with the manufacturer's instructions.

C. Method of Coating Application

1. Where two or more coats are required, all coats shall be WFT tested.
2. Coating shall not be applied to a surface until it has been prepared as specified and approved for coating by the manufacturer.

D. Film Thickness and Continuity

1. Coating system thickness is the total thickness of primer and finish coats. Coatings shall be applied to the thickness specified.
2. Overspray, pinholes and other surface defects shall be repaired.

27.12 COATING SYSTEM SPECIFICATION SHEETS

Coating Systems specified for use appear on the following pages.

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Coating System Identification:

Product A-1

Manufacturer:	The Strong Company, Inc., 4505 Emmett Sanders Road, Pine Bluff, AR - 1-800-982-8009 or FAX 870-850-6933.
Product name:	MS-2C
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged blended calcium aluminate fiber reinforced cementitious monolithic coating composed of fused calcium aluminate cement and inert quartz aggregates (shall contain no ordinary Portland cement), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement binder: $\text{Al}_2\text{O}_3 \geq 43\%$, $\text{CaO} \leq 40\%$, $\text{FeO}+\text{Fe}_2\text{O}_3 \geq 4\%$, $\text{SiO}_2 \leq 10\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>800 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,500 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	0% @ 28 Days per ASTM C596
Bond:	>2,000 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: **Product A-1**

Environmental controls: Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.

Design: Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third-party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range of values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch | 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch | 25.4 mm for structural restoration of existing infrastructure.

Application: Field application by “wet-shotcrete” method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer’s recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.

Curing: Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.

Thickness: Minimum of 1/2 inch DFT

Tolerances: Minus 0 inches.

Cleanup: Water

Inspection Check Points: See the article headed “Quality Assurance/Quality Control” in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product A-2

Manufacturer:	Quadex Inc., 4801 Crystal Hill Rd., North Little Rock, AR – 713-750-9081, or FAX 501-758-3814.
Product name:	Aluminaliner
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged blended calcium aluminate fiber reinforced cementitious monolithic coating composed of fused calcium aluminate cement and inert quartz aggregates (shall contain no ordinary Portland cement), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement binder: $Al_2O_3 \geq 43\%$, $CaO \leq 40\%$, $FeO+Fe_2O_3 \geq 4\%$, $SiO_2 \leq 10\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>700 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,600 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	<0% @ 28 Days per ASTM C596
Bond:	>2,500 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product A-2

Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product A-3

Manufacturer:	Madewell Products Corporation, 7561 Industrial Court, Alpharetta, GA 30004 –800-741-8199, or FAX 770-475-8167.
Product name:	Mainstay ML-CA
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged blended calcium aluminate fiber reinforced cementitious monolithic coating composed of fused calcium aluminate cement and inert quartz aggregates (shall contain no ordinary Portland cement), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement binder: Al_2O_3 = 39–42%, CaO = 37-40%, Fe_2O_3 = 14-17%, SiO_2 = 2-5%.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Dark Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>600 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,600 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	<0% @ 28 Days per ASTM C596
Bond:	>3,000 psi @ 28 Days per ASTM C1042
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed “Preparation” in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product A-3

Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product B-1

Manufacturer:	Kerneos Inc., 1316 Priority Lane, Chesapeake, VA - 1-877-KERNEOS, 757-284-3200 or FAX 757-284-3300.
Product name:	SewperCoat PG
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged 100% calcium aluminate fiber reinforced cementitious monolithic coating composed of pure fused calcium aluminate cement and manufactured calcium aluminate aggregate (no other aggregate material permitted), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement and aggregate portion: $\text{Al}_2\text{O}_3 = 39 - 44\%$, $\text{CaO} = 34 - 38\%$, $\text{FeO} + \text{Fe}_2\text{O}_3 = 9 - 15\%$, $\text{SiO}_2 = 6 - 8\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>7,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>700 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,300 psi @ 28 Days per ASTM C348
Shrinkage @ 90% RH:	<0.07% @ 28 Days per ASTM C596
Bond:	>2,500 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Environmental controls: Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.

Design: Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch | 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch | 25.4 mm for structural restoration of existing infrastructure.

Application: Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.

Curing: Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.

Thickness: Minimum of 1/2 inch DFT

Tolerances: Minus 0 inches.

Cleanup: Water

Inspection Check Points: See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product B-2

Manufacturer:	The Strong Company, Inc., 4505 Emmett Sanders Road, Pine Bluff, AR - 1-800-982-8009 or FAX 870-850-6933.
Product name:	High Performance Mix
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged 100% calcium aluminate fiber reinforced cementitious monolithic coating composed of pure fused calcium aluminate cement and manufactured calcium aluminate aggregate (no other aggregate material permitted), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement and aggregate portion: $\text{Al}_2\text{O}_3 = 39 - 44\%$, $\text{CaO} = 34 - 38\%$, $\text{FeO} + \text{Fe}_2\text{O}_3 = 9 - 15\%$, $\text{SiO}_2 = 6 - 8\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>800 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,300 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	0% @ 28 Days per ASTM C596
Bond:	>3,000 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product B-3

Manufacturer:	Global Materials Company, 5580 State Road 524, Cocoa, FL 32926 - 1-800-470-8450 Ext 1 or FAX 800-470-8450 Ext 2.
Product name:	Refratta HAC 100
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged 100% calcium aluminate fiber reinforced cementitious monolithic coating composed of pure fused calcium aluminate cement and manufactured calcium aluminate aggregate (no other aggregate material permitted), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement and aggregate portion: $\text{Al}_2\text{O}_3 = 39\text{-}44\%$, $\text{CaO} = 34\text{-}38\%$, $\text{FeO}+\text{Fe}_2\text{O}_3 = 9\text{-}15\%$, $\text{SiO}_2 = 6\text{-}8\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Light Gray to Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>875 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,500 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	0% @ 28 Days per ASTM C596
Bond:	>2,000 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product B-3

Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

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Coating System Identification: Product C-1

Environmental controls:	Minimum 50 degrees F, Maximum 120 degrees F, less than 90 percent humidity and do not expose to rain or snow. Provide heaters, dehumidification, and ventilation as recommended by manufacturer and as needed to prevent condensation before and during cure. Provide wastewater bypass as necessary.
Design:	The coating thickness shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third party independent testing lab paid for by the Contractor. The test results and design information for each individual structure shall be submitted to the Engineer for review.
Application:	Field application by heated plural component airless or air-assisted spray, applied by trained technician who is experienced in the application of a spray applied epoxy resin and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Generally 6hrs at 70 degrees F curing time after the completion of spraying before subjecting the manhole to active flow. Near maximum physical properties achieved in 8 hours. In cold weather, manhole shall be protected while curing is in process to maintain temperatures above 50 F. No more than 24 hrs at 70 F between coats.
Thickness:	Per manufacturer's design. Minimum of 125 mils WFT. Maximum of 200 mils per coat recommended on vertical or overhead surfaces.
Tolerances:	Plus 20 mils or minus 10 mils.
Cleanup:	Acetone, xylene, or MEK. Dispose of solvent and debris as required by code.
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product C-2

Manufacturer:	SPRAYROQ, Inc., 4707 Alton Court, Birmingham, AL. 35210 - 205-957-0020 or Fax 205-957-0021 or Fax 318-687-4337
Product name:	SPRAYWALL Polyurethane
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Spray-applied monolithic urethane resin coating. Materials per ASTM D638-Test Method for Tensile Properties of Plastics, and ASTM D790-Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Natural color of resin
Compressive Strength:	18,000 psi per ASTM D695
Tensile Strength:	7,450 psi per ASTM D638
Flexural Strength:	12,000 psi per ASTM D790
Flexural Modulus:	735,000 psi per ASTM D790
Bond:	Shall exceed tensile strength of substrate
Low Temp. Flexibility:	Passing at -4 degrees F, per ASTM D1790
Density:	87 lb/cu. ft.
Recovery:	98 percent, per ASTM C920
Service condition:	Immersed, non-potable, non-immersed, domestic wastewater, corrosive environment, interior and exterior water pressure, traffic areas.
Surface preparation:	Per the article headed "Preparation" in this Section of the Technical Specifications, and including the application of manufacturer recommended primer for steel and cast iron. Inject or hand pack grout to seal holes, leaks and seeping. Do not apply to surfaces that are wet (including condensation) or covered with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product C-2

Environmental controls:	Minimum 50 degrees F temperatures, less than 90 percent humidity and do not expose to rain or snow. Provide heaters, dehumidification, and ventilation as recommended by manufacturer and as needed to prevent condensation before and during cure. Provide wastewater bypass as necessary.
Design:	The urethane coating thickness shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third party independent testing lab paid for by the Contractor. The test results and design information for each individual structure shall be submitted to the Engineer for review.
Application:	Field application, manually sprayed onto all surfaces by trained technician who is experienced in the application of a spray applied urethane resin and has been certified by the manufacturer. Coating shall be applied within 48 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Minimum of 30 minutes curing time after the completion of spraying before subjecting the manhole to active flow. A minimum of 3 hours curing time or until all sprayed materials have returned to the ambient temperature of the manhole interior before. In cold weather, manhole shall be protected while curing is in process to maintain temperatures above 50F.
Thickness:	Per manufacturer's design. 125 mils minimum thickness.
Tolerances:	Plus 20 mils or minus 10 mils.
Cleanup:	As required. Dispose of solvent and debris as required by code.
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product E-1

Manufacturer:	Quadex LLC, a Vortex Company, 18150 Imperial Valley Dr., Houston TX, 77060. Phone: (713) 750-9081.
Product name:	GeoKrete Geopolymer.
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals. NEED Manufacturers CERTIFICATION REQUIREMENTS/PROCEDURES
Material Classification:	Geopolymer mortar or Geopolymer (Alumina Silicate powder-based product). A factory blended, one-component (just add water), eco-friendly, micro-fiber reinforced geopolymer mortar synthesized from reactive SiO ₂ and Al ₂ O ₃ from industrial byproducts, enhanced with monocrystalline quartz aggregate.
Surfaces:	Where specified and approved, can be used for structural restoration of large diameter pipes, culverts and tunnels, including raw, storm and wastewater, consisting of metal, concrete, stone, masonry and others. Other applicable structures include manholes, wet-wells, and treatment plant structures.
Color:	Light grey
Compressive Strength:	Minimum 8,000 psi per ASTM C39 & C109, @ 28 days
Split Tensile Strength	Minimum 900 psi @ 28 days, per ASTM C496
Flexural Strength:	Minimum 800 psi per ASTM D78, @ 28 days, per ASTM C78
Modulus of Elasticity	Minimum 5,400,000 psi @ 28 days, per ASTM C469
Bond:	Shall exceed tensile strength of substrate. Bond strength to concrete shall be minimum 3,000 psi @ 28 days, per ASTM C882
Low Temp. Flexibility:	Per manufacturer, per ASTM D1790
Density:	Per manufacturer.
Chemical Resistance	Maximum 10% mass loss in 8-week sulfuric acid @ pH 1.0 immersion, per ASTM C267
Chloride Ion Penetration Resistance	28-Day < 250 Coulombs (very low), per ASTM C1202
Shrinkage	28-days ≤ 0.02%, per ASTM C1090

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Coating System Identification:

Product E-1

Service condition:	Immersed, non-potable, non-immersed, domestic wastewater, corrosive environment, interior and exterior water pressure, traffic areas, PH as low as 1.0 and temperature exceeding 212°F 100°C for industrial effluent.
Surface preparation:	Per the article headed "Preparation" in this Section of the Technical Specifications. Prepare surface to be patched by removing unsound concrete, dirt, dust, oil and other debris using high pressure (3,500 PSI 241.3 bar) water blasting, abrasive blasting. Stop active infiltration. Then rinse with potable water to remove all remaining dirt, sand and loose debris. This will provide a clean, damp surface to allow for a good bond.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.
Environmental controls:	Stop active infiltration. Provide wastewater bypass as necessary. Temp must be maintained above freezing at all times.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.

Coating System Identification:

Product E-1

Application:	Field application depending on temperature and conditions of application by trained technician who has been certified by the manufacturer. Manufacturer to certify equipment proposed for use by Contractor. Use approximately 0.48 to 0.57 gallons 1.82 to 2.16 liters of potable water per 60 lb. 27.2 kg bag of GeoKrete geopolymer. For 1,000 lb. 454 kg. supersack use approximately 8.0 to 9.5 gallons 30.3 to 36 liters of potable water. First add water to mixer, start the mixer and add GeoKrete geopolymer until mortar is completely mixed. Once all geopolymer material and water has been added to mixer, it needs to mix for approximately five (5) minutes prior to being transferred into the material hopper. Once fully mixed, additional water may be added, as approved by Quadex, should it be necessary for proper consistency. Apply GeoKrete geopolymer by low pressure spraying, hand trowel, or the spin cast application process on horizontal or vertical surfaces to a monolithic minimum thickness meeting the design parameters or as directed by the Engineer. of 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure. Troweling of materials shall begin immediately following the spray application. Initial troweling shall be in a motion, to compress the material into any voids within the structure walls. Precautions should be taken not to over trowel. After troweling, the applied liner should be brushed or sponged to remove trowel marks and to break up the latent surface brought about by troweling. Brushing/sponging should be in the horizontal plane and as with troweling do not over work the lining material.
Curing:	Coating shall Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound is not to be used. Minimum 6 hours curing prior to contact or immersion with flowing wastewater, with deviation only upon written approval from manufacturer.
Thickness:	As approved, Per manufacturer's design design requirements. In no case less than 250 mils (.5 inch) minimum thickness.
Tolerances:	Plus 20 mils or minus 10 mils.
Cleanup:	Clean equipment with water. Clean hands with water and hand cleaner.
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.
Precautions/PPE	Avoid eye contact or prolonged contact with skin. Wash thoroughly after use. Persons using Quadex GeoKrete geopolymer should wear necessary PPE consisting at minimum of eye protection, dusk mask and rubber gloves. Read all product labels and technical literature prior to use.

END OF SECTION

Engineering & Capital Improvements Department

Field Order – Annual Projects



Project Number	20013-111
Project Title	SAN Annual CIPP Lining FY20
Contractor	LMK Pipe Renewal, LLC
Field Order No.	FO23-009
Date	10/27/22

The following directive is given pursuant to Contract Standards. Article "Issuance of Change Orders and Field Orders". The Contractor is hereby directed to proceed with this Field Order. In accordance with Contract Standards Article "Changes in the Work", the Contractor must make written claim for an increase in the contract price or time within five (5) days, if so desired.

Location / Plan Reference:

(All Plans as defined in the contract documents includes all Field/Work Orders).

Directive:

All items listed below result in no changes to the overall contract time or total amount.

(1) Execute all Work issued per contract specs within the contract period specified.

(2) Adjustment of bid pay item unit rates is per Contract Standards Article G-39. According to ENG CCI index the bid item unit rates are authorized to be increased by 14.16% for current annual renewal period (9/1/2022).

Required Completion Date: 8/31/23

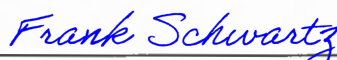
Check appropriate box below for Work Order based Water/Wastewater projects:

- ☐ Contractor may invoice the City monthly as the Work proceed.
- ☒ Contractor may invoice the City monthly for completed Work Orders only.

Engineering Construction Manager

 10/27/22
Thomas Rice, P.E., Construction Manager

Contractor Representative:



Project Manager

Name and Title

cc: Matt Wilson, Project Manager

Roger Larkin, Inspector

Mike Littlewood, CI Construction Coordinator

ECID Records

Updated December 2019

From BID#7737											
20013-111 City of St. Petersburg - Price Increase Calculations for LMK Pipe Renewal											
inv 1-2, only											
Item	Description	Cost	Unit	Contract B	ENR Inde	ENR Inde	ENR % in	Calc	Calc	New Cost - Effective 9/1/22	
G-1.1	Emergency Response	3000	DAY	10/15/2020	11539	13173.43	1.141644	3424.932	3424.93	3424.930	
G-2.1	Traffic Control	450	DAY	10/15/2020	11539	13173.43	1.141644	513.7398	513.74	513.740	
S-1.1	Sewer Main Cleaning and CCTV Inspection - 8" Diameter and Less (Not part of CIPP Lining Work)	2.25	LF	10/15/2020	11539	13173.43	1.141644	2.568699	2.57	2.570	
S-1.2	Sewer Main Cleaning and CCTV Inspection - 10" to 12" Diameter (Not part of CIPP Lining Work)	2.95	LF	10/15/2020	11539	13173.43	1.141644	3.36785	3.37	3.370	
S-1.3	Sewer Main Cleaning and CCTV Inspection - 14" to 18" Diameter (Not part of CIPP Lining Work)	5.25	LF	10/15/2020	11539	13173.43	1.141644	5.993631	5.99	5.990	
S-1.4	Sewer Main Cleaning and CCTV Inspection - 20" to 27" Diameter (Not part of CIPP Lining Work)	8.95	LF	10/15/2020	11539	13173.43	1.141644	10.21771	10.22	10.220	
S-1.5	Sewer Main Cleaning and CCTV Inspection - 30" to 48" Diameter (Not part of CIPP Lining Work)	14.5	LF	10/15/2020	11539	13173.43	1.141644	16.55384	16.55	16.550	
S-2	Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection (Not part of CIPP Lining Work)	285	EA	10/15/2020	11539	13173.43	1.141644	325.3685	325.37	325.370	
S-3.1	Specialty Cleaning - 8" Diameter and Less	9	LF	10/15/2020	11539	13173.43	1.141644	10.2748	10.27	10.270	
S-3.2	Specialty Cleaning - 10" to 12" Diameter	11	LF	10/15/2020	11539	13173.43	1.141644	12.55808	12.56	12.560	
S-3.3	Specialty Cleaning - 14" to 18" Diameter	13	LF	10/15/2020	11539	13173.43	1.141644	14.84137	14.84	14.840	
S-3.4	Specialty Cleaning - 20" to 27" Diameter	25	LF	10/15/2020	11539	13173.43	1.141644	28.5411	28.54	28.540	
S-3.5	Specialty Cleaning - 30" Diameter and Greater	32	LF	10/15/2020	11539	13173.43	1.141644	36.53261	36.53	36.530	
S-4.1	Chemical Sealing of Host Pipe - 10" Diameter and Less	495	EA	10/15/2020	11539	13173.43	1.141644	565.1138	565.11	565.110	
S-4.2	Chemical Sealing of Host Pipe - 12" to 15" Diameter	525	EA	10/15/2020	11539	13173.43	1.141644	599.3631	599.36	599.360	
S-4.3	Chemical Sealing of Host Pipe - 18" to 24" Diameter	650	EA	10/15/2020	11539	13173.43	1.141644	742.0686	742.07	742.070	
S-4.4	Chemical Sealing of Host Pipe - 27" Diameter and Greater	835	EA	10/15/2020	11539	13173.43	1.141644	953.2727	953.27	953.270	
S-5	Chemical Sealing - Grout	400	GAL	10/15/2020	11539	13173.43	1.141644	456.6576	456.66	456.660	
S-6	Additional Access Cost	350	EA	10/15/2020	11539	13173.43	1.141644	399.5754	399.58	399.580	
S-7	Chemical Sealing of Service Lateral Connection	450	EA	10/15/2020	11539	13173.43	1.141644	513.7398	513.74	513.740	
M-13	Allowance for Contract Amendment	50000	--						50000	50000.000	
S-24	Initial Service Lateral CCTV From Main	290	EA	10/15/2020	11539	13173.43	1.141644	331.0768	331.08	331.080	
S-25	Initial Service Lateral CCTV Inspection From Clean Out	5	EA	10/15/2020	11539	13173.43	1.141644	5.70822	5.71	5.710	
S-26.1	CIPP Lateral Lining, 8" to 10" Full Circle Main/Lateral Connection, Up To 15 LF	3597	EA	10/15/2020	11539	13173.43	1.141644	4106.493	4106.49	4106.490	
S-26.2	CIPP Lateral Lining, 12" to 15" Full Circle Main/Lateral Connection, Up To 15 LF	3825	EA	10/15/2020	11539	13173.43	1.141644	4366.788	4366.79	4366.790	
S-27.1	CIPP Lateral Lining, 8" to 10" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral	3750	EA	10/15/2020	11539	13173.43	1.141644	4281.165	4281.16	4281.160	
S-27.2	CIPP Lateral Lining, 12" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral	3900	EA	10/15/2020	11539	13173.43	1.141644	4452.412	4452.41	4452.410	
S-28.1	CIPP Lateral Lining, 8" to 10" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral	7600	EA	10/15/2020	11539	13173.43	1.141644	8676.494	8676.49	8676.490	
S-28.2	CIPP Lateral Lining, 12" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral	8200	EA	10/15/2020	11539	13173.43	1.141644	9361.481	9361.48	9361.480	
S-29	CIPP Lateral Lining, Up To 15 LF (From Access Structure)	3385	EA	10/15/2020	11539	13173.43	1.141644	3864.465	3864.46	3864.460	
S-30	CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29)	70	LF	10/15/2020	11539	13173.43	1.141644	79.91508	79.92	79.920	
S-31	Replacement or Installation of Cleanouts - Not In Bulk	1500	EA	10/15/2020	11539	13173.43	1.141644	1712.466	1712.47	1712.470	
S-32	Replacement or Installation of Cleanouts - Bulk Installation (10 or more within localized area)	1400	EA	10/15/2020	11539	13173.43	1.141644	1598.302	1598.3	1598.300	
S-33	Replacement or Installation of Cleanouts - Dewatering - Targeted Areas	1800	EA	10/15/2020	11539	13173.43	1.141644	2054.959	2054.96	2054.960	
S-35	Clean-Out Restoration in Grass/Mulch Area	1300	EA	10/15/2020	11539	13173.43	1.141644	1484.137	1484.14	1484.140	
S-36	Clean-Out Restoration in Asphalt Area	1450	EA	10/15/2020	11539	13173.43	1.141644	1655.384	1655.38	1655.380	
S-37	Clean-Out Restoration in Concrete Driveway	1500	EA	10/15/2020	11539	13173.43	1.141644	1712.466	1712.47	1712.470	
S-38	Clean-Out Restoration in Paver Driveway	2500	EA	10/15/2020	11539	13173.43	1.141644	2854.11	2854.11	2854.110	
M-13.1	Allowance for Contract Amendment	50000	--						50000	50000.000	
M-13.2	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000	
M-13.3	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000	
M-13.4	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000	
M-13.5	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000	
M-13.6	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000	

AGREEMENT

THIS AGREEMENT ("Agreement"), made and entered into on the 17th day of September, 2020 ("Effective Date"), by and between LMK Pipe Renewal, LLC, ("Contractor") and the City of St. Petersburg, Florida, ("City" or "Owner").

WITNESSETH:

NOW, THEREFORE, in consideration of the promises and covenants contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Contractor and the City agree as follows:

- a) The Contractor shall furnish all material and perform all of the work for:

SAN Annual CIPP Lining FY20

St. Petersburg, Florida, Project No. 20013-111 ("Project"), in full and complete accordance with this Agreement and the Contract Documents. Contract Documents shall mean, collectively, the General Conditions and supplementals thereto, Specifications and supplementals thereto, the Plans, the Solicitation and any addenda thereto, and the Bid (as those terms, i.e., Specifications, Plans, Solicitation, and Bid, are defined in the General Conditions).

- b) This Agreement and the Contract Documents form the contract ("Contract") between the City and Contractor.
- c) The initial term of this Agreement is three (3) years commencing on the Effective Date. The City reserves the right to renew this Agreement under the same terms and conditions, except as set forth below, for one (1) two-year period at the end of the initial term, provided that the City and Contractor mutually agree through a written amendment to the Contract to (i) a renewal, (ii) the unit prices for the first annual period of the renewal term, and (iii) the method for calculating adjustments to those unit prices during the second annual period of the renewal term. In the event this Agreement is renewed, the parties will mutually agree on a description of the work for each annual period of the renewal term.
- d) After the City issues a Notice to Proceed (as defined in the General Conditions) for each annual period, Contractor shall be prepared to commence portions of the Work (as described in the Contract Documents) set forth in individual Field Orders (as defined in the General Conditions). After the City issues a Field Order, Contractor shall, for each Field Order: (i) reach Substantial Completion (as defined in the General Conditions) of all Work under that Field Order within the time period stated therein, and (ii) reach Final Completion within thirty (30) calendar days after the City's delivery of the punch list in accordance with the Contract, unless a longer period of time to

reach Final Completion is set forth in the punch list (collectively for each Field Order, (i) and (ii), "Field Order Completion Time"). The Field Order Completion Time may be modified by a Change Order (as defined in the General Conditions).

- e) For the first annual period of the Initial term of this Agreement, Contractor shall obtain a Public Construction Bond in accordance with the applicable requirements set forth in the Contract Documents. For each annual period thereafter, Contractor shall obtain a rider to the Public Construction Bond or a new Public Construction Bond in the additional amount of the Contract Price for that annual period (as hereinafter defined). All Public Construction Bonds and riders thereto must be approved by the City Attorney's Office prior to issuance of a Notice to Proceed for any new work. All Public Construction Bonds and riders thereto must be approved by the City Attorney's Office prior to issuance of a Notice to Proceed for any new work.
- f) Provided that Contractor faithfully performs its obligations contained the Contract, the City hereby agrees to pay Contractor pursuant to the amounts set forth in the unit prices, as those unit prices may be annually adjusted in accordance with the Contract Documents, at the time and in the manner set forth in the Contract Documents, an amount not to exceed Five Hundred Twenty Nine Thousand (\$529,000) for the first annual period of the initial term, Seven Hundred Fifty Thousand (\$750,000) for the second annual period of the initial term, and Seven Hundred Fifty Thousand (\$750,000) for the third annual period of the initial term (individually for each annual period, "Contract Price") subject to additions and deductions as provided in the Contract.
- g) Time is of the essence in the Contract. The parties agree that it would be extremely difficult and impractical under known and anticipated facts and circumstances to ascertain and fix the actual damages the City would incur if Contractor does not achieve Substantial Completion within the time stipulated in each Field Order. Therefore, Contractor shall be liable for and shall pay to the City the sums hereafter stipulated as fixed, agreed and acknowledged as reasonable liquidated damages, not as a penalty, for each calendar day of delay until the Work in each Field Order reaches Substantial Completion, in the following aggregate amounts:

Field Order Amount	Daily Charge per Calendar Day
\$50,000 and under.....	\$500
Over \$50,000 but less than \$500,000	\$1,000
Over \$500,000 but less than \$5,000,000	\$1,500
Over \$5,000,000 but less than \$15,000,000.....	\$2,000
\$15,000,000 and over	\$4,000

These liquidated damages shall be the City's sole and exclusive damages for Contractor's delay of the Work.

- h) The obligations of the City as to any funding required pursuant to the Contract shall be limited to an obligation in any given year to budget, appropriate and pay from legally available funds, after monies for essential City services have been budgeted and appropriated, sufficient monies for the funding that is required during that year. Notwithstanding the foregoing, the City shall not be prohibited from pledging any legally available non-ad valorem revenues for any obligations heretofore or hereafter incurred, which pledge shall be prior and superior to any obligation of the City pursuant to the Contract.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which is effective as of the day and date first above written.

LMK Pipe Renewal
(Company Name)

By: Shawn M. Flanery
(Signature of Corporate Officer)

WITNESSES:

By: Timothy G. Ischay
(Printed Name)

By: Andrea Sorensen
(Printed Name)

CITY OF ST. PETERSBURG, FLORIDA

By: _____
Procurement and Supply Management Director

By: _____
City Clerk (Designee)

Date

APPROVED AS TO FORM:

By: _____
City Attorney (Designee)

00470584 -- 3-yr w/ 2-yr renewal, Field Order

(Acknowledgment of Contractor, If a Limited Liability Company)

(State of Florida)
(County of Broward)
(City of Fort Lauderdale)

The foregoing instrument was acknowledged before me this 17th day of September
2020, by Shaun Flanery
(Managing Member or Manager of LLC)

of LMK Pipe Renewal a Florida
(Name of Limited Liability Company) (State of Organization)

Limited Liability Company, on behalf of said liability company.

He/she is personally known to me or has produced Drivers License as
(Select) (Type of Identification)

Identification and Did take an oath; and appeared before me at the time of notarization.
(Did/Did Not)

The undersigned warrants that he/she is authorized by the said limited liability company to
(Select)

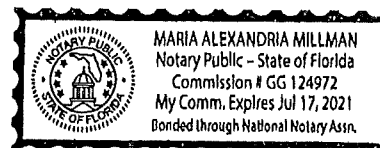
execute the foregoing instrument.

NOTARY PUBLIC:

Sign: [Signature]

Print/Type: Maria A. Millman

(Seal)



payment must be in accordance with the notice and time limitation provisions set forth in Sections 255.05(2) and 255.05(10), Florida Statutes.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or to the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

IN TESTIMONY WHEREOF, the hands and seals of the parties hereto this ____ day of _____, 20____.

SURETY:

North American Specialty Insurance Company
SURETY NAME

BY: _____

(Signature of Attorney-In-Fact)

Dione R. Young

(Print or Type Name of Attorney-In-Fact)

W286959

(Florida license # of Attorney-In-Fact)

Surety
Seal

Countersignature of Florida Licensed Agent (only required if Attorney-In-Fact is not a Florida Licensed Agent)

Note: A copy of a power of attorney attested by the corporate secretary of the Surety evidencing the Attorney-In-Fact named above is currently authorized to execute this bond on behalf of the Surety must be attached to this bond.

CITY:

APPROVED AS TO FORM:

By: _____

City Attorney (Designee)

PRINCIPAL:

LMK Pipe Renewal, LLC

PRINCIPAL NAME

BY: _____

(Signature)

Shan Floney, VP

(Print or Type Name and Title)

Check applicable box below (check only one box):

☒ Principal has a seal. **If checked, attest and impress Principal's seal:**

ATTEST:

Principal
Seal

BY: _____

(Signature)

TIMOTHY G. ISCHAY

(Print or Type Name)

☐ Principal has no seal. **If checked, provide two witness signatures:**

WITNESS 1 for Principal:

BY: _____

(Signature)

(Print or Type Name)

WITNESS 2 for Principal:

BY: _____

(Signature)

(Print or Type Name)

PUBLIC CONSTRUCTION BOND

Bond # 2309596

(STATE OF FLORIDA)

(COUNTY OF Pinellas)

(CITY OF St. Petersburg)

KNOW ALL MEN BY THESE PRESENTS:

That we, LMK Pipe Renewal, LLC (hereinafter called the "Principal"),
(Company Name)
located at 1131 NW 55th Street, Fort Lauderdale, FL 33309, (954) 772-0075,
(Principal Business Address) (Phone Number)
and North American Specialty Insurance Company (hereinafter called the "Surety"),
(Surety Name)
located at 1200 Main Street, Suite 800, Kansas City, MO 64105, (913) 676-5200,
(Surety Business Address) (Phone Number)

are held and firmly bound unto the City of St. Petersburg, Florida (hereinafter called the "City")
located at One 4th Street North, St. Petersburg, FL 33701, phone: (727) 893-7220, in the penal
sum of: \$ 529,000.00 ^(first annual period of the initial term) for the payment of which we bind ourselves, our heirs, personal
representatives, successors, and assigns, jointly and severally, for the faithful performance of a
certain written construction agreement, dated the _____ day of _____, 20____, entered
into between the Principal and the City ("Contract") for:

SAN Annual CIPP Lining FY20 Project No. 20013-111

The locations of the proposed Work for the project are within the sanitary sewer collection
service areas for the City of St. Petersburg, Florida.

NOW, THEREFORE, THE CONDITIONS of this bond are such that, if the Principal shall (i) in
all respects comply with the terms and conditions of the Contract (the Contract being made a
part of this bond by reference), including but not limited to the guarantee and warranty
requirements, all obligations contained in the Contract Documents (as defined in the Contract)
and all modifications made to the Contract as therein provided, for the original term of the
Contract and any extensions which may be granted by the City, with or without notice to the
Surety; and (ii) promptly make payments to all claimants, as defined in Section 255.05(1),
Florida Statutes, supplying labor, materials, or supplies used directly or indirectly in the
prosecution of the work provided for in the Contract; and (iii) pay the City all losses, damages,
liquidated damages, expenses, costs, and attorneys' fees at trial and on appeal sustained by
the City due to a default by Principal under the Contract; and (iv) fulfill its obligations related
to the guarantee and warranty of all work and materials furnished under the Contract
pursuant to the terms and conditions specified in the Contract, then this bond shall be void;
otherwise, it shall remain in full force.

**This bond is meant to comply with all the requirements of Section 255.05, Florida
Statutes, and herewith incorporates all duties of a surety required by Section
255.05, Florida Statutes, and all notice and time limitation provisions set forth in
Sections 255.05(2) and 255.05 (10), Florida Statutes. Any action instituted by a
claimant under this bond for**

Acknowledgment of Principal, if a Corporation

(STATE OF FLORIDA)

(COUNTY OF Broward)

(CITY OF Ft. Lauderdale)

The foregoing instrument was acknowledged before me this 18th day of September, 2020
by Shawn Flanery, V.P. of LMK Pipe Renewal, LLC, a
(Name and Title of Officer) (Name of Principal)

Florida corporation, on behalf of said corporation. He/She is
(State of Corporation) (Select)

personally known to me or has produced Drivers License as identification.
(Type of Identification)

He/She warrants that he/she is authorized by the Board of Directors of said corporation to execute
(Select) (Select)

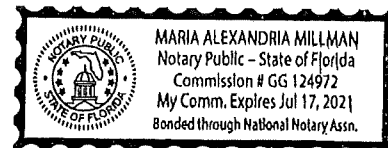
to execute the foregoing instrument.

NOTARY PUBLIC:

Sign: [Signature]

Print/Type: Maria Millman

SEAL



**Acknowledgment of Surety,
(Where Executed by Attorney-in-Fact, as Agent)**

Iowa
(STATE OF ~~FLORIDA~~)
(COUNTY OF Dallas)
(CITY OF Waukee)

The foregoing instrument was acknowledged before me this 17th day of September, 2020,
by Dione R. Young
(Name of Attorney-in-Fact)
as Attorney-in-Fact for North American Specialty Insurance Company,
(Name of Surety)
who is personally known to me or has produced Attorney-in-Fact
(Type of Identification)
as Identification.

By virtue of a power of attorney from said corporation, a copy of which is attached hereto,
he/she is duly authorized to execute the foregoing instrument.

NOTARY PUBLIC:

Sign: 

Print/Type: Stacy Venn

Commission Expires: August 20, 2023

SEAL



**Acknowledgment of Countersigner,
(Only Required if Attorney-in-Fact is not a Florida Licensed Agent)**

(STATE OF FLORIDA)

(COUNTY OF _____)

(CITY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____,

by _____
(Name of Countersigner)

as Countersignator for _____
(Name of Surety)

who is personally known to me or has produced _____
(Type of Identification)

as Identification.

By virtue of a power of attorney from said corporation, a copy of which is attached hereto,
he/she is duly authorized to execute the foregoing instrument.

NOTARY PUBLIC:

Sign: _____

Print/Type: _____

SEAL

SWISS RE CORPORATE SOLUTIONS

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WESTPORT INSURANCE CORPORATION

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Overland Park, Kansas and Washington International Insurance Company a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Overland Park, Kansas, and Westport Insurance Corporation, organized under the laws of the State of Missouri, and having its principal office in the City of Overland Park, Kansas each does hereby make, constitute and appoint:

JAY D. FREIERMUTH, CRAIG E. HANSEN, BRIAN M. DEIMERLY, SHIRLEY S. BARTENHAGEN, CINDY BENNETT, ANNE CROWNER,

TIM MCCULLOH,, STACY VENN, DIONE R. YOUNG, and WENDY ANN CASEY

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED TWENTY FIVE MILLION (\$125,000,000.00) DOLLARS

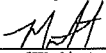
This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on March 24, 2000 and Westport Insurance Corporation by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By 
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation

By 
Mike A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company
& Senior Vice President of Westport Insurance Corporation



IN WITNESS WHEREOF, North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 3rd day of November, 20 17.

North American Specialty Insurance Company
Washington International Insurance Company
Westport Insurance Corporation

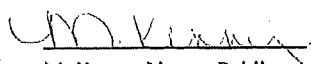
State of Illinois
County of Cook ss:

On this 3rd day of November, 20 17, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of

Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation and Michael A. Ito Senior Vice President of Washington International Insurance Company and Senior Vice President

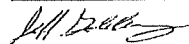
of North American Specialty Insurance Company and Senior Vice President of Westport Insurance Corporation, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.




M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Vice President and Assistant Secretary of North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company, Washington International Insurance Company and Westport Insurance Corporation which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this day of , .


Jeffrey Goldberg, Vice President & Assistant Secretary of Washington International Insurance Company &
North American Specialty Insurance Company & Vice President & Assistant Secretary of Westport Insurance Corporation



City of St. Petersburg
PURCHASE ORDER

PURCHASE ORDER NO	REVISION	DATE
237766	0	14-OCT-2020

This Purchase Order No must appear on all invoices, packing lists and correspondence related to this order.

SHIP TO: Thompson, Lillian A ENGINEERING DEPARTMENT CITY OF ST PETERSBURG ONE 4TH ST N 7TH FLOOR Saint Petersburg, FL 33701 United States
--

VENDOR: LMK Pipe Renewal LLC 1131 NW 55th St Fort Lauderdale , FL 33309 Frank Schwartz / (954) 772-0075	VENDOR NO: 130680
--	--------------------------

BILL TO: FINANCE DEPARTMENT ACCOUNTS PAYABLE CITY OF ST PETERSBURG PO BOX 1257 Saint Petersburg, FL 33731 United States

CONTACT/PHONE/EMAIL			BUYER/PHONE/EMAIL		
Thompson, Lillian A / 7278925492 / Lillian.Thompson@stpete.org			Neal Jones / 727-892-5297 / Neal.Jones@stpete.org		
Contract No 236497	DELIVERY DATE 01-OCT-2020	SHIP VIA Best Way	FOB FOB Destination	FREIGHT Prepaid	TERMS NET 15

Description:

Supplier Notes: *Pending executed Agreement*

This BPA covers Annual SAN CIPP Pipe Lining projects effective September 20, 2020 through August 31, 2023, with one, two-year renewal option. Incorporated into this BPA: Your bid submittal for IFB No. 7737; Executed Agreement; Scope of Service; Bid pricing page.

Negotiation Header Note To Supplier

All questions regarding this solicitation shall be directed in writing to Neal Jones, Procurement Analyst, at neal.jones@stpete.org no later than Noon, Monday, June 22, 2020.

Bidders must attach all required documents, including but not limited to the Bid Bond and Insurance Certificates as a single PDF, except for the Price Page, Subcontract Summary and Apprentice/Disadvantaged Worker Utilization Plan Worksheet which must be attached as separate Excel documents.

Web Conferencing Invitation to Pre-Bid: June 5, 2020, at 10:00 a.m.:

You are invited to attend a remote meeting; to attend the meeting use the instructions provided below:

To attend remotely using a PC, Mac or Linux computer or an iOS or Android tablet/smartphone click on the link below:

<https://zoom.us/j/7278925298>

To join using a smartphone tap:

+16699006833,,7278925298# or +14086380968,,7278925298#

Or to join via a wired Telephone dial:

City of St. Petersburg Standard Purchase Order 237766

1-669-900-6833 or 1-408-638-0968 or 1-646-876-9923
Meeting ID: 727 892 5298

LINE	DESCRIPTION	ORIGINAL QTY	UOM	UNIT PRICE	LINE AMOUNT
1	SAN Annual CIPP Lining FY20, pricing per bid pricing sheet.	529000	DOLLAR	1.00	529,000.00

NOTE: Total represents original award amount as amended

TOTAL: \$529,000.00

State Sales Tax Exemption Number 85-8012740154C-1

Federal Employer ID Number 59-6000424



Procurement Director

Acceptance and Acknowledgement

For orders \$10,000 and above please log in to the [iSupplier Portal](#) and acknowledge acceptance of the terms and conditions of this agreement and all change notices.

Once logged in, follow the steps outlined below to acknowledge this purchase order:

1. Click on 'Orders' tab
2. Select 'Purchase Orders to Acknowledge' from the View Menu
3. Select the specific purchase order
4. Click the 'Acknowledge' button
5. Select 'Accept Entire Order'
6. On next screen, click 'Submit'

If login information is unknown or difficulties are experienced please contact Registration@stpete.org for assistance.

Attention: Important Payment Information – Please Read

- The Purchase Order (PO) Number on this document MUST appear on all invoices
- Invoices without PO Numbers will delay payment and are not considered proper invoices
- Each invoice must be in a separate PDF file and be emailed to ap@stpete.org
- Invoices must contain:
Remit to Address, Service Location, City Department and Requestor name, detailed description and cost breakout pursuant to the Agreement
- Due dates are based on the date a proper invoice is received

The City's preferred payment method is e-payables and the City also offers automated clearing house (ACH) payments as authorized by the vendor.

For questions on invoices or payments, please contact the Finance Department at AP-Solutions@stpete.org or call 727-893-7031. Please reference the invoice # and city's six digit Purchase Order # in your email so we can better assist you.

Rev (07/2020)



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
09/30/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Holmes Murphy & Assoc - WDM PO Box 9207 Des Moines, IA 50306-9207		1-800-247-7756 CONTACT NAME: PHONE (A/C, No. Ext): FAX (A/C, No): E-MAIL ADDRESS:																						
INSURED LMK Pipe Renewal, LLC 1131 NW 55th Street Fort Lauderdale, FL 33309		<table border="1"> <thead> <tr> <th colspan="2">INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A:</td> <td>NATIONAL FIRE INS CO OF HARTFORD</td> <td>20478</td> </tr> <tr> <td>INSURER B:</td> <td>CONTINENTAL INS CO</td> <td>35289</td> </tr> <tr> <td>INSURER C:</td> <td>CONTINENTAL CAS CO</td> <td>20443</td> </tr> <tr> <td>INSURER D:</td> <td>COLUMBIA CAS CO</td> <td>31127</td> </tr> <tr> <td>INSURER E:</td> <td></td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> <td></td> </tr> </tbody> </table>		INSURER(S) AFFORDING COVERAGE		NAIC #	INSURER A:	NATIONAL FIRE INS CO OF HARTFORD	20478	INSURER B:	CONTINENTAL INS CO	35289	INSURER C:	CONTINENTAL CAS CO	20443	INSURER D:	COLUMBIA CAS CO	31127	INSURER E:			INSURER F:		
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INSURER F:																								

COVERAGES

CERTIFICATE NUMBER: 60399037

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PRO-JECT ☒ LOC ☐ OTHER:	X	X	6057465522	06/01/20	06/01/21	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY	X	X	6057465519	06/01/20	06/01/21	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	☒ UMBRELLA LIAB ☒ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☒ RETENTION \$ 10,000	X	X	6057465598	06/01/20	06/01/21	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		X	6057465553	06/01/20	06/01/21	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional Liability	X	X	6072220853	06/01/20	06/01/21	Limit 2,000,000
D	Pollution Liability		X	6076568890	06/01/20	06/01/21	Limit 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Additional Insured (GL, Auto, Umbrella, Pollution): City of St. Petersburg as required by written contract, per policy terms and conditions.
Waiver of Subrogation (GL, Auto, Umbrella, WC, Pollution, Professional): in favor of the additional insured as required by written contract, per policy terms and conditions.

CERTIFICATE HOLDER

City of St. Petersburg

PO Box 2842

St. Petersburg, FL 33731

USA

APPROVED

Anthony Rotella, 10/1/2020, 4:34:20 pm

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Ty Hoot

© 1988-2015 ACORD CORPORATION. All rights reserved.

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
	GENERAL - GROUP I				
G-1.1	Emergency Response	10	DAY	\$ 3,000.00	\$ 30,000.00
G-2.1	Traffic Control	75	DAY	\$ 450.00	\$ 33,750.00
	SANITARY SEWER - GROUP I				
S-1.1	Sewer Main Cleaning and CCTV Inspection - 8" Diameter and Less (Not part of CIPP Lining Work)	5,000	LF	\$ 2.25	\$ 11,250.00
S-1.2	Sewer Main Cleaning and CCTV Inspection - 10" to 12" Diameter (Not part of CIPP Lining Work)	2,000	LF	\$ 2.95	\$ 5,900.00
S-1.3	Sewer Main Cleaning and CCTV Inspection - 14" to 18" Diameter (Not part of CIPP Lining Work)	1,000	LF	\$ 5.25	\$ 5,250.00
S-1.4	Sewer Main Cleaning and CCTV Inspection - 20" to 27" Diameter (Not part of CIPP Lining Work)	1,000	LF	\$ 8.95	\$ 8,950.00
S-1.5	Sewer Main Cleaning and CCTV Inspection - 30" to 48" Diameter (Not part of CIPP Lining Work)	1,000	LF	\$ 14.50	\$ 14,500.00
S-2	Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection (Not part of CIPP Lining Work)	100	EA	\$ 285.00	\$ 28,500.00
S-3.1	Specialty Cleaning - 8" Diameter and Less	500	LF	\$ 9.00	\$ 4,500.00
S-3.2	Specialty Cleaning - 10" to 12" Diameter	200	LF	\$ 11.00	\$ 2,200.00
S-3.3	Specialty Cleaning - 14" to 18" Diameter	100	LF	\$ 13.00	\$ 1,300.00
S-3.4	Specialty Cleaning - 20" to 27" Diameter	100	LF	\$ 25.00	\$ 2,500.00
S-3.5	Specialty Cleaning - 30" Diameter and Greater	100	LF	\$ 32.00	\$ 3,200.00
S-4.1	Chemical Sealing of Host Pipe – 10" Diameter and Less	20	EA	\$ 495.00	\$ 9,900.00
S-4.2	Chemical Sealing of Host Pipe – 12" to 15" Diameter	5	EA	\$ 525.00	\$ 2,625.00

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-4.3	Chemical Sealing of Host Pipe – 18” to 24” Diameter	5	EA	\$ 650.00	\$ 3,250.00
S-4.4	Chemical Sealing of Host Pipe – 27” Diameter and Greater	5	EA	\$ 835.00	\$ 4,175.00
S-5	Chemical Sealing – Grout	1,000	GAL	\$ 400.00	\$ 400,000.00
S-6	Additional Access Cost	50	EA	\$ 350.00	\$ 17,500.00
S-7	Chemical Sealing of Service Lateral Connection	20	EA	\$ 450.00	\$ 9,000.00
MISCELLANEOUS - GROUP I					
M-13	Allowance for Contract Amendment	--	--	\$ 50,000.00	\$ 50,000.00
CONTRACT BASE BID TOTAL - GROUP I:					\$ 648,250.00
SANITARY SEWER - GROUP II					
(CIPP Main Lining)					
S-11.1	CIPP Main Liner 8" Diameter - 6.0 mm Thick	25,000	LF		\$ -
S-11.2	CIPP Main Liner 10" Diameter - 6.0 mm Thick	7,500	LF		\$ -
S-11.3	CIPP Main Liner 12" Diameter - 6.0 mm Thick	2,500	LF		\$ -
S-11.4	CIPP Main Liner 15" Diameter - 7.5 mm Thick	1,500	LF		\$ -
S-11.5	CIPP Main Liner 18" Diameter - 9.0 mm Thick	1,500	LF		\$ -
S-11.6	CIPP Main Liner 21" Diameter - 9.0 mm Thick	1,000	LF		\$ -
S-11.7	CIPP Main Liner 24" Diameter - 10.5 mm Thick	1,000	LF		\$ -
S-11.8	CIPP Main Liner 27" Diameter - 10.5 mm Thick	1,000	LF		\$ -

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-11.9	CIPP Main Liner 30" Diameter - 12.0 mm Thick	1,000	LF		\$ -
S-11.10	CIPP Main Liner 36" Diameter - 12.0 mm Thick	1,000	LF		\$ -
S-11.11	CIPP Main Liner 42" Diameter - 13.5 mm Thick	500	LF		\$ -
S-11.12	CIPP Main Liner 48" Diameter - 15.0 mm Thick	500	LF		\$ -
S-12.1	CIPP Main Liner 8" Diameter Thickness Variance $\pm$ 1.5 mm	1,000	LF		\$ -
S-12.2	CIPP Main Liner 10" Diameter Thickness Variance $\pm$ 1.5 mm	2,000	LF		\$ -
S-12.3	CIPP Main Liner 12" Diameter Thickness Variance $\pm$ 1.5 mm	2,000	LF		\$ -
S-12.4	CIPP Main Liner 15" Diameter Thickness Variance $\pm$ 1.5 mm	2,000	LF		\$ -
S-12.5	CIPP Main Liner 18" Diameter Thickness Variance $\pm$ 1.5 mm	1,000	LF		\$ -
S-12.6	CIPP Main Liner 21" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.7	CIPP Main Liner 24" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.8	CIPP Main Liner 27" Diameter Thickness Variance $\pm$ 1.5 mm	501	LF		\$ -
S-12.9	CIPP Main Liner 30" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.10	CIPP Main Liner 36" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.11	CIPP Main Liner 42" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-12.12	CIPP Main Liner 48" Diameter Thickness Variance $\pm$ 1.5 mm	500	LF		\$ -
S-13.1	CIPP Main Pre-Liner 8" Diameter	600	LF		\$ -

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-13.2	CIPP Main Pre-Liner 10" to 12" Diameter	600	LF		\$ -
S-13.3	CIPP Main Pre-Liner 15" to 18" Diameter	500	LF		\$ -
S-13.4	CIPP Main Pre-Liner 21" to 27" Diameter	400	LF		\$ -
S-13.5	CIPP Main Pre-Liner 30" to 36" Diameter	200	LF		\$ -
S-13.6	CIPP Main Pre-Liner 42" to 48" Diameter	150	LF		\$ -
S-14.1	Wastewater Bypass Pump-Around Setup - 8" Diameter and Less	55	EA		\$ -
S-14.2	Wastewater Bypass Pump-Around Setup - 10" to 12" Diameter	20	EA		\$ -
S-14.3	Wastewater Bypass Pump-Around Setup - 14" to 21" Diameter	15	EA		\$ -
S-14.4	Wastewater Bypass Pump-Around Setup - 22" to 30" Diameter	5	EA		\$ -
S-14.5	Wastewater Bypass Pump-Around Setup - 32" to 48" Diameter	5	EA		\$ -
S-15.1	Wastewater Bypass Pump-Around Operation - 8" Diameter and Less	75	DAY		\$ -
S-15.2	Wastewater Bypass Pump-Around Operation - 10" to 12" Diameter	40	DAY		\$ -
S-15.3	Wastewater Bypass Pump-Around Operation - 14" to 21" Diameter	30	DAY		\$ -
S-15.4	Wastewater Bypass Pump-Around Operation - 22" to 30" Diameter	15	DAY		\$ -
S-15.5	Wastewater Bypass Pump-Around Operation - 32" to 48" Diameter	10	DAY		\$ -
S-20	Removal & Sealing of Protruding Service Connections	10	EA		\$ -
S-22	Service Reconnection	500	EA		\$ -

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-23	CIPP Liner Material Testing	10	EA		\$ -
S-24.1	CIPP Liner Testing - FELL Testing - 8" to 12" Diameter	3,500	LF		\$ -
S-24.2	CIPP Liner Testing - FELL Testing - 14" to 21" Diameter	500	LF		\$ -
S-24.3	CIPP Liner Testing - FELL Testing - 22" to 30" Diameter	500	LF		\$ -
S-24.4	CIPP Liner Testing - FELL Testing - 32" to 48" Diameter	200	LF		\$ -
	MISCELLANEOUS - GROUP II				
M-13	Allowance for Contract Amendment - Group II	--	--	\$ 100,000.00	\$ 100,000.00
SANITARY SEWER - GROUP II TOTAL:					\$ 100,000.00
	SANITARY SEWER - GROUP III (Service Lateral CIPP Lining)				
S-24	Initial Service Lateral CCTV From Main	250	EA	\$ 290.00	\$ 72,500.00
S-25	Initial Service Lateral CCTV Inspection From Clean Out	25	EA	\$ 5.00	\$ 125.00
S-26	CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF	200	EA	\$ 3,597.00	\$ 719,400.00
S-27	CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral	30	EA	\$ 3,825.00	\$ 114,750.00
S-28	CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral	30	EA	\$ 7,600.00	\$ 228,000.00
S-29	CIPP Lateral Lining, Up To 15 LF (From Access Structure)	10	EA	\$ 3,385.00	\$ 33,850.00
S-30	CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29)	10,000	LF	\$ 70.00	\$ 700,000.00

Pay Items - Price Page

The Bidder proposes to furnish all material and equipment and perform all Work for the following prices:

The Bidder shall provide unit prices in the yellow spaces provided:

Insert Bidder/Company Name:					
Item No.	Description	Estimated Quantity	Unit	(\$) Unit Price	(\$) Total Price
S-31	Replacement or Installation of Cleanouts - Not In Bulk	20	EA	\$ 1,500.00	\$ 30,000.00
S-32	Replacement or Installation of Cleanouts - Bulk Installation (10 or more within localized area)	75	EA	\$ 1,400.00	\$ 105,000.00
S-33	Replacement or Installation of Cleanouts - Dewatering - Targeted Areas	90	EA	\$ 1,500.00	\$ 135,000.00
S-35	Clean-Out Restoration in Grass/Mulch Area	75	EA	\$ 1,300.00	\$ 97,500.00
S-36	Clean-Out Restoration in Asphalt Area	5	EA	\$ 1,450.00	\$ 7,250.00
S-37	Clean-Out Restoration in Concrete Driveway	10	EA	\$ 1,500.00	\$ 15,000.00
S-38	Clean-Out Restoration in Paver Driveway	10	EA	\$ 2,500.00	\$ 25,000.00
	MISCELLANEOUS - GROUP III				
M-13	Allowance for Contract Amendment	--	--	\$ 50,000.00	\$ 50,000.00
SANITARY SEWER - GROUP III TOTAL:					\$ 2,333,375.00



CITY OF ST. PETERSBURG

ENGINEERING & CAPITAL IMPROVEMENTS DEPARTMENT

SAN Annual CIPP Lining FY20 ST. PETERSBURG, FLORIDA

PROJECT NO. 20013-111

Plans, specifications and details governing the Work to be accomplished under Project No. 20013-111 have been prepared for the City of St. Petersburg by Engineering & Capital Improvements Department, One Fourth Street North, St. Petersburg.

All communication pertaining to this project shall carry the reference,
"CITY PROJECT NO. 20013-111"



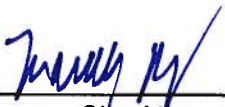
Brijesh Prayman, P.E., ENV SP
Director, Engineering & Capital Improvements

APPROVED AS TO CONTENT

**SAN Annual CIPP Lining FY20
Project No. 20013-111**

CITY OF ST. PETERSBURG, FLORIDA

Approved on the assumption that the QUALIFICATION REQUIREMENTS; BID BOND; BIDDER SECURITY/BIDDER INFORMATION; AGREEMENT; PUBLIC CONSTRUCTION BOND; SUBCONTRACTOR SUMMARY; APPRENTICE/DISADVANTAGED WORKER UTILIZATION PLAN WORKSHEET; INSTRUCTIONS TO BIDDERS; and GENERAL CONDITIONS FORMS are the latest approved versions with the only variation being in the SUPPLEMENTAL INSTRUCTIONS TO BIDDERS a which I have read and approved. This was the only CONTRACT STANDARDS SUPPLEMENTAL that was included. I assume a CERTIFICATE OF INSURANCE form will be included. No opinion is offered on the TECHNICAL SPECIFICATIONS.

By: 
City Attorney (or designee)

Date: 4/17/20

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REQUIRED BIDDER DOCUMENTS *(Attached, PDF and Excel Documents)*

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Qualification Requirements

BID FORMS

Subcontractor Summary

Apprentice/Disadvantaged Worker Utilization Plan Worksheet

Pay Items - Price Page

Bid Bond

Bidder Security and Bidder Information

Agreement Template *(attached, for informational purposes)*

Public Construction Bond Template *(attached, for informational purposes)*

CONTRACT SPECIFICATIONS

CONTRACT STANDARDS

Instructions to Bidders

General Conditions

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SIB-2 Article I-5 - Submission of Bids

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- 1.02 Scope of Work
- 1.03 Field Order/Work Order
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- 1.06 Permits
- 1.07 Project Sign
- 1.08 Project Work Hours/Field Supervision
- 1.09 Project Schedule Documentation
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- 1.11 Maintenance of Storm Drainage System
- 1.12 Prevention, Control, and Abatement of Erosion and Water Pollution
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**CONTRACT STANDARDS: INSTRUCTIONS TO
BIDDERS AND GENERAL CONDITIONS FOR
ANNUAL WATER/WASTEWATER PROJECT**



City of St. Petersburg, Florida

Engineering & Capital Improvements Department

Contract Standards for Annual Water/Wastewater Projects

December 2019

CONTRACT STANDARDS

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CONTRACT STANDARDS

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INSTRUCTIONS TO BIDDERS

ARTICLE I-1 GENERAL INFORMATION

The construction work called for within this bidding package involves work for the City of St. Petersburg as Owner. Bidders are cautioned to carefully follow the instructions of this section to help ensure that their Bids are responsive to the requirements as presented herein.

ARTICLE I-2 DEFINITIONS OF TERMS

In addition to the definition of terms provided in this Instructions to Bidders section, the definitions set forth in the Agreement and the General Conditions apply to this Instructions to Bidders section.

ADDENDA/ADDENDUM – Written or graphic instruments issued prior to receipt of Bids which modify or interpret the Contract Documents, Plans and/or Specifications by additions, deletions, clarifications and/or corrections.

ALTERNATES – Bid price for additive or deductive items to the base Bid.

BID DOCUMENTS – Bid forms and Bid bond forms making up the Solicitation issued by the City for this Project.

BIDDER – Individuals or entities submitting Bids for the Project.

BID OPENING – The stage in the solicitation process in which the Bids are publicly opened by the City and read aloud.

NOTICE OF CONTRACT AWARD – Written notice by the City to the apparent successful Bidder stating award of the Project.

RECORDED BIDDERS – All Bidders to which the City has sent the Solicitation and all Bidders that attended the pre-Bid conference.

TOTAL BID PRICE – The total Contract price for the Bid, which includes the base Bid price and Alternates.

ARTICLE I-3 EXAMINATION OF BID PACKAGE DOCUMENTS

3.1 Completeness of Bid Package

The physical makeup and content of the Contract Documents are designed to be complete for the preparation and submittal of Bids. However, the Bidder shall verify to its own satisfaction that all material issued to the Bidder including Addenda, is complete. Should the Bidder discover that a page, sheet, or other item is missing, it shall so notify the City and the City will forward the missing item(s) to the Bidder. After Bids have been submitted, no claims of ignorance of the requirements of bidding or of construction, due to such missing material, including Addenda, will be recognized.

3.2 Bidder's Responsibility to the Project

The submission of a Bid will constitute an incontrovertible representation by the Bidder that it has or will comply with all provisions of the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for the performance of the Work, and that the Bidder has thoroughly reviewed the Plans and Specifications and has included all required labor and material in its Bid.

Inasmuch as it is not standard practice to detail all controls, wiring, piping and appurtenances, etc. required to render each piece of equipment functional on the Plans, the Bidder is cautioned to ensure that its Bid includes all such items necessary to permit the equipment to function as intended in a manner that meets all applicable codes, is free from defects and abnormal conditions, and provides a complete and operational system.

3.3 Conflicts in the Documents

Should any particular requirement in the Plans and/or Specifications for the Project appear to a Bidder to be in disagreement with other requirements in the Contract Documents, or if a Bidder is unsure of the intent or meaning of any particular requirement of the Contract Documents, the Bidder shall immediately notify the City.

If such notifications are received by the City prior to the deadline for questions indicated in the Solicitation, the City will, if deemed by the City to be warranted, issue a written clarification or an Addendum to all Recorded Bidders.

3.4 Contract Completion Time

The City will require that Work under this Contract be completed within the time limit stipulated in the Contract Documents, and Bidders must give consideration to this requirement when submitting Bids. If a Bidder is of the opinion that more time should be allowed for accomplishing the Work, a request for such extra time may be made in writing to the Procurement and Supply Management Director. For consideration, said request must be received by this office prior to the deadline for questions indicated in the Solicitation. If the Procurement and Supply Management Director deems it to be in the best interest of the City to revise the time requirement, an Addendum will be issued and furnished to all Bidders.

ARTICLE I-4 BID GUARANTY

4.1 Certified Check or Bid Bond

Bids shall be accompanied by a certified check, cashier's check or Bid Bond in the amount of not less than 5% of the Total Bid Price. The certified check or Bid Bond, and the monies payable thereon, shall be paid into the funds of the City of St. Petersburg, Florida, as liquidated damages, if the Bidder fails to execute the written Contract and furnish the required Public Construction Bond within ten (10) calendar days following Notice of Contract Award. The Bid Bond shall be furnished by a Surety company duly authorized to do business in the State of Florida. The Surety company shall have a rating classification of "A" and a financial category of Class VII as evaluated in the current Best's Key Rating Guide, Property – Liability.

4.2 Return of Checks

Bid securities submitted by Bidders in the form of a certified check or cashier's check will be held or deposited into the funds of the City of St. Petersburg and will be refunded or returned to the parties submitting same not later than thirty (30) days after execution of the Contract. In the event that all Bids are rejected, checks will be refunded to all Bidders within fifteen (15) calendar days after date of rejection.

ARTICLE I-5 SUBMISSION OF BIDS

5.1 Submission of Bids

The Bidder shall submit a complete Bid electronically through the City's iSupplier portal. Bids will be received as stipulated in the Solicitation until the time and date specified in the Solicitation.

5.2 Bid Form

Bids shall be made upon the forms supplied within the iSupplier Solicitation. Each Bidder must state in its Bid the price for which the Bidder will perform the Work as required by the Bid Documents.

5.3 Basis of Bid Prices

The Bid Documents, together with any Addenda, which are furnished to prospective Bidders during the advertising period shall become the basis of the Contract.

Unless otherwise provided in the Bid Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work including the costs incurred by the Contractor in complying with all the provisions and requirements of the Contract Documents.

Each unit price will be deemed to include an amount considered by the Bidder to be adequate to cover the Bidder's overhead and profit for each separately identified item.

5.4 Bid Preparation

All applicable pages of the Bid shall be completed and all required attachments must be provided.

All prices for lump sum or unit price work shall be given in numerals. Bid prices must be entered on the Bid for all items, unless directed otherwise on the Bid.

Failure to complete the Bid price and questionnaire sections and to provide completed required attachments will render the Bid non-responsive.

5.5 Addenda

If, in the judgment of the Procurement and Supply Management Director, an Addendum is required, a copy of such will be posted on the Procurement and Supply Management Department's web page. All Recorded Bidders will be notified of the Addendum and will be

provided with the electronic link to the web page. All Addenda shall become part of the Contract Documents. No other interpretations or clarifications issued prior to the Bid Opening will have legal effect.

The sole obligation of the Procurement and Supply Management Director with respect to distribution of Addenda is to ensure that a copy of each Addendum is posted on the City's procurement web page and to notify all Recorded Bidders. Each Bidder bears the responsibility to review and/or download the Addenda and to satisfy itself prior to submitting its Bid that its Bid is responsive to all Addenda issued.

5.6 Bid for Alternates

To be responsive, all Bids shall include costs for Alternates. Unless otherwise specified, any Bid which does not include the base Bid plus each and every Alternate may be rejected as being non-responsive. The City may select any combination or reject any or all Alternates as best serves the interest of the City.

5.7 Period Bid Remains in Effect

Bids for the Work covered by this Contract may be held by the City for a period of ninety (90) days after Bid Opening and shall continue in full effect and not be subject to withdrawal during that period until a Contract has been executed with a Bidder. If no Contract has been executed within the ninety-day period, any Bid may be withdrawn or nullified by either party or be deemed to be confirmed and extended in time for as long as permitted by the Bidder submitting each such Bid.

ARTICLE I-6 EXAMINATION OF THE SITE

6.1 Familiarity with Site Conditions

It shall be the responsibility of Bidder to examine the site of the proposed Work. Before submitting a Bid, Bidders shall inform themselves fully of the conditions relating to the cost of construction materials and labor under which the Work will be prosecuted, and shall make whatever site investigations or site tests they deem necessary. Should a Bid be accepted, the Bidder will be responsible for any and all errors in its Bid resulting from its failure to perform such examinations, inform itself of such conditions, or do such investigations and tests.

6.2 Extents and Locations of Subsurface Conditions

The Plans show the existing surface and other underground structures likely to affect the prosecution of the Work insofar as they have been determined, but the information shown is not guaranteed as being correct or complete. Bidders are expected to examine the Plans, and the location of the Work upon the ground, and consult various utility companies if deemed necessary, in order to judge for themselves the potential circumstances affecting the cost of the Work or the time required for its completion.

ARTICLE I-7 TABULATION OF THE BIDS

7.1 Correction of Mathematical Errors

Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the

correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

7.2 Preparation and Distribution of Bid Tabulation

All Bids received in conformity with the Contract Documents will, as soon as practicable, be tabulated and the tabulation shall be posted in iSupplier.

ARTICLE I-8 REJECTION OF BIDS OR AWARD WITHIN BUDGET AMOUNT

8.1 Rejection of Bids

The City reserves the right to reject any or all Bids, in whole or in part, when the City determines it is in the City's best interest to do so.

8.2 City Budget

The City reserves the right to award the Contract to the lowest responsible Bidder for an amount equal to the City's budget for the Work.

ARTICLE I-9 WAIVER OF IRREGULARITIES

In evaluating the Bids, the City reserves the right to waive any and all minor irregularities.

ARTICLE I-10 DISQUALIFICATION OF BIDDERS

Each Bidder, by submitting its Bid, states that neither Bidder nor Bidder's agents, nor any other party acting on Bidder's behalf, has paid or agreed to pay, directly or indirectly, to any person, firm, corporation, or employee of the City, any money or valuable consideration for assistance in procuring or attempting to procure the Contract herein referred to, and further agrees that no such money or reward will be hereafter paid.

Any or all Bids will be rejected if there is any reason for believing that collusion exists among the Bidders, and participants in such collusion will not be considered in future Bids for the same Work.

ARTICLE I-11 RECOMMENDATION OF AWARD OF CONTRACT

11.1 Standard for Award

Contracts will be awarded to the lowest responsible and responsive Bidder whose Bid meets the requirements and criteria set forth in the Solicitation. In awarding any Contract, the City Council may reject any Bid determined by the City Council not to be in the best interest of the City.

11.2 Factors Determining Whether a Bidder is Responsible

In making the determination of whether a Bidder is responsible, the City reserves the right to take into account and give reasonable weight to:

- A. Whether the Bidder has the necessary personnel, facilities, equipment, ability, experience, financial resources and special qualifications to perform the Work in a satisfactory manner within the time specified;

- B. Whether the Bidder or any Subcontractor possesses any City-, County-, or State-approved certification required to perform the Work;
- C. Whether the Bidder's references confirm the Bidder's experience qualifications;
- D. Whether the Bidder's references confirm the Bidder has the required resources to do the Work;
- E. The Bidder's default under, or failure to complete, other contracts;
- F. The Bidder's non-compliance with applicable Laws, including any citations from the Occupational Safety and Health Administration (OSHA) in the last three years;
- G. Whether the Bidder has had claims made against it alleging wage violations and/or discrimination in the last three years;
- H. The Bidder's involvement in ongoing litigation, including any final judgments that have not been satisfied;
- I. The Bidder's performance of previous satisfactory work for the City, including fulfillment of warranties;
- J. Evidence that the Bidder provides a drug-free workplace; and
- K. Evidence that all employees who will work on the Project have completed or will complete the OSHA 10-hour training course prior to performing any work on the Project.

11.3 Factors Rendering Bidders Non-Responsive

Any Bidder that submits a Bid that does not conform in all material respects to the requirements set forth in the Solicitation, including but not limited to any requirements to submit documentation, will be rendered non-responsive.

11.4 Recommendation of Award

Upon review and consideration of the relevant factors, the Procurement and Supply Management Director, the Engineering & Capital Improvements Director, the funding agency (if applicable), and the Design Professional will determine the lowest responsible and responsive Bidder, and a recommendation for City Council award will be made by the Procurement and Supply Management Director.

The City reserves the right to award the Contract to the lowest responsible Bidder for an amount equal to the City's available budget for the Work, which may be greater or less than the lowest responsible Bidder's Contract total(s) in the Proposal. The City reserves the right to reject any or all Bids, or to delete any part of the Work.

ARTICLE I-12 SPECIAL PROVISIONS DUE TO FEDERAL FINANCING

If this Project is to be financed, in whole or in part, by the Federal Government, all applicable requirements of the Davis Bacon Act as amended shall be complied with by Contractor.

The Davis Bacon Act, as amended, includes the provisions of the President's Executive Orders #11246 and #11375, Titles VI and VII of the Civil Rights Act of 1964, and sets forth criteria for the following: (a) Labor Standards, (b) Procedures for compliance with the Davis Bacon Act, (c) Mandatory clauses which shall be included in all contracts which are subject to provisions of the Davis Bacon Act, (d) Apprentice and trainee employment requirements in all contracts in excess of \$10,000 where the Davis Bacon Act applies, (e) Instructions for completing Payroll Form WH347, and (f) Contractor responsibilities under the Davis Bacon Act.

If Federal or State funds are partially or fully funding this Project, the Contractor will be required to submit a Payment and Performance Bond for 100% of the cost of construction.

ARTICLE I-13 SUBCONTRACTORS

13.1 Prior Approval

No part of the Contract shall be sublet without the prior written approval of the Owner. If the Contractor should sublet any part of this Contract, the Contractor shall be as fully responsible to the Owner for acts and omissions of its Subcontractor and of the persons either directly or indirectly employed by its Subcontractor, as it is for the acts and omissions of persons directly employed by the Contractor.

13.2 Subletting of Contract

The Contractor must complete at least 50% of the Total Bid Price with its own organization based on unit Bid prices, unless otherwise specified in the contract documents or approved in writing by the Engineer. The contract amount upon which the 50% requirement is computed includes the cost of materials and manufactured products which are to be purchased or produced by the Contractor under the contract provisions.

In order to meet this 50%, the Contractor shall not purchase any materials for a subcontracted item nor shall Contractor place other contractor's employees on Contractor's payroll. The term "own organization" shall be construed to include only workers employed and paid directly by the Contractor and equipment owned or rented by Contractor, with or without operators.

Each Bid shall include the name and place of business of each intended Subcontractor who will perform work or render services to the Contractor along with the portion of Work and cost of that Work to be completed by each Subcontractor.

Contractor may not utilize third-tier subcontractors for the Project unless the Contract is for a federally funded project.

The Contractor who is awarded the Project may not change or substitute Subcontractors or the portions of the Work to be performed or materials to be supplied from those identified in its Bid except upon written approval of the Engineer for the following situations:

- A. Subcontractor fails or refuses to execute a written contract for the scope of work specified at the price specified;
- B. Subcontractor is not appropriately licensed to perform the scope of work;

- C. Subcontractor becomes bankrupt or insolvent;
- D. Subcontractor is ineligible to perform the work on the Project;
- E. Subcontractor fails or refuses to perform its subcontract;
- F. Engineer determines the work performed by the Subcontractor is substantially unsatisfactory and not in substantial accordance with the Plans and Specifications;
- G. Subcontractor is substantially delaying or disrupting the progress of the Work.

ARTICLE I-14 NONDISCRIMINATION

In carrying out the Contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or disability. The Contractor shall take affirmative action to ensure that applicants for employment and employees are treated in accordance with all applicable local, state, and federal laws regarding race, color, religion, sex, national origin or disability.

All employment decisions of the Contractor with respect to employees and employee applicants, including but not limited to, initial employment upgrading, demotion, transfer, recruitment, recruitment advertising, layoff, termination, rates of pay or other forms of compensation, training and apprenticeship shall be without discrimination against the employee or employee applicant because of disability, race, color, religion, sex, or national origin. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause. Failure to adhere to the above procedures is considered a violation of the Contract with the City and may subject the violator to debarment from future City contracts.

ARTICLE I-15 WITHDRAWAL OF BIDS

Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the deadline for submitting Bids. A request for withdrawal or a modification must be in writing and signed by a person duly authorized to do so; and, in case signed by a deputy or subordinate, the principals' proper written authority to such deputy or subordinate must accompany the request for withdrawal or modifications.

Withdrawal of a Bid will not prejudice the rights of a Bidder to submit a new Bid prior to the Bid date and time.

If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with the City and within five (5) calendar days thereafter demonstrates to the reasonable satisfaction of the City that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid and the Bid security will be returned. Thereafter, the Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

ARTICLE I-16 PUBLIC ENTITY CRIMES

Contractor is hereby notified of the provisions of Section 287.133(2)(a), Florida Statutes, related to prohibitions on persons or affiliates who have been placed on the convicted vendor list following a conviction for a public entity crime.

ARTICLE I-17 SMALL BUSINESS ENTERPRISE PROGRAM

17.1 Participation by SBE Contractors and Subcontractors

Unless otherwise prohibited, all Contractors entering into a construction contract with the City agree to be subject to and comply with the requirements for designating a percentage of the Work for small business enterprises (as defined in Section 2-232), or demonstrating and documenting a good faith effort to do so, as those requirements are set forth in Chapter 2, Article V, Division 4, of the St. Petersburg City Code, as may be amended from time to time (collectively, "SBE Requirements"). The ability of a Contractor to perform the Work with its own workforce will not excuse the Contractor from complying with the SBE Requirements. The designated Small Business Enterprise percentage requirement for the Work is set forth in the Qualification Requirements section of the Solicitation.

17.2 Acknowledgment with Bid

All Bidders shall respond in the Qualification Requirements section of the Solicitation that they have read, understand, and will comply with the SBE Requirements. A Bidder's failure to submit a response in the Qualification Requirements section of the Solicitation renders the Bid non-responsive.

ARTICLE I-18 APPRENTICE EMPLOYMENT

18.1 Apprentice Requirements

If the Total Bid Price is equal to or greater than one million dollars (\$1,000,000), all Contractors entering into a construction contract with the City agree to be subject to and comply with the requirements for employing apprentices, or demonstrating and documenting good faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 7 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Apprentice Requirements").

18.2 Acknowledgment with Bid

All Bidders shall respond in the Qualification Requirements section of the Solicitation that they have read, understand, and will comply with the Apprentice Requirements. A Bidder's failure to submit a response in the Qualification Requirements section of the Solicitation renders the Bid non-responsive.

ARTICLE I-19 DISADVANTAGED WORKERS

19.1 Disadvantaged Worker Requirements

If the Total Bid Price is equal to or greater than one million dollars (\$1,000,000), all Contractors entering into a construction contract with the City agree to be subject to and comply with the requirements for employing disadvantaged workers, or demonstrating and documenting good

faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 8 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Disadvantaged Worker Requirements").

19.2 Acknowledgment with Bid

All Bidders shall respond in the qualification requirements document that they have read, understand, and will comply with the Disadvantaged Worker Requirements. A Bidder's failure to submit a response to the qualification requirements shall render the Bid non-responsive.

ARTICLE I-20 RESPONSIBLE WAGE

20.1 Responsible Wage Requirements

If the Total Bid Price is equal to or greater than one million dollars (\$1,000,000), all Contractors entering into a construction contract with the City agree to be subject to and comply with the responsible wage requirements set forth in St. Petersburg City Code Chapter 2, Article V, Division 9, as those requirements may be amended from time to time, (collectively, the "Responsible Wage Requirements").

20.1 Acknowledgement with Bid

All Bidders shall respond in the qualification requirements document that they have read, understand, and will comply with the Responsible Wage Requirements. A Bidder's failure to submit a response to the qualification requirements shall render the Bid non-responsive.

ARTICLE I-21 CONSIDERATION OF SEA LEVEL RISE AND RESILIENCY

It is the policy of the City to apply the consideration of sea level rise and resiliency to the City's decision-making, including in the procurement of City construction projects. Bidders are encouraged to provide documentation addressing the following:

- A. Whether the Project considers the latest regional best available science regarding the effects of sea level rise, climate-related vulnerability and resiliency in St. Petersburg;
- B. Whether the Project affects an area that is vulnerable to the impacts of sea level rise;
- C. Whether the Project will increase the resiliency of the City with respect to sea level rise;
- D. Whether the Project is compatible with the City's sea level rise mitigation and resiliency efforts.

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GENERAL CONDITIONS

ARTICLE G-1 DEFINITION OF TERMS

In addition to the terms set forth in the Agreement, the following terms as used in the Contract are respectively defined as follows:

ALTERNATES – Bid price for additive or deductive items to the Base Bid in the Proposal.

BID – The solicitation response the Contractor submitted on the prescribed proposal form setting forth the prices for the Work to be performed.

BUSINESS DAYS – Every day other than Saturdays, Sundays, or City-designated holidays.

CHANGE ORDER – A written order to the Contractor prepared by the City, executed as required by the Contract, describing, authorizing and recognizing a change in the Work, an adjustment in the prices for the Work set forth in the Bid, and, if applicable, an adjustment to the Field Order Completion Time. A Change Order may be utilized to substitute work at no cost, to authorize additional (extra) work or to authorize the deduction of work. A Change Order signed by the Contractor indicates its agreement therewith.

CITY INSPECTOR – Duly authorized project representative assigned by the Manager, Engineering Construction. The City Inspector may be a City employee or an employee of a Design Professional employed by the City.

DESIGN PROFESSIONAL – The person or entity under separate contract with the City to provide Engineering/Architectural services, and, if noted at the pre-construction conference, may provide construction administration, construction inspection, or other project-related services for the Project.

ENGINEER – The Director of the City Engineering & Capital Improvements Department, or an authorized representative.

FIELD ORDER – A document (i) authorizing the Contractor to proceed with work defined in a single Work Order or multiple Work Orders, (ii) establishing the date on which the Contractor is to commence performance of the Work, and (iii) providing a timeline for completion of that work. Field Orders are assigned a unique number for recordkeeping purposes.

FINAL PAYMENT – The final payment made by the City after Final Completion has been achieved by the Contractor. Final Payment releases all moneys due to the Contractor for Work performed under a Field Order.

FINAL COMPLETION – Completion of all work required under the Contract for each Field Order to the satisfaction of the City. Completion includes not only construction of Work but also the completion of the punch list items, which may include submittal of as-built drawings approved by the City, warranty documents, Operation and Maintenance Manuals, and all other documentation required by the Contract.

LAWS – All federal, state, and local statutes, rules, regulations and ordinances, the federal and

state constitutions, and the orders and decrees of lawful authorities having jurisdiction over the matter at issue.

MANAGER, ENGINEERING CONSTRUCTION – Duly authorized representative of the Engineer.

NOTICE TO PROCEED – Official written notice provided by the City to the Contractor for each annual period of the Contract, upon which the Contractor shall be prepared to initiate commencement of the Work under the Contract upon receipt of Field Order(s).

PAY ITEMS – Descriptions of specific work, methods of measurement, and basis of payments outlined in the bid form attached to the Solicitation, and used by a Bidder to determine the Total Bid Price.

PLANS/CONTRACT PLANS – All Field Orders, Work Orders, Worklists, and associated combination of City atlas maps, GIS maps, drawings, and City surveyor established vertical/horizontal control data furnished by the City describing the scope, extent, character, and location of the Work related to each Field Order, Work Order, or Worklist within the overall Project, and which form the basis of the Contractor's As-Built Drawings/Records. City Standard Details are also included with the Plans by reference.

SAMPLES – Physical examples which illustrate materials, equipment, or workmanship and established standards by which the Work will be judged.

SCHEDULE OF VALUES – A breakdown of costs for the various construction activities associated with each pay item in the Solicitation.

SHOP DRAWINGS – All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier, or distributor and which illustrate the equipment, material, or some portion of the Work required by the Contract.

SOLICITATION – All documents included in the solicitation issued by the City for the Work, including but not limited to the Notice to Bidders, Invitation to Bid, and Instructions to Bidders, and any addenda thereto.

SPECIFICATIONS – Those portions of the Contract consisting of written technical descriptions of, and requirements applicable to materials, equipment, construction systems, standards and workmanship as applied to the Work, and all administrative details, procedures and requirements. Specifications include all divisions herein.

SUBCONTRACTOR – A Subcontractor is a person or entity who has a contract with the Contractor to perform any of the Work at the site.

SUBSTANTIAL COMPLETION – The stage in the progress of the Work set forth in a Field Order when the Work is sufficiently complete in accordance with the Contract so that the City can occupy or utilize the Work for its intended use. Substantial Completion is further defined in the Contract Documents.

SUPERINTENDENT – Contractor employee in charge of and responsible for the coordination all Contractor field personnel, construction crews and Subcontractors which perform work under

the Project. Superintendent shall be available to the Engineer at all times and meet all of the qualifications required as part of the Contract Documents.

SURETY – The corporate body which is bound with and for the Contractor and which engages to be responsible for its payment of all debts pertaining to, and for its acceptable performance of, the Work for which it has contracted.

WORK – The construction and services required by the Contract, whether completed or partially completed, including all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

WORKLIST – A tabulated list comprised of a single Work Order or multiple Work Orders and associated utility asset data.

WORK ORDER – A document attached to a Field Order detailing work to be performed. Work Orders are assigned a unique number for recordkeeping purposes.

ARTICLE G-2 REPRESENTATIONS AND WARRANTIES

Execution of the Contract by Contractor is a representation that the Contractor is familiar with the Project site, is familiar with the local conditions under which the Work is to be performed, and that it has correlated personal observations with the requirements of the Contract. Familiarity with the Project site and local conditions includes, without limitation: (1) the condition and layout of the Project site and surrounding locale, including marine and subsurface conditions; (2) available labor supply and costs; (3) available subcontractors and suppliers; (4) the prevailing climate, including the impact on construction operations of rain, and other weather events, based upon averages documented by the National Weather Service; (5) available material and equipment and related costs; and (6) other similar issues. Contractor may not make any claim whatsoever for additional time or money arising from its failure to familiarize itself with the Project site in accordance with the representations set forth in this Article.

Contractor has informed the City, and hereby represents to the City, that it has experience in performing work similar to the Work identified in the Contract, and that it is well acquainted with the components that are properly and customarily included within such a Project and the requirements of applicable Laws including but not limited to building, labor, safety, licensing or environmental Laws and local building codes, building standards, and trade practices affecting the Project. The City agrees to furnish or approve, in a timely manner, information required by the Contractor.

The time limits stated in the Contract are of the essence.

ARTICLE G-3 PROJECT SCHEDULE

The Contractor shall comply with the requirements of the article headed "Project Schedule Documentation" of the Technical Specifications, Section 1 - General.

ARTICLE G-4 INTENT AND USE OF THE CONTRACT

4.1 Relationship Between Documents

The Contract comprise the entire Contract between the City and the Contractor concerning the

Work. They may be altered only by a modification. The Specifications are accompanied by the Plans which are duplicates of Plans on file with the City Engineering & Capital Improvements Department.

The documents comprising the Contract are complementary; what is called for by one portion is as binding as if called for by all portions. The table of contents, titles and headings contained in the Contract are solely to facilitate reference to pertinent provisions of the Contract, and shall in no way affect the interpretation of the provisions to which they refer. Further, in the event any particular parts of the Contract are found to be unenforceable, no such event shall affect the enforceability or applicability of any other parts of the Contract.

In the event a conflict between the Plans and the Specifications arises, the Contractor shall notify the Engineer who shall interpret and rule on the true intent.

4.2 References to Other Documents

Reference to standard specifications, manuals or codes of a technical society, organization or association, or to the code of a governmental authority, whether such reference is specific or by implication, shall mean the latest standard specification, manual or code in effect at the time of opening of the Bids unless otherwise specifically stated and shall be as binding as other Project Specifications. However, no provision of a referenced standard specification or manual (whether or not specifically incorporated by reference in the Contract) shall change the duties and responsibilities of the City, or the Contractor or any of their agents or employees from those set forth in the Contract.

When used in the Contract, the following abbreviations have the meaning shown unless stated otherwise:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
AREA	American Railway Engineering Association
ASHRAE	American Society of Heating, Refrigerating, & Air Conditioning Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preserver's Association
AWS	American Welding Society
AWWA	American Water Works Association
CISP	Cast Iron Soil Pipe Institute
CRSI	Concrete Reinforcing Steel Institute
DEP	Department of Environmental Protection, State of Florida
DIPRA	Ductile Iron Pipe Research Association
DOT or FDOT	Department of Transportation, State of Florida
DOT-SSRBC or FDOT-SSRBC	Department of Transportation, Standard Specification for Road & Bridge Construction (English Units)
FDEP	Florida Department of Environmental Protection
FHWA	Federal Highway Administration
FM	Factory Mutual
EPA or USEPA	United States Environmental Protection Agency
IEEE	Institute of Electrical and Electronics Engineers

MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NSF	NSF International
OSHA	United States Department of Labor, Occupational Safety and Health Administration; and Occupational Safety and Health Act
PCA	Portland Cement Association
PCI	Pre-stressed Concrete Institute
SBCCI	Southern Building Code Congress International
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SSPC	Steel Structures Painting Council
UL	Underwriters Laboratories, Inc.

4.3 Contract Document Ownership

Neither the Contractor nor a Subcontractor, manufacturer, fabricator, supplier or distributor shall have or acquire title to or ownership rights in the Plans, Specifications, or other documents (or copies of same) prepared by or through the City and they shall not reuse them in whole or in part, on extensions of this Project or on another project without prior written consent of the City including any specific written verifications or adaptations.

4.4 Intent of the Plans

It is the intent of the Plans to provide the Contractor the best information available regarding the location and layout of the existing and proposed utilities. The Contractor shall carefully use this information and conduct exploratory excavations to verify the locations of existing utilities where any excavation is required.

4.5 Intent of the Specifications

The intent of the Specifications is to provide the Contractor with the best practical information regarding the quality of materials and work to be performed at the site. Contractor shall be responsible for ensuring that the material standards required are met and that the manner of performing all work is of the highest quality.

4.6 Intent of the Contract

It is the intent of the Contract to describe a complete Project to be constructed in accordance with the Contract. All work that may reasonably be inferred from the Specifications or Plans as being required to produce a complete and functional result shall be supplied whether or not it is specifically mentioned. When words which have a well-known technical or trade meaning are used to describe the Work, materials or equipment, in all cases those words shall have that meaning.

The apparent silence of the Specifications as to any detail, or the 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 be used, and that only materials and workmanship of the best quality shall be used, and interpretation of the Specifications shall be made upon that basis.

Payment for the items quoted in the Bid shall also include all costs of any other work, materials and equipment necessary to make the Work complete with the intent of the Project. Work not specified, 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 was specifically delineated or described.

4.7 Record Documents

The Contractor shall maintain in a safe place at the site one (1) record copy of all Plans, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarification in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to the Engineer for reference.

4.8 Records Retention

The Contractor shall keep and maintain complete records related to this Contract during the term of the Contract, through the guarantee period identified in ARTICLE G-45, GUARANTEE PERIOD and for the retention periods set forth in the most recent General Records Schedule GS1-SL for State and Local Government Agencies. All records shall be kept and maintained in accordance with generally accepted accounting principles.

ARTICLE G-5 OMISSIONS OR ERRORS IN THE CONTRACT

Should anything be omitted from the Contract Plans or Specifications which is necessary to permit a clear understanding of the Work, or should there be any error in any of the various instruments furnished, the Contractor shall not perform the Work and shall immediately notify the City of such omissions or errors. Upon receipt of such notification, the City will respond accordingly.

In the event of the Contractor's failure to follow this procedure, it shall make good any damage to or defect in its work caused hereby. The Contractor will not be allowed to take advantage of any omission or error on the Plans, as full instructions will be furnished by the City regarding the intent of the Contract.

ARTICLE G-6 INTERPRETATIONS

When, during the course of the progress of the Work, a question arises as to the intent of the Contract, the scope of Work to be performed, or the labor or materials to be supplied, such questions shall, prior to the Work being performed, be referred to the Engineer for formal determination. All such referrals must be made prior to the Work being performed. Any Work performed prior to receipt of written instruction shall be considered to have been performed outside the scope of the Contract and performed at no cost to the City.

If, upon the receipt of a question concerning the Work, the Engineer determines that the Work referred to must be performed by the Contractor at no increase in price to the Contract, the City Inspector will issue an interpretation on a form entitled "Field Order", which upon issue, shall be signed by the Contractor acknowledging receipt. In the event the Contractor disagrees with such an interpretation, it must register a protest by Certified Mail with the Engineer within ten (10) days following the date of issuance of the Field Order by the City Inspector. However, the Contractor shall immediately proceed with the instruction given in the Field Order.

If, upon receipt of a question concerning the Work, the Engineer determines that the Work referred to lies outside the Contractor's scope of Work, the Engineer will not issue a Field Order but rather will initiate the procedures for the execution of a Change Order as specified in ARTICLE G-34, CHANGES IN THE WORK.

Interpretations of the requirements of the Contract may be issued as Field Orders by the Engineer or the City Inspector at any time during the course of the construction. The Contractor, at all times, is required to immediately execute the instructions of all issued Field Orders.

ARTICLE G-7 APPLICABLE LAWS AND REGULATIONS

The Contract shall be governed by the laws of the State of Florida. Venue for any action brought in state court shall be in Pinellas County, St. Petersburg Division. Contractor and the Work shall comply at all times with all applicable Laws. If the Contractor finds that the Work is or may be in conflict with applicable Laws, the Contractor shall give, prior to performing such Work, the City prompt written notice, specifying each conflict. Upon receipt of such notice, if warranted, the City will eliminate each conflict by issuance of an appropriate Change Order.

Contractor is required to be familiar with the Laws applicable to the Work. If Contractor performs any Work contrary to such Laws, the Contractor shall bear sole liability for all consequences.

ARTICLE G-8 ROYALTIES AND PATENTS

The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

If a particular invention, design process, product or device is specified in the Contract for use in the performance of the Work and if to the actual knowledge of the City its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the City in the Contract.

The Contractor shall defend at its expense, pay on behalf of, hold harmless and indemnify the Indemnified Parties (as hereinafter defined) from and against any and all Claims (as hereinafter defined), including but not limited to costs, expenses and attorneys' and experts' fees at trial and on appeal, whether or not a lawsuit is filed, which Claims are alleged or claimed to have arisen out of or in connection with, in whole or in part, directly or indirectly, the infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device.

ARTICLE G-9 ACCIDENT PREVENTION

Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of applicable Laws, and existing building and construction codes shall be observed. Machinery, equipment, and other hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, and OSHA's Safety and Health Standards (29 CFR 1926/1910) U. S. Department of Labor, to the extent that such provisions are not in contravention of applicable Laws and the Accident Prevention Manual, City of St. Petersburg, Florida.

ARTICLE G-10 PUBLIC CONVENIENCE AND SAFETY

10.1 Requirements for the Protection of the Work, Personnel, and Property

The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent and mitigate damage, injury or loss resulting from its construction activities to:

- A. All employees on the Work and all other persons who may be affected thereby;
- B. All the Work, and all materials and equipment to be incorporated therein, whether installed, in storage on or off the site under the care, custody or control of the Contractor or any of its Subcontractors or Sub-Subcontractors;
- C. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall give all notices and comply with all applicable Laws bearing on the safety of persons or property of their protection from damage, injury or loss.

The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying City and users of adjacent utilities.

No Contractor shall cut away any timber, dig under any foundations or into any walls or other parts, or in any case allow the same to be done without the full knowledge and consent of the City, and shall be held responsible for any damage resulting from any violations of the provisions of this clause. Approved excavation under foundations shall be backfilled concrete by and at the expense of the Contractor requiring such excavation.

When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

The Contractor shall promptly remedy all damage or loss to any property caused in whole or in part by the Contractor, any Subcontractor, any Sub-Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone whose acts any of them may be liable and for which the Contractor is responsible except damage or loss attributable to the acts or omissions of the City or anyone directly or indirectly employed by the City, or by anyone for whose acts the City may be liable, and not attributable to the fault or negligence of the Contractor.

10.2 Public Convenience

The Contractor shall conduct its work so as to interfere as little as possible with private business or public travel. It shall, at its own expense, whenever necessary or required, maintain barricades, maintain lights, and take such other precautions as may be necessary to protect life and property, and it shall be liable for all damages occasioned in any way by its act or neglect or that of its agents or employees. The Contractor is responsible, where necessary, to provide

temporary sidewalks for the safe passage of pedestrian traffic. The Contractor shall comply with the State of Florida Manual on Traffic Control and Safe Practices.

The Contractor shall cooperate with the City of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

In the event of interruption to underground or overhead utility services as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall immediately alert the occupants of nearby premises as to any emergency that the Contractor may create or discover at or near such premises. The Contractor shall then notify the City and the City or operator of the utility facility of the disruption and shall cooperate with the said utility City or operator in the restoration of service. If water service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

During all work under this Project, the Contractor, through the use of water or other City-approved means, shall institute a continuous dust abatement program to the extent that reasonable precaution shall be taken by the Contractor to prevent the emission of fugitive particulate matter into the atmosphere. Access to private property is to be maintained at all times. It is the Contractor's responsibility to develop construction schedules and methods to assure compliance with this requirement.

ARTICLE G-11 NOISE ABATEMENT

The Contractor shall comply with applicable Laws related to noise, including the City's noise ordinance.

ARTICLE G-12 WORK DAYS

Except for special operations that may be necessary to maintain, check, and protect work already performed, all work shall normally be discontinued on Saturdays, Sundays, and City-designated holidays. Should the Engineer approve the Contractor's performing work on Saturdays, Sundays, or City-designated holidays, and such work, in the Engineer's opinion, requires City inspection, the Contractor shall pay the City the amount of Four Hundred Dollars (\$400.00) per eight (8) hour day or fraction thereof for each City inspector so assigned. Should it be desired to perform regular and continuous night work, the lighting, safety and other facilities which are necessary for performing such work at night must be provided by the Contractor, at its own cost and expense.

ARTICLE G-13 NO WAIVER OF RIGHTS

No inspection, orders, measurements, or certificates made by the Engineer, nor any payment or acceptance in whole or in part, nor extension of time, nor taking of possession by the City, shall operate as a waiver of the conditions of this Contract, or of any right to damages herein provided for. No waiver of one breach of the Contract shall be construed as a waiver of another breach.

Should an error be discovered in the partial or final estimates, or conclusive proofs of defective work or materials used by the Contractor be discovered after the Final Payment has been made,

the City reserves the right to claim and remove by process of law such sums as may be sufficient to correct the error or make good the defect in the Work and materials.

ARTICLE G-14 SEPARATE CONTRACTS

The City reserves the right to let other contractors do other work in connection with the Work. The Contractor shall afford such other Contractors or the City reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly coordinate its work with theirs.

ARTICLE G-15 COORDINATION OF THE WORK

It shall be the responsibility of the Contractor to set the pace of the Work and coordinate the Work of any and all other contractors, Subcontractors, and private utilities working at the site. The cost associated with those efforts shall be incorporated into the various bid prices for the Contractor's work.

This coordination shall include sufficient notifications of each of the other Contractors when they must be at the site to initiate portions of their work. These notifications should be logged by the Contractor in a construction log book.

Each contractor shall afford other contractors, Subcontractors and private and public utility companies reasonable opportunity for the introduction or storage of their materials and the execution of their work. Any contractor failing to do so shall be responsible for all damages or other costs associated with delays in work precipitated by such failure. If the City is performing work with the City employees, the Contractor shall provide reasonable opportunity to the City for the introduction and storage of materials and equipment and the execution of work. The Contractor shall properly connect and coordinate its work with the work of all other forces at the site.

If any part of a contractor's work is preceded by the work of the City, utility companies or any other Contractor, it shall, prior to the initiation of its work, inspect such other work and report to the Engineer any defects which render it unsuitable as related to its work. Failure by any Contractor to make such inspection shall constitute its acceptance of the other work as fit and proper for the reception of its work; except as to hidden defects or defects which may develop in the other work at a later date.

The Contractor shall do all cutting, fitting, and patching of its work that may be required to properly integrate it with work performed by other forces. The Contractor shall not endanger any work of others by cutting, excavating or otherwise altering such work, and shall only cut or alter such work with the consent of the entity whose work will be affected.

ARTICLE G-16 CONFERENCES AND CORRESPONDENCE

16.1 Pre-construction Conference

As soon as practical after the execution of the Contract occurs, a pre-construction conference will be scheduled to receive the Contractor's proposed construction schedule; to verify or clarify procedures for handling Shop Drawings and other submittals, to explain the procedure for processing Contractor's pay estimate forms; and to establish a general understanding among all persons who will be engaged in the construction activities. This conference shall be attended

by responsible individuals, representing the City, the Contractor and the Contractor's Subcontractors. The City will designate the time, date and place for this conference.

16.2 Correspondence to the Contractor

The business address given at the pre-construction conference shall be designated as the place where all notices, letters, and other communication shall be served, mailed to or delivered.

16.3 Correspondence to the City

The business address for correspondence to the City after the Notice to Proceed shall be determined at the pre-construction conference. Correspondence prior to the Notice to Proceed shall be mailed or delivered to the business addresses given in the Notice to Bidders.

ARTICLE G-17 CONSTRUCTION MEANS AND METHODS

Unless otherwise expressly provided in the Contract, the means, methods, techniques, sequences and procedures of construction shall be as such as the Contractor may choose; subject, however, to the City's right to reject means and methods proposed by the Contractor which will not produce the finished Work in accordance with the terms of the Contract or does not meet the highest standards of workmanship of the industry. The City may also direct means or methods more stringent than those proposed by the Contractor in the interest of alleviating hazards of the Work to persons or to property.

The approval or lack of approval by the City of the Contractor's means or methods of construction or the City's failure to exercise the right to reject such means and methods, shall not relieve the Contractor of its obligation to accomplish the result intended by the Contract; nor shall the exercise of, or failure to exercise such right to reject, create a cause of action for damages.

The Contractor shall be responsible to the City for the acts and omissions of its employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a Contract with the Contractor.

ARTICLE G-18 CONTRACTOR'S OBLIGATION TO PERFORM

The Contractor's obligation to perform and complete the Work in accordance with the Contract shall be absolute. No payment, act or statement by the City or by an employee or agent of the City for the duration of the Contract shall constitute an acceptance of work not in accordance with the Contract, nor shall it constitute a release of the Contractor's obligation to perform the Work in accordance with the Contract.

The Contractor agrees that work shall be prosecuted regularly, diligently, and uninterrupted at such a rate of progress as will ensure full completion within the time specified. It is expressly understood and agreed by and between the Contractor and the City that based upon the Contract Price, the time for the completion of the Work is a reasonable time for the completion of the same.

Should the Contractor cause damage to any other contractor on the Work, the Contractor agrees, upon due notice, to attempt to settle or otherwise resolve the claim with such Contractor. If such other contractor sues the City on account of any damage alleged to have been so

sustained, the City shall notify the Contractor, who shall defend such proceedings at its own expense, and if any judgment against the City arises there from, the Contractor shall pay or satisfy it and pay all costs incurred by the City.

ARTICLE G-19 RESPONSIBILITY OF THE CITY

19.1 Contractual Representative

The office of the Engineer and its designees will be the City's sole representative during construction. In the event that the City has hired an engineering or architectural firm to provide construction-related services for this Project, the City will designate a representative during construction at the pre-construction conference.

19.2 Issuance of Change Orders and Field Orders

Through the issuance of Field Orders and punch lists, the Engineer shall be the final City interpreter of the requirements of the Contract and the judge of the adequacy of the Work performed. The office of the Engineer will furnish, with reasonable promptness, such clarification, explanations or interpretations (Field Orders) of the Contract as are deemed necessary, which shall be consistent with the expressed or obvious intent of the Contract.

The office of the Engineer shall be the final judge as to the need for, the existence of, and the reasonableness of prices for extra work and deducted work.

No Field Orders or Change Orders can be issued by consultants hired by the City to provide construction-related services. These two forms can only be issued and/or executed by the authorized employees of the City.

19.3 Preparation of Additional Drawings

The City shall, if deemed necessary, furnish the Contractor further drawings as may be necessary to detail and illustrate the Work to be performed and the Contractor shall immediately conform its work to said drawings and said drawings shall become part of the Contract. Such drawings may also be issued as supplementary documents to either Field Orders or Change Orders.

ARTICLE G-20 CITY'S RIGHT TO DO WORK

The City reserves the right to furnish, at any time, materials and labor and to execute work, in addition to the Work of the Contractor, as the City may desire. Further, the City reserves the right to furnish, at any time, such materials and labor, and to execute, with City forces, Work covered by this Contract at which time a Change Order deducting the Work may be prepared and properly executed.

ARTICLE G-21 CITY'S RIGHT TO STOP OR SUSPEND WORK

The City shall have the right to stop or suspend the whole or any part of the Work to be performed, when, in the opinion of the Engineer, the Contractor is not performing the Work in accordance with the provisions of the Contract. However, this right of the City to stop the Work will not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other person or entity.

If it becomes apparent to the City that the Work should be suspended due to weather conditions, the City shall have the right to suspend the Work in order to protect the integrity of the Work items being suspended. In the event this occurs, the City will issue a notice of suspension to the Contractor stating the reasons for the suspension and the date on which the Work shall be resumed. The Contractor shall resume the Work on the date so fixed and shall be granted an increase in the Field Order Completion Time equal to the number of days of the suspension.

ARTICLE G-22 MATERIAL AND EQUIPMENT DELIVERY

Shipments of material to be used by the Contractor in the Work shall be scheduled for delivery to the work site only during the regular working hours of the Contractor unless the Engineer approves delivery outside of the regular working hours of the Contractor. If a delivery must be made during other than the normal working hours of the Contractor, its authorized agent shall be on duty to receive such material. No employees or agent of the City shall be authorized or requested to receive shipments designated for the Contractor.

ARTICLE G-23 STORAGE OF MATERIALS

23.1 Proper Storage

All materials and equipment incorporated in the Work shall at all times subsequent to shipment from the production or warehouse facilities of suppliers, and prior to their installation in final locations designated, be stored in clean, dry storage facilities acceptable to the City. Adequate storage facilities shall be maintained by the Contractor for the duration of the Project. The Contractor shall bear sole responsibility for the security of all storage facilities, and shall provide ready access to the City during all periods that construction activities are in progress, as well as at other reasonable times. Materials that are improperly stored may be rejected by the City without testing. Materials shall be placed so that inspection may be made promptly.

23.2 Use of Premises

The Contractor shall confine its equipment, apparatus, the storage of materials, and the operation of its workers to the limits indicated by applicable Laws and the direction of the Engineer. The Contractor shall not unreasonably encumber the premises. The Contractor shall diligently guard and protect all work and materials.

23.3 Use of Chemicals

All chemicals used during Project construction or furnished for Project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

ARTICLE G-24 QUALITY OF MATERIALS AND WORKMANSHIP

All materials and equipment furnished under this Contract shall be as specified or required and of a domestic origin or manufacture (unless otherwise specified). In the absence of a particular specification, materials and equipment shall be the best of their respective kinds, of a model or type currently being manufactured, of new stock, unused and not deteriorated. If required by the City, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

All Work contemplated and described shall be done in a good, substantial and workmanlike manner and shall be of the best quality.

ARTICLE G-25 SANITARY FACILITIES FOR CONSTRUCTION PERSONNEL

Temporary sanitary conveniences for use by all persons employed on the Work shall be supplied and maintained by the Contractor during the period of construction, at Contractor's expense, in sufficient number, and in such places as required by the County Public Health Unit and shall be approved by the City. All persons connected with the Work shall be obliged to use them, and any employees found violating these provisions shall be discharged from performing Work pursuant to the Contract unless otherwise agreed to in writing by the City. All necessary precautions including the care of employees, shall at all times be satisfactory to the City.

ARTICLE G-26 SUBCONTRACTORS

26.1 Division of the Work for Contractors

Neither the divisions and sections of the Technical Specifications, nor the Bid, nor the organization and designations of the Plans shall control the Contractor in dividing the Work among Subcontractors, or delineating the Work to be performed by a specific trade.

26.2 Contractor's Responsibility for Subcontractors

Contractors shall be fully responsible for all acts and omissions of their Subcontractors, and of persons and organizations directly or indirectly employed by them, and of persons and organizations for whose acts any of them may be liable to the same extent that the Contractor is responsible for the acts and omissions of persons directly employed by the Contractor. The Contractor is responsible for payment to Subcontractors pursuant to those terms and conditions of their respective agreements. When notified by the City in writing of an alleged payment deficiency of a Subcontractor, the Contractor shall respond in writing within seven (7) calendar days, with concurrence of non-payment to a Subcontractor, or the reason(s) why payment has not been rendered.

26.3 City's Responsibility to Subcontractors and Material Suppliers

The City may furnish, at the City's discretion, upon written request from any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to the Contractor on account for specific work performed. The City may also furnish, upon request, a copy of the Contractor's Public Construction Bond or alternate form of security.

When placed on notice, by a Subcontractor, of a Contractor's failure to pay the Subcontractor for work performed and paid for by the City, the City shall give notice to the Contractor and the Surety, requesting a written explanation to include amounts paid to date.

26.4 Agreement with Subcontractors

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract, assumes toward the City. Each subcontract

agreement shall preserve and protect the rights of the City under the Contract with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract, has against the City. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract. Contractor shall require that Subcontractors similarly make copies of applicable portions of such subcontract documents available to their respective proposed sub-subcontractors.

ARTICLE G-27 SMALL BUSINESS ENTERPRISE PROGRAM

Unless otherwise prohibited, Contractor agrees to be subject to and shall comply with the requirements for designating a percentage of the Work for small business enterprises (as defined in Section 2-232), or making a good faith effort to do so, as those requirements are set forth in Chapter 2, Article V, Division 4, of the St. Petersburg City Code, as may be amended from time to time (collectively, "SBE Requirements"). The SBE Requirements are hereby incorporated into the Contract as Contractor's obligations under the Contract. Accordingly, Contractor shall ensure that the Small Business Enterprise Percentage requirement set forth in the Qualification Requirements section of the Solicitation, including the cost of materials, goods and supplies, be performed or provided by City-certified Small Business Enterprises and comply with all other SBE Requirements. Failure to comply with the SBE Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 4 of the St. Petersburg City Code.

ARTICLE G-28 CONTRACTOR'S EMPLOYEES

The Contractor shall employ a qualified resident Superintendent and only competent and skillful personnel to do the Work. In the event the City notifies the Contractor in writing that any person employed to perform work at the site is, in the opinion of the City, disobedient, intemperate, incompetent, disorderly or otherwise unsatisfactory, the Contractor, on receiving such notice, shall immediately dismiss such person and shall not again employ that person on any part of the Work without the written consent of the City.

ARTICLE G-29 CONTRACTOR TO BE REPRESENTED

29.1 Office Supervision

The Contractor shall devote the office attention necessary to ensure the timely submission of schedules, progress estimates, Shop Drawings and samples of materials.

The Contractor shall devote the office attention necessary to ensure that materials are ordered with sufficient lead time to have them available at the site when needed to ensure that the Work progresses according to the progress schedule and in accordance with the Contract.

The Contractor shall further devote the office attention necessary to the Work to ensure that sufficient and properly skilled manpower is available and utilized at the site continuously to ensure that the Work progresses according to the progress schedule and in accordance with the Contract.

29.2 Field Supervision

The Contractor shall designate and keep on site at all times during the Work, a competent resident Superintendent, employed by the Contractor. Such designation shall be made at the pre-construction conference and shall include pertinent data as to address, phone numbers, etc. where said Superintendent may be contacted at any time of the day or night.

The Superintendent shall not be replaced without written notice and approval by the City except under extraordinary circumstances. Upon approval by the City of such change, all pertinent data (as stated previously in this section) shall be given by the Contractor to the City regarding the replacement.

The Superintendent will be the Contractor's representative at the site and shall have the authority to act on behalf of the Contractor. All communications given to the Superintendent shall be as binding as if given to the Contractor.

ARTICLE G-30 TESTS AND INSPECTIONS

30.1 Tests of Materials

The Contractor shall give the City timely notice of readiness of the Work for all inspections, tests, concurrence and acceptance for which the City's presence is mandated by the Contract.

If any Work required to be tested or inspected, is covered contrary to the written directive of the Engineer, it shall, if requested by the City, be uncovered for observation and recovered at the Contractor's expense.

If any applicable Laws require Work (or some part) to specifically be inspected, tested or approved, the Contractor shall have sole responsibility to ensure such inspection is performed by approved organizations and pay all costs for inspection.

In the event that the results of a test observed by the City indicates that the materials, equipment and/or workmanship, failed to demonstrate adequacy or reasonable expectation of the necessary function, the Contractor at its expense shall immediately undertake corrective action.

Upon completion of corrective action, the Contractor shall re-test in the presence of the City. This procedure shall be repeated as often as necessary, until all facilities constructed under this Contract have successfully demonstrated their ability to perform the functions for which they were designed and installed.

The Contractor shall furnish without cost to the City, manufacturers' certificates of conformity of materials to the Specifications as may be required by the Engineer.

The City may, at random, select samples of materials from the job in order to have same tested by a laboratory selected by the City, at the City's expense. If samples selected by the City do not conform to the Specifications, the entire lot from which the samples were taken will be rejected. All samples will be collected by the Engineer or its representative and shall be furnished by the Contractor without cost to the City. The City will be responsible for the cost of making all such tests, at no charge to the Contractor. All re-test of materials, including density tests and bacteriological tests, will be at the expense of the Contractor.

30.2 Inspections

Neither observations, nor tests, nor inspections by authorities so empowered, or approvals by the City or others so empowered, shall relieve the Contractor from its obligations to perform the Work in accordance with the Contract.

30.3 Defective Work

When ordered by the Engineer, the Contractor shall promptly, either correct all defective work, whether or not fabricated, installed or completed, or if the Work has been rejected by the City, remove it from the site and replace it with non-defective work.

If the Contractor fails within a reasonable time after written notice to correct defective work or to remove and replace rejected work as required by the City, or if the Contractor fails to perform the Work in accordance with the Contract, or if the Contractor fails to comply with any other provision of the Contract, the City may correct and remedy any such deficiency. The Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

The expense so charged will be deducted and paid out of such moneys as are or may become due under this Contract; or, if such moneys are not sufficient to meet said expense, the additional moneys shall be furnished by the Contractor. If the Contractor refuses or neglects to provide the necessary moneys, they shall be provided by its Surety. In exercising the rights and remedies under this Article the City shall proceed expeditiously.

To the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, and suspend the Contractor's services related thereto, take possession of the Contractor's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere.

The Contractor shall allow the City, the City's representatives, agents and employees such access to the site as may be necessary to enable them to exercise the rights and remedies under this Article. All direct, indirect and consequential costs of the City exercising such rights and remedies will be charged against the Contractor in an amount approved as to reasonableness by the Engineer, and a Change Order will be issued incorporating the necessary revisions to the Contract with respect to the Work. The City shall be entitled to an appropriate decrease in the Contract Price and if parties are unable to agree as to the amount thereof, the City may make a claim. The Contractor shall not be allowed an extension of the Field Order Completion Time because of any delay in performance of the Work attributable to the exercise by the City of the City's rights and remedies hereunder.

ARTICLE G-31 UNCOVERING OF WORK

31.1 Uncovering Work Requiring Prior Inspection

If any portion of the Work should be covered contrary to the prior request of the City or to requirements specifically expressed in the Contract, it must, if required in writing by the City, be uncovered for observation and shall be replaced at the Contractor's expense.

31.2 Uncovering Work Not Requiring Prior Inspection

If any portion of the Work has been covered which the City has not specifically requested to observe prior to being covered, the City may request to see such Work and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Contract, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the City. If such Work is found not to be in accordance with the Contract, the Contractor shall pay such costs unless it can be proven to the City that this condition was caused by the City or a separate contractor in which event the City or the separate contractor shall be responsible for the payment of such costs.

ARTICLE G-32 UNFORESEEN SUBSURFACE CONDITIONS

Requests by the Contractor for additional compensation relating to unforeseen subsurface conditions shall be limited to those differing materially from the Contract and other reports, information and data made available to the Contractor by the City or which can be judged as being reasonably unforeseeable by the Contractor. However, the Contractor shall notify the City within 24 hours upon encountering any unforeseen subsurface conditions and shall have the written approval of the City prior to the execution of any such work.

ARTICLE G-33 SUBSTITUTIONS DURING CONSTRUCTION

Subsequent to the signing of the Contract and by reason of conditions of availability, time of delivery or other element of supply, the Contractor may offer substitutions for the standards stipulated in the Contract. The decision to accept any such offer of substitution shall however lie solely with the City who will not only consider availability and time of delivery, but will also consider the aesthetic value of the proposed substitution, general differences in the knowledge of the product, the quality, efficiency, history of performance, operating costs, and also any architectural, engineering, inspection, testing or administrative expenses. Any adjustments in Contract Price and/or Field Order Completion Time shall be executed by appropriate Change Order. It shall be the intent herein that savings in cost which result from substitution subsequent to the signing of the Contract shall accrue in major part to the advantage of the City.

ARTICLE G-34 CHANGES IN THE WORK

34.1 Scope

The Contract Documents provide for a broad scope of work which represents the general nature of the type of work that the Contractor may be requested to perform under this Contract. When a Field Order is issued, it will include a Work Order, or multiple Work Orders, containing a specific description of the Work to be performed. Outstanding Work issued to the Contractor may be increased, decreased, and/or altered. Changes will be made in writing by the Engineer through a Change Order.

34.2 City's Right to Request Change Orders

The City may, without invalidating the Contract, order the Contractor to perform changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Price and the Field Order Completion Time being adjusted accordingly. All such changes in the Work must be authorized by a Change Order and shall be performed under the applicable conditions of the Contract. A Change Order may also be issued by the City

for a change in Contract Price or for the substitution of items of work at no net change to the Contract Price. In such an event, the Change Order shall contain the values of the Work items being substituted. Notwithstanding the foregoing, an increase in the Contract Price requires an amendment to the Agreement executed by Contractor and the City.

34.3 Recognition of Extra Work

Claims for extra compensation by the Contractor shall not be recognized and shall not be valid unless the Contractor has in its possession prior to the Work being performed, a properly executed Change Order including the extra work or a Field Order identifying the work. In the event the Contractor fails to obtain a written Field Order or Change Order prior to the said work being performed, the City will not be obliged to receive after-the-fact requests from Contractors for extra compensation and the said work shall be considered to have been performed within the scope of the Contract and performed at no cost to the City. Notwithstanding the foregoing, an increase in the Contract Price requires an amendment to the Agreement executed by Contractor and the City.

34.4 Determining Change Order Prices

The following method shall be used to determine the price of Change Order items:

If the Change Order involves items not listed on the original Bid, the Contractor must present the City with price quotes for the proposed Change Order items, on the basis of the cost of the Work plus a fee for overhead and profit. These quotes may be requested by the City either in terms of unit prices or as lump sum prices. The City retains the right to request and negotiate itemized pricing details for labor, mark-ups and fees as required to reach an agreement.

34.5 Disputes Regarding Change Order Prices

In the event that no agreement as to price can be arranged between the City and the Contractor for either extra work or for work to be deleted, the Engineer may, utilizing recognized cost data guidelines as a basis, determine and set a fair price for the Work and materials at issue. The Engineer's decision shall be final and binding upon all parties so concerned. If a Contractor does not agree with the determination of the Engineer, the Contractor shall immediately proceed with the Work, but may do so under written protest. In the event this occurs, the provisions of ARTICLE G-47, CLAIMS AND DISPUTES apply.

34.6 Contractor's Right to Request Change Orders

If the Contractor wishes to make a claim for an increase in the Contract Price due to events outside its control, it shall give the City written notice thereof within five (5) calendar days of the event giving rise to the Contractor's claim. No such claim shall be valid unless so made. Any change in the Contract Price resulting from such claim shall only be authorized by a properly executed Change Order.

If the Contractor elects to initiate a request for a Change Order, it is cautioned that no work relating to the request may be performed prior to issuance of a written Change Order. No oral communications, whether offered directly as confirmation of previous discussions or as hearsay will be acceptable with the exception of emergency work as outlined in Section 34.7 below.

34.7 Monetary Compensation for Delays

Requests for additional monetary compensation due to delays by the City, other Contractors working at the site, private utility companies, and unforeseen conditions, will not be considered by the City, including extended or unabsorbed home office overhead, adverse business or operational impacts, or field-related overhead not included in the lump sum or unit prices bid.

34.8 Unauthorized Work/Emergency Work

Additional work performed without a properly executed Change Order or written Field Order identifying the additional work will not entitle the Contractor to an increase in the Contract Price or an extension of the Field Order Completion Time, except in the case of clear and present emergency where the work must be performed immediately. However, in the case of a present emergency, the Contractor shall obtain approval from the Engineer prior to executing the Work.

34.9 Preparation of Change Orders

The Engineer is authorized to approve Change Orders for the City. If the exact scope of work for the proposed Change Order can be delineated and all prices are agreed to between the Contractor and the City, the scope and price are both to be entered on the Change Order form. When so completed and signed by both parties, the signed Change Order gives the Contractor immediate approval to proceed with the proposed work items.

If the scope of the proposed work can be delineated but the price cannot be agreed immediately, a Field Order may be issued by the Engineer describing the proposed work items and requesting a written proposal from the Contractor. In this case, the Contractor may proceed with the Work until the requested proposal is received by the City from the Contractor and is approved by the City through the issuance of a Change Order authorizing the Contractor to proceed with the Work.

If a Change Order involves an increase or decrease in the Field Order Completion Time, the Change Order may also be utilized to grant changes in the Field Order Completion Time and completion date if it can be shown that the critical path of construction has been altered by the Work covered by the Change Order.

34.10 Changes in Field Order Completion Time

The Field Order Completion Time may only be extended by a Change Order. The Contractor shall notify the Engineer in writing of any request for a time extension within five (5) calendar days of each occurrence. An increase in the Field Order Completion Time of performance may be granted by the City if the Contractor demonstrates to the satisfaction of the Engineer that:

- A. The delayed activity is critical relative to the Contract completion date;
- B. A delay in the Field Order completion is unavoidable by the Contractor.

In general, if the above conditions are met, additional time may be granted for the following reasons:

- A. Extremely abnormal and excessive inclement weather as indicated by the records of the local weather bureau for a five-year period preceding the Effective Date;

- B. Labor disputes or strikes not the fault of the Contractor;
- C. Change in scope of the Contract.

The determination made by the Engineer on an application for an extension of time shall be binding and conclusive on the Contractor.

Delays caused by failure of the Contractor or its material men, manufacturers, and dealers to submit or furnish approved Shop Drawings, materials, fixtures, equipment, appliances, or other material or required submittals on time or failure of Subcontractors to perform their work shall not constitute a basis for extension of time. Delays caused by the Contractor's failure to manage, coordinate, or organize the Work, or evaluate the site conditions shall not constitute a basis for extension of time.

ARTICLE G-35 SHOP DRAWINGS AND SUBMITTALS

35.1 Shop Drawings – General

The Contractor shall submit a list to the City showing manufacturers and equipment suppliers it proposes to use.

Shop Drawings shall be complete and detailed and shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Manufacturer's catalogs, pamphlets, descriptive literature, and performance and test data, may be considered only as supportive to required Shop Drawings as defined above.

Shop Drawings shall be checked and coordinated with the Work of all trades involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Shop Drawings submitted without this stamp of approval shall be returned to the Contractor for resubmission.

Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:

- A. Number and title of the drawing;
- B. Date of drawing or revision;
- C. City Project name and Project number;
- D. Name of Contractor and Subcontractor submitting drawing;
- E. Clear identification of contents and location of the Work;
- F. Specification section title and number;
- G. Shop Drawing submittal number.

If Shop Drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in its letter of transmittal. If acceptable, proper adjustment in the Contract Price may be implemented where appropriate. If the Contractor fails to describe such variations, it shall not be relieved of the responsibility for executing the Work in accordance with the Contract, even though such Shop Drawings have been reviewed.

Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data. Where data on materials and equipment show various classes, sizes or options, the Contractor shall clearly indicate what is being furnished.

For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained. Each data submittal on materials and equipment shall have a cover page with a blank area 3-1/2 inches by 3-1/2 inches. The cover page shall display the following:

- A. Number and title of the data submittal;
- B. Date;
- C. City Project name and Project number;
- D. Name of Contractor and Contractor's approval stamp;
- E. Specification section title and number;
- F. Data submittal number.

Only the Engineer will utilize the color "red" in marking submittals.

35.2 Requirements

The Contractor shall submit to the Engineer for review and approval, such Shop Drawings, test reports and data on materials and equipment (hereinafter in this Article called Data), and material samples (hereinafter in this Article called Samples) as are required for the proper control of work, including but not limited to, those working drawings, Shop Drawings, Data and Samples for materials and equipment specified elsewhere in the Specifications and on the Plans.

Within thirty (30) calendar days after the Effective Date, the Contractor shall submit to the Engineer a complete list of preliminary items for which Shop Drawings, Data and Samples are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way, expressed or implied, relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Contract. This procedure shall precede submittal review of Shop Drawings, Data and Samples.

Shop drawings, Data and Samples (hereinafter in this Article called Submittals) shall be transmitted by a letter of transmittal. The letter of transmittal shall list the following information for each Submittal:

- A. City Project name and number;
- B. Number and title of Submittal(s);
- C. Name of manufacturer or fabricator;

- D. Submittal number as described below;
- E. Statement if Submittal deviates from the requirements of the Plans or Specifications.

Sequential page numbers shall be provided on Submittal pages, relating each page to the submitted number, as follows:

- A. The first page of the first item of the first transmittal shall carry the number 1.1-1. The prefix number 1 indicates an item covered in the first letter of transmittal. The suffix .1 (decimal one) indicates the first item in the list, and the -1 (dash one) indicates the first page of the Submittal covering item number one,
- B. Each particular separate item in the first transmittal package (for example, pipe, valves, fittings) should receive an individual Submittal number (1.1, 1.2, 1.3, etc.). If the first item is shown on four different pages, they should be numbered as follows: 1.1-1, 1.1-2, 1.1-3, and 1.1-4, and
- C. The first page of the first item submitted with the second Letter of Transmittal should carry the number 2.1-1.

Re-submittals should be indicated by following the above method with the inclusion of "R" and a sequential re-submittal number, for example 1.1R1, and 1.1R2 indicating the first and second re-submittal; the first page being 1.1R1-1, or 1.1R2-1, etc.

The Contractor shall maintain an accurate updated Submittal log and shall submit it with monthly pay requests. This log shall include the following items:

- A. Submittal description and number assigned;
- B. Date to Engineer;
- C. Date received by Contractor;
- D. Status of Submittal (approved/resubmit/rejected);
- E. Date of re-submittal and return (as applicable);
- F. Date material released (for fabrication), as applicable;
- G. Projected date of delivery to site;
- H. Status of O & M Manuals submittal.

The Contractor shall designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Submittals will be needed.

35.3 Contractor's Responsibility

Submittals shall indicate any deviations from requirements of the Contract. Failure of the Contractor to indicate such deviations shall make Contractor liable for not complying with Plans and Specifications.

Prior to preparation of Submittals, the Contractor shall determine and verify:

- A. Field measurements;
- B. Field construction criteria;
- C. Catalog numbers and similar information;
- D. Conformity with the Plans and Specifications.

The Contractor shall furnish the Engineer, if required, a schedule fixing the respective dates for the submission of Submittals, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.

The Contractor shall not begin any of the Work covered by a Submittal returned for correction until a revision or correction thereof has been reviewed and returned to it approved, by the Engineer.

The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of the Work prior to the completion of the review by the Engineer of the necessary Submittals.

The Contractor shall submit to the Engineer all Submittals and schedules sufficiently in advance of construction requirements to provide no less than fourteen (14) calendar days for checking and appropriate action from the time the Engineer receives them.

The Contractor shall furnish Submittals complete with transmittal, and descriptive or product data in a Portable Document Format (PDF) electronic file(s). Each PDF file shall contain a single submittal or group of related Submittals. The Contractor shall furnish Submittals with appropriate comments, mark-ups, and notations in any single color other than red. The Engineer will review the Submittal and return to the Contractor the same PDF file with the Engineer's stamp and appropriate review comments, mark-ups, and notations in the color red.

When each Submittal has been completed to the satisfaction of the Engineer and received by the Contractor, the Contractor shall print in color and furnish two (2) complete sets of each Submittal to the Engineer.

35.4 Engineer's Review of Submittals

The Engineer's review of Submittals by the Contractor will cover only general conformity to the Specifications, and physical condition which affect the installation.

The review and approval of Submittals and schedules will be general, and shall not be construed:

- A. As permitting any departure from the Contract requirements;
- B. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
- C. As approving departures from details furnished by the Engineer, except as otherwise provided herein.

If the Submittals describe variations, and show a departure from the Contract requirements

which the Engineer finds to be in the interest of the City and to be so minor as not to involve a change in Contract Price or Field Order Completion Time, the Engineer may return the reviewed Submittals without noting an exception.

When reviewed by the Engineer, each of the Submittals will be identified as having received such review being so stamped and dated. Submittals noted "Not Acceptable" or "Revise and Resubmit" and with required corrections shown will be returned to the Contractor for the necessary revisions and re-submittal.

No partial submittals will be reviewed. Submittals not complete will be returned to the Contractor, and will be considered "rejected" until resubmitted.

Re-submittals will be handled in the same manner as first submittals. On re-submittals, the Contractor shall direct specific attention, in writing or on resubmitted Submittal, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make corrections required by the Engineer.

If the Contractor considers any correction indicated on the Submittals to constitute a change to the Plans or Specifications, the Contractor shall give written notice thereof to the Engineer.

The Engineer will review a submittal/re-submittal a maximum of two (2) times after which the cost of review will be borne by the Contractor. The cost of engineering shall be equal to the Engineer's charges to the City under the terms of the Design Professional agreement with the City, and also all of the City's costs.

When the Submittals have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

ARTICLE G-36 CHANGES IN SHIPPED MATERIAL

36.1 Materials Requiring Submittal Approval Prior to Shipment

If, after the execution of the Contract, the City initiates a Change Order eliminating material or equipment for which approval has been given under Shop Drawing procedures, the Contractor may claim invoiced costs of that material or equipment if:

- A. Materials and equipment have been ordered and are in transit or are stored at the Project site or other authorized place and cannot be returned to the supplier for restocking. The Contractor may also claim invoiced charges for freight and storage. The total claim may not exceed the cost bid for "materials" on the Contractor's Bid for that item;
- B. If the item can be restocked, the Contractor may claim reasonable costs for freight, storage, and restocking, but may not claim labor costs.

In the event such an event occurs involving materials and/or equipment in transit or in storage at the Contractor's risk (i.e. Shop Drawing submittal approval was not obtained by the Contractor through the complete and successful Shop Drawings and/or sample submittal procedures where required by the Contract), the City will have the option to pay for such materials and/or equipment, thereby taking ownership, or of rejecting the claim. If the City rejects the Contractor's

claim, the Contractor shall be fully and solely liable for costs and final disposition of the materials and/or equipment involved.

36.2 Materials Not Requiring Submittal Approval Prior to Shipment

If, after the execution of the Contract, the City initiates a Change Order eliminating material or equipment for which Shop Drawing submittal and approval are not required by the City, the Contractor may claim invoiced costs of that material or equipment if:

- A. Materials and equipment have been ordered and are in transit or are stored at the project site and cannot be returned to the supplier for restocking. The Contractor may also claim invoiced charges for freight and storage. The total claim cannot exceed the cost bid for material on the Contractor's Bid for that item. Materials or equipment paid for in this way shall become the property of the City;
- B. If the item can be restocked, the Contractor may claim reasonable costs for freight storage and restocking, but may not claim labor costs.

ARTICLE G-37 WORK IN INCLEMENT WEATHER

No work shall be done when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the Contractor, upon the direction of the Engineer, shall suspend all work indefinitely. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the Contractor at no cost to the City.

The Engineer shall have the authority to suspend work wholly or in part, for such period or periods as the Engineer may deem necessary due to unsuitable weather or such other similar conditions considered unfavorable for the suitable prosecution of the Work, or for such time as is necessary due to the failure on the part of the Contractor to perform any or all provisions of the Contract. If it should become necessary to suspend the Work for an indefinite period, the Contractor shall, at its own cost, take every precaution to prevent damage or deterioration of the Work performed and provide suitable temporary structures where necessary.

ARTICLE G-38 QUANTITIES OF WORK

38.1 Unit Price Items

For unit price items, the quantities listed on the Bid form are to be considered as approximate and are to be used for the comparison of Bids only. Even though the unit prices tendered by the Contractor are tendered for the scheduled quantities, the scheduled quantities of work to be performed and materials to be furnished may each be increased or diminished as provided herein without in any way invalidating the unit bid prices for those items.

For any annual renewal period, the unit prices will be adjusted based on the ratio of the "20 Cities Average Cost Index for Construction Cost and Common Labor (CCI)" as published in the "Construction Economics" section of the Engineer News Record for the month and year when the Contract is executed, and the then-current CCI during any annual or renewal period.

38.2 Lump Sum Items

For lump sum payment items, payment shall not exceed the amount bid by the Contractor on its

Bid. The Work, materials and equipment to be included in the lump sum bid price shall include all items necessary to produce a complete and properly functioning system, as intended. This shall include all connections, controls, wiring, supply lines, drain lines, etc., required to render the lump sum bid item functional as intended and able to pass all applicable codes, tests, and required inspections.

Partial payments to the Contractor (if applicable) for Work performed under lump sum items shall be based upon a Schedule of Values prepared by the Contractor and submitted within thirty (30) calendar days after issuance of the Notice to Proceed and approved by the City which shall apportion the lump sum price to the major components entering into or forming a part of the Work under the lump sum price.

ARTICLE G-39 AS-BUILT RECORDS

Plans/Contract Plans shall be the basis for the As-Built Records recorded and submitted by the Contractor. The Contractor shall keep and maintain one set of As-Built Records in good order and continuously maintained at each applicable job site as the Work progresses.

The Contractor shall mark and annotate neatly and clearly all project conditions, locations, configurations and any other changes or deviations which may vary from the details represented on the Plans, including revisions made necessary by Addenda, Shop Drawing, Change Order, Field Order, Work Order, and Worklist during the construction process.

Excavation limits, materials of construction, and horizontal and vertical location of the repair, replacement, or installation of all pipe and structures shall be identified. The type of (description) and horizontal and vertical location of all fittings, valves, adapters, couplings, and other appurtenances used to complete the work shall be identified. Additionally, the horizontal and vertical location of any pipes, structures, and appurtenances which are located or uncovered in the work area shall be identified. The horizontal and vertical dimensions shall be sufficient to locate the buried facilities in the future. Manholes, inlets, headwalls, and other drainage and access structures shall be dimensioned from the face of curb, roadway centerline, construction baseline where established, surveyed property/easements lines, or other permanent structures if needed. Location of new, repaired, replaced, or uncovered sewer laterals shall be dimensioned from the nearest downstream manhole. All access and drainage structure cover, ground level, and invert elevations shall be recorded. Cover elevation for man-entry access structures shall be North rim elevation. All storm inlets shall have recorded curb type, curb top, gutter, and throat elevations. Pipe invert elevations and size shall be recorded for every pipe connecting to a structure (including conflict pipes). All structure inside dimensions shall be identified. Size, material and elevations of all intersecting or parallel utilities within project excavation area shall be shown.

The basis of horizontal and vertical control shall be identified for all completed As-Built Records. All record elevations shall be referenced to City of St. Petersburg Datum (National Geodetic Vertical Datum of 1929 (NGVD29) + 97.00 ft). Where the Contractor is directed by the Engineer to complete a repair without an established benchmark per Florida State Plane Coordinates or City of St. Petersburg Datum, a temporary benchmark(s) shall be established for control and subsequently identified on the As-Built Drawings/Records. The As-Built Records shall be signed and dated by the Contractor and titled with the corresponding Field Order/Work Order number provided by the City.

ARTICLE G-40 OPERATION AND MAINTENANCE MANUALS

The Contractor shall compile manufacturer's operation and maintenance instructions for all equipment furnished by it under this Contract. As applicable for each category and item of equipment, information supplied shall include at least the information as may be unique and pertinent to a specific item for purposes of ensuring clarity and understanding of all normal operating and maintenance procedures and requirements.

All instruction information shall be submitted as a complete electronic version and as a complete set, assembled into a three-ring loose-leaf binder organized and indexed in the order of appearance in these Specifications. When instructions are applicable to a single unit assigned a tag number or other identification designation specified or shown on the Plans, the identification designation shall appear on the instruction. In cases where multiples of identical equipment (e.g. pumps, valves, filters, blowers, and similar like components) are covered by the same instructions, do not duplicate information; instead, list the identity designations for which instructions are common on the information sheets. If more than one binder is necessary for a set, overall information shall be divided into logical divisions, and each binder shall contain a table of contents specific to that binder. Additionally, each binder shall contain an overall table of contents to ensure that the reader is informed whether the binder in hand is all-inclusive, or only part of a series.

In all cases, information shall plainly identify all precautions, procedures, adjustments, and other actions on the part of the ultimate user that affect continuity of warranty coverage. The City will be responsible for the adequacy of maintenance subsequent to acceptance of each component of the facility, if the information supplied by the Contractor covers all requirements.

In the event of equipment failure attributable to improper or inadequate operation and/or maintenance acts on the part of the City, which in turn can be attributable to erroneous, inappropriate, or incomplete information furnished by the Contractor, the Contractor shall be solely responsible for prompt repair or replacement, including all costs for replacement parts or equipment, all transportation, and all labor. In such an event, the Contractor shall, in addition, procure and furnish appropriately corrected or supplementary operation and maintenance instruction to ensure against subsequent failure of equipment attributable to the same cause.

The first sheet of each section shall list the following information appropriate for each item (or multiples) for which all sheets immediately following apply:

- A. Manufacturer's name, address, and telephone number;
- B. Manufacturer's local distributor's or representative's name, address, and telephone number;
- C. The year of purchase, also, if different, the year of manufacture of the equipment;
- D. Equipment model and serial number(s). Include sub-listing for all assembly components (e.g. pumps, motors, variable speed devices, and other appurtenances).

The Contractor shall deliver four (4) complete operation and maintenance manuals and a complete electronic version of the same to the Engineer, as specified and approved by the Engineer.

ARTICLE G-41 CLEAN UP

As the Work progresses, and as may be directed, the Contractor shall remove from the site and dispose of debris and waste material resulting from its Work at an approved disposal site. Particular attention shall be given to minimizing any fire and safety hazard from materials or other combustible as may be used in connection with the Work, which shall be removed daily.

Any buildings included in the Contract shall be kept free from waste material at all times. Before completion of the Work, the Contractor shall thoroughly clean out all chambers, tanks, pits, vaults, channels, drains, pipe lines, conduits manholes, and miscellaneous appurtenant structures.

The Contractor shall be responsible for the final cleaning of floors, walls, glass, doors, windows and all other surfaces of structures, equipment and fixtures which have been affected by its work. The Contractor shall tear down and remove all temporary structures built by the Contractor. The Contractor shall restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the Work.

ARTICLE G-42 SUBSTANTIAL COMPLETION

When the Contractor believes the Work identified in a Field Order has reached Substantial Completion, the Contractor shall request the City Inspector to schedule an inspection of the Work. Within fifteen (15) business days after the request, the City Inspector will either (i) notify the Contractor that Substantial Completion has not been reached, or will (ii) perform the inspection and, provided the City Inspector agrees that the Work has reached Substantial Completion, the City Inspector will, within thirty (30) calendar days after the Work has reached Substantial Completion, develop a punch list of items required to reach Final Completion. Within five (5) calendar days after the City Inspector finishes developing and reviewing the punch list, the City Inspector will deliver the punch list to the Contractor. The Contractor shall complete all items on the punch list within thirty (30) calendar days after the punch list is delivered to the Contractor unless a longer period of time for completion is set forth in the punch list. When the Contractor believes that it has satisfactorily completed all items on the punch list, the Contractor shall so notify the City Inspector to schedule a final inspection of the completed Work to determine if Final Completion has occurred.

ARTICLE G-43 FINAL INSPECTION

The final inspection will be scheduled within five (5) business days after the City receives notification from the Contractor that all punch list items have been completed, or within five (5) business days after the Contractor makes a request for Final Payment.

ARTICLE G-44 PAYMENTS

44.1 Partial Payment

The City will pay the Contractor the Contract Price as provided in this Agreement.

The City will make partial payments monthly in accordance with the applicable Field Order (i.e., monthly as the Work proceeds or monthly for completed Work Orders only), on proper and complete application for payment request approved by the Engineer. In the preparation of application of partial payment, the Engineer may authorize material delivered on the site and

preparatory work done to be taken into consideration. Material delivered to the Contractor at locations other than the site may also be taken into consideration if:

- A. Consideration is specifically authorized by the Contract; and
- B. The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material will be used to perform the Work.

In making partial payments, the Engineer may retain an amount that the City considers adequate to protect the City and will release to the Contractor all or a portion of any excess amount.

Contractor shall at all times monitor the total constructed quantities of all unit-priced Work and to promptly bring to the attention of the Engineer any Work which, if performed, will approach, equal or exceed the Contract Price for that annual period. Any work performed by the Contractor in excess of the Contract Price, without permission from the Engineer, will be done at the Contractor's expense.

In order to be considered complete, the Contractor's application for payment shall include the following supporting documents and As-Built Records described below in City approved format. All records shall be downloaded electronically to the City's file sharing location designated by the City at the Pre-Construction conference. After downloading all complete records pertaining to the Contractor's application for payment, the Contractor shall notify the City in writing by email of the payment request.

1. Transmittal - Shall be in Adobe PDF file format, using City approved file naming format and shall include: (i) Contractor's contact information and any invoice number(s) included with the application for payment, and (ii) Summary listing of total number of and type of files (PDF, Excel, .mpeg, Microsoft Access, etc.) submitted in each category listed below included with the current application for payment.
2. Summary of Quantity(s) which Defines Work Complete per Field Order - Shall be in Adobe PDF file(s) format, using City approved file naming format and shall include: A dated and signed Contractor summary in tabular format including but not limited to: start and end date for period of Work submitted, Contractor's address and contact information, Contract Price, value of approved Change Orders, total value of Work performed to date, retainage amount to date, stored materials, net amount earned on Contract to date, amount of previous invoices and payments, and balance due with the current invoice. Backup information provided shall include, in the same file or separate file, a tabular summary of all contract unit pay items and dollar totals used for the current invoice period, and previous invoice period.
3. Worklist(s) - Shall be in Microsoft Excel file(s) format, using City approved file naming format. Contractor shall provide the City supplied Worklist with Contractor As-Built data filled in for all completed Field Orders (rows of data) including but not limited to: Contractor invoice number, liner thickness, date completed, individual pay item quantities, Contractor comments, property address, or any other field required to adequately describe the work performed, actual conditions, or conditions different from original Plans.
4. As-Built Drawings/Records - Shall be in Adobe PDF file(s) format, minimum 300dpi, using City approved file naming format. Contractor shall provide all As-Built Records of Plan documents based on original Plans as provided by the City and related to the current

Summary of Quantity(s)/Pay Application including: any individual Field Orders, Work Orders, Worklist(s), and associated maps, plans, or drawings, and shall include construction start/end dates, total cost based on unit pay items, and any other changes as approved by the Engineer. Each map/plan/drawing page relevant to the current Summary of Quantity(s)/Pay Application shall be annotated or marked to clearly indicate what Work was completed and include any changes, additions, or conditions different from original Plans. Each individual Field Order, Work Order or Worklist form shall be collated/sorted with any supplemental maps/drawings pertaining to it either as individual files or one complete collated file. Additionally, each individual Summary of Quantity(s)/Pay Application shall include an itemized unit pay item summary.

5. CCTV Inspection Video(s) - Shall be in .mpeg or other City approved file format and shall conform to NASSCO LACP or PACP standards.
6. CCTV Inspection Video log(s) - Shall be in Adobe PDF file(s) format and shall conform to NASSCO LACP or PACP standards.
7. CCTV Inspection Database file(s) - Shall be in Microsoft Access file format and shall conform to NASSCO LACP or PACP database format and standards.

If an improper payment request is submitted by the Contractor, the City shall notify the Contractor in writing and indicate the corrective action needed to make the payment request proper, within twenty (20) business days after receipt of the payment request by the City. Upon receipt of a corrected and proper request for payment, the City will make payment or notify the Contractor in writing of corrective action needed, within ten (10) business days of receipt.

The Contractor shall notify the Engineer of any payment disputes in accordance with ARTICLE G-47, CLAIMS AND DISPUTES.

In the event this Article conflicts with the Local Government Prompt Payment Act, the provisions of such act shall control.

44.2 Payment for Materials Stored On- and Off-Site

In general, the City will not pay for materials stored on- or off-site, unless the Technical Specifications specifically stipulate that payment will be made for the materials before being incorporated into the Work and that the conditions established herein have been met.

A. Payment for Materials Stored Off-Site:

The City, if stipulated in the Technical Specifications, will consider providing payment for materials or equipment stored off-site provided the following conditions are met:

1. The material or equipment is in conformity with approved Shop Drawings and has been inspected by the Engineer;
2. The material or equipment is to be specifically manufactured for the Project and cannot be readily utilized or diverted to another project;
3. The fabrication period is greater than six (6) months;
4. The storage of materials or equipment shall meet the City's requirements for security, bonding, licensing, and title;

5. The City reserves the right to make payment on a progress or total basis of up to 75% of the invoice amount, to be paid in full or monthly installments;
6. The Contractor shall furnish evidence that materials or equipment, suitably stored and paid by the City, has been paid in full and that the Contractor has good title to the materials or equipment, free of liens, claims, or encumbrances. This proof shall be submitted to the City within thirty (30) calendar days of receipt of payment by the City for the materials or equipment;
7. The Contractor shall furnish a breakdown of labor and material at the time of submittal of schedule of values.

B. Payment for Materials Delivered On-Site:

The City, if stipulated in the Technical Specifications, will consider payment for special materials delivered to the site, at the rate of 75% of the invoice cost, provided such materials have been inspected and found to meet the Specifications. Said materials shall meet the applicable conditions as specified for payment for materials stored off-site. The balance of such invoice value will be paid when such materials incorporated into them become part of the Project.

44.3 The City's Right to Decline, Reduce or Delay Payments

The City may, with prior notice to the Contractor, decline, reduce, or delay the processing of payment requests or, because of subsequently discovered evidence or subsequent observations, may nullify, delay or reduce the whole or any part of any payment previously issued, to such extent as may be necessary in the City's opinion to protect the City from loss because of one or more of the following conditions:

- A. Defective or damaged Work not being expediently remedied;
- B. Third party claims filed or evidence indicating probable filing of such claims;
- C. Failure of the Contractor to promptly pay Subcontractors for labor or materials;
- D. Written notice from the Surety that (i) its prior consent to the payment is revoked or (ii) that the City should withhold from the payment a specified amount (in addition to the regular retainage amount);
- E. Evidence that the Work cannot be completed for the unpaid balance of the Contract;
- F. Damage to the City or another contractor;
- G. Persistent failure to carry out the Work in accordance with the Contract;
- H. Persistent failure to comply with orders of the City;
- I. Evidence that liquidated damages will be assessed the Contractor;
- J. Failure of the Contractor to accelerate its Work to get back on schedule.

When the above condition(s) are removed, payment shall be made for amounts withheld because of them.

44.4 Final Payment

After the Contractor has completed all Work under the Field Order; made all final inspection punch list corrections to the satisfaction of the Engineer; delivered all schedules, guarantees, warranties, bonds, test results, As-Built Records, operations and maintenance manuals, records, occupancy permits, and sworn affidavits to the City; and submitted all other documents to the City, as required by the Contract, the Contractor may make application for Final Payment.

The procedures established and submittals required herein for partial payments shall apply to the Final Payment as well.

Upon completion and submittal of such, the unpaid balance of the Contract will be paid to the Contractor in accordance with the Local Government Prompt Payment Act.

The Final Payment estimate for the Contract shall reflect fully and accurately the total quantities of Work actually performed.

The making and acceptance of Final Payments shall constitute:

- A. A waiver of all claims by the City against the Contractor, except claims arising from unsettled liens, from defective work appearing after final inspection, or from failure to comply with the Contract or the terms of any special guarantees specified therein; however, it shall not constitute a waiver by the City of any rights in respect of the Contractor's continuing obligations under the Contract;
- B. A waiver of all claims by the Contractor against the City.

ARTICLE G-45 GUARANTEE PERIOD

In addition to any other warranties that may exist, including but not limited to any warranties set forth in the Specifications or supplemental Specifications, the Contractor shall unconditionally guarantee together with its Surety all materials and workmanship incorporated in this Contract for a period of two (2) years from the date of Final Completion. The Contractor shall submit a notarized affidavit attesting to such guarantee period prior to Final Payment. Should defects develop within the guarantee period, the Contractor shall, upon written notice of same, promptly remedy the defects and reimburse the City for all damage to other Work if caused by the defects or caused by correcting defects of the Work.

If the Contractor, after due notice, shall refuse or neglect to make good the defects as notified to the satisfaction of the City, then the City may and is empowered to proceed in the manner prescribed in the event of abandonment or forfeiture of the Work by the Contractor. The payment of claims for material and labor and other expenses shall be prerequisite to the termination of the guarantee period and to the release of the Sureties on the Public Construction Bond(s).

All representations and guarantees made in the Contract shall survive Final Payment and termination or completion of this Contract. This guarantee shall be exclusive of any manufacturer's guarantees or warranties exceeding this period.

ARTICLE G-46 LIENS

If a Subcontractor refuses to furnish a release or receipt in full, the Contractor shall furnish a bond satisfactory to the City to indemnify the City against loss due to any such lien or liens.

If any lien remains unsatisfied after all payments are made, the Contractor shall refund the City all moneys that the City may be compelled to pay in discharging such liens, including all costs and attorney's fees.

ARTICLE G-47 CLAIMS AND DISPUTES

47.1 Initial Referral to the Engineer

Claims, disputes and other matters relating to the acceptability of the Work, fair price determinations made by the Engineer, or interpretations by the City of the Contract pertaining to the execution and progress of the Work, shall be referred to the Engineer within ten (10) calendar days in writing by certified mail, with a request for a formal decision in accordance with this Article, which the Engineer will render in writing within a reasonable time.

Written notices of each claim, dispute or other matter shall be delivered by the claimant to the Engineer within ten (10) calendar days of the occurrence of the event giving use thereto, and written supporting data shall be submitted to the Engineer within fifteen (15) calendar days of such occurrence, unless the Engineer grants an extension of time for a specific purpose. It is a requirement of these provisions that all submitted supporting data relating to prices for Work shall be based upon recognized cost data guidelines. In its capacity as interpreter and judge of the submitted information, the Engineer will not show partiality and will not be liable for any consequences attributable to an interpretation or decision rendered in good faith in such capacity.

The Contractor may not delay the performance of Work required by the issuance of Field Orders and shall carry on the other work and maintain the overall progress of the construction schedule during all disputes or disagreements with the City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements except as the Contractor and the City may jointly otherwise agree to in writing.

47.2 Protesting the Engineer's Decision

In the event the Contractor refuses to accept the Engineer's decision concerning any dispute, the Contractor shall, within five (5) calendar days of the date of the Engineer's decision, submit a letter of protest to the Engineer, delineating the areas of the decision under protest. However, any such protest has no bearing on any Work requirements arising out of the Engineer's decision in that the Contractor must immediately perform the Work required in the decision so as to not hold up the progress of the Work at the Project.

Where a protest has been received from a Contractor, the Engineer will schedule an informal hearing to be held at a designated City office where the affected parties will meet to discuss and resolve the items under protest. If the item(s) under protest or dispute is not resolved at this informal meeting, and the Contractor is made aware of no appellate procedure thereafter, the Contractor is entitled to litigate the matter for resolution.

ARTICLE G-48 TERMINATION OF THE CONTRACT

48.1 Reasons for Termination

The City may terminate the Contract upon the occurrence of any one or more of the following conditions:

- A. If the Contractor repeatedly fails to supply sufficient skilled workers as directed by the City or suitable materials or equipment;
- B. If the Contractor disregards applicable Laws;
- C. If the Contractor otherwise violates in any substantial way any provisions of the Contract;
- D. If the Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
- E. If a petition is filed against the Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;
- F. If Contractor makes a general assignment for the benefit of creditors;
- G. If a trustee, custodian or agent of Contractor is appointed under applicable Laws or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property for the benefit of Contractor's creditors;
- H. Upon seven (7) calendar days' written notice to the Contractor, the City may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Contract. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which may include fees and charges of engineers and architects. In no event whatsoever will the City be liable to the Contractor for anticipated fees or profit on work not performed or for lost opportunity costs or for any consequential damages.

48.2 Settlement of Payment

If the City is permanently prohibited or enjoined from proceeding with the Work herein contemplated, the City may terminate this Contract and pay the Contractor a sum equal to all expenses legitimately incurred by it in connection with this Work, plus 10% of such expenses, less an amount equal to the sum of all partial payments previously made to the Contractor. The City shall pay this sum to the Contractor within thirty (30) calendar days after the City terminates the Contract pursuant to this section.

ARTICLE G-49 PUBLIC RECORDS

- A. Contractor shall (i) keep and maintain public records (as defined in Chapter 119, Florida Statutes) required by the City to perform the services and work pursuant to the

Contract; (ii) upon request from the City Clerk's Office, provide the City (at no cost to 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 under Florida laws regarding public records or other applicable Laws; (iii) ensure that public records in Contractor's possession that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by applicable Laws for the term and after the expiration or earlier termination of the Contract; and (iv) after the expiration or earlier termination of the Contract, at the City's request, either transfer, at no cost, to the City all public records in Contractor's possession within ten (10) calendar days following the City's request and/or keep and maintain any public records required by the City to perform the services and work pursuant to the Contract. If Contractor transfers all public records to the City upon final completion or earlier termination of the Contract, Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If Contractor keeps and maintains public records upon the expiration or earlier termination of the Contract, Contractor shall meet all applicable requirements for retaining public records in accordance with the Contract and all applicable Laws. At the City's request, all public records stored electronically by Contractor shall be provided to the City in a format approved by the City.

- B. **IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, AS TO CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THE CONTRACT, CONTACT THE CITY CLERK'S OFFICE (THE CUSTODIAN OF PUBLIC RECORDS) AT (727) 893-7448, CITY.CLERK@STPETE.ORG, OR 175 FIFTH ST. N., ST. PETERSBURG FL 33701.**

- C. Nothing contained herein shall be construed to affect or limit Contractor's obligations including but not limited to Contractor's obligations to comply with all other applicable Laws and to maintain books and records pursuant to the Contract.

ARTICLE G-50 SCRUTINIZED COMPANIES

The Contractor hereby makes all certifications required under Florida Statute section 287.135, and the City may terminate the Contract as provided in Florida Statute section 287.135.

ARTICLE G-51 DISCHARGES BY CONTRACTOR AND CORRECTIVE ACTION PLANS

The spill or discharge of any substance (e.g., wastewater, fully or partially treated reclaimed water, line or tank washwater, etc.) by Contractor or its employees, agents or Subcontractors in violation of applicable Laws ("Discharge") shall constitute a default of this Contract.

In the event of a Discharge, Contractor shall immediately (i) report the Discharge to the Engineer and the City's Emergency Dispatch Center (727-893-7261) and (ii) control, contain, and stop the Discharge.

Within fifteen (15) days of a Discharge, the Contractor shall submit to the City a proposed corrective action plan for preventing future Discharges. Upon the City's acceptance of a

corrective action plan, Contractor's compliance with such plan shall automatically become a term of the Contract. Contractor's failure to comply with the corrective action plan, or Contractor's failure to prepare a corrective action plan that is acceptable to the City, shall constitute a default of the Contract. Contractor's compliance with a corrective action plan shall not relieve Contractor of liability for damages as set forth below. In the event of a conflict between the Contract and the corrective action plan, the Contract shall prevail.

In addition to Contractor's indemnity obligations under the Contract that may arise in connection with a Discharge, Contractor agrees that the following damages will be readily ascertainable and that the appropriate remedy is the recovery of actual damages from Contractor. Such actual damages include: (i) damage to property (City and third-party) arising from a Discharge, (ii) fines imposed on the City by the Florida Department of Environmental Protection ("FDEP"), including fines imposed on the City pursuant to Consent Order OGC 16-1280 between the City and FDEP, and (iii) costs incurred by the City as a result of such Discharge, including costs imposed on the City pursuant to Consent Order OGC 16-1280 between the City and FDEP. In addition to those readily ascertainable damages set forth above, the Contractor acknowledges that the City will suffer other indirect damages (including reputational damages) due to a Discharge that are not readily ascertainable and agrees that the Contractor shall pay the aggregate amount of \$5,000 per Discharge to the City as agreed reasonable and proportionate liquidated damages, not as a penalty. The Parties acknowledge that the recovery of liquidated damages and actual damages constitutes a combination of remedies rather than an impermissible election of remedies under Florida law.

The City shall deduct all damages owed by Contractor pursuant to this Article from amounts due to Contractor under the Contract. In the event that the amount owed to Contractor is less than the amount of damages Contractor is required to pay the City pursuant to this Article, Contractor shall remit the amount of such damages owed to the City pursuant to this Article within ten (10) days after receipt of an invoice from the City.

The obligations and liabilities of Contractor resulting from a Discharge as set forth in this Article shall not limit Contractor's other obligations and liabilities set forth in the Contract or under applicable Laws.

ARTICLE G-52 INDEMNIFICATION

- A. The Contractor agrees to indemnify, hold harmless, assume legal liability for, save and defend the City, its officers, employees, contractors, elected and appointed officials, representatives and agents (collectively, "Indemnified Parties") from and against any and all claims, liens, suits, actions, damages, liability, assertions of liability, losses, costs and expenses in law or in equity, of every kind and nature whatsoever, (collectively, "Claims"), whether or not a lawsuit is filed, including but not limited to costs, expenses and attorneys' and experts' fees at trial and on appeal and Claims for bodily injury or death of persons and or damage to property, which Claims may occur or be alleged to have occurred by or on account of or arising out of, in whole or in part (i) the negligence, recklessness, or intentional wrongful misconduct of Contractor, its Subcontractor(s), employees, agents or representatives in the performance of the Contract; or (ii) the failure of the Contractor, its Subcontractor(s), employees, agents or representatives to comply with applicable Laws arising out of the Contract; or (iii) any act, omission, or default of the Contractor, its Subcontractor(s), employees, agents or representatives arising from Contractor's, Contractor's Subcontractor(s)', employees', agents' or representatives' performance of the Contract;

- B. The City will promptly notify the Contractor of any Claim(s) against the Indemnified Parties. The Contractor shall have the right to control the defense of any Claim(s) subject to the foregoing indemnification to the extent of the indemnification. The Contractor also shall have the right to settle any such Claim(s) provided that the Contractor pays the entire amount of such settlement and there is no finding of fault against the Indemnified Parties;
- C. The provisions of this Article are independent of, and will not be limited by, any insurance required to be obtained by the Contractor or its Subcontractor(s) pursuant to the Contract or otherwise obtained by Contractor or its Subcontractor(s).

ARTICLE G-53 INSURANCE

The Contractor shall provide the City with Certificates of Insurance on a standard ACORD form or other documentation acceptable to the City reflecting all coverages prior to commencing operations and at each subsequent policy renewal. Certificates shall name the City of St. Petersburg as an additional insured and show the City of St. Petersburg as the Certificate Holder. Certificates shall also indicate the use of any endorsements that are required in the Contract. No insurance policy required herein may be canceled, non-renewed, or adversely changed without thirty calendar days written notice to the City. Insurance shall be maintained at all times by the Contractor until Final Completion except for completed operations coverage which shall be maintained for a period of at least one (1) year beyond Final Completion. Completed operations coverage shall not serve to limit the liability of the Contractor.

Certificates of Insurance shall be delivered to the Director of the City's Procurement and Supply Management Department. Failure to provide Certificates or failure to renew insurance shall not relieve the Contractor of the responsibility to provide insurance as required. At the City's request, the Contractor and all its Subcontractors shall provide complete certified copies of any insurance policies, including endorsements, for the City's review. Receipt of Certificates of Insurance which indicate less coverage than required does not constitute a waiver of the Contractor's obligation to fulfill the insurance requirements herein.

The Contractor may, at its option, provide the limits of liability as set out herein by a combination of the policies described herein, including an Umbrella or Excess Liability Insurance Policy. Any Excess or Umbrella insurance policy must provide coverage on at least a following form basis.

If the insurance carried by the Contractor has broader coverage than required in the Contract, then that broader coverage, including but not limited to additional insured requirements, shall be the requirements in the Contract. If the Contractor's insurance limits are greater than the limits set forth herein, then the Contractor's policy limit shall be the required limit in the Contract. Any policy wording, including but not limited to wording contained in an Additional Insured Endorsement or Limits of Insurance provision, indicating that the limit of insurance available to an additional insured is the lesser of the contract requirement or applicable limit in the declarations, shall not apply to the Contract. The City shall have Additional Insured coverage to the Contractor's policy's full limit should it be greater than what is required in the Contract.

Approval of the insurance by the City shall not in any way relieve or decrease the liability of the Contractor. It is expressly understood that the City does not in any way represent that the specified limits of liability or coverage or policy forms are sufficient or adequate to protect the interest or liabilities of the Contractor.

The Contractor's deductibles or self-insured retention may be disapproved by the City and shall be reduced or eliminated at the option of the City. All responsibility for payment of any sums resulting from any deductible provisions, corridor, or self-insured retention conditions of the policy or policies shall remain with the Contractor.

All of the insurance required under the Contract shall be in effect under enforceable policies issued by insurers licensed to do business in the State of Florida and be rated "A-" or better by a rating agency such as A.M. Best or its equivalent.

The insurance coverages and limits are set at the sole discretion of the City and are subject to change or revision as the need arises. The City may, at its sole discretion, change or increase the required insurance coverage and limits from time to time and shall provide thirty (30) calendar days' notice to the Contractor. Failure of the Contractor to comply with any changes or increases within thirty (30) calendar days of receipt of written notice from the City shall be considered a material default of the Contract.

The Contractor hereby waives all subrogation rights of its insurance carriers in favor of the Indemnified Parties. This provision is intended to waive fully, and for the benefit of the Indemnified Parties, any rights or claims which might give rise to a right of subrogation in favor of any insurance carrier.

53.1 Workers' Compensation Insurance

A. Coverage:

The Contractor shall obtain and maintain during the life of the Contract, Workers' Compensation Insurance for all of Contractor's employees employed at the Project site. Coverage should include Employers Liability and Voluntary Compensation.

If any work is subcontracted, the Contractor shall require each Subcontractor to provide Workers' Compensation Insurance for all the Subcontractor's employees unless such employees are covered by the Workers' Compensation Insurance afforded by the Contractor.

The Contractor and Subcontractors shall purchase any other insurance or coverage required by law for the benefit of their employees.

B. Limits:

Workers' Compensation - as required by Florida Law.

Employer's Liability - \$100,000 each employee, each accident, and \$100,000 each employee/ \$500,000 policy limit for disease.

53.2 U.S. Longshore and Harbor Worker's Act Insurance

A. Coverage:

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, including but not limited to work on or about navigable waters, Contractor shall obtain and maintain U.S. Longshore and Harbor Worker's Act Insurance as required by law, including Jones Act coverage where appropriate.

B. Limits:

As required by Federal Law.

53.3 Commercial General Liability Insurance

A. Coverage:

The Contractor shall obtain and maintain Commercial General Liability Insurance providing coverage for bodily injury, property damage, and personal and advertising injury which may arise from operations under this Contract, whether such operations be by the Contractor or by any Subcontractors, or any of their agents, representatives, guests, employees, invitees or anyone contracting with the Contractor or by anyone directly or indirectly employed by any of them.

Coverage shall be provided by ISO Commercial General Liability coverage form CG 00 01 04 13 or similar form acceptable to the City. Coverage shall also be in occurrence form.

Explosion, collapse and underground hazards shall be covered by the Contractor's and Subcontractor's Commercial General Liability Insurance.

A separate general aggregate limit of liability shall apply to the Project. If the Contractor works on more than one (1) project under the Contract, a general aggregate shall apply to each of such projects. The project(s) shall be specifically described in the endorsement.

B. Limits:

Each Occurrence Limit: \$2,000,000.

General Aggregate Limit applicable per Project: \$2,000,000.

Products and Completed Operations Aggregate Limit: \$2,000,000.

Personal and Advertising Injury Limit: \$2,000,000.

Damage to Rented Premises Limit: \$100,000.

53.4 Commercial Automobile Insurance

A. Coverage:

The Contractor shall obtain and maintain Commercial Automobile Insurance providing liability coverage for "any auto", which shall include, but not be limited to, all leased, owned, non-owned, and hired vehicles.

B. Limits:

\$1,000,000 combined single limit each occurrence for bodily injury and property damage.

53.5 Builder's Risk Insurance

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, Contractor shall obtain and maintain Builder's Risk Insurance insuring the Contractor's work at the site to the full Contract Price and naming the City as a loss payee and additional insured. This insurance shall insure the interests of the City, the Contractor, and all

Subcontractors in the Work and shall insure against special form causes of loss, including collapse during construction, windstorm, and flood. Valuation shall be for replacement cost (including fees and charges of engineers, architects, attorneys and other professionals). The Contractor shall obtain and maintain similar property insurance on equipment, materials, supplies and other property and portions of the Work stored on or off site or in transit. Builder's Risk Insurance shall be endorsed to permit occupancy until such time as the facilities are completed and accepted by the City and written notice of that fact has been issued by the City.

53.6 Pollution/Environmental Liability Insurance

A. Coverage:

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, Contractor shall obtain and maintain Pollution/Environmental Liability Insurance, covering sudden and gradual pollution conditions including the discharge, release, or escape of fumes, vapors, smoke, acids, alkalis, asbestos, toxic chemicals, liquids or gases, waste materials, or other contaminants, irritants, or pollutants into or upon any structure, land, body of water, or atmosphere. Coverage shall include bodily injury, property damage, loss of use of tangible property whether or not it has not been physically injured or destroyed, cleanup and remediation costs, penalties or fines, and defense costs including costs incurred in the investigation or adjustment of the claim. Coverage may be provided by a stand-alone policy or by endorsement(s) to one of Contractor's other policies. Coverage shall be provided both for the use of pollutants on site and during transit. If the policy is on a claims made basis, it must include the retroactive date of coverage and shall be maintained for at least two (2) years past the date that the Work is completed.

B. Limits:

\$2,000,000 per occurrence.

53.7 Professional Liability Insurance

A. Coverage:

On applicable projects, as indicated in the Qualification Requirements section of the Solicitation, Contractor shall obtain and maintain Errors and Omissions or Professional Liability insurance appropriate to the Contractor's profession. If the policy is on a claims made basis, it must include the retroactive date of coverage and shall be maintained for at least two (2) years past the date that the Work is completed.

B. Limits:

\$2,000,000 per occurrence.

ARTICLE G-54 PUBLIC CONSTRUCTION BOND

The Contractor shall furnish a Public Construction Bond executed by a Surety company duly authorized to do business in the state of Florida on a form approved by the City Attorney or designee. The amount of the Public Construction bond shall be equal to 100% of the Contract Price, as security for the faithful performance of this Contract and as security for the payment by the Contractor of all persons performing this Contract. The Surety shall have a rating classification of "A" and a financial category of Class VII as evaluated in the current Best's Key Rating Guide, Property - Liability.

In lieu of the Public Construction Bond, the Contractor may furnish to the City an alternative form of security in the form of cash, money order, certified check, cashier's check, an irrevocable letter of credit, or a security of a type listed in Chapter 625, Part II, of the Florida Statutes and acceptable to the City Attorney. Any such alternative form of security shall be subject to the same conditions as those applicable to the Public Construction Bond required by this section and Chapter 255 of the Florida Statutes.

The Public Construction Bond shall remain in effect for at least one (1) year beyond the date of Final Completion.

If at any time during the term of the Contract, the City deems the Surety or Sureties upon such Public Construction Bond to be unsatisfactory or, if for any reason such Public Construction Bond ceases to be adequate to cover the performance of the Work, the Contractor shall, at its expense within ten (10) days after the receipt of notice from the City to do so, furnish an additional Public Construction Bond or Public Construction Bonds in such form and amount, and with such Surety or Sureties the City deems satisfactory. In such event, no further payment to the Contractor will be deemed to be due under the Contract until such new or additional security for the faithful performance of the Work is furnished in a manner and form satisfactory to the City.

When the Work has been completed in accordance with the Contract Documents and accepted by the City, it is mutually agreed and understood that the Contractor, together with his Surety, shall fully and unconditionally guarantee, for a period of not less than one (1) year from date of Final Completion, all materials and labor (workmanship) incorporated in the Project. This guarantee is exclusive of any manufacturer's guarantees or warranties exceeding this period.

Alternative forms of security will be returned to the Contractor not later than thirty (30) calendar days following the expiration of the guarantee period.

ARTICLE G-55 APPRENTICES REQUIREMENTS

If the Contract Price is equal to or greater than one million dollars (\$1,000,000), Contractor agrees to be subject to and shall comply with the requirements for employing apprentices, or demonstrating and documenting good faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 7 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Apprentice Requirements"). The Apprentice Requirements are incorporated into the Contract as Contractor's obligations under the Contract. Accordingly, Contractor shall ensure that at least 15 percent of all hours of work be performed by apprentices (as defined in Section 2-262 of the St. Petersburg City Code) in accordance with the Apprentice Requirements and comply with all other Apprentice Requirements. Contractor's failure to comply with the Apprentice Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 7 of the St. Petersburg City Code.

ARTICLE G-56 DISADVANTAGED WORKERS REQUIREMENTS

If the Contract Price is equal to or greater than one million dollars (\$1,000,000), Contractor agrees to be subject to and shall comply with the requirements for employing disadvantaged workers, or demonstrating and documenting good faith efforts to do so, as those requirements are set forth in Chapter 2, Article V, Division 8 of the St. Petersburg City Code, as may be amended from time to time (collectively, "Disadvantaged Worker Requirements"). The Disadvantaged Worker Requirements are incorporated into the Contract as Contractor's

obligations under the Contract. Accordingly, Contractor shall ensure that at least 15 percent of all hours of work be performed by disadvantaged workers (as defined in Section 2-269 of the St. Petersburg City Code) in accordance with the Disadvantaged Worker Requirements and comply with all other Disadvantaged Worker Requirements. Contractor's failure to comply with the Disadvantaged Worker Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 8 of the St. Petersburg City Code.

ARTICLE G-57 RESPONSIBLE WAGE REQUIREMENT

If the Contract Price is equal to or greater than one million dollars (\$1,000,000), Contractor agrees to be subject to and shall comply with the responsible wage requirements set forth in St. Petersburg City Code Chapter 2, Article V, Division 9, as those requirements may be amended from time to time, (collectively, the "Responsible Wage Requirements"). The Responsible Wage Requirements are incorporated into the Contract as Contractor's obligations under the Contract. Accordingly, Contractor shall pay its employees for any hours worked pursuant to the Contract in accordance with the Responsible Wage Requirements and comply with all other Responsible Wage Requirements. Contractor's failure to comply with the Responsible Wage Requirements will result in consequences for non-compliance set forth in Chapter 2, Article V, Division 9 of the St. Petersburg City Code.

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3-yr w/ 2-yr renewal, Field Order Basis

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

In cases where this Supplemental Instructions to Bidders and the standard Contract Standards Instructions to Bidders do not agree, this Supplemental Instructions to Bidders will govern.

SIB-1 ARTICLE I-13 - SUBCONTRACTORS

Sub Article 13.2 - Subletting of Contract: Delete all the first and second paragraphs of the sub article's text and replace with the following:

"The Contractor must complete at least 75% of the Total Bid Price with its own organization based on unit Bid prices. The contract amount upon which the 75% requirement is computed includes the cost of materials and manufactured products which are to be purchased or produced by the Contractor under the contract provisions.

In order to meet this 75%, the Contractor shall not purchase any materials for a subcontracted item nor shall Contractor place other contractor's employees on Contractor's payroll. The term "own organization" shall be construed to include only workers employed and paid directly by the Contractor and equipment owned or rented by Contractor, with or without operators."

SIB-2 ARTICLE I-5 - SUBMISSION OF BIDS

Sub Article 5.6 Bid for Alternates: Delete the text and replace with the following:

"The City may select any combination or reject any or all Alternates (Sanitary Sewer - Group I, Sanitary Sewer - Group II or Sanitary Sewer - Group III) as best serves the interest of the City."

END OF SECTION

TECHNICAL SPECIFICATIONS

SECTION 1 - GENERAL

1.01 LOCATION OF THE WORK SITE AND ACCESS

The proposed Work for the Project is within the limits of the City of St. Petersburg's wastewater service area. The wastewater pipe assets to be rehabilitated will be Citywide as located in the Plans. The Bidder may review a list of anticipated Work locations under the Initial Term of this Project (Appendix I).

Access to the Work site shall be over public streets and rights-of-way. Any damage to existing pavement or other surface improvements, attributable to the Contractor's activities, shall be restored to equal or better condition by the Contractor at the Contractor's expense. Portions of the Work will be in rear easements of residential areas.

1.02 SCOPE OF WORK

The essential portions of the proposed Work for the Project are summarized as follows:

The Contractor shall furnish all labor, material, equipment and services necessary for wastewater pipe rehabilitation using Cured-In-Place-Pipe (CIPP) lining. The Work shall be completed at locations identified on the Plans within the City of St. Petersburg's wastewater service area, and shall include, but is not limited to; obtaining permit approvals; maintenance of traffic; bypass pump around and/or diversion of wastewater flows; cleaning, removal and disposal of all sand, rubble, deposits, and other accumulated debris in the host pipe and manholes; Closed Circuit Television (CCTV) video inspection of the host pipe prior to rehabilitation; construction of CIPP Main Liners; reconnection of service laterals; CCTV video inspection after liner construction; testing of CIPP liners; Project site cleanup and restoration; and all other incidentals as required and directed by the Engineer to complete the Work.

The list of anticipated Work locations under the Initial Term of this Project is not inclusive and may change as repairs are completed, damaged pipes are discovered, and the City's prioritization schedule changes; however, it may represent the kinds of repairs that are anticipated to be assigned under this Project.

Estimated quantities and Contract Pay Items are listed in the Proposal. Procedures for partial payment and final payment of Field Orders and associated Work Orders is established in *Contract Standards, General Conditions "Article G-44 - Payments"*. As described under this agreement, partial payment will not be requested or made more often than monthly as the work proceeds and is applicable only for completed Work Orders.

1.03 FIELD ORDER/WORK ORDER

Each asset (pipe segment, manhole, etc.) to be rehabilitated and the type/nature of rehabilitation will be authorized by the issuance of Field Orders/Work Orders. A Field Order will be associated with one or more Work Orders issued on individual Work Order form(s) or a Worklist (tabular list of multiple Work Orders and associated assets in Excel/PDF format) and will establish the timeline for required commencement and completion of the Work. Field Orders, Work Orders or Worklist will be issued in City approved format and delivered either electronically or by hard copy to the

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Contractor.

Each individual Work Order form, or Work Order (spreadsheet row) in a Worklist, will contain the available pertinent information for the associated asset(s) such as Work Order number, the upstream and downstream manhole identification numbers (sanitary gravity mains), nominal host pipe diameter, approximate length of pipe, the upstream and downstream rim to invert depth, host pipe material, GIS identification distance tag value representing a distance from a downstream manhole (applies to sanitary laterals only), and any other Engineer comments describing requirements and specific directions for Work required.

Along with each individual Work Order form or Worklist, corresponding supplemental maps/drawings which may consist of highlighted or notated Utility Atlas/GIS Map(s), proposed plan drawings, As-Built or Record Drawings, or any combination thereof, will be issued to the Contractor showing the location of the assets, and any additional directions/requirements regarding the Work. Field Orders, Work Orders combined with any associated supplemental Utility Atlas/GIS Map(s), proposed plan drawings, As-Built or Record Drawings, or details issued along with it, will together be considered the Plans. The Contractor shall locate, uncover, and verify the manholes and access structures associated with each pipe segment to be rehabilitated prior to commencing Work. The Plans issued represent the best practical information available regarding the location and layout of the existing utilities. The Contractor shall refer to them for additional information including, but not limited to, rights-of-way widths, sanitary sewer easement widths, and general location of utilities with respect to property lines. The accuracy of the utility location information and dimensions are not guaranteed. The Contractor shall verify location and size of all existing utilities prior to starting the Work. Other Field Order/Work Order formats may be used as determined by the Engineer.

As the Work progresses, the Contractor shall utilize the Plans to continuously maintain As-built Records of the Work. The Contractor will be required to supply and fill in as-built attributes relating to each Work Order/Worklist including but not limited to: contractor invoice number, liner thickness, lining material, work start date, completion date, property address served (laterals only), unit pay item quantities for the Work rendered per asset (for a Worklist only), unit pay item quantities for the Work rendered per each individual Work Order, pipe length, pipe diameter, pipe invert elevations, manhole rim and invert depths and elevations, manhole material, host pipe material, private lateral material (where missing or a deviation from original Plans), contractor comments, or any other field necessary to adequately describe the work performed, actual conditions, or deviation from original Plans. The original data and formulas contained in any Worklist issued by the City shall not be altered in any way, however the Contractor may add additional records (rows) or columns (data fields) as necessary to describe the Work in more detail, use for scheduling, tracking, record keeping purposes, or to communicate details and progress of the Work with the City.

Examples of acceptable completed As-built Records, including completed individual Work Order forms, Worklist forms, and as-built drawings, are included in the Appendix of the Technical Specifications. Any deviation from this approved format shall be approved by the Engineer.

Field Orders/Work Orders for various tasks may require prioritization by the Engineer. The Contractor shall accomplish the Work in accordance with a given chronological sequence and amend the sequence of outstanding Field Orders/Work Orders as the Engineer deems necessary. The Engineer shall notify the Contractor in writing of any such changes and unless notified otherwise, the Contractor shall proceed with the Work in the order in which it was issued. From

time to time, the Engineer may issue an Emergency Response Work Order. The Contractor shall as soon as possible inform the Engineer of the equipment and manpower that he intends to mobilize. If this is acceptable and the Engineer agrees, the Contractor shall immediately begin mobilizing equipment, manpower, supervision, and materials necessary to facilitate the Work. Work that qualifies and is authorized for an Emergency Work Order and response will include payment under the unit pay item "G-1.1, Emergency Response".

The Contractor's superintendent or other City approved representative shall attend monthly meetings with the City to discuss scheduling and sequencing of Work and receive prioritization of outstanding and future Work issued by the City to the Contractor. The day and time of month for these meetings shall be agreed to at the pre-construction meeting prior to the Contractor starting Work on the Project. The Schedule for beginning and completion of Work on each Field Order/Work Order shall be in accordance with Technical Specifications Section 1.09 "Project Schedule Documentation".

1.04 ESTIMATED QUANTITIES

The estimated quantities for the unit price Pay Items listed in the Proposal are to be considered as representative only and are to be used for the comparison of Bids and Pay Items, and determining amounts for which the Bid and Construction Bonds shall be furnished. Even though the unit prices tendered by the Contractor are tendered for the scheduled quantities, the scheduled quantities of work to be performed and materials to be furnished may each be increased or decreased without in any way invalidating the Bid unit prices for those Pay Items. The Engineer reserves the right to vary the estimated quantities or to delete the Work and the corresponding Contract Pay Items from the Contract. The Contractor will be compensated for Work actually performed as described in the Field Orders/Work Orders or authorized by the Engineer, all in accordance with the unit prices or lump sum prices contained in the Proposal. The Bidder shall quote in the Proposal a unit price or lump sum price for which he will perform the Work for each of the Contract Pay Items.

1.05 PLANS AND SPECIFICATIONS

Technical Specifications Sections 1 and 20 through 27 have been prepared specifically for this Project. Other Technical Specifications sections are City Standards and only the applicable portions of them govern the Work to be performed. Where the Plans and Specifications are not in agreement, the Plans shall govern. Where a specifically prepared Technical Specification section is not in agreement with City Standards Technical Specifications, the specifically prepared section shall govern.

The Contractor shall furnish all labor, equipment, and materials to complete each Field Order/Work Order and all miscellaneous and appurtenant work complete in place as specifically described and included under each Contract Pay Item as shown, specified, or directed by the Engineer in accordance with the obvious or expressed intent of the Contract and related Plans (Field Order(s), Work Order(s), Worklist, associated maps/drawings, City Standard Details and any City furnished control points).

The Technical Specifications for the Project that reference FDOT-SSRBC pertain to *Florida Department of Transportation FY 2019-20 - Standard Plans for Road and Bridge Construction, including applicable interim revisions*, except as noted in the Technical Specifications "Section 8 - Paving Materials" and "Section 9 - Roadway Construction".

1.06 PERMITS

The City will obtain all construction permits required for the Work by FDEP, FDOT, CSXRR, SWFWMD, Army Corps of Engineers, Pinellas County Coastal Management, Pinellas County Highways, US Coast Guard, and Pinellas County Health Department. The Contractor shall be required to comply with all provisions of such permits regarding workmanship, schedules, notification of starting construction, and other conditions under which the permits are issued. A copy of any permits, if necessary, will be issued to the Contractor with the applicable Field Order/Work Order.

The Contractor shall obtain and pay for all other Federal, State, or County permits, licenses, and other authorizations required for the prosecution of the Work, including the cost of all Work performed in compliance with the terms and conditions of such permits, licenses, and authorizations, whether performed by the Contractor or by others.

1.07 PROJECT SIGN

The City shall furnish the Project sign. The Contractor shall mount the sign at a location mutually agreed by the Engineer and the Contractor and maintain it for the duration of the Project.

If the sign becomes unusable due to damage, vandalism, or any means other than Contractor activity, the City will furnish a replacement sign at no cost to the Contractor. If the sign is damaged by Contractor activity, the Contractor shall replace the sign in-kind at no additional cost to the City.

Payment for installing and maintaining the Project sign shall be incidental to construction costs of the Project for the duration of the Contract. The sign will remain the property of the City upon completion of the Project.

No sign other than as shown on the Plans and/or as specified, either by the Contractor, any subcontractor, or any material supplier, will be allowed on the Project site.

1.08 PROJECT WORK HOURS/FIELD SUPERVISION

Normal work hours for the Project are Monday through Friday, 8:00 a.m. to 5:00 p.m., excluding City-designated holidays. Emergency work may be required to be performed after hours, on Saturday, Sunday and City-designated holidays, and shall be subject to advance approval by the Engineer.

The Contractor shall designate and keep on site at all times during the Work, a competent resident Superintendent, employed by the Contractor accordance with the *Contract Standards, General Conditions "Article G-29.2 - Field Supervision"*.

1.09 PROJECT SCHEDULE DOCUMENTATION

The Contractor shall commence Work within 10 consecutive calendar days after the Notice to Proceed is received by the Contractor (unless such time is extended in writing by the Engineer). The Contractor shall commence Work on each Field Order/Work Order within 10 consecutive calendar days after it is received by the Contractor (unless such time is extended in writing by the Engineer). For a Work Order in which an Emergency Response has been requested, the repair

shall be done as quickly as possible, as approved by the Engineer. If the Contractor does not believe that the repair for an Emergency Response Work Order can be made within the agreed schedule, he shall notify the Engineer in writing before accepting the Work Order. The Work shall be performed uninterrupted until completed. The Contractor shall make every effort to expedite the repair. The Contractor shall be deemed to have accepted responsibility for completion of all Field Orders/Work Orders by the contract term listed in the Agreement or the expiration of funds, whichever comes first, unless the Contractor notifies the Engineer in writing within 10 consecutive calendar days after any Field Order/Work Order is received by the Contractor. The Contractor shall pursue each Field Order/Work Order with expeditious continuity until the Work is complete.

The contractor's weekly crew locations shall be provided to the Engineer in a City approved electronic file format and method (email) ahead of the start of any Work.

A Field Order/Work Order with various tasks may require prioritization by the Engineer. The Contractor shall accomplish the Work in accordance with a given specified sequence, if included in the Field Order/Work Order, and amend the sequence of outstanding tasks as the Engineer deems necessary. The Engineer shall notify the Contractor in writing of any such changes and unless notified otherwise, the Contractor shall proceed with the Work in the order in which it was issued.

Following acceptance of the CIPP Main Liner installation for each gravity main by the Engineer, the Contractor shall immediately reconnect service laterals; construct CIPP Lateral Liners where required; and complete Post - CCTV video inspection, testing of CIPP liners, project restoration work, and other associated tasks within 30 consecutive calendar days.

The Engineer may order the Contractor to proceed with the Work at a faster rate or to add additional crew(s) should a backlog of Field Orders/Work Orders develop.

If the Work does not progress at a satisfactory rate, is otherwise deemed unsatisfactory by the Engineer, or is not completed within the approved timeframe, the City in its sole discretion reserves the right to terminate the Contract and re-advertise the Work at any time. No additional compensation beyond the unit prices bid for Work completed will be allowed the Contractor because of such termination.

If the Engineer requests the Contractor to perform Work outside of normal working hours as defined during the Preconstruction Conference, the inspection fee will be waived and the Contractor compensated as provided under the *Contract Standards, General Conditions "Article G-34 - Changes in the Work."*

1.10 STORM PREPAREDNESS PLAN

Within 15 days of the date of Notice to Proceed, the Contractor shall file with the Engineer a Storm Preparedness Plan. The plan shall outline the necessary measures which the Contractor proposes to perform at no additional cost to the City upon the issuance of an official storm warning issued by the National Weather Service.

In the event of inclement weather, or at the Engineer's direction, the Contractor shall carefully protect the Work, private property affected by the Work, and stored materials against damage or injury from the weather. If, in the opinion of Engineer, any portion of the Work or materials is damaged or injured by reason of failure on the part of the Contractor to protect the Work, such

Work and materials shall be removed and replaced at the Contractor's expense.

1.11 MAINTENANCE OF STORM DRAINAGE SYSTEM

The Contractor shall be responsible at all times to maintain the operation of existing stormwater facilities, or, when existing stormwater facilities are removed or taken out of service, to provide equivalent capacity alternate forms of stormwater removal adequate to prevent upstream or downstream flooding in excess of existing conditions. This responsibility shall include the installation of temporary connections, bypass pumping, or other temporary means necessary until the stormwater system is fully operational. All stormwater removed from the system shall be discharged back to the stormwater system.

1.12 PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION

The Contractor shall be responsible for prevention, control, and abatement of erosion, siltation, and water pollution resulting from construction of the Project until final acceptance of the Project.

The Contractor shall implement all appropriate turbidity management practices at the point of discharge into a storm drainage system, gutter, or other conveyance to ensure that state water quality standards are not violated at the point where the storm drain, gutter, or other conveyance discharges into a surface water.

All necessary provisions shall be taken to ensure compliance with:

- A. Water quality standards of the State of Florida. Attention is called to Chapter 62-302, Florida Administrative Code, and in particular, the requirements that turbidity shall not exceed 29 NTUs above background level. Adequate silt containment procedures and equipment shall be used to control turbidity, at no additional cost to the City.
- B. *Contract Standards, General Conditions "Article G-51, Discharges by Contractor and Corrective Action Plan"*.

1.13 CONTAMINANTS CONTAINMENT/DISPOSITION

Prior to the installation of well points for dewatering, the Contractor shall visually inspect the Work area for indications of existing ground water monitoring, wells, or metal caps at grade. The Contractor shall review the Work area for monitoring wells or abandoned fuel tanks, and shall notify the Engineer in writing if any of the above items exist.

If during the dewatering activities the spoil water becomes odorous (excluding sulfur odor) or the spoil water is discolored (excluding tannic acid or iron), the Contractor shall stop the dewatering activities and shall notify the Engineer in writing of such, and request direction.

When Work activities encounter or expose any abnormal condition that may indicate the existence of a hazardous or toxic waste, Work activities shall stop in the vicinity of the abnormal condition and the Contractor shall notify the Engineer immediately. The presence of tanks or barrels; discolored earth, metal, wood, or groundwater; visible fumes; abnormal odors; excessively hot earth; smoke; or other conditions that appear abnormal, may be signs of hazardous or toxic wastes and shall be treated with extraordinary caution.

Every effort shall be made by the Contractor to minimize the spread of any hazardous or toxic waste into uncontaminated areas. The Contractor's operations shall not resume until directed in writing by the Engineer.

Disposition of the hazardous or toxic waste will be made in accordance with the requirements and regulations of any City, County, State, or Federal agency having jurisdiction. Any permit required for the hauling and disposing of this material shall be obtained by the Contractor at his expense prior to commencing hauling operations. Where the Contractor performs work necessary to dispose of hazardous or toxic waste, and the Contract does not include Pay Items for disposal, payment may be made as provided in the *Contract Standards, General Conditions "Article G-32 - Unforeseen Subsurface Conditions"*.

1.14 FIELD ENGINEERING

If required by the Engineer, the Contractor shall establish and provide all vertical and horizontal control points for this Project including benchmarks. The Contractor shall provide the field layout surveying necessary to properly construct the Work from City-furnished control points or reference points indicated on the Plans.

All field layout surveying shall be performed under the supervision of a Professional Land Surveyor (Chapter 472, Florida Statutes). The Contractor shall submit the name and registration number of said Surveyor to the Engineer. The Engineer reserves the right to check all survey staking and to require adjustments or re-staking by the Contractor in the event that conflicts or errors are detected.

Water pressure pipelines that are 8-inch or less diameter shall be installed with the required cover using horizontal control stakes provided by the Contractor. Storm drains, sanitary sewers, sanitary pressure pipelines, and water pressure pipelines greater than 8-inch diameter shall be installed using an approved method for line and grade control. Methods for line and grade control shall be submitted to the Engineer for approval, as specified for shop drawings. Sketches shall be provided by the Contractor showing vertical adjustment necessary for pressure pipelines to adequately clear storm drains and other utilities, unless otherwise shown on the Plans.

1.15 INSPECTION AUTHORITY

The Engineer has ultimate responsibility for Contract administration and inspection for this Project which includes all plans issued pursuant to the Contract Documents. The Engineer may assign field inspection responsibilities to a Design Professional and/or City Inspector.

Each step of construction is subject to approval by the Engineer prior to proceeding with a subsequent step in accordance with the *Contract Standards, General Conditions "Article G-30 - Tests and Inspections"* and as supplemented herein.

During the progress of the Work and up to the date of final acceptance, the Contractor shall at all times afford representatives of the City, the County, the State, the Department of Environmental Protection, the Department of Labor, or any other agency with jurisdiction, a reasonable, safe, and proper facility for observation of the Work done or being done at the site and also of the manufacture or preparation of materials and equipment at the place of such manufacture or preparation.

The Project line of authority will be presented at the Preconstruction Conference.

1.16 SEQUENCE OF OPERATION

The Work may involve other Contractors. Therefore, the Contractor shall carefully coordinate its Work activities and that of any subcontractors with the City Inspector so as to minimize disruption of service to the residents, to minimize pump around pumping, and to avoid scheduling conflicts between various disciplines of work. In that regard, the following general sequence of preparation and construction activities shall be adhered to unless the Contract or conditions warrant otherwise.

A. General - Pipeline Rehabilitation Work

The Sequence of Work shall in general conform to the following order:

1. The Engineer will determine the Work required, and will issue the Contractor Field Orders/Work Orders authorizing the necessary rehabilitation work.
2. Upon receipt of the Field Orders/Work Orders from the Engineer and prior to commencing work, the Contractor shall obtain all permits, and develop and submit for approval a schedule for the Work detailing plans for night operations, pump around pumping, and traffic control. Those pipe segments requiring rehabilitation that are adjacent to each other shall be scheduled for rehabilitation at similar times to minimize the mobilization effort, pump around set-ups, and traffic control where feasible.
3. Store materials (when applicable) at locations and in a manner as approved by the Engineer. Equipment and materials shall not be stored or strung in residential areas more than 3 days in advance of lining installation unless otherwise approved in writing by the Engineer.
4. Perform neighborhood notification not less than 7 days prior to commencement of Work in the rights-of-way, in accordance with the article headed "Neighborhood Notification" in this Section of the Technical Specifications.
5. Setup and maintain pump around pumping in accordance with the article headed "Pump Around Pumping" in this Section of the Technical Specifications.
6. Perform host pipe and access structure cleaning in accordance with the requirements of the Technical Specification Section headed "Cleaning of Wastewater System".
7. Perform pre-CCTV inspection of host pipe to be lined in accordance with the requirements of the Technical Specification Section headed "Closed Circuit Television Inspection".
8. Review pre-CCTV inspection reports and notify the Engineer of any host pipe condition and existing lateral locations which may prevent proper completion of lining.
9. Construct CIPP liner in accordance with the requirements of the Technical Specifications Section headed "Cured-In-Place-Pipe (CIPP) Liners".
10. Reconnect service laterals in accordance with the requirements of the Technical Specifications Section headed "Cured-In-Place-Pipe (CIPP) Liners".
11. Remove pump around pumping setup.
12. Perform post-CCTV inspection and test the liner, if required, in accordance with these

Technical Specifications. Make repairs as necessary.

13. Restore the ground surface (when applicable) in accordance with these Technical Specifications.

B. Utility Companies

Utility companies may be present on the Work site adjusting their facilities and installing new facilities. The Contractor's work shall be scheduled in such a manner as to minimize conflicts with various utility companies.

C. Clean Up

The Contractor shall clean up the site for each phase of Work in accordance with the Contract Documents before proceeding to a subsequent phase of Work, unless otherwise approved by the Engineer.

1.17 MOBILIZATION

Mobilization shall include all preparatory work and operations necessary to begin the Project, including moving of personnel, equipment, plant, and all else necessary to commence work.

If a separate Pay Item is included for mobilization, payment will be as specified for that Pay Item. If no Pay Item is included, costs for mobilization shall be included with the costs for the major Work items included in the Proposal.

1.18 TEMPORARY TRAFFIC CONTROL

The Contractor shall provide required traffic controls for all roadways directly affected by construction activities within the Project limits. The Contractor shall notify the Special Events Division for the City a minimum of 2 working days prior to any construction affecting traffic flow. A Temporary Traffic Control plan drawing shall be submitted for review by the Engineer prior to each lane closure or opening during the course of construction. All traffic control devices utilized during construction shall be provided by the Contractor and meet the requirements set forth in the latest revision of U.S. Department of Transportation Federal Highway Administration's "Manual on Uniform Traffic Control Devices" and the Florida State Department of Transportation's "Design Standards."

Failure or refusal, on the part of the Contractor, to install, maintain and/or position traffic control devices promptly, fully, and in an acceptable manner, shall be sufficient cause for the City, after 24-hour notice, to perform the traffic control with its own organization, or to contract with any other individual, firm, or corporation to perform the required traffic control. All costs and expenses incurred thereby shall be charged against the defaulting Contractor, and the amount thereof deducted from any money due, or which may become due the Contractor, or shall be charged against the Contract Bond. Any Work performed as described by this paragraph, shall not relieve the Contractor in any way of their responsibility for the Work performed by them.

Traffic control shall be performed so that vehicular traffic shall be maintained with at least one 10-foot wide lane in each direction at all times. Temporary lanes, drainage modifications and temporary plates must be constructed by the Contractor at Contractor expense.

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The Contractor shall arrange his Work so that there will be as little disruption of traffic as possible. Vehicular traffic shall have access to residences and businesses. Pedestrian traffic shall be maintained.

The Contractor will conform to FDOT or Pinellas County regulations for scheduling when working in FDOT or Pinellas County roadways.

Two traffic lanes/two-way traffic shall be kept open at all times in State and County roads.

An acceptable detour route shall be developed by the Contractor to redirect traffic when and where necessary, with the approval of the Special Events Division for the City.

Temporary lanes shall be constructed with a minimum 1-inch thick asphaltic concrete surface over a 6-inch thick limerock base compacted to 98% of the maximum density in accordance with AASHTO T-180. In no case, for any period of time, shall a pavement cut in the pre-existing pavement, or in a temporary traffic bypass road be utilized for traffic without a hot mix asphaltic concrete patch or surface having been applied. Temporary lane striping/markers shall be applied by the Contractor at the end of each work day, on all asphaltic concrete courses except the final surface course. All temporary pavement markings shall conform to the 2012/2013 FDOT Design Standards.

It is understood that partial or complete removal of the existing pavement and base is necessary on certain residential streets in the process of construction. Ingress and egress for residential streets to residences and businesses driveways shall be maintained on either graded compacted dirt, roadway base or a sanded prime coat temporary roadway at all times during the construction process other than for the period of two days at a time when drainage construction, roadway base construction, or curb construction passes directly in front of a specific driveway. In those instances, the Contractor shall notify the owner two days in advance of limiting access to the owner's driveway. Temporary road maintenance shall be provided by the Contractor to maintain a level, safe driving surface free of excessive dust. Damage caused to temporary roadways shall be repaired by the Contractor at the Contractor's expense. Excavated material and construction material shall not be stockpiled in such manner as to unnecessarily hinder or confuse traffic adjacent to work where a partial road closure is in effect. If the Contractor's operations cause traffic hazards, the Contractor shall be responsible to rectify those hazards.

Temporary Traffic Control plan drawings shall be prepared by the Contractor for each specific location, giving the correct name of the street and of the intersecting streets between which closure and/or partial closure is sought. Permission shall be given for specific dates and hours, and such dates and hours must be closely observed. Partial closure is the condition when a portion of normal traffic can be permitted although one or more traffic lanes will be out of service.

At least 72 hours before starting any Work the Contractor shall obtain a Closure Permit from the appropriate County or State agency for any traffic lane or street closure required. Street Closure Permits shall be submitted to the Engineer before starting any Work. No changes to approved Street Closure Permits will be permitted without prior approval.

1.19 MATERIALS AND EQUIPMENT

All materials, appurtenances, and types of construction shall be in accordance with the Contract Documents and shall in no event be less than that necessary to conform to the requirements of

all applicable laws and regulations.

All materials and equipment to be incorporated into the Work shall be new, unused, and correctly designed. They shall be of standard first grade quality, produced by expert workmen, and be intended for the use for which they are offered. Materials or equipment which, in the opinion of the Engineer, are inferior or of a lower grade than indicated, specified, or required, will not be accepted.

Only "Asbestos-Free" materials shall be incorporated into the Work, unless the Contract Documents specifically call for otherwise. Material suspected of being Regulated Asbestos Containing Material (RACM), includes but is not limited to: thermal and acoustic insulation, joint compound, mastic, adhesive, vinyl floor tile and sheeting, ceiling tile, plaster, wall board, roofing felt, and shingle. Shop drawings for material or equipment suspected of being RACM shall list all contents, shall be noted "Asbestos-Free," and shall be screened by the Contractor prior to submittal to confirm that it is "Asbestos-Free." All materials delivered to the Project site shall have been approved through the shop drawing procedure and shall be in their original labeled and unopened containers.

In the event that asbestos-containing material installed by the Contractor is discovered either during construction, following completion of construction, or following acceptance of the Contract Work by the City and closeout of the Contract, it will be the responsibility of the Contractor to pay all costs incurred to remove and replace those materials, including repair or replacement of all adjacent materials which are affected by the abatement process.

1.20 MANUFACTURER

The names of proposed manufacturers, manufacturers' representatives, suppliers, and dealers who are to furnish materials, fixtures, equipment, appurtenances, or other fittings, shall be submitted by the Contractor to the Engineer for approval in accordance with the *Contract Standards, General Conditions "Article G-35 - Shop Drawings and Submittals"* to afford proper investigation and checking. No manufacturer will be approved for any materials, fixtures, equipment, appurtenances, or other fittings to be furnished under this Contract unless the manufacturer is of good reputation and has a plant of ample capacity. The Contractor shall, upon the request of the Engineer, be required to submit evidence that the manufacturer has manufactured a product similar to the one specified and that the product has been used for a like purpose for a sufficient length of time to demonstrate its satisfactory performance. All transactions with the manufacturer and subcontractors shall be through the Contractor.

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.

1.21 SAMPLES

The Contractor shall, when required, submit to the Engineer for approval, typical samples of material and appurtenances. The samples shall be properly identified by tags and shall be submitted sufficiently in advance of the time when they are to be incorporated into the Work so that rejections thereof will not cause delay. A letter of transmittal from the Contractor requesting approval shall accompany all such samples.

1.22 EQUIVALENT QUALITY

In the Contract Documents, whenever an article, material, apparatus, equipment, or process is called for by trade name or by name of a patentee, manufacturer, or dealer, or by reference to catalog of a manufacturer or dealer, it shall be understood as intending to mean and specify the article, material, apparatus, equipment, or process designated, or, upon approval of the Engineer, any equal thereto in quality, finish, design, efficiency, and durability, and equally serviceable for the purposes for which it is intended.

Whenever material or equipment is submitted for approval as being equal to that specified, the submittal shall include sufficient information and data to demonstrate that the material or equipment conforms to the Contract requirements. The decision as to whether or not such material or equipment is equal to that specified shall be made by the Engineer. Upon rejection of any material or equipment submitted as the equivalent of that specifically named in the Contract, the Contractor shall immediately proceed to furnish the designated material or equipment.

Neither the approval by the Engineer of alternate material or equipment as being equivalent to that specified, nor the furnishing of the material or equipment specified, shall in any way relieve the Contractor of responsibility for failure of the material or equipment, due to faulty design, material, or workmanship, to perform the functions required of them by the Contract Documents.

1.23 SERVICE OF MANUFACTURER'S REPRESENTATIVE

The Contract amount shall include the cost of furnishing a competent and experienced representative of the equipment manufacturer who shall assist the Contractor, when required, to install, adjust, test, and place in operation the equipment, in conformity with the Contract Documents. After the equipment is placed in operation, the representative shall make all adjustments and tests required by the Engineer to prove that the installed equipment is in proper and satisfactory operating condition. The representative shall instruct personnel designated by the Engineer in the proper operation and maintenance of such equipment.

1.24 MATERIAL AND EQUIPMENT DELIVERY AND STORAGE

In conformance with the *Contract Standards, General Conditions "Article G-22 - Material and Equipment Delivery"* and *"Article G-23 - Storage of Materials"* the Contractor shall deliver materials in ample quantities to ensure the most speedy and uninterrupted progress of the Work to complete the Work within the allotted time. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the Work of any related contractor. The Contractor shall provide space for storage of materials and equipment.

Materials stored along roads and rights-of-way shall be placed in a manner that will not endanger or restrict pedestrian or vehicular traffic.

1.25 WATER PURCHASE

Water used in connection with this Project may be purchased from the Water Resources Department, 1650 Third Avenue North, St. Petersburg, Florida, in accordance with the provisions of applicable ordinances, procedures, and regulations.

1.26 SPECIAL CONSIDERATIONS FOR WORK

A. Staging Area

The Contractor's use of any property for storage of materials, parking of trailers, employee parking, and other uses, shall be as shown on the Plans. If no area is designated, the Contractor shall submit a staging plan to the Engineer for approval prior to mobilizing to the site.

Contractors shall restrict operations to approved staging areas and parking areas. Use of unpaved areas for roadways and parking shall not be permitted unless approved in writing by the Engineer.

On-site, temporary fuel storage will not be allowed unless the method of storage is pre-approved in writing by the Engineer. All fuel storage shall be properly contained to prevent accidental spills from leaking into the surrounding environment.

B. Utilities

The Contractor shall provide telephone and sanitary facilities for his employees. Upon written approval of the Engineer, the Contractor may connect to existing plant electrical and water outlets, if not in use by the City, and if use of these utilities does not affect operation of the plant.

C. Employee Dress and Appearance

All Contractors, subcontractors, sales representatives, and their employees, shall be appropriately dressed. All workers and employees working at the plant shall wear shoes, pants, and shirts.

D. Unloading and Delivery of Materials and Equipment

The Contractor shall have adequate staff and equipment at the site to receive materials and equipment. City employees and City equipment shall not be used to assist the Contractor in receiving deliveries.

E. Use of City Facilities

Except as otherwise authorized in writing by the Engineer, the Contractor shall not use City telephones, restrooms, break rooms, or other facilities provided for City employees' comfort.

The Contractor shall not use the City's mailing address to receive mail. The City will not accept mail for the Contractor addressed to City offices or mail box.

F. Cleanup

Any waste or extra materials (including sandblast, rubble, brush, dirt, trash, sludge, packing crates, boxes, etc.), or equipment and materials replaced, will be the Contractor's responsibility for proper disposal. Disposal on-site or use of City dumpster may be allowed upon Contractor written request and upon receipt of written permission from the Engineer.

The Contractor shall do a thorough cleanup of the construction area daily.

All wire scraps, pipes, fittings, paper scraps, boxes, paint cans, scrap metal, and other scraps, shall be cleaned up daily. Metal scrap may be placed in the City's scrap metal dumpster located at the plant.

If the work is in an area of existing plant structures, the floors shall be swept clean and equipment that was soiled by the construction shall be dusted, on a daily basis.

Any damage to the existing work location, equipment, grass, landscaping, pavement, or surrounding structures, shall be restored to as good as or better condition by the Contractor as soon as the Contractor has completed work in the area of the damage, or as directed in writing by the Engineer.

G. Painting

1. All exposed interior and exterior pipes, conduits, and equipment shall be painted to protect the metal. The number of coats, mil thickness, etc., shall be as specified in the Contract Documents or Plans or as directed by the Engineer.
2. Unless otherwise specified, finished coating on new or reconstructed Work shall be painted to match the existing color coding. The existing color coding may be obtained from the Engineer upon request.
3. No lead base paint, including primer, may be used. All paint systems shall have low Volatile Organic Compounds (VOCs).
4. All coatings that come in contact with drinking water shall comply with Florida Administrative Codes and be approved by the United States Environmental Protection Agency (EPA), the NSF International, the Underwriters Laboratories Inc. (UL), or other FDEP/EPA approving agency. This approval must be in writing and a copy of the approval shall be submitted with the shop drawings.
5. Voids between beams, walls, tanks, slabs, and other steel or iron surfaces which would prohibit coating for rust protection must be sealed using an approved sealant.

H. Miscellaneous

1. The Contractor shall not assume that existing valves can be closed and drip-proof. After closing valves, the Contractor shall conduct adequate tests to determine the leakage of the valve and shall submit a procedure to the Engineer for handling this leakage during the shutdown period.
2. Coordination of the Contractor's work that requires special procedures of the plant operating personnel shall be shown on the Project Schedule and shall be reconfirmed with the Engineer 48 hours prior to the required special procedure. The Engineer reserves the right to deny or reschedule work, if such action is needed due to operating demands, personnel availability, or other factors that will impact the City's use of the facility. The Engineer may grant a time extension to the Contract period if rescheduling impacts the completion time.

1.27 FIELD OFFICE AND APPURTENANT STRUCTURES

A field office is not required for this project. If the Contractor elects to utilize a field office, the following requirements apply:

Any optional field office and appurtenant structures for use by the Contractor shall be temporary. Permanent facilities shall not be used for field offices or for storage. Structures may be new or used, but must be serviceable, adequate for the required purpose, and shall be in compliance with all applicable codes or regulations.

Any optional field office chosen by the Contractor shall not be located within temporary or permanent easements or street rights-of-way and shall be furnished, installed and maintained during the entire construction period by the Contractor at his own expense. Location of any temporary structure shall be approved by the Engineer prior to installation, providing such uses will not interfere in any manner with the construction of the Work or the operation of existing facilities. No payment for such facilities will be made by the City. The Contractor shall be responsible for all permits, leases, fees, and other costs associated with a field office.

All security requirements for such facilities shall be provided and maintained by the Contractor.

Before the Final Payment will be paid, and as directed by the Engineer, the Contractor shall clean up the area, remove any temporary facilities, finish grade, and restore the area to its original condition as determined by the Engineer.

1.28 TRUCK HAUL ROUTES

Haul routes to and from the work site shall utilize streets designated as truck routes as a first priority for the maximum possible distance. As a second priority, arterial or collector streets may be used. Residential streets shall be used for the least possible distance. The Contractor shall submit the intended truck haul routes for the Engineer's written approval prior to beginning the Work. The haul route submission(s) shall document the full length of the haul routes within the City Limits of St. Petersburg. All truck beds containing soil, aggregate, or other loose material shall be covered.

1.29 WORK IN STREETS AND HIGHWAYS

All Work within streets and highways shall be subject to the regulations and requirements of the appropriate agencies. Streets and highways are under the jurisdiction of the City of St. Petersburg, Pinellas County, and/or the Florida Department of Transportation for this Project.

Methods and materials of construction used in restoration within such streets and highways shall conform to the requirements, inspection, and approval of the duly authorized representatives of the appropriate agency having jurisdiction. Restoration Work shall include: removal and replacement of pavement, sidewalk, curb, and gutter; replacement of storm drainage facilities; excavation and backfilling; and storage of materials and equipment.

1.30 WORK ON PRIVATE PROPERTY

In the event that, in the opinion of the Contractor, obtaining a temporary construction easement outside the limits of the rights-of-way, of City-owned property, or of the easement(s) obtained by

the City is necessary or desirable, it shall be the sole responsibility of the Contractor to obtain such temporary easement from the owner of the property. If such easement is obtained by the Contractor, it shall contain provision to hold the City harmless from any operations of the Contractor within the easement limits. The Contractor shall not conduct construction operations on private property outside the limits of the rights-of-way, of City-owned property, or of the easement(s) obtained by the City unless a copy of the Temporary Construction Easement Agreement is filed with the Engineer.

Upon completion of Work in easements, the Contractor shall restore the property, including all fences or other structures disturbed by his operations, to as good as or better than the condition in which it was found at the start of the Project.

1.31 NEIGHBORHOOD NOTIFICATION

Not less than 7 days prior to the commencement of Work in the rights-of-way, the Contractor shall notify all residents and businesses along the construction route with an approved printed door hanger notice indicating the scheduled date of construction, the type of construction, and the Contractor's and Superintendent's name, address, and telephone number. The notice shall contain wording indicating that the property owners or businesses should remove from the rights-of-way any bush, flower, planting, landscaping materials, etc., that they wish to save. The door hanger text and a list of residents and businesses to which the notification has been delivered shall be compiled and submitted to the Engineer prior to the Contractor commencing Work in a particular block. After such notification, any such item remaining in the rights-of-way and requiring removal shall be removed and disposed of by the Contractor. Restoration of such items will not be required of the Contractor, except for sodding of disturbed yard and parkway areas. However, the Contractor shall exercise reasonable caution in order to avoid damaging such items where possible.

1.32 UTILITIES

Prior to construction, the Contractor shall familiarize himself with the location of all existing utilities and facilities within the Project Site and with the applicable provisions of the *Contract Standards, General Conditions "Article G-10 - Public Convenience and Safety"*.

The Contractor shall notify utility companies at least 48 hours, excluding Saturdays, Sundays, and legal holidays, prior to excavation. Utility companies shall be contacted by calling the utility notification center "Sunshine" at 1-800-432-4770. The City will furnish to the Contractor the available records of City utilities. The Contractor shall locate and mark all City utilities for his reference and for use by utility companies. The Contractor shall act as the City's agent for locating and marking City underground utilities within the Project limits, in accordance with the Florida Underground Facilities Damage Prevention and Safety Act (FS 556).

In all cases where existing utility lines may be interfered with by the Work, the Contractor shall give a minimum of 48 hours' notice to the owners of such utilities to permit them to relocate the lines prior to construction. Existing utilities will be shown on the Plans (City Atlas Maps, GIS maps and Intersection drawings) insofar as information is reasonably available. However, it will be the Contractor's responsibility to brace, preserve and protect all existing utilities whether shown on the Plans or not.

1.33 COORDINATION OF SERVICE INTERRUPTIONS

The Contractor shall provide at least 24 hours advance written notice to all customers to be affected by any work requiring disruption of access to their property or interruption of their water service or sanitary sewer service. Disruption in sanitary sewer service shall not exceed 4 hours.

1.34 SAFEGUARDING SURVEY MARKS

The Contractor shall safeguard all existing property monuments, benchmarks, and other survey marks adjacent to and within the Project limits, and shall bear the cost of re-establishing them if disturbed or destroyed.

1.35 TREE PROTECTION

Particular care shall be taken by the Contractor to protect trees during construction by erecting approved barricades to prevent unnecessary damage to trunk and roots during construction. Such barriers shall protect the area within the dripline.

The Contractor shall protect branches and roots to the maximum extent possible and prune branches and roots that interfere with construction in accordance with American Forestry Association Standards under the direction of an ISA certified arborist. The proof of registration of the certified arborist shall be provided to the Engineer. Trees that are trimmed shall be trimmed in a balanced shape around the full perimeter of the tree to obtain the best possible appearance, as directed. Roots over 2-inch diameter shall be preserved wherever possible. If root pruning is required, roots shall be cut cleanly.

Temporary soil deposits, concrete block, concrete wash, or solvents shall not be placed within the dripline. The grade within the dripline shall be preserved. If adjacent grade is altered, protective measures such as those described in the Florida State Division of Forestry "Tree Protection Manual for Builders and Developers" shall be constructed to protect the tree(s) from deleterious effects of the grade change.

The Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval from the Engineer. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.

Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment, dumping or other operations, protect such trees by placing boards, planks, or poles around them.

Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition. The Engineer will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and disposed of.

All scars made on trees by equipment, construction operations, or by the removal of limbs larger than one inch in diameter shall be coated as soon as possible with an approved tree wound

trimming. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears, under the supervision of a certified arborist. Tree trimming with axes will not be permitted. Climbing ropes shall be used where necessary for safety.

Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of a certified arborist, shall be immediately removed and replaced in kind and maintained until growth is assured. The Contractor's responsibility for removal shall include securing a tree removal permit and removal of the trunk and root ball to 24 inches below the ground. Replacement trees shall meet the requirements for tree planting in the right of way contained in the Contract and shall be guaranteed for one year. Such removal and replacement shall be entirely at the expense of the Contractor.

1.36 TREE REMOVAL, REPLACEMENT OR RELOCATION

As required by *St. Petersburg City Code "Chapter 16. Article XV. Division 5. Tree and Mangrove Protection"* a permit is required to remove any native tree or palm greater than 2-inch diameter measured 4.5 feet above the ground.

Upon receipt and review of any Plans and corresponding Field Order/Work Order(s), the Contractor shall respond in accordance with the time limits set forth under Technical Specifications Section 1.09 "Project Schedule Documentation" and Section 1.03 "Field Order / Work Order" and notify the City Inspector prior to commencing Work of any trees that may interfere with or prevent access to the Work and will require pruning or removal. The City may elect to perform this Work with its own forces, through a separate contract, or may request the Contractor to perform and coordinate any portion of this Work including the cost of any required permitting and all applicable provisions of said regulations or permit. Where requested, the Contractor shall secure such permit(s) at his own expense by contacting the City's Arborist at 727-893-4249. Payment for requested tree pruning and removal is not a part of the Pay Items in the Proposal, and the cost will be negotiated with the Contractor on an as-needed basis. Regardless of the entity performing the Work, the Contractor shall be responsible for scheduling an on-site meeting with the City Inspector, Certified Arborist who will perform or supervise the required tree Work, and the Contractor's Superintendent to review the work site, agree to needed scope, and mark which trees are to be pruned or removed. The Contractor shall not remove any trees without the approval of the Inspector.

The cost of tree removal and obtaining the tree removal permits shall be included in the cost of the appropriate associated Contract Pay Item under which the Work is to be performed. The Contractor shall remove trees as required and approved by the Engineer whether or not said trees are shown on the Plans. Trees that have to be removed, except for Australian pine, Brazilian pepper, punk, and other exempt species, shall be replaced as directed. Replacement trees shall be of native species at least 8-feet tall and at least 3-inch caliper diameter.

1.37 SALVAGED MATERIALS

The Contractor shall not proceed with demolition of existing materials or equipment without prior written approval from the Engineer for the method of disposal. All materials which are not returned to the City yard shall be disposed in an approved disposal site. The Engineer may request confirmation of the site's approval for disposal of the specific materials.

Salvaged materials shall be loaded on Contractor trucks and returned to the City's Water

Resources Complex, 1650 Third Avenue North, St. Petersburg, Florida. The City will designate the specific location at the yard for placement of salvaged materials by the Contractor.

The following materials shall be removed and returned by the Contractor:

- A. Fire hydrants, manhole frames and covers, inlet grates, and concrete catch basin covers shall be salvaged and each placed in a designated location at the City yard.
- B. Granite curb shall be salvaged, individually unloaded, and neatly placed at a designated location in the City yard.
- C. Red paving brick (free of asphalt) and sidewalk hexblock shall be palletized on City-furnished pallets and delivered to the City yard.
- D. Asphalt millings, if called for by the Engineer, shall be transported to the City yard and dumped in a pile at a designated location in the City yard.

1.38 SHOP, FIELD AND LABORATORY TESTING

The Engineer may require testing by certified personnel of certain materials to be incorporated in the Work, such as: soils density, pavement, concrete pipe and appurtenances, and welds. In the event any such testing is required by the Engineer, a detailed description will be found in these Contract Documents concerned with the specific item of Work.

Where reference is made in the FDOT-SSRBC for design mixes, tests of materials, or work performed, or where in the opinion of the Engineer, tests are required to ascertain compliance with the Specifications, the Contractor shall have such tests made by an approved testing laboratory. No additional payment will be made for these tests.

1.39 SOILS DENSITY TESTS

Soils density testing shall be performed by the City at no cost to the Contractor. Retesting of failed tests, in excess of ten percent of tests performed, shall be at the expense of the Contractor. The Contractor may have independent soils compaction tests performed, at no cost to the City; however, the results of these tests may not constitute a basis for acceptance or rejection of the Work.

All soils used in backfill shall be compacted with suitable equipment in layers as specified. Maximum density shall be defined as the oven-dried density in pounds per cubic foot of the soil at optimum moisture content as determined by the latest revision of AASHTO T180.

Prior to any backfill operation, a representative sample of the backfill material shall be taken by certified personnel, and tested in a certified laboratory as approved by the Engineer, to determine the relationship between the moisture content and density of the material when compacted in accordance with AASHTO T180.

When the densities and corresponding moisture contents for the sample material have been plotted as specified, a curve shall be produced. The moisture content corresponding to the peak of the curve shall be termed the "optimum moisture content" of the sample under the above described compaction.

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At least one representative sample, as described above, shall be taken thereafter for every significant observed change in soil characteristics or as ordered by the Engineer.

The maximum density of the representative sample as herein specified shall become the basis for determining the in-place percentage of maximum density required in the Technical Specification for the specific item of Work.

In-place density testing shall employ the use of nuclear equipment in accordance with the latest revision of AASHTO T238 Method B "Density of Soil and Soil-Aggregate in Place by Nuclear Methods."

In-place density shall be taken upon completion of each compaction layer or more often as ordered by the Engineer.

1.40 AS-BUILT RECORDS

As specified in the *Contract Standards, General Conditions "Article G-39 As-Built Drawings"* the Contractor shall:

- A. Keep and maintain one set of redline prints, As-Built Drawings, in good order and legible condition to be continuously marked-up at the job site, and shall be available for inspection by the Engineer at all times during the Project.
- B. Mark and annotate all Project conditions, locations, configurations and any other changes from the original Contract Documents, including revisions made necessary by Shop Drawings and Change Orders during the construction process.
- C. Record the horizontal and vertical locations, in the plan and profile, of all buried utilities that differ from the locations indicated or which were not indicated in the Contract Documents, and buried (or concealed) construction and utility features which are revealed during the construction period.
- D. Comply with requirements set forth in the Florida Administrative Code, Chapter 5J-17.

Project control points shall be shown on the drawings and noted in the following tabular format:

Point Number	Northing	Easting	Elevation	Description	Location Reference
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The basis of the horizontal and vertical control points and the respective datums shall also be referenced.

The final As-Built Drawings shall electronically update the original As-Bid Drawing in AutoCAD. All As-Built changes shall be made on a new layer as directed below:

<u>Layer Name</u>	<u>Layer Description</u>	<u>Color</u>
AB-SAN	All Sanitary As-Built Pipes, Structures and Text	Green
AB-STRM	All Stormwater As-Built Pipes, Structures and Text	Magenta

AB-WTR	All Water As-Built Pipes, Structures and Text	Blue
AB-REC	All Reclaimed As-Built Pipes, Structures and Text	Purple
AB	Any Additional As-Built Changes Required	Red

Prior to placing new potable water mains in service, the Contractor shall provide the Engineer intersection drawings, as specified, for the water mains.

1.41 PUMP AROUND PUMPING

A. General

The Contractor shall be responsible for the adequate and safe control of wastewater flows through the collection system where Work is being performed. Wastewater bypass pump around pumping shall consist of furnishing, installing, and maintaining all power, primary and standby pumps, storage tanks, transport, appurtenances and pump around piping required to maintain existing flows and services. Wastewater pump around pumping shall be done in such a manner as not to damage private or public property, or create a nuisance or public menace. The pumped wastewater shall be in an enclosed hose or pipe that is adequately protected from traffic, and shall be redirected into the wastewater collection system that has adequate capacity to accept the flow, or stored and transported for proper disposal. Dumping or free flow of wastewater on private property, gutters, streets, sidewalks, or into the stormwater system is prohibited. No wastewater shall be allowed to leave the approved collection system. The Contractor shall locate and configure his bypass piping to minimize any disturbance to traffic, access to adjacent property, and existing utilities, and shall obtain the approval of piping locations from the Engineer. The Contractor shall maintain existing traffic patterns and access to adjacent property by elevating or burying the bypass piping, or through the use of flow-through ramps, as approved by the Engineer. Under no circumstances can portions of the wastewater system be removed from service for periods of time in excess of that approved by the Engineer.

B. Submittals

The Contractor shall submit wastewater bypass pump around pumping and/or diversion plans for review and approval by the Engineer at least 14 days prior to the Work. In some cases, verbal confirmation of the plan and approval with the Engineer or City Inspector may be used in lieu of a written plan. The Contractor shall notify the City Inspector assigned to the project a minimum of 48 hours prior to commencing with the pump around operation. Failure to receive approval by the Engineer or City Inspector may result in the Contractor's work being halted at no cost to the City. The submittal shall include the following information:

1. Drawing/Sketch indicating the location of temporary plugs and pump around discharge lines. (the sketch shall include street names and City manhole ID numbers).
2. Capacities of pumps, prime movers, standby equipment and storage tanks.
3. Design calculations (when required) proving adequacy of pump around system and

selected equipment.

4. Corresponding traffic control plan (where applicable) in accordance with the article headed "Traffic Control" in this Section of the Technical Specifications.
5. Acoustical information of pumps to confirm compliance per the *Contract Standards, General Conditions "Article G-11 - Noise Abatement"*.
6. Emergency response plan in the event of failure of the pump around pumping system.

C. Job Conditions and Preparation

The Contractor shall be responsible to assess conditions and capacities of existing wastewater system in order to implement an acceptable pump around pumping plan at no additional cost to the City. The pump around pumping systems shall be of sufficient capacity to handle existing flows plus additional flows that may occur during periods of high tide or rainfall. The Contractor shall supply the necessary pumps, conduits, storage tanks, and other equipment to not only divert flow around the manhole or pipe section in which Work is to be performed, but also to transmit the flow into downstream wastewater system, pump stations, and/or wastewater treatment facility without surcharge or overflow. Backup of wastewater in lateral connections within the areas being rehabilitated is prohibited.

D. Wastewater Pump Around Pumping

The Contractor will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and pump around pumping systems. The Contractor shall retain full responsibility for adequately and safely pumping or transporting wastewater flow on a continuous basis. The Contractor shall take all necessary precautions including constant monitoring of pump around pumping to ensure that no wastewater backup or spill occurs.

Pumps shall be self-priming type or submersible electric, in good working order, with a working pressure gauge. All power must be supplied by the Contractor. All pumps used must be constructed to allow dry running for extended periods of time to accommodate the cyclical nature of wastewater flows. When pumping is in operation, all engines shall be equipped in a manner to keep the pump noise to a minimum and comply with the *Contract Standards, General Conditions "Article G-11 - Noise Abatement"*. Contractor shall provide stand-by pumps of adequate capacity and spare parts for pump(s) and piping shall be kept on site as required.

When pump around pumping operations are complete, piping shall be drained into the wastewater system prior to disassembly.

1.42 SUBSTANTIAL COMPLETION

The applicable items below must be accomplished in order to achieve Substantial Completion:

- A. All systems and components have been tested and are properly functioning.
- B. Utilities are connected and operating normally.
- C. Contractor has met acceptance conditions of all permits.

- D. Project is accessible for intended use and by normal traffic.
- E. Draft As-Built Drawings in an AutoCAD format provided to the City Inspector.

END OF SECTION

SECTION 2 - EXCAVATION AND BACKFILL

2.01 GENERAL

The Work in this section includes furnishing all labor, materials, tools, and equipment for excavation and backfill of roadways, sidewalks, curbs, driveways, pipelines, and structures. The Work also includes removing and disposing of leftover material, and furnishing and placing off-site fill.

Bidders shall examine the site of the Work, make their own additional soil borings and tests, and make their own determination of the character of materials and the conditions to be encountered on the Work; their Proposal shall be based upon their own investigation.

Standards referenced in this section are the latest revision of the following specifications:

AASHTO T 99	"Method of Test for Moisture-Density Relations of Soils Using a 2.5-Kg (5.5-lb) Rammer and a 305-mm (12-14) Drop"
AASHTO T 180	"Method of Test for Moisture-Density Relations of Soils Using a 4.54-Kg (10-lb) Rammer and a 457-mm (18-in) Drop"
ASTM C 33	"Specification for Concrete Aggregates"
ASTM D 1557	"Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort"
DOT-SSRBC Section 110	"Clearing and Grubbing"
DOT-SSRBC Section 120	"Excavation and Embankment"
DOT-SSRBC Section 901	"Coarse Aggregate"
DOT-SSRBC Section 902	"Fine Aggregate"
DOT-SSRBC Section 921	"Portland Cement and Blended Cement"
DOT-SSRBC Section 923	"Water for Concrete"
DOT-SSRBC Section 929	"Fly Ash, Slag, Microsilica and Other Pozzolanic Materials for Portland Cement Concrete"
FS 553.60-553.64	Florida Trench Safety Act Statute
29 C.R.R., S. 1929.650 Subpart P	OSHA Trench Excavation Safety Standard

2.02 TRENCH SAFETY

The Contractor shall be responsible for maintaining safety at each excavation. The Contractor shall adhere to the Florida Trench Safety Act (FS 553.60-553.64), OSHA trench excavation safety

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standards (29 CFR, Subpart P, 1926.650), and OSHA trench excavation shielding, sloping, or sheeting requirements. Inspections required by OSHA trench excavation safety standards shall be provided by the Contractor's "competent person," as defined by OSHA 29 CF, Subpart P, 1926. The Contractor's "competent person" shall be identified at the Project preconstruction meeting.

The Contractor certifies by submitting the bid and subsequently executing this Contract, that all trench excavation done within his control shall be accomplished in strict adherence with OSHA trench safety standards, the Florida Trench Safety Act, and public safety.

The Contractor also agrees to produce or obtain, prior to award of the subcontracts, identical certification from subcontractors who will perform trench excavation, and to retain such certification for at least three years following Final Acceptance.

The Contractor shall consider all available geotechnical information when designing the trench excavation safety system. If sufficient geotechnical information is not available, the Contractor may obtain such to support the requirements set forth above, at no additional cost to the City.

2.03 WORK IN WETLANDS, MANGROVES AND PRESERVATION AREAS

Strict adherence to all permits is required. Damage to wetlands, periodically wet areas, mangroves, and preservation areas is prohibited. Any such damage by the Contractor shall be duly rectified at no additional cost to the City and as approved by the regulatory agencies.

2.04 CLEARING AND GRUBBING

All clearing and grubbing Work shall conform to all applicable requirements of DOT-SSRBC Section 110 "Clearing and Grubbing" except as modified herein.

The Contractor shall remove only those trees and bushes necessary to complete the specified Work. Not all the trees and bushes have been located or shown on the Plans. The Contractor shall flag those trees and bushes to be removed. All other trees and bushes shall be protected as specified in Technical Specifications section headed "General," subsection headed "Tree Protection."

All roots, stumps and other debris shall be removed to a depth not less than 12 inches below a bearing surface. The disturbed surface shall be backfilled, graded, and compacted as specified.

No tree or bush shall be removed without the approval of the Engineer. The Contractor shall obtain all necessary City or County permits for each tree to be removed. Tree removal shall conform to the provisions of the Technical Specifications section headed "General," subsection headed "Tree Removal and Replacement."

2.05 ROADWAY EXCAVATION

The extent of excavation shall be as shown on the Plans or otherwise approved by the City, and shall include roadway excavation and/or filling and grading, together with the removal of trees, bushes, existing asphalt, concrete, or other material, as required to facilitate construction and restoration as directed by the City.

All excavation Work shall conform to all applicable requirements of DOT-SSRBC Section 120 except as modified herein.

2.06 TRENCH EXCAVATION

Mechanical excavation shall be terminated at least 2 inches above the proposed pipe bed and trench bottom, then shaped and compacted so as to provide uniform bearing on the barrel of the pipe. Particular care shall be taken to recess the bottom of the trench at the bell of the pipe to relieve the bell of all load.

A minimum trench width shall be maintained, allowing room for the jointing and proper compaction of the backfill. If material is encountered that is unsuitable in the opinion of the Engineer, it shall be removed by the Contractor and replaced with acceptable material compacted in place as specified. In the event the Contractor excavates below the elevation required without approval, the Contractor shall backfill with approved materials compacted to obtain a suitable trench bottom, all to the satisfaction of the Engineer and at no additional cost to the City.

The amount of open trench shall be limited so that no more than 100 feet of open trench in advance of the backfilling operation will remain at the end of that working day. All open trench shall be protected by the Contractor with barriers, warning devices, and traffic control devices, which shall be kept in the correct position, properly directed, anchored when required, and clearly visible at all times. The barriers, warning devices, and traffic control devices shall be suitably lighted at all times when vehicular traffic lights are required.

2.07 STRUCTURE EXCAVATION

Excavation shall be of the size and depth required for construction of structures and their foundations. Unsuitable material encountered shall be removed to the depth required to obtain sound foundation material or as ordered by the Engineer. Over-excavated areas shall be filled with approved backfill material compacted as specified, at no additional cost to the City.

Unsuitable existing soil shall be removed and replaced with compacted material, as approved by the Engineer and as specified in the subsection herein headed "Excavation of Unsuitable Material."

2.08 EXCAVATION OF UNSUITABLE MATERIAL

Unsuitable material shall include rock, concrete, and boulders. Unsuitable soft material shall include logs, muck, other soft soils, organic soils, and other soils as specified or as ordered by the Engineer to be unsuitable.

All excavation of unsuitable material shall conform to all applicable requirements of DOT-SSRBC Section 120 except as modified herein.

Unsuitable material encountered below or within the roadway stabilized subgrade, the trench bottom, or a structure bottom, shall be removed by the Contractor to the limits established by the Engineer and disposed of from the Work area at an approved disposal area. Unsuitable material shall be replaced with approved material and compacted as specified.

No additional payment will be made for backfill material obtained from any source and used to replace any unsuitable material except as otherwise specified. Limerock shall not be used as backfill material.

2.09 SHEETING, SHIELDING AND SLOPING

All excavations shall be properly sheeted, shielded, or sloped to the required slope to furnish safe working conditions, to prevent shifting of material, to prevent damage to structures or other Work, and to avoid delay to the Work, all in accordance with applicable safety and health regulations. The minimum sheeting and shielding for trench excavations shall meet the general trenching requirements of the Florida Trench Safety Act and OSHA standards.

The sheeting and shielding shall be of adequate strength and quantity for the purpose intended. Any sheeting extending below the level of above the top of pipeline shall be cut off as ordered by the Engineer and left in place. In addition, the Engineer may order the Contractor to cut off and leave in place any sheeting, shielding, or other approved support where required to protect construction, property, or existing facilities or utilities.

Damages resulting in the installation or removal of sheet piling shall be rectified by the Contractor at no additional cost to the City.

2.10 DEWATERING

All pipeline and appurtenances shall be laid entirely in a dry trench. All foundations and structure walls shall be constructed or installed in a dry excavation.

Before commencing any excavation at the site of the Work, the Contractor shall submit to the Engineer for review, the methods, equipment, and arrangement of facilities proposed for dewatering and disposal of water at the site and of all water entering any excavation or other part of the Work from any source whatsoever.

Water discharged from dewatering equipment shall be carried into surface drainage facilities, except water quality treatment systems, and shall not be discharged into sanitary sewer lines. The Contractor shall prevent water from puddling in streets or on private properties. The depositing of dirt in storm drains or ditches, and the staining of existing facilities, are not allowed.

Adequate standby facilities shall be provided to ensure that the excavation will be kept dry in the event of power failure or mechanical breakdown. Facilities for the removal and disposal of water shall be of sufficient capacity to keep the excavation dry under all circumstances with one-half of the facilities out of service. If well points are used, provision shall be made for removing and resetting individual well points without taking the system of which they are a part out of service.

The City reserves the right to require the Contractor to replace noisy equipment in order to keep disturbance to a minimum.

The cost of dewatering and disposal of water shall be included in the unit quantity for each appropriate item bid.

Refer to the Technical Specifications Section headed "General," subsection headed "Contaminants Containment/Disposition," for requirements concerning encountered groundwater contaminates.

2.11 BORROW MATERIAL

Any borrow excavation Work shall consist of the excavation and satisfactory utilization of material from areas provided by the Contractor when necessary material is not available from the normal

excavation or grading operations. This Work shall conform to DOT-SSRBC Section 120 except as modified herein.

If additional fill material is required, it shall be City approved material supplied and compacted by the Contractor. All compaction under roadway, alley, driveway, curb, walk, or other improved surface shall be to a density as specified. Unless otherwise directed by the City, all material not required for construction shall be removed from the premises and disposed of by the Contractor.

2.12 BEDDING MATERIAL

Where shown, ordered, or required, the Contractor shall place bedding material prior to placing pipelines, structures, or slabs. Bedding material may be either excavated approved native sand, concrete sand, gravel, or reclaimed concrete. Limerock is not allowed.

Off-site bedding material shall be sand or gravel. Sand bedding material shall be a clean concrete sand of uniform gradation between sieve sizes No. 4 and No. 50. All particles shall pass a 3/8-inch sieve and no particles shall pass a No. 100 sieve.

Gravel bedding material shall meet the requirements of ASTM C33 and shall be coarse aggregate, DOT Size No. 67 (3/4-inch to No. 4) or approved equal.

Reclaimed concrete bedding material shall be graded to meet the size requirements as specified for gravel bedding.

Bedding material, where required, shall be placed in lifts and compacted in a manner to achieve the specified density as described elsewhere.

If gravel or reclaimed concrete bedding is used, an impermeable groundwater barrier shall be placed at 100-foot intervals.

The impermeable groundwater barrier shall consist of a 10 mil sheet of polyethylene covering the full cross sectional area of the gravel, embedded 6 inches into the trench sides and bottom, and extending to the top of the bedding. The barrier shall be offset a minimum of 2 feet from any culvert or pipe joint. Ends and splice points shall be lapped a minimum of 12 inches.

2.13 STRUCTURAL SLAB BEDDING

Structural slabs for manhole bases, footings, and similar structures shall be placed on approved compacted bedding material and leveled as specified and/or as shown.

2.14 BACKFILL COMPACTION

All backfill shall be compacted as specified herein and shall meet the following minimum density as determined by the AASHTO T-180 method for backfill outside the rights-of-way and in City streets, and by the AASHTO T-99 method if in County or State rights-of-way.

AASHTO T-180 Method C or D will be used for stabilized subgrade and base compaction tests, and Method A or B will be used for backfill testing, or as directed by the Engineer or jurisdiction.

	<u>T-180</u>	<u>T-99</u>
Roadway stabilized subgrade	98%	N/A*
Roadway base	98%	N/A*

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Curb base	98%	N/A
Sidewalk and driveway base	98%	N/A
Pipe bedding	98%	100%
Pipe backfill - under pavement	98%	100%
Pipe backfill - under grass	95%	100%
Structure base slabs	100%	N/A
Structure backfill	98%	N/A

*Roadway stabilized subgrade and base material shall meet LBR requirements as specified in the Technical Specifications section headed "Roadway Construction," subsections headed "Stabilized Subgrade" and "Roadway Base."

Moisture content of backfill material shall be controlled in order that compaction occurs when the material is within +/- 2 percent of optimum as developed by the Modified Proctor moisture-density relationship set forth in ASTM D-1557. To control the moisture content, the Contractor shall mechanically rework or aerate the backfill material as necessary prior to compaction.

2.15 BACKFILLING OF TRENCH

Backfilling shall be accomplished with suitable material, and shall commence only after the pipelines have been laid and tentatively accepted by the City. The space between the pipe and the sides of the trench shall be packed full by hand-shoveled earth free from lumps or debris.

The backfill material shall be placed in 6-inch lifts and compacted, using approved tampers to the required compaction, to a point 12 inches over the top of the pipe. The remaining backfill (under areas other than roadways) shall be placed in uniform lifts not greater than 12 inches thick (or less as approved for mechanical equipment available) and tamped to the required compaction. Backfill under roadways shall be compacted in 6-inch lifts.

2.16 BACKFILLING STRUCTURES

Backfill around structures shall be of suitable job-excavated material, suitable off-site fill material, or other material approved by the Engineer. Such backfill shall extend from the bottom of the excavation or top of bedding to the bottom of pavement base course, the bottom of lawns or lawn replacement, the top of the existing ground surface, or to such other grades as may be shown or required.

The backfill shall be placed in uniform lifts not greater than 12 inches thick, and thoroughly compacted in place.

2.17 BACKFILLING UNDER ROADWAYS

Backfill placed under roadways and other paved surfaces shall be compacted in 6-inch lifts and thoroughly compacted in place, with suitable equipment as specified herein.

2.18 DISPOSING OF LEFTOVER MATERIAL

The Contractor shall bring the surface to the same level as existed prior to the excavation. All leftover material shall be hauled from the site and disposed of by the Contractor. Leftover material shall not be stored in or along rights-of-way or easements.

2.19 ADJACENT FACILITIES

The Contractor shall be responsible for the protection, removal, and replacement of all adjacent structures, utilities, trees, shrubbery, curbs, culverts, headwalls, fences, City-maintained signs, and other miscellaneous City-maintained structures encountered during the course of the Work.

2.20 TEMPORARY SUPPORTS

Temporary supports for 16-inch and larger pressure and gravity pipes shall be designed by the Contractor and submitted to the City as required by the *Contract Standards, General Conditions "Article G-35 - Shop Drawings and Submittals"*. Temporary supports that include a structural beam, or other such member(s), shall be designed, signed and sealed by a Professional Engineer.

2.21 FLOWABLE FILL

Where shown on the Plans, or where ordered by the Engineer, the Contractor shall backfill a void area or an excavation with flowable fill. Flowable fill may be shown, or ordered, to fill abandoned pipes, abandoned underground steel storage tanks, trench backfill, washout area under structural slabs or behind walls, or other similar locations.

Flowable fill shall be produced and delivered to the site. Placing of flowable fill shall be by chute, pumping, or other approved methods. Flowable fill shall be placed to the designated fill line without vibration. The Contractor shall take all necessary precautions to prevent any damage caused by hydraulic pressure of the fill during placement prior to hardening. Flowable fill shall not be used for pipe bedding and backfill in the zone from the bottom of a pipe to 12 inches above the top of pipe.

Flowable fill shall consist of materials conforming to DOT-SSRBC Sections as follows:

Cement (Type I or II)	Section 921	"Portland Cement and Blended Cement"
Fly ash (Type F)	Section 929	"Fly Ash, Slag, Microsilica and Other Pozzolanic Materials for Portland Cement Concrete"
Fine aggregate (sand)	Section 902	"Fine Aggregate"
Water	Section 923	"Water for Concrete"

The Contractor shall submit a proposed flowable fill design mix that will produce a flowable fill meeting the strength requirements specified herein, using the following materials:

	<u>Pounds per cubic yard</u>
Cement (Type I or II)	50 - 200
Fly ash (Type F)	0 - 2,000
Fine aggregate (sand)	2,500 - 3,000
Water	325 - 550

Note: 6-inch to 10-inch slump

Flowable fill material shall be proportioned to produce a 28-day compressive strength approximately as follows:

	<u>Pounds per square inch</u>
Pipe trench backfill	50 - 150

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Fill abandoned pipes or tanks	30 - 150
Under slabs, behind walls	300 - 1000

Note: Density in place 115 to 145 pounds per cubic foot.

Not more than 60 minutes shall elapse between the start of moist mixing and the placement of the flowable fill.

Flowable fill placed on slopes shall have a reduced slump with a reduction in water, and shall be able to be shaped as required.

The Contractor shall place the flowable fill in such a manner as to eliminate all cavities.

Flowable fill shall not be placed in salt water. When within a tidal area, the flowable fill shall be placed immediately after the salt water has receded.

When flowable fill is used adjacent to ductile iron pipe, the pipe shall be polyethylene encased.

END OF SECTION

SECTIONS 3 THROUGH 9 -- NOT USED

SECTION 10 - SANITARY SEWER CONSTRUCTION

10.01 GENERAL

The Work in this section includes construction of sanitary sewer gravity pipes, force mains, manholes, and appurtenances.

Sanitary Sewers are to be constructed at locations indicated on the Plans. The City reserves the right, however, to make minor changes in grade and/or alignment as the Work progresses.

All Work shall be fully completed within the established limits as outlined for the various Pay Items listed in the Proposal. It is not the intent of the City to allow additional compensation for obstructions, interferences, or similar contingencies on this Project.

All force main pipe and fittings shall be furnished and installed in accordance with the applicable requirements of the Technical Specifications sections headed "Piping Materials: Ductile Iron Pipe," "Piping Materials: PVC Pressure Pipe," "Piping Materials: Miscellaneous," and "Pressure Pipe Construction."

At the ends of the sections where adjoining pipelines have not been completed and are not ready to connect, temporary bulkheads or plugs (as specified herein) approved by the Engineer shall be installed. All such bulkheads or plugs shall be removed when they are no longer needed or when ordered by the Engineer.

All pipelines shall be tested and closed circuit television video (CCTV) inspected. Any leak or defect shall be repaired and re-televised. Tests shall be conducted in accordance with these Specifications.

PVC pipe for gravity sewers shall be tested for allowable deflection. Tests shall be conducted in accordance with the requirements of these Specifications.

Connections between dissimilar gravity pipe materials or diameters shall be made as specified herein.

Connections between pressure pipes shall be made with solid sleeves as specified herein.

The ends of all new sanitary laterals shall be marked by witness posts or protruding galvanized pipe, as directed by the Engineer. Witness posts shall be 4-inch diameter PVC pipe filled with concrete; 4 to 5 feet of the pipe shall be exposed and wrapped with green tape. The 1-inch diameter galvanized pipe shall protrude 1 inch above grade.

The following Standards are referenced in this section:

ASTM C 12	"Practice for Installing Vitrified Clay Pipe Lines"
ASTM C 76	"Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe"
ASTM C 443	"Standard Specification for Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets"

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ASTM C 478	"Standard Specification for Precast Reinforced Concrete Manhole Sections"
ASTM C 1107	"Standard Specification for Packaged Dry, Hydraulic-Cement Grout (NonShrink)"
ASTM D 2321	"Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications"
ASTM D 3034	"Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings"
ASTM D 3753	"Standard Specification for Glass-Fiber-Reinforced Polyester Manholes@
ASTM F 477	"Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe"
ASTM F 679	"Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings"
UNI-B-6-98	"Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe" Uni-Bell Plastic Pipe Association, Dallas, Texas

10.02 DATA TO BE SUBMITTED

The Contractor shall submit shop drawings in accordance with the *Contract Standards, General Conditions "Article G-35 - Shop Drawings and Submittals"*, for the following materials:

- Piping materials
- Fittings and couplings
- Grouting rings
- Pipe-to-manhole connectors
- Precast manholes
- Fiberglass manholes
- Castings
- Wall sleeves
- Special construction methods
- Interior cementitious coating (including applicator's certification from manufacturer)

10.03 MATERIALS

All materials shall be furnished by the Contractor, unless otherwise noted on the Plans. All materials shall be new and of the best quality available. Materials not specifically specified shall confirm to applicable provisions of the DOT-SSRBC.

- A. **Piping Materials:** Sanitary sewer pipe shall either be green in color or shall be white with continuous colored green ink lettering or shall be continuously painted green along the top 1/3 of the pipe with 2-part high build epoxy-polyamide paint. All sanitary sewers shall be installed accompanied by green colored metallic identification tape laid 1 foot above the pipe, cut every 10 feet.

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1. Ductile iron pipe and fittings for force mains or gravity sewers shall conform to the Technical Specifications section headed "Piping Materials: Ductile Iron Pipe."
2. PVC gravity sewer pipe and fittings 4-inch through 15-inch, intended for non-pressure service, shall comply with ASTM D 3034, Type PSM; a dimension ratio of SDR 26 and a minimum pipe stiffness of 115 psi shall be used. Joints and gaskets shall comply with ASTM F 477. PVC fittings for use on 4-inch through 15-inch PVC pipe shall be Harco Gasketed PVC Sewer Fittings as manufactured by Harrington Corp. or approved equal.

PVC gravity sewer pipe and fittings 18-inch through 27-inch, intended for non-pressure service, shall comply with ASTM F 679, with T-1 wall thickness and a minimum pipe stiffness of 46 psi. Joints and gaskets shall comply with ASTM F 477.
3. PVC pressure pipe and fittings for force mains or gravity sewers shall conform to the Technical Specifications section headed "Piping Materials: PVC Pressure Pipe." Fittings shall be PVC or ductile iron as specified, as directed by the Engineer.
4. High Density Polyethylene (HDPE) profile wall pipe, and Corrugated High Density Polyethylene (CHDPE) pipe for gravity sewers shall conform to the Technical Specifications section headed "Piping Materials: Miscellaneous."
5. High Density Polyethylene (HDPE) pressure pipe for force mains shall conform to the Technical Specifications section headed "Piping Materials: Miscellaneous."
6. Fiberglass Reinforced Polymer Mortar Pipe (FRPMP) for micro-tunneling (18-inch and larger) and gravity sewer mains (28-inch through 48-inch) shall conform to Technical Specifications section headed "Piping Materials: Miscellaneous."

B. Other Materials

1. Castings for manholes and cleanouts shall be cast iron of the sizes, shapes, and catalog references shown on the Plans. Where no reference is made on the Plans, castings shall be equivalent in quality to those manufactured by U.S. Foundry. Unless otherwise noted, all castings shall be designed for an HS-20 truck loading. Castings shall be marked "Sanitary Sewer."
2. Concrete, reinforcing, and masonry for precast, cast-in-place, or site assembled manholes and structures shall conform to the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel."
3. Precast manholes shall be manufactured as specified herein and in accordance with the sizes and details shown on the Plans, and with the approved shop drawings.
4. Fiberglass Reinforced Polyester (FRP) manholes shall be manufactured in accordance with ASTM D 3753, the sizes and details shown on the Plans, and the approved shop drawings.

10.04 CONNECTIONS TO EXISTING SANITARY SEWERS

The Contractor shall connect new sanitary sewers to existing sanitary sewers as shown on the Plans and as specified.

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All connections to existing sanitary sewers shall be by Flex-Seal Adjustable Repair Coupling Series MR-ARC with Series 316 stainless steel shear rings as manufactured by Mission Rubber Company or approved equal. All couplings shall be centered between pipe ends and shall be tightened at both ends by Series 316 stainless steel clamps or approved equal.

The Engineer shall be notified at least two working days prior to making final connections. The time at which the connections are to be made shall be subject to approval by the Engineer.

10.05 CONSTRUCTION OPERATIONS

Pipes shall be laid in open cut, except when another method, such as jacking, augering, directional drilling, or tunneling, is shown on the Plans, specified, or ordered.

- A. No excavations shall be left open over a weekend. All pavement openings shall be completely repaired within seven days of opening.
- B. Sanitary sewers may be constructed in short tunnels to protect trees, shrubs, and existing surface or subsurface utilities and structures. Short tunnels shall be constructed to the lengths shown on the Plans, specified, or directed by the Engineer. No separate payment will be made for short tunnels.
- C. Temporary fences, where required, shall be "wood and wire fence" or other suitable fencing as approved by the Engineer.
- D. In the course of the Work, it will be necessary to install the sanitary sewer under or closely adjacent to existing culverts and other storm and water main facilities. Where so indicated on the Plans, the Contractor shall remove storm drains to permit construction of the sanitary sewer and shall then reconstruct the storm drain. Where removal and reconstruction are not indicated on the Plans, the Contractor shall protect all existing storm and water main facilities which are shown on the Plans or located in the field during the course of the Work.
- E. Sewers crossing water mains may be required to be constructed of ductile iron pipe, PVC pressure pipe, or heavy wall PVC pipe (SDR 26) as ordered by the Engineer, to conform to DEP and Pinellas County Public Health Unit requirements.

Sanitary sewers and service laterals which cross under the new water pipe with less than 18 inches clear vertical separation, or which cross over the new water pipe, shall be replaced with ductile iron pipe or PVC pressure pipe, or heavy wall PVC pipe (SDR 26) for 10 feet on both sides of the new water main, or as directed by the Engineer.

- F. All ground surfaces disturbed by the Contractor shall be restored to their original condition in conformance to City Standards and to the Technical Specifications section headed "Surface Restoration."
- G. Sanitary sewers shall not be cut or pumped around without an approved sanitary sewer pump-around plan and submittal of same, a minimum of 72 hours prior to implementation, to the Water Resources Department Dispatch, 727-893-7261. The pump-around plan shall include size of pipes and pumps, and discharge location.

10.06 LAYING AND JOINTING PIPELINES

- A. Ductile iron pipelines, PVC pressure pipelines, and HDPE pressure pipelines for force mains

shall be laid and jointed as specified in the Technical Specifications section headed "Pressure Pipe Construction." Retainer glands used for PVC force mains shall be UL listed or FM approved and shall have factory certification for pressures up to 188 psi.

- B. PVC, concrete, and FRPMP gravity pipelines shall be laid in conformance to applicable requirements of ASTM C 12 for concrete pipe, ASTM D 2321 for PVC pipe, and ASTM D 3262 and D 4161 for FRPMP.
- C. **Line and Grade:** Sewers shall be laid to exact line and grade using approved methods consistent with common practice and approved by the Engineer. All line and grade controls shall be furnished by the Contractor.
- D. **Pipe:** Before the pipe is jointed in the trench, the outside of the spigot end and the inside of the bell shall be thoroughly cleaned, wiped, and brushed out to ensure that no dirt or foreign material gets into the finished line. Each pipe shall be inspected for defects and cracks prior to being lowered into the trench. Any cracked or otherwise rejected pipe shall be immediately removed from the site. All pipeline work must be performed in the presence of the Engineer. When work is not in progress, water shall be kept out of the pipe, and the pipe shall be kept closed by means of a test plug.
- E. **Service Connections:** Service lateral connections shall conform to City Standard Details and shall be installed as indicated or as directed by the Engineer. The Contractor shall locate and record the exact position of such service lateral connections and include actual data on the As-Built Drawings to be furnished to the City.
- F. **Watertight Plugs:** Watertight plugs of an approved type shall be installed in the ends of all pipe at times when pipe laying is not in progress or as ordered to prevent any contaminated material or vermin from entering the pipe.
- G. Excavation and backfilling shall conform to the Technical Specifications, Section 2 - "Excavation and Backfill."

10.07 MANHOLE CONSTRUCTION

- A. **Brick Manholes:** Brick manholes shall be constructed in accordance with the details shown on the Plans and these Specifications. Twenty-four hours shall elapse between the pouring of the slab and the beginning of laying the brick work.
 - 1. **Base Slabs:** Bases shall be cast in place on a level, compacted trench bottom.
 - 2. **Mortar:** Brick shall be laid in mortar that has been machine mixed for a minimum of 1.5 minutes before water is added, and then mixed until a homogeneous mixture is obtained. Mortar of improper consistency and/or partly set shall not be used in the Work. The brick shall be laid with 3/8-inch nominal mortar joint, and care shall be taken to produce true and smooth alignments, particularly for the inside surfaces.
 - 3. **Brick:** Clay brick shall be as specified in the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel."
 - 4. **Exterior and Interior Brick Surface:** Exterior and interior brick surface of manholes shall be given a 3/4-inch application of cement plaster. This plaster shall be the same type mix as the mortar in which the bricks are laid, and it shall be applied in 2 applications. Any

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visible seepage through the manhole walls shall be corrected by the Contractor.

5. **Inverts:** Inverts shall be formed using poured-in-place concrete conforming to the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel" and shall have a minimum strength of 2,500 psi. Invert pipe (stub out) shall not extend more than 6 inches outside manhole walls (as measured to back of bell), and shall be grouted with the same mortar used for making mortar joints.
 6. **Exterior Epoxy Coating:** A protective coal tar epoxy coating of Carbolite (formerly Kop-Coat) Bitumastic 300-M, or approved equal, shall be applied to the exterior surfaces of manholes. One coat shall be applied to the outside and shall yield a final dry film thickness of 9 mils.
 7. **Interior Cementitious Coating:** A dense and durable concrete lining of 100 percent pure fused calcium-aluminate cementitious lining of SewperCoat PG as manufactured by Kerneos Inc., shall be applied in accordance with manufacturer's recommendations, to all interior surfaces of manholes including walls, benches, flow channels, and inverts. Lining shall have a final minimum thickness of 1/2 inch.
 8. **Manhole Wall Penetrations:** New brick manholes shall have a grouting ring. New wall penetrations and repair penetrations, for connections to existing manholes, shall be core-drilled and a grouting ring shall be installed. Grouting ring shall be WS Series Waterstop Grouting Ring as manufactured by Press-Seal Gasket Corporation or Engineer approved equal. Installation shall be in accordance with manufacturer's recommendations. Non-shrink grout shall comply with ASTM C 1107. Material shall be 1107 Advantage Grout manufactured by Dayton Superior, Burke Multi-purpose Grout as manufactured by Burke Company, or approved equal.
- B. **Precast Concrete Manholes:** Precast manholes shall be constructed in accordance with the details shown on the Plans. Full shop drawing information including design, materials, fabrication details, and installation methods of the proposed precast manholes shall be submitted to the Engineer as specified.
1. **Base Slabs:** Base slabs for precast manholes 48-inch in diameter shall have a minimum thickness of 8 inches as detailed on the Plans. The diameter of the base slab shall be as detailed on the Plans. Reinforcement shall be placed with 2 inches of concrete cover over the top row of steel. Base slabs for precast manholes shall be cast with the lower manhole section and placed on a level, compacted trench bottom.
 2. **Riser Sections:** Riser sections, grade rings, and tops shall comply with ASTM C 478 with the exception that Article No. 11 shall be deleted. Base riser sections shall be provided with preformed pipe holes to fit the connectors. The tops of pipe holes shall not be within 4 inches of the bell or socket portion of the riser.
 3. **Riser Joints:** Riser joint shall conform to ASTM C 443, to the manufacturer's recommendations and as shown on the Plans. Riser shall be jointed with rubber, plastic, or preformed bituminous joint sealing compound equal to Ram-Nek as manufactured by K.T. Snyder.
 4. **Manhole Sizes:** Manhole sizes up to 10 feet in depth (invert to bottom of brick adjustment ring) shall be a minimum of 48-inch inside diameter for 18-inch diameter and smaller pipe. Manholes over 10 feet in depth shall be the specified diameter for a minimum of 6 feet

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above the manhole invert; the remaining portion may, at the Contractor's option, be reduced to 48-inch diameter. In no case shall the manhole diameter be less than that required to adequately enclose the sewer pipe.

5. **Tops:** Tops shall have a minimum opening 24 inches in diameter for pipes 18-inch and smaller and 32-inch minimum for pipes 21-inch and larger, with an 8-inch wide flange at the top. For Type I manholes, only concentric cones are acceptable.
 6. **Top Grades:** Top grades of precast manholes shall be established so that a minimum of 3, but no more than 6, courses of brick are placed under the ring and cover casting.
 7. **Inverts:** Inverts shall be formed using poured-in-place concrete conforming to the Technical Specifications section headed "Concrete, Masonry and Reinforcing Steel" and shall have a minimum strength of 2500 psi.
 8. **Drop Inlets:** Drop inlets shall be provided where directed by the Engineer or shown on the Plans, and such drop inlets shall conform to details shown on the Plans.
 9. **Exterior Epoxy Coating:** Coating shall be applied to the outside surfaces of precast manholes as specified for brick manholes.
 10. **Interior Cementitious Coating:** Coating shall be applied to the inside surfaces of precast manholes as specified for brick manholes.
 11. **Manhole Wall Penetrations:** Manhole wall penetrations for precast manholes shall be as specified for brick manholes.
 12. **Pipe-to-Manhole Connections (for New Precast):** Pipe-to-manhole connections shall be made with a flexible watertight connector such as Kwik Seal or PSX: Positive Seal as manufactured by Press-Seal Gasket Corporation, or Kor-N-Seal I connectors for pipe sizes up to 15-inch and Kor-N-Seal II connectors for pipe sizes 15-inch through 30-inch as manufactured by NPC Inc. Pipe-to-manhole connection shall be installed by the precaster for new manholes, unless specified otherwise.
- C. **Fiberglass Reinforced Polyester (FRP) Manholes:** The construction of FRP manholes shall conform to the details on the Plans. Full shop drawing information including design, materials, fabrication details, and installation methods of the proposed fiberglass manholes shall be submitted to the Engineer as specified.

FRP manhole shall be a one piece unit consisting of a watertight base and corbel section with a concentric cone, as manufactured by LF Manufacturing, Containment Solutions, or an approved equal.

A minimum wall thickness of 0.318 inch shall be used for 48-inch diameter manholes. A minimum wall thickness of 0.50 inch shall be used for manholes larger than 48-inch diameter.

All manholes shall have a U/V inhibitor that is homogeneous with the resin mixture.

All FRP manholes shall have a minimum 20 year manufacturer=s warranty against corrosion and structural defects.

All FRP manholes shall have a minimum AASHTO HS-20 axle loading.

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1. **Base Slabs:** FRP manhole base slabs shall be precast or cast-in-place concrete and shall conform to the thickness specified in the details on the Plans. Cast-in-place concrete base slab reinforcement shall be placed with 3 inches of concrete cover in accordance with the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel."

Cast-in-place base slabs for FRP manholes shall be cast in place on a level, compacted bottom.

2. **Watertight Bottom:** The FRP manhole shall have a resin fiber-reinforced bottom and a 2 and 1/2-inch-wide anti-floatation flange as a homogeneous part of the bottom section. The manhole bottom shall be a minimum 1/2-inch thick.

For FRP manhole depths greater than 10 feet, the manufacturer shall install a minimum of two 1 and 1/2-inch-deep by 3 and 1/2-inch-wide stiffening ribs. Stiffening ribs shall be completely enclosed with resin fiber-reinforcement.

3. **Anchors and Washers:** FRP manholes shall be anchored to the cast-in-place concrete base slab with 316 stainless steel Kwik Bolt II Wedge anchors and washers as manufactured by Hilti, or approved equal. The size, number of anchors, and embedment depth shall be as shown on the Plans. The anchors shall be installed a minimum of 1 and 1/2 inches from the outer edge of the anchoring flange and shall be equally spaced around the circumference of the manhole bottom.
4. **Manhole Height:** No fiberglass manhole shall have less than 4 feet clear inside height (measured from invert of bench to finished grade.)
5. **Inverts:** Inverts shall be as shown on the Plans.

A concrete invert may be formed in the field using poured-in-place concrete conforming to the Technical Specifications section headed "Concrete, Masonry, and Reinforcing Steel" and shall have a minimum strength of 2,500 psi.

6. **Stub Outs:** FRP stub outs shall be installed as shown on the Plans or directed by the Engineer, in accordance with approved shop drawings.

Pipe-to-manhole connectors for new manholes shall be installed by the FRP manhole manufacturer, unless specified otherwise. Connections for 4-inch through 15-inch pipe shall be made with a Kor-N-Seal boot as manufactured by NPC Inc., or approved equal, and laminated sleeve, as shown in the details on the Plans. Connections of 18-inch and larger shall be with a Link-Seal connector as manufactured by Pipeline Seal & Insulator Inc., or approved equal, and laminated sleeve as shown on the details on the Plans.

Laminated sleeves shall be formed using resin and fiberglass of same type and grade as used in the fabrication of the fiberglass manhole. Laminated sleeves may be factory installed or field installed. Field installation shall be by a manufacturer's certified representative or a Contractor-certified person.

All holes cut into the FRP manhole shall be by core methods recommended by the manhole manufacturer. A minimum of 12-inch clear wall between cutouts shall be maintained in all directions for each cored hole.

10.08 TESTING OF SEWER PIPELINES

A. Pressure Pipelines

Pressure sanitary sewer pipelines shall be tested in accordance with the applicable requirements of the Technical Specifications section headed "Pressure Pipe Construction." Pressure sanitary sewer pipelines shall not be disinfected.

B. Gravity Pipelines

1. Gravity pipelines shall be tested for infiltration, exfiltration, deflection, or low pressure air test, at the Engineer's direction. The Contractor shall provide a closed circuit television video camera inspection, in the presence of the City (or engineer) for all sanitary sewer pipe repairs and all new sanitary sewer construction. The video tape, CD, or DVD shall include time and date, footage, and audio describing any pipe abnormality; also, a CCTV inspection log shall be provided with each completed inspection. Any sewer pipeline found to be unacceptable by the Engineer shall be corrected, repaired, or replaced as directed by the Engineer, at no additional cost to the City.
2. **Infiltration Test:** Upon completion of a section of sewer line, a test for infiltration shall be conducted as directed by the City Inspector. Dewatering of the line to be tested shall terminate at least 2 days prior to the infiltration test. The maximum infiltration allowed in a 24-hour period shall not exceed 200 gallons per inch of diameter per mile of sewer from any section between successive manholes. If the infiltration exceeds the allowable limits, the line shall be further checked and repaired by the Contractor until the infiltration requirements have been met. If any particular location indicates concentrated infiltration, such location shall be investigated and corrected regardless of the overall infiltration requirement.

Groundwater level measuring pipes shall be installed at manholes. The groundwater level shall be measured prior to testing. If the groundwater level is at least 2 feet above the highest section of the work being tested, infiltration methods of measurement shall be used. If there is insufficient groundwater head to perform infiltration testing, exfiltration tests will be made.

3. **Exfiltration Test:** If, in the opinion of the City Inspector, the position of a sewer line is above the normal groundwater table, the Engineer may direct the Contractor to perform an exfiltration test. The maximum allowable exfiltration during a 24-hour period shall not exceed 200 gallons per inch of diameter per mile of sewer from any section between successive manholes. An allowance of an additional 10 percent of gallonage shall be permitted for each additional 2 feet of head over a basic 2-foot minimum internal head.

The exfiltration test shall be performed by plugging the upstream and downstream manholes of the test section, filling the line with water, and maintaining a minimum of 2 feet head of water in the section of line being tested. The rate of exfiltration shall be calculated from the water level drop in the upstream manhole during the 24-hour test period.

4. **Low pressure air test:** At the direction of the City Inspector or Engineer, each pipeline reach may alternatively be tested with air pressure (minimum 3.5 psi, maximum 5 psi) in accordance with UNI-BELL UNI-B-6-98 "Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe." The system passes the test if the pressure drop due to

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leakage through the pipe or pipe joints is less than or equal to 0.5 psig over the time period described below.

Minimum time period for a 0.5 psig pressure drop

The time period for the test shall be calculated from UNI-B-6-98 as follows:

- T = 28.33 DK,
T = Shortest time, in seconds allowed for the air pressure to drop 0.5 psig,
K = .000419 DL, but not less than 1.0,
D = Nominal pipe diameter in inches, and
L = Length of pipe being tested in feet.

5. **Deflection Test:** Prior to final acceptance of the Project, all PVC pipelines shall be deflection tested. The Contractor or a City-approved test lab shall perform the deflection testing at the expense of the Contractor. The deflection test shall be performed a minimum of 7 days after the base has been compacted and sealed.

The PVC pipe/soil system has been designed so that the maximum installed deflection does not exceed 5 percent and 7.5 percent of the base inside diameter of the pipe as listed in the following table:

<u>Nominal Size</u> (inches)	<u>Base Inside Diameter</u> (inches)	<u>5% Deflection after 7 Days Mandrel</u> (inches)	<u>7.5% Deflection after 30 Days Mandrel</u> (inches)
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ASTM D 3034 SDR-26

8	7.488	7.11	6.93
10	9.342	8.87	8.64
12	11.102	10.55	10.27
15	13.575	12.90	12.56

ASTM F 679 TYPE T-1

18	16.976	16.13	15.70
21	20.004	19.01	18.50
24	22.480	21.36	20.79
27	25.327	24.06	23.43

ASTM F 679 TYPE T-2

18	17.054	16.20	15.77
21	20.098	19.09	18.59
24	22.586	21.46	20.89
27	25.446	24.17	23.54

The Contractor shall have the option of testing for 5 percent deflection after the base has been compacted and sealed for 7 days; or for 7.5 percent deflection after the base has been compacted and sealed for 30 days.

If the pipe fails the 7-day, 5 percent deflection test, the Contractor shall immediately

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conduct a 7.5 percent deflection test. If the pipe passes the 7.5 percent deflection test, the Contractor has the option of repairing that section at that time or waiting until a minimum of 30 days after the base has been compacted and sealed and then re-testing for a maximum of 7.5 percent deflection.

If the pipe fails the 7.5 percent deflection test after 7 days or at 30 days, the Contractor shall repair that section immediately.

If the Contractor performs the deflection testing rather than employing a City-approved test lab, the following shall apply:

- a. The Contractor shall furnish the mandrel, labor, materials, and equipment necessary to perform the tests as approved by the Engineer. The mandrel shall be pulled through by hand or a hand operated reel in the presence of the Engineer. Prior to performing the deflection tests, the Contractor shall submit to the Engineer certification that the 9-arm mandrels are preset as stated above. Each mandrel shall be engraved with the following:
 - Serial Number
 - Nominal Pipe Diameter
 - Either "ASTM D 3034" year, "SDR-26", or "ASTM F 679" year; and either "Type T-1" or Type T-2"
 - Percent deflection as stated above
- b. If the mandrel fails to pass any section of pipe, the Contractor shall excavate and make all repairs (section replacements) necessary to correct the excessive deflection. The Contractor shall then backfill, re-compact, reseal the permanent pavement base, and retest the line. If the mandrel fails to pass a second time, the affected section shall be replaced. Re-rounding shall not be permitted.

END OF SECTION

SECTIONS 11 THROUGH 12 -- NOT USED

SECTION 13 - SURFACE RESTORATION

13.01 GENERAL

The Work in this section includes restoring and maintaining pavements and pavement bases, curbing, sidewalks, driveways, and grass surfaces that are disturbed, damaged, or destroyed during the course of the Work under this Contract.

The quality of workmanship and materials used in the restoration shall produce a surface equal to or better than the condition before the Work began.

Prior to restoration, the Contractor shall saw cut and remove all existing pavement within 2 feet of the edge of the excavation, or within such widths as may be ordered by the Engineer.

Compaction of soil and base materials shall be tested using the AASHTO T 180 method.

Surface restoration workmanship and materials shall conform to the applicable sections of the DOT-SSRBC.

All dirt areas disturbed shall be restored with sod, unless otherwise specified.

The City reserves the right to delete any or all of the restoration work.

13.02 ROADWAY RESTORATION

Where the installation of pipe or structures occurs within an existing roadway, the limits of excavation shall be saw cut leaving a straight and square edge. The upper portion of the trench backfill shall be replaced with a compacted shell, crushed (reclaimed) concrete, or limerock base as shown on the Plans, and paved to match the surrounding surface. Replacement base material shall be the same as the existing base. Roadway restoration shall conform to the detail for "Flexible Pavement Restoration."

13.03 TEMPORARY PAVEMENT

Immediately upon completion of backfilling, the pavement surfaces damaged or destroyed shall be temporarily restored by placing a shell (DOT-SSRBC Section 913), crushed (reclaimed) concrete (DOT-SSRBC Section 204 applicable sections), or limerock (DOT-SSRBC Section 911) base on the backfilled, compacted subgrade, and an adequate temporary asphaltic patch as shown or as approved by the Engineer. Shell, crushed (reclaimed) concrete, or limerock shall be used as a base for all bituminous pavements.

Temporary work shall be maintained in a suitable and safe condition for traffic until the permanent pavement is laid or until final acceptance of the Work.

13.04 SHELL BASE

Shell base shall be constructed on the prepared subgrade to not less than 98 percent of maximum density, in accordance with the requirements of DOT-SSRBC Section 250. The minimum compacted thickness of shell base shall conform to the detail for "Flexible Pavement Restoration."

13.05 LIMEROCK BASE

Limerock base shall be constructed on the prepared subgrade to not less than 98 percent of maximum density, in accordance with the requirements of DOT-SSRBC Section 200. The minimum compacted thickness of limerock base shall conform to the detail for "Flexible Pavement Restoration."

13.06 CRUSHED (RECLAIMED) CONCRETE BASE

Crushed (reclaimed) concrete base shall be constructed on the prepared subgrade to not less than 98 percent of maximum density, in accordance with the requirements of DOT-SSRBC Section 204. The minimum compacted thickness of crushed (reclaimed) concrete base shall conform to the detail for "Flexible Pavement Restoration."

The minimum limerock bearing ratio (LBR) value shall be 150.

13.07 ASPHALTIC CONCRETE PAVEMENT

A prime coat shall be applied to the prepared base in accordance with DOT-SSRBC Section 300 prior to permanent asphaltic concrete pavement.

Unless specified elsewhere, all permanent asphaltic concrete pavement replacement shall be Type SP-1 and shall be constructed in accordance with the requirements of DOT-SSRBC Sections 320, 330, and 331. Compacted thickness shall conform to the detail for "Flexible Pavement Restoration."

13.08 BRICK PAVEMENT

Construction of brick pavement shall follow the details as shown on the Plans and City standard practice using City standard paving brick or red clay brick conforming to ASTM C 32, Grade SS with City standard dimensions.

Streets with exposed brick surface shall be restored with brick. Brick pavers removed from streets that are not to be restored with brick shall remain the property of the City of St. Petersburg. Bricks not required for restoration, even those that have been overlaid with asphalt, shall be delivered by the Contractor to the City of St. Petersburg Maintenance Storage Yard, 3rd Avenue North and 17th Street. Brick streets that are restored shall be restored to a condition of a new well-defined and contoured cross section with a surface appearance equal to or better than that which previously existed.

Bricks which are broken or damaged by the Contractor shall not be reused. Replacement bricks shall be purchased from the Maintenance Storage Yard. The Contractor shall obtain the current brick charge from the Stormwater, Pavement and Traffic Operations Department, Pavement Maintenance, phone 727-893-7260.

Brick street abutting asphalt pavement shall have a minimum 6-inch-wide flush Type "A" Header Curb.

13.09 CURB AND GUTTER

All permanent restoration of street curb, or curb and gutter, shall be of the same type and thickness as the curb, or curb and gutter, which abuts. The grade of the restored curb, or curb and gutter, shall conform to the grade of the existing adjacent curb, or curb and gutter, so that positive drainage is maintained.

13.10 CONCRETE SIDEWALK

The restoration and construction of concrete sidewalks shall conform to applicable requirements of DOT-SSRBC Section 522 and the Plans, and shall be constructed where shown on the Plans and directed by the City. Sidewalk expansion joints with bituminous filler shall be installed at a maximum of 50-foot intervals on center, and struck joints shall be spaced equidistant with walk width (joints wider than 6 feet shall be spaced as directed by the City). Where new construction is to be tied into existing facilities, the old material is to be removed back to the nearest construction joint, or sawcut to a straight line as directed by the Engineer. The soil under sidewalks and driveways shall be compacted to 98 percent of the maximum density.

New sidewalks shall be 4 inches thick. Concrete pour for walk construction shall be made only on dampened subgrade. A soft broom finish shall be given the walk surface as directed by the Engineer.

Sidewalks crossing driveways shall be constructed according to the Specifications for concrete driveways.

Curb ramps for physically handicapped shall be constructed at all locations where sidewalks cross the curb or where directed by the Engineer. Those existing sidewalks which are removed to accomplish associated work as a part of this Project shall be replaced with a curb ramp when the sidewalk crosses the curb. The cost of curb ramps shall be included in the appropriate proposal item for sidewalk restoration.

Where sidewalks are replaced, the replacement shall be the full width of the walk and the minimum length shall be 60 inches. Restoration of adjacent lawn is incidental to sidewalk replacement and no separate payment will be made therefore.

13.11 HEXAGON BLOCK SIDEWALK

The restoration and construction of hexagon block sidewalks shall conform to the details shown on the Plans and City standard practice using City standard hexagon blocks.

The soil under sidewalks and driveways shall be compacted to 98 percent of the maximum density. New hexagon block sidewalks shall be 2 inches thick.

Curb ramps for physically handicapped shall be constructed at all locations where sidewalks cross the curb, or where directed by the Engineer. Those existing sidewalks which are removed to accomplish associated work as a part of this Project shall be replaced with a curb ramp when the sidewalk crosses the curb. The cost of curb ramps shall be included in the appropriate Pay Item for sidewalk restoration.

Where sidewalks are replaced, the replacement shall be the full width of the walk. Restoration of adjacent grass is incidental to sidewalk replacement and no separate payment will be made therefore.

Hexagon block removed from a sidewalk that is not to be restored with hexagon block shall remain the property of the City of St. Petersburg. Hexagon block not required for restoration shall be delivered by the Contractor to the City of St. Petersburg Maintenance Storage Yard, 3rd Avenue North and 17th Street, St. Petersburg, Florida. Hexagon block that is broken or damaged by the Contractor shall not be reused. Replacement hexagon block may be purchased from the Maintenance Storage Yard. The Contractor shall obtain the current hexagon block charge from the

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Stormwater, Pavement and Traffic Operations Department, Pavement Maintenance, phone 727-893-7260.

13.12 DRIVEWAY AND PARKING LOT

Except as otherwise specified, all permanent restoration of base and surface of driveways, parking aprons, and sidewalks shall match the materials, thicknesses, elevations, lines, and grades of the existing construction, all to the Engineer's satisfaction. Patching of Portland cement driveway areas will not be allowed between joints or dummy joints.

For areas where streets are to be paved, or where more than 50 percent of the driveway apron is disturbed, concrete or brick driveways shall be replaced in kind. All other driveways, including shell and dirt, shall be restored with an asphalt concrete surface from the street to the property line or front of sidewalk, as directed by the Engineer.

All base compaction under driveways shall be to a minimum density of 98 percent of the maximum density.

13.13 DRIVEWAY - ASPHALT

Residential asphalt driveway restoration shall include 1-inch thick asphaltic concrete surface over 2 inches of compacted sand-asphalt hot mix base, or 5 inches of compacted limerock or shell base.

Commercial asphalt driveway restoration shall be constructed of 1-inch thick asphaltic concrete surface over 8 inches of limerock base compacted in 2 lifts.

13.14 DRIVEWAY - CONCRETE

The restoration and construction of concrete driveways shall conform to applicable requirements of DOT-SSRBC Section 522 and the Plans, and shall be constructed where shown on the Plans and directed by the Engineer.

Residential concrete driveway restoration shall be 5 inches thick and shall include placing a single layer of 6-inch by 6-inch wire mesh (WWF 6 x 6 - W1.4 x W1.4).

Commercial concrete driveways shall be 6 inches thick with a double layer of 6-inch by 6-inch wire mesh (WWF 6 x 6 - W1.4 x W1.4).

13.15 DRIVEWAY - PEAGRAVEL

Where less than 50 percent of the driveway apron is disturbed, peagravel driveways shall be restored to match the existing driveway. Peagravel driveway restoration shall include asphalt treated shell base 5 inches thick after compaction to a minimum density of 98 percent of the maximum.

13.16 DRIVEWAY - SHELL

Where less than 50 percent of the driveway apron is disturbed, shell driveways shall be restored to match the existing driveway. Shell driveway restoration shall be 5 inches thick after compaction to a minimum density of 98 percent.

13.17 GRASS

A. Seeding

Seed shall be sown as soon as practical after paving, pipeline, or other work has been completed.

Seeding where shown or ordered shall be accomplished in a manner satisfactory to the Engineer. All work and materials shall meet the applicable requirements DOT-SSRBC, Sections 570, 981, and 982. Prior to seeding, fertilizer shall be applied at a rate as recommended by the manufacturer.

The type grass seed to be sown shall be of the same variety as the grass removed or as is predominately adjacent, as approved by the Engineer. Seed sown in cooler months, which will not germinate until spring, shall be over seeded with Rye grass seed or other approved winter variety.

B. Sodding within Street Rights-of-Way

Sod shall be planted as soon as practical after paving, pipeline, or other work has been completed.

All work and materials shall meet the applicable requirements DOT-SSRBC Section 575 (Sodding).

Sodding shall be done as directed by the Engineer, using only material which, in the opinion of the Engineer, is healthy and free of weeds, and (unless specified otherwise by the Engineer) of the same variety predominating at time of removal. Sod may be St. Augustine, Bahia, or other varieties as selected by the Engineer.

Sod shall be planted within 72 hours of being cut. Only moist, green sod having a virile root system may be planted. Sod shall be cut into adjacent sod to provide a smooth surface, and "top dressed" where necessary. Sod shall be rolled or tamped after planting to provide a uniform and consistent grade.

C. Grass Maintenance

The Contractor shall properly water and otherwise maintain all seeded and sodded areas for a minimum of 60 consecutive calendar days after completion of seeding or sodding operations. After the 60 days, and upon receipt of written request from the Contractor, the Engineer will inspect the areas for acceptance by the City. Any area that is washed or eroded, fails to show a uniform stand of healthy, vigorous grassing, or does not appear to be otherwise developing satisfactorily, shall be reseeded or re-sodded and maintained until suitable for acceptance by the Engineer.

In the event that the stand of grass is found to be contaminated by weeds or other undesirable growth, the Contractor will be required to effectively eliminate such undesirable growth at his own expense.

13.18 EXPANSION JOINT MATERIAL

Expansion joint material for concrete pavement surfaces, including sidewalks and driveways, shall

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be the bituminous strip type, 1/2-inch thick, and shall conform to applicable requirements of DOT-SSRBC Section 932.

END OF SECTION

SECTIONS 14 THROUGH 19 -- NOT USED

SECTION 20 - PAY ITEM DESCRIPTIONS

20.01 INTRODUCTION

It is the intent of the City to itemize major construction associated with the Project as Pay Items in the Proposal, and specify method of measurement and payment for all listed Pay Items. As may be noted below, incidental work which may be associated with a specific Pay Item is to be included in the cost proposed by the bidding contractor for that Pay Item. The City will not allow for additional compensation beyond those Pay Items included in the Proposal. It is important therefore that all Bidders fully acquaint themselves with all Plans, Specifications, City Standard Details, and other details pertaining to the Work.

Work not shown or called out in either the Plans or the Specifications, but necessary in carrying out the intent of the Project 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. No additional compensation will be considered for this associated and necessary Work.

The Contractor shall not use contingency Pay Items without prior written approval from the Engineer.

Pay Items have a prefix to assist the City in charging the Work to the proper accounting code and to assist in describing the Scope of Work. If no Pay Item exists for Work within a prefix class for that type Work, a similar Pay Item in another prefix may be used, as approved by the Engineer.

Prefixes used are:

- G - General
- S Sanitary Sewer
- M - Miscellaneous

20.02 GENERAL – G

Work under this classification applies to Work related to other prefix classifications.

Pay Item G-1.1 Emergency Response

Payment for Emergency Response will be made for each emergency response to a location to Work on one or more related Work Orders assigned to the Contractor as described in the Technical Specification section headed "Work Orders" and authorized by the Engineer. For an Emergency Response, the Contractor and Engineer shall discuss and agree upon the particular aspects involved, and then perform the Work in accordance with the time frame so agreed upon and described in the Technical Specification section headed "Project Schedule". Payment will include all costs associated with securing current Work site, if necessary, and all preparatory Work and operations necessary to mobilize manpower, equipment, supervision, and materials to a different site at the earliest feasible date within 24 hours of notification from the Engineer.

Work covered under this pay item does not include normally issued Work Orders or changes to

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Work Orders that may be prioritized or reprioritized to be performed in the sequence so specified by the Engineer.

Pay Item G-2.1 Traffic Control

Payment for Traffic Control will be made per day for a lining location. Measurement will be for the actual number of days. Time for setup and take down will not be included. Traffic Control shall be in accordance with the requirements of DOT SSRBC Section 102. A lining location for Traffic Control shall be defined as Work to be performed between access manholes regardless of the length or number of intermediate manholes or pipe segments included. Payment shall include all materials, labor, equipment, and supplies necessary to setup, maintain, and take down the Traffic Control setup in and around a lining location, and specifically includes, but is not limited to, all signs, barricades, warning lights, markers, flagmen, restoration, and all other appurtenant work as specified to control traffic on typical four lane urban roads. This includes roadways designated by the City as Collectors and Arterials, and Pinellas County and FDOT roadways. Traffic Control for lining locations other than as described in this Pay Item is considered customary traffic control and no separate payment will be made for Traffic Control at those locations.

Payment for Traffic Control will be excluded when the Contractor is not actively pursuing the completion of the Work (including correction of deficient Work) under the various Pay Items in this Section. Variable message boards, crash cushions, barrier walls, off-duty police, striping, and ramps are not included in the Work under this Pay Item.

20.03 SANITARY SEWER – S

Pay Items S-1.1	Sewer Main Cleaning and CCTV Inspection - 8" Diameter and Less
S-1.2	Sewer Main Cleaning and CCTV Inspection - 10" to 12" Diameter
S-1.3	Sewer Main Cleaning and CCTV Inspection - 14" to 18" Diameter
S-1.4	Sewer Main Cleaning and CCTV Inspection - 20" to 27" Diameter
S-1.5	Sewer Main Cleaning and CCTV Inspection - 30" to 48" Diameter

Payment for Sewer Main Cleaning and CCTV Inspection will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for; full segment CCTV inspection including any reverse setups where necessary dictated by field conditions; CCTV inspection data, video and log; normal cleaning which includes, but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Routine normal cleaning and pre/post-CCTV inspection required as part of any CIPP lining work is not applicable to this Pay Item. This Pay Item only pertains to CCTV inspections/cleaning ordered by the City independent of issued CIPP lining work, or issued CIPP lining pre-inspection work that results in the documentation of defects/conditions that require corrective action before CIPP lining pre-CCTV inspection work can proceed. Separate Pay Items are provided for Specialty Cleaning under Pay Items S-3.1 through S-3.5, and for routine normal cleaning and pre/post-CCTV inspection associated with CIPP work under Pay Items S-11.1 through S-11.12.

Pay Item S-2 Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection

Payment for Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection will be made per each service lateral inspected only in conjunction with Work under Pay Items S-1.1 through S-1.5, regardless of depth or overall length. Measurement will be for each service lateral inspected by approved lateral CCTV equipment. Payment shall include all materials, labor, equipment, and supplies necessary for; full lateral CCTV inspection from the main including any reverse setups (from cleanout to the main, where clean-out exists) where necessary dictated by field conditions; locating the lateral and placing a City approved marker over top of the lateral at the property line and any alignment changes; CCTV inspection data, video and log; transfer of inspection information (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; normal cleaning which includes, but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No payment will be made for inspection of laterals where the lateral termination point can be seen clearly from the mainline inspection or which does not require launching of the lateral inspection camera from the main or insertion from the top down via a City cleanout.

Pay Items S-3.1 Specialty Cleaning – 8” Diameter and Less
S-3.2 Specialty Cleaning – 10” to 12” Diameter
S-3.3 Specialty Cleaning – 14” to 18” Diameter
S-3.4 Specialty Cleaning – 20” to 27” Diameter
S-3.5 Specialty Cleaning – 30” Diameter and Greater

Payment for Specialty Cleaning will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Measurement will be based on a minimum of 50 linear feet of pipe, or the actual length of the Specialty Cleaning performed, but not necessarily for the entire pipe segment length. Specialty Cleaning of only joints within a pipe segment, or portion thereof, shall count as 2.5 feet of equivalent pipe length (For Example: 400 feet of 8” pipe with 5 ft joints, clean all joints = 80 joints x 2.5 ft = 200 feet of specialty cleaning). Equivalent joint length shall not be counted in addition to the length of a pipe segment, or portion thereof, where continuous Specialty Cleaning has been performed. Payment shall include all materials, labor, equipment, and supplies necessary for Specialty Cleaning of wastewater pipe, and specifically includes, but is not limited to; the complete removal and disposal of all accumulated debris within the pipe including grease, roots, joint sealant, tuberculation, and other adherent deposits through the use of special equipment; restoration; and all other appurtenant work as specified. Specialty Cleaning is in addition to Normal Cleaning which is covered under Pay Items S-1.1 through S-1.5 or under Pay Items S-11.1 through S-11.12 depending on the nature of the work. Payment also includes mobilization, demobilization, and customary traffic control.

Pay Items S-4.1 Chemical Sealing of Host Pipe – 10” Diameter and Less
S-4.2 Chemical Sealing of Host Pipe – 12” to 15” Diameter
S-4.3 Chemical Sealing of Host Pipe – 18” to 24” Diameter
S-4.4 Chemical Sealing of Host Pipe – 27” Diameter and Greater

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Payment for Chemical Sealing of Host Pipe will be made per each host pipe for the applicable pipe diameters listed in the Proposal, regardless of depth, overall length, or the number of infiltration points sealed. Measurement will be for a host pipe between manholes. Payment shall include all materials, labor, equipment and supplies necessary for the Chemical Sealing of Host Pipe in conjunction with/prior to CIPP liner installation, and specifically includes, but is not limited to; sealing excessive infiltration at pipe joints and other defects; controlling the flow of wastewater with the use of temporary plugs; disposal of debris; post-rehabilitation CCTV inspection video and log; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control. A separate Pay Item S-5 is provided Chemical Sealing - Grout material.

Pay Item S-5 Chemical Sealing – Grout

Payment for Chemical Sealing – Grout will be made per gallon. This Pay item is applicable only in conjunction with Pay Items S-4.1 through S-4.4. Payment shall include all materials, labor, equipment and supplies for chemically sealing excessive infiltration at pipe joints and other defects at specified locations for Chemical Sealing of Host Pipe prior to CIPP liner installation.

Pay Item S-6 Additional Access Cost

Payment for Additional Access Cost will be made per each access location. Measurement will be for a liner installation where both the upstream and downstream manhole are not readily accessible by standard equipment, e.g., when located in rear easements. Payment shall include all additional labor, equipment, materials and supplies to complete the CIPP Liner installation in locations with limited access. The Contractor shall attempt to schedule and stage the Work to permit the lining of multiple, contiguous pipe segments from an accessible manhole where feasible. The costs associated with removal/replacement of trees, shrubs, sheds, landscaping, etc. as necessary to access the Work locations are not included in the Pay Items, and these costs will be negotiated with the Contractor as required to complete the Work.

Pay Item S-7 Chemical Sealing Service Lateral Connections

Payment for Seal Service Lateral Connections will be made per each service regardless of the connection diameter or host pipe diameter, and regardless of depth or overall length of the host pipe. Payment shall include all materials, labor, equipment, and supplies necessary for grouting the annular space between the liner and host pipe at the service lateral connection and 18-inches of the service lateral connection at the main; controlling the flow of wastewater with the use of temporary plugs, post-rehabilitation CCTV inspection video and log; disposal of debris; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

This is for standalone Work ordered and not in conjunction with CIPP lining requirements. There is a separate pay item for both reinstating and chemical sealing of laterals in conjunction with CIPP main lining work under Pay Item S-22, Service Reconnection.

20.04 SANITARY SEWER – S-II – Group II (CIPP Main Lining)

Pay Items S-11.1	CIPP Main Liner 8” Diameter – 6.0 mm Thickness
S-11.2	CIPP Main Liner 10” Diameter – 6.0 mm Thickness
S-11.3	CIPP Main Liner 12” Diameter – 6.0 mm Thickness

S-11.4	CIPP Main Liner 15" Diameter – 7.5 mm Thickness
S-11.5	CIPP Main Liner 18" Diameter – 9.0 mm Thickness
S-11.6	CIPP Main Liner 21" Diameter – 9.0 mm Thickness
S-11.7	CIPP Main Liner 24" Diameter – 10.5 mm Thickness
S-11.8	CIPP Main Liner 27" Diameter – 10.5 mm Thickness
S-11.9	CIPP Main Liner 30" Diameter – 12.0 mm Thickness
S-11.10	CIPP Main Liner 36" Diameter – 12.0 mm Thickness
S-11.11	CIPP Main Liner 42" Diameter – 13.5 mm Thickness
S-11.12	CIPP Main Liner 48" Diameter – 15.0 mm Thickness

Payment for the installation of CIPP Main Liner will be made per linear foot for the applicable pipe diameters and minimum thickness listed in the Proposal, regardless of the depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for the CIPP Main Liner installation, and specifically includes, but is not limited to; normal cleaning which includes but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; post-cleaning/pre-rehabilitation CCTV inspection data, video and log; liner installation; liner sampling and storage of samples for testing; sealing liner connections at manholes; matching existing manhole lining to the CIPP liner; matching existing flow channels and surfacing to the liner to minimize turbulence; cleaning, removal and disposal of all sand, rubble, deposits, and other accumulated debris after liner installation; post-rehabilitation CCTV inspection data video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Separate Pay Items are provided for Specialty Cleaning.

Pay Items S-12.1	CIPP Main Liner 8" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.2	CIPP Main Liner 10" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.3	CIPP Main Liner 12" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.4	CIPP Main Liner 15" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.5	CIPP Main Liner 18" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.6	CIPP Main Liner 21" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.7	CIPP Main Liner 24" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.8	CIPP Main Liner 27" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.9	CIPP Main Liner 30" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.10	CIPP Main Liner 36" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.11	CIPP Main Liner 42" Diameter Thickness Variance $\pm$ 1.5 mm
S-12.12	CIPP Main Liner 48" Diameter Thickness Variance $\pm$ 1.5 mm

Payment for CIPP Main Liner Thickness Variance will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Liner thickness may be varied due to field conditions requiring a change in the specified minimum thickness. The per linear foot price for CIPP Main Liner Thickness Variance will be added to, or deducted from, the per linear foot price of the Main Liner for the applicable pipe diameter listed in Pay Items S-11.1 through S-11.12. The Main Liner per linear foot price will be adjusted for each 1.5 mm thickness variance increment. Liner thickness shall be in accordance with Technical Specification Section headed "Cured-In-Place-Pipe (CIPP) Liners" unless otherwise approved by the Engineer in writing.

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Pay Items S-13.1	CIPP Main Pre-Liner 8" Diameter
S-13.2	CIPP Main Pre-Liner 10" to 12" Diameter
S-13.3	CIPP Main Pre-Liner 15" to 18" Diameter
S-13.4	CIPP Main Pre-Liner 21" to 27" Diameter
S-13.5	CIPP Main Pre-Liner 30" to 36" Diameter
S-13.6	CIPP Main Pre-Liner 42" to 48" Diameter

Payment for the installation of CIPP Main Pre-Liner will be made per linear foot for the applicable pipe diameters and minimum thickness listed in the Proposal, regardless of the depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for the CIPP Main Pre-Liner installation, and specifically includes, but is not limited to; normal cleaning which includes but is not limited to the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; post-cleaning/ pre-rehabilitation CCTV inspection data, video and log; liner installation; liner sampling and storage of samples for testing; sealing liner connections at manholes; cleaning, removal and disposal of all sand, rubble, deposits, and other accumulated debris after liner installation; post-rehabilitation CCTV inspection data video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Pay Items S-14.1	Wastewater Bypass Pump-Around Setup – 8" Diameter and Less
S-14.2	Wastewater Bypass Pump-Around Setup – 10" to 12" Diameter
S-14.3	Wastewater Bypass Pump-Around Setup – 14" to 21" Diameter
S-14.4	Wastewater Bypass Pump-Around Setup – 22" to 30" Diameter
S-14.5	Wastewater Bypass Pump-Around Setup – 32" to 48" Diameter

Payment for Wastewater Bypass Pump-Around Setup will be made per each setup for the applicable pipe diameters listed in the Proposal. Measurement will be for each setup regardless of the length of pump-around or number of pipe segments included. Payment shall include all materials, labor, equipment and supplies necessary for the Wastewater Bypass Pump-Around Setup, and specifically includes, but is not limited to; pumping and backup equipment; alarm systems; fittings, connectors, adapters, temporary piping; excavation; pipe supports; flow through ramps; restoration; and all other appurtenant work as specified in accordance with the Technical Specifications Section headed "General" to set up and take down the Wastewater Bypass Pump-Around system. Payment also includes mobilization, demobilization, and customary traffic control.

Wastewater Bypass Pump-Around shall be defined as the removal of wastewater from the wastewater collection system, pumping it around the upstream manhole and pipe segment(s), and returning it to the wastewater collection system downstream of the pipe segment(s) being lined. A separate Pay Item is provided for Wastewater Bypass Pump-Around Operation.

Pay Items S-15.1	Wastewater Bypass Pump-Around Operation – 8" Diameter and Less
S-15.2	Wastewater Bypass Pump-Around Operation – 10" to 12" Diameter
S-15.3	Wastewater Bypass Pump-Around Operation – 14" to 21" Diameter
S-15.4	Wastewater Bypass Pump-Around Operation – 22" to 30" Diameter
S-15.5	Wastewater Bypass Pump-Around Operation – 32" to 48" Diameter

Payment for Wastewater Bypass Pump-Around Operation will be made per day for the applicable pipe diameters listed in the Proposal. Measurement will be for the actual number of days. Time for setup and take down will not be included. Payment shall include all materials, labor, equipment

and supplies necessary for the Wastewater Bypass Pump-Around Operation. Payment for Wastewater Bypass Pump-Around Operation will be excluded when the Contractor is not actively pursuing the completion of the Work, including correction of deficient Work. Payment for Normal Cleaning will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, and supplies necessary for Normal Cleaning, and specifically includes, but is not limited to; the complete removal and disposal of all accumulated debris within the pipe including sludge, dirt, rocks, sand, rubble, and other materials and obstructions; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

Pay Item S-20 Removal & Sealing of Protruding Service Connections

Payment for Removal & Sealing of Protruding Service Connections will be made per each service regardless of the connection diameter or host pipe diameter, and regardless of depth or overall length of the host pipe. Payment shall include all materials, labor, equipment and supplies necessary for the Removal & Sealing of Protruding Service Connections, and specifically includes, but is not limited to; removing the protruding service lateral connection by internal cutting or other remote methods; grouting the main/ lateral connection and 18-inches of the service lateral connection at the main; disposal of debris; post-rehabilitation CCTV inspection video and log; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

No separate payment will be made for Traffic Control and Wastewater Bypass Pump-Around when associated with installation of CIPP liners under this Contract.

Pay Item S-22 Service Reconnection

Payment for Service Reconnection will be made per each service regardless of the connection diameter or host pipe diameter, and regardless of depth or overall length of the host pipe. Payment shall include all materials, labor, equipment, and supplies necessary for the service reconnection, and specifically includes, but is not limited to; reconnecting service lateral by internal cutting or other remote methods; grouting the annular space between the liner and host pipe at the service lateral connection and 18-inches of the service lateral connection at the main; post-rehabilitation CCTV inspection video and log; disposal of debris; restoration; and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and traffic control. No additional payment will be made for service reconnections made by excavation.

Pay Item S-23 CIPP Liner – Material Testing

Payment for CIPP Liner Material Testing will be made per each test. Measurement will be for a set of tests completed for a liner installation and accepted by the Engineer. Payment shall include all materials, labor, equipment, supplies, and expenses necessary for CIPP Liner Testing, and specifically includes, but is not limited to; preparing samples; coordinating with the Independent Laboratory; submitting the results to the Engineer; and all other appurtenant work as specified. The cost to obtain and store samples for testing, and any retesting of samples is not included in this Pay Item.

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Pay Items S-24.1	CIPP Liner Testing - FELL Testing - 8" to 12" Diameter
S-24.2	CIPP Liner Testing - FELL Testing - 14" to 21" Diameter
S-24.3	CIPP Liner Testing - FELL Testing - 22" to 30" Diameter
S-24.4	CIPP Liner Testing - FELL Testing - 32" to 48" Diameter

Payment for CIPP Liner – FELL Testing will be made per linear foot for the applicable pipe diameters listed in the Proposal, regardless of the depth or overall length. Measurement will be from the upstream manhole to the downstream manhole centerlines. Payment shall include all materials, labor, equipment, supplies, and expenses necessary for FELL (Focused Electrode Leak Location) Testing of post CIPP liner installations, in accordance with Electro Scan Inc's, (the equipment manufacturer) specifications, ASTM F2550-18, ASTM F1216, Section 8.2, and specifically includes, but is not limited to; transfer of test results (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; all mobilization, demobilization, and traffic control necessary to perform the work. Only Contractors licensed and certified by the equipment manufacturer shall be allowed to perform the Work.

20.04 SANITARY SEWER – S-III – Group III (CIPP Lateral Lining)

Pay Item S-24 Initial Service Lateral CCTV From Main

Payment for Initial Service Lateral CCTV From Main will be made per each lateral. Measurement will be for each lateral regardless of length, and shall include the entire City owned portion, from the mainline to the cleanout, property line or point where inspection equipment cannot pass due to pipe conditions. Payment shall include all materials, labor, equipment and supplies necessary for Locating, Cleaning & CCTV Inspection of Laterals as required or as ordered by the Engineer, and specifically includes, but is not limited to, locating the lateral and placing a City approved marker over top of the lateral at the property line and any alignment changes; post-cleaning/ pre-rehabilitation CCTV inspection of the lateral from the main pipe to the termination point of the public lateral or to the property line using specialty equipment from within the main pipe; removal and disposal of all sand, rubble, deposits, and other accumulated debris; CCTV inspection database, video and log; transfer of inspection information (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; restoration, and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

Pay Item S-25 Initial Service Lateral CCTV Inspection From Clean Out

Payment for Initial Service Lateral CCTV Inspection From Clean Out will be made per each lateral. Measurement will be for each lateral regardless of length, and shall include the entire City owned portion, from the cleanout to the mainline, or point where inspection equipment cannot pass due to pipe conditions. Payment shall include all materials, labor, equipment and supplies necessary for Locating, and CCTV Inspection of Laterals as required or as ordered by the Engineer, and specifically includes, but is not limited to, locating the lateral and placing a City approved marker over top of the lateral at the property line and any alignment changes; pre-rehabilitation CCTV inspection of the lateral from the cleanout to the mainline; CCTV inspection database, video and log; transfer of inspection information (database and report(s) in a format acceptable to the City) via uploading to the City's designated file transfer location; restoration, and all other appurtenant work as specified. Payment shall include mobilization, demobilization, and customary traffic control.

Pay Item S-26 CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF

Payment for CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF will be made per each lateral liner installed. Measurement will be actual installed liner length along the lateral pipe from the wall of the mainline pipe towards the cleanout or property line / easement line, for up to the initial 15 linear feet for a standard lateral wye or tee configuration lateral at the main. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-27 CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral

Payment for CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral will be made per each lateral liner installed for this configuration. Measurement will be actual installed liner length along the vertical stack plus horizontal lateral pipe from the wall of the mainline pipe towards the cleanout or property line / easement line, for up to the initial 15 linear feet for the vertical stack and connecting lateral. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-28 CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral

Payment for CIPP Lateral Lining, 8" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral will be made per each lateral liner installed for this configuration. Measurement will be actual installed liner length along the vertical stack plus each horizontal lateral pipe from the wall of the mainline pipe towards the cleanouts or property lines / easement lines, for up to the initial 15 linear feet for the vertical stack and connecting laterals. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner

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installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-29 CIPP Lateral Lining, Up To 15 LF (From Access Structure)

Payment for CIPP Lateral Lining, Up To 15 LF (From Access Structure) will be made per each lateral liner installed from a connecting access structure. Measurement will be actual installed liner length along the lateral pipe from the wall of the access point towards the cleanout or property line / easement line, for up to the initial 15 linear feet. Payment shall include all materials, labor, equipment and supplies necessary for the CIPP Lateral Liner installation, and specifically includes, but is not limited to, post-cleaning/ pre-rehabilitation CCTV inspection; Pump-Around Pumping or temporary plugs; preparing the lateral for lining; construction of cleanout if required to install liner; liner installation; liner sampling and storage of samples for testing; trimming; post-rehabilitation CCTV inspection data, video and log; restoration; and all other appurtenant work as specified. Payment also includes mobilization, demobilization, and customary traffic control.

No separate payment will be made to construct a cleanout or replace the service lateral when required as a result of a defective CIPP Lateral Liner installation under this Contract. Separate payment is provided for any remaining installed lateral liner under Pay Item S-30, CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29).

Pay Item S-30 CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29)

Payment for CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29) will be made per linear foot of liner installed beyond 15 feet. Measurement will be actual installed liner length along the lateral pipe in excess of the initial 15 linear feet installed under Pay Items S-26 to S-29.

Pay Item S-31 Replacement or Installation of Cleanouts – Not in Bulk

Payment for replacement or installation of cleanouts will be made per each cleanout replaced or installed up to (6) feet deep. Payment shall include all customary traffic control, mobilization, demobilization, excavation, backfilling, compacting, materials, labor, equipment, supplies, cleanup, and testing required for furnishing and installing new cleanouts in accordance with City Standard Details and up to (5) feet of public lateral piping downstream from the Right-of-Way or Easement boundary where City ownership starts. Work issued and payment under this Pay Item will include one or more cleanouts installed at various locations as needed.

Separate Pay Items are provided for surface restoration (Pay Items S-35 through S-38), and dewatering if required in conjunction with clean-out installation (Pay Item S-33).

Pay Item S-32 Replacement or Installation of Cleanouts - Bulk Installation (10 or more within localized area)

Payment for replacement or installation of cleanouts will be made per each cleanout replaced or installed up to (6) feet deep. Payment shall include all customary traffic control, mobilization, demobilization, excavation, backfilling, compacting, materials, labor, equipment, supplies, cleanup, and testing required for furnishing and installing new cleanouts in accordance with City Standard Details and up to (5) feet of public lateral piping downstream from the Right-of-Way or Easement boundary where City ownership starts. Work issued and payment under this Pay Item will include a minimum of at least (10) cleanouts within a contiguous or clustered localized area of a few blocks distance.

Separate Pay Items are provided for surface restoration (Pay Items S-35 through S-38), and dewatering if required in conjunction with clean-out installation (Pay Item S-33).

Pay Item S-33 Replacement or Installation of Cleanouts – Targeted Area – Dewatering

Payment for replacement or installation of cleanouts - targeted area - dewatering will be made per each dewatering system employed to complete Pay Items S-31 and S-32. Payment shall include all labor, equipment, and materials required for set up and operation of dewatering pumping equipment by well point or open sump methods. The well point dewatering system shall stabilize the trench bottom and remain in operation until backfilling and compacting operations are complete.

This Pay item is only applicable in conjunction with replacement or installation of cleanouts in targeted areas (Pay Items S-31 and S-32).

Pay Item S-35 Clean-Out Restoration in Grass/Mulch Area

Payment for Clean-Out Restoration in Grass/Mulch Area will be per each clean-out installed in grass or mulch area under Pay Items S-31 and S-32. Payment shall include furnishing all labor and materials to replace the lawn/mulch area, including rolling sod, erosion protection, and watering a minimum of (14) days or until final acceptance by the Engineer. Type of lawn and mulch shall match existing.

Pay Item S-36 Clean-Out Restoration in Asphalt Area

Payment for Clean-Out Restoration in Asphalt Area will be made per each per each clean-out installed in asphalt area in conjunction with work under Pay Items S-31 and S-32. Payment shall include furnishing all labor and materials for saw cutting, removal, and disposal of the old surface and placing asphaltic concrete on a prepared base in accordance to the City's Standard Details and Technical Specifications for flexible pavement restoration. All tie-in elevations shall match existing.

Pay Item S-37 Clean-Out Restoration in Concrete Driveway

Payment for Clean-Out Restoration in Concrete Driveway will be made per each driveway restored in conjunction with work under Pay Items S-31 and S-32. Each restoration will cover a driveway/walkway removed/replaced for an area of up to 80 square feet (8' x 10'). Any area

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above or below this threshold shall be quantified by half increments (Example 1.5 = up to 120 sq ft of concrete placement). Payment shall include furnishing all labor and materials for saw cutting, removal, and disposal of the old driveway/walkway where directed, and constructing the new driveway base and top course in accordance to the City's Standard Details and Technical Specifications for driveway restoration.

Pay Item S-38 Clean-Out Restoration in Paver Driveway

Payment for Clean-Out Restoration in Paver Driveway will be made per each per each clean-out installed in a paver driveway in conjunction with work under Pay Items S-31 and S-32. Payment shall include furnishing all labor and materials for removal, storing, protecting and reinstalling the existing paver surface on a prepared base in accordance to the City's Standard Details and Technical Specifications for driveway restoration. All tie-in elevations shall match existing.

20.04 MISCELLANEOUS - M

The Pay Item(s) described under this classification of Work will be full compensation for all labor, equipment, material, and services necessary to construct or install items, structures, and other miscellaneous Work complete which are required of the Project.

Pay Item M-13 Allowance for Contract Amendment

The proposal includes an allowance for various extra work contingencies. Any amount of extra work and/or alterations to the proposed Work charged to the allowance shall be fully documented and authorized by the Engineer as follows.

- A. The Contractor shall include in the Contract Total Price the allowance so named in the Proposal Form.
- B. The Contractor shall not proceed on any additional Work to be covered by the allowance until authorized in writing by the Engineer.
- C. The Contractor shall cause the Work so covered to be done by such subcontractors or suppliers, and for such sum within the limit of the allowance as authorized by the Engineer.
- D. Prior to final payment, an appropriate change order will be issued as recommended by the Engineer to reflect actual amounts due to the Contractor on account of Work covered by the allowance, and the Contract Total Price shall be correspondingly adjusted.
- E. The allowance shall not be used for incidental work shown on the Plans or specified in the Contract Documents, or for other work required to render the Project complete.

END OF SECTION

SECTION 21 - CURED-IN-PLACE-PIPE (CIPP) LINERS

21.01 GENERAL

The Work in this section includes furnishing and installing cured-in-place pipe (CIPP) liners. Main Liners are typically installed in wastewater gravity mains between two adjacent manholes or access structures, for the various nominal host pipe diameters and the liner thicknesses listed in the Proposal.

The Contractor shall furnish all materials, labor, equipment, and services necessary for liner installation including, but not limited to: traffic control, wastewater bypass pump around and/ or diversion, cleaning and closed circuit television (CCTV) video inspection of the pipe segment to be lined, Main Liner construction, service lateral reconnection, final CCTV video inspection, testing of the CIPP liner, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

21.02 GOVERNING STANDARDS

The following references are part of this Specification. In case of conflict between the requirements of this Specification and those of the listed documents, the requirements of this Specification shall prevail. The latest edition of the following references shall be used:

<u>Reference</u>	<u>Title</u>
ASTM D543	Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents
ASTM D790	Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D903	Standard Test Method for Peel or Striping Strength of Adhesive Bonds
ASTM D1600	Standard Terminology for Abbreviated Terms Relating to Plastics
ASTM D2990	Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep Rupture of Plastics
ASTM D3839	Standard Practice for Underground Installation of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe
ASTM D5813	Standard Specification for Cured-In-Place Thermosetting Resin Sewer Piping Systems
ASTM F412	Standard Terminology Relating to Plastic Piping Systems
ASTM F1216	Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of Resin-Impregnated Tube

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ASTM F1743	Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-In-Place Installation of Cured-In-Place Thermosetting Resin Pipe
ASTM 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)
ASTM F2304	Standard Practice for Sealing of Sewers Using Chemical Grouting
ASTM F2454	Standard Practice for Sealing Lateral Connections and lines from the mainline Sewer Systems by the Lateral Packer Method, Using Chemical Grouting
ASTM F2550-18	Locating Leaks in Sewer Pipes by Measuring Variation of Electric Current flow through the Pipe Wall

21.03 QUALIFICATIONS

The Contractor's qualifications are addressed in item 12 of the Engineering Project Questionnaire. Additionally, the Contractor shall be certified and/ or licensed by the liner manufacturer(s) as an approved installer for the products referenced in this specification. The CIPP Main Liner Manufacturer/ Assembler shall have supplied a minimum of 500,000 linear feet of successful wastewater collection system installations in North America of the product to be furnished for this Project. The Contractor shall provide a list of installation projects including the project name, contact information, and year installed as required by the Engineer.

21.04 PRODUCTS

A. All products used shall conform to these Specifications.

1. Lateral Liners shall consist of a factory assembled one-piece CIPP liner that provides a resin impregnated full circular wrap in the main at the service connection and a verifiable non-leaking connection at the junction between the main and lateral pipe. The Lateral Liner shall be suitable for both wye or tee connections. The connecting end of the lateral tube shall be shaped to match the aperture and curvature of the main tube. The lateral tube and main tube shall be sealed by use of a flexible cured adhesive/sealant. No devices other than the resin impregnated full circular wrap at the main will be permitted to affect the connection between the main and lateral pipe. The length of the full circular wrap material inside the main shall be at least 12-inches beyond the circular edge of the lateral pipe opening, and of a continuous cross section. The thickness of the liner within the main and lateral pipe shall be designed for thickness as specified in this Section. Subject to these Specifications, the following products and Manufacturers or Assemblers are acceptable: "Service Connection Seal" by BLD Services, LLC and "T-Liner" by LMK Enterprises. No other products will be accepted.
2. Chemical grout designed for injection shall be: AV-100 chemical grout as manufactured by Avanti International, or approved equal.
3. All products used shall conform to the City of St. Petersburg Water Resources Department's most recent Approved Product List at the time of bidding. Where there are conflicts, the Technical Specifications shall prevail.

21.05 WARRANTY

- A. The Contractor shall warrant each lined pipe segment against any defects which will affect the integrity, quality or strength of the product such as materials, surface preparation, lining application, and workmanship for a period of 2 years from the date of final acceptance of the Work. The Contractor shall, within 1 month of written notice thereof, propose an acceptable method and repair any defects that may develop during the warranty period in a manner acceptable to the Engineer and at no cost to the City. Defects specifically include, but are not limited to, evidence of visible leakage of groundwater through/ around the CIPP liner; foreign inclusions, dry spots, or delamination of any portion of the CIPP liner as visible from CCTV video inspection; and wrinkles or separation of any part of the CIPP liner from the host pipe to the extent that the installed CIPP liner inside diameter is 95 percent or less than the design inside diameter of the CIPP liner. No wrinkles in the CIPP liner will be allowed within 4 feet of liner terminations at manholes.
- B. The Contractor shall warrant and save harmless the City and Engineer against claims for patent infringement and any loss thereof.

21.06 SUBMITTALS

- A. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
1. Details on all lining materials and resins.
 2. Name of resin supplier and liner material supplier.
 3. Certification that the Contractor is licensed or approved by the manufacturer(s) to install the product(s) referenced in this Specification.
 4. Manufacturer's or Assembler's certification that the liner materials are in compliance with these Specifications, and the codes and standards referenced herein.
 5. Manufacturer's or Assembler's guidelines for storage procedures and temperature control, handling and inserting the liner, curing requirements and details, service connection methods, and trimming and finishing.
 6. Manufacturer's or Assembler's guidelines for factory and/ or field (whichever applies) wet out procedures including: volume of resin per unit of liner, roller gap setting, mixing ratios and procedures for resin and catalyst/ hardener, shelf life of resin, pot life of resin, and required wet out procedure to ensure full saturation.
 7. Manufacturer's or Assembler's requirements and procedures for minimum and maximum pressures, temperatures, and time durations to be used during liner inversion, curing, and cool down, and for relieving static head after the liner is cured.
 8. Contractor's procedures, testing, and details of all component materials required for sealing CIPP Liners from groundwater infiltration/ migration at manholes, lateral connections and lateral liner termination points: including hydrophilic rubber seals or gaskets, grout or pressure grouting.
 9. The Contractor shall provide field measurements and liner sizing calculations, signed and sealed by a professional engineer registered in the State of Florida, that demonstrate the liner wall thickness design for each pipe segment in accordance with

the structural requirement contained in this Specification, and that the liner has been properly undersized to avoid the creation of wrinkles or folds. The liner wall thickness shall be increased as required based on actual pipe ovality determined by the pre-installation CCTV video inspection.

- B. The Contractor shall submit wastewater bypass pump around and/ or diversion plans to the Engineer a minimum of 14 days prior to the liner installation for review and approval. In some cases verbal confirmation of the plan and approval with the Engineer or City Inspector may be used in lieu of a written plan. The Contractor shall notify the Engineer a minimum of 48 hours prior to commencement of the pump around operation. Failure to receive approval by the Engineer or City Inspector may result in the Contractor's Work being halted at no cost to the City.

The Contractor shall submit drawings that identify the liner insertion, wastewater bypass pump around locations and methods with sufficient detail to assure that the Work can be accomplished without spill or discharge of wastewater. The wastewater bypass pump around plan shall include an emergency response plan to be followed in the event of a failure of the pumping system.

- C. The Contractor shall submit a Maintenance of Traffic (MOT) plan, permit applications, and other supporting documents to the Engineer for review and approval a minimum of 14 days prior to the implementation of the MOT plan. The Contractor shall notify the Engineer a minimum of 24 hours prior to commencing MOT operations. The MOT documents shall be coordinated with the wastewater bypass pump around and/ or diversion plans.
- D. Submit certification of licensing and training as specified for all Contractors/Subcontractors who will be utilized to perform FELL (Focused Electrode Leak Locating) testing that meets ASTM F2550-18, Standard Practice for Locating Leaks in Sewer Pipes by Measuring the Variation of Electric Current Flow Through the Pipe Wall.

21.07 MATERIALS

A. Pre-Liner

1. A pre-liner shall be installed, where approved by the City, in CIPP lined sections where active infiltration and moisture would impact the CIPP curing process or quality of the liner tube. The contractor shall notify the City of any such conditions prior to lining.
2. The pre-liner shall be Griffolyn Type 55 by Reef Industries, or approved equal, and shall meet the following minimum specifications:

Property	ASTM Test Method	Value
Weight	D-2103	29 LB/1000 FT2
3" Load @ Yield	D-882	82 LBF
3" Load @ Break	D-882	31 LBF 1,900 psi
3" Elongation @ Break	D-882	360%
Tongue Tear	D-2261	15 LBF
Trapezoidal Tear	D-4533	24.5 LBF
PPT Resistance	D-2582	25 LBF

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Dart Impact Strength	D-1709	1.4 LBF
Cold Impact Strength	D-1709	-20° F
Permeance	E-96	0.059 Grains

B. Liner Tube

1. The liner tube shall consist of one or more layers of flexible needled felt or an absorbent non-woven felt fabric that meets the standards referenced herein. The tube shall be constructed to withstand installation pressures and curing temperatures, and be compatible with the resin system used. The liner shall be fabricated to a size and thickness that, when installed, will fit the internal circumference of the host pipe without any annular space between the liner and existing pipe wall, will have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.
2. The wet out tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the required design wall thickness.
3. The tube shall be sewn or flame bonded to a size that when installed will tightly fit the internal circumference and length of the host pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.
4. The outside layer of the tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.
5. The tube shall be homogeneous across the entire wall thickness containing no intermediate elastomeric layers. No material shall be included in the tube that may cause delamination in the cured liner. No dry or unsaturated layers shall be evident.
6. The wall color of the interior surface of the liner after installation shall be a light reflective color so that a clear, detailed examination with CCTV inspection equipment may be made. Colored resin is not permitted.
7. Seams in the tube shall be stronger than the non-seamed felt.
8. The outside of the tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 feet. Such markings shall include the manufacturer's name or identifying symbol.
9. The liner shall be fabricated from materials which when cured, will be chemically resistant to withstand internal exposure to constituents normally present in domestic wastewater.
10. The minimum tube length shall be that deemed necessary by the Contractor to effectively span the distance from the inlet to the outlet of the respective manholes or access structures, unless otherwise specified. The Contractor shall verify the lengths in the field before impregnation of the tube with resin. An individual liner insertion operation may be made over multiple contiguous pipe segments as determined in the field by the Contractor and reviewed by the Engineer.

C. Resin

1. The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system compatible with the fabric liner material, host pipe and other products

the resin may contact. The resin system, when properly cured within the tube composite, shall meet the standards and physical properties referenced herein, and those to be utilized in the design of the CIPP liner for this Project. The resin shall produce CIPP liners complying with the structural and chemical resistance requirements of this Specification.

2. Resin shall not be subjected to ultraviolet light and shall form no excessive bubbling or wrinkling during curing.

D. Hydrophilic End Seals

1. Each CIPP liner shall be installed with approved hydrophilic seals where the liner terminates, passes through access structures, or interfaces through an opening in a main liner connection (lateral liner), so to form a watertight compression seal at terminating ends.

21.08 STRUCTURAL REQUIREMENTS

- A. The CIPP liner shall be designed as per ASTM F1216, Appendix X1. The CIPP liner design shall assume no bonding to the original host pipe wall.
- B. The Contractor must have performed long-term testing for flexural creep of the CIPP liner material to be installed. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (tube and resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for this 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 design.
- C. The layers of the cured CIPP liner shall be uniformly bonded. It shall not be possible to mechanically separate any two layers such that the layers separate cleanly or a probe moves freely between the layers. If separation of the layers occurs during testing of field samples, new samples will be cut from the Work. Any reoccurrence may cause rejection of the Work.
- D. The CIPP liner material shall conform to the structural properties, as listed below.

Minimum Physical Properties

<u>Property</u>	<u>Test Method</u>	<u>Cured Composite min. per ASTM F1216</u>
Flexural Modulus	ASTM D790	300,000 psi
Flexural Strength	ASTM D790	4,500 psi
Flexural Modulus	ASTM D2990 (long term)	150,000 psi

- E. The required CIPP liner wall thickness shall be based, as a minimum, on the physical properties in Section 17.08D of this Specification, in accordance with the design equations in the Appendix of ASTM F1216, and the following design parameters:

Design Safety Factor	=	2
Retention Factor for Long-Term	=	1% - 50%
Flexural Modulus to be used in Design (as determined by Long-Term tests described in Section 17.08B)		
Ovality	=	5%
Groundwater Depth (above invert)	=	Assume at Existing Grade
Soil Depth (above crown)	=	Based on field measurements
Soil Modulus	=	700 psi
Soil Density	=	120 pcf
Live Load	=	AASHTO HS - 20
Design Condition	=	Fully Deteriorated
Enhancement Factor	=	7.0
Poisson's Ratio	=	0.3

- F. The CIPP liner material shall conform to the minimum wall thicknesses, as listed below:

Minimum Wall Thicknesses

<u>CIPP</u>	<u>Thickness</u>
4"-6"	3.0 mm
8"-12"	6.0 mm
15"	7.5 mm
18"-21"	9.0 mm
24"-27"	10.5 mm
30"-36"	12.0 mm
42"	13.5 mm
48"	15.0 mm

- G. Any layers of the tube that are not saturated with resin prior to insertion into the host pipe shall not be included in the CIPP liner wall structural thickness computation.

21.09 PREPARATION

- A. It shall be the responsibility of the Contractor to locate all manhole access points, verify that they are open and accessible for the Work, and arrange access to these points. The Contractor shall notify the City Inspector of access structures that cannot be opened due to obstruction by permanent structures. The Contractor shall be responsible to make all necessary provisions to ensure service conditions and structural conditions of the host pipe are suitable for installation and warranty of the liner. Provisions include, but are not limited to, temporary wastewater bypass pump around, temporary service interruption of service laterals, confirming the locations of all lateral service connections prior to installing and curing the CIPP liner, correction of obstructions/ defects, and controlling excessive infiltration.

B. Cleaning of Wastewater System

The Contractor shall remove all debris from the pipe segments and manholes that will interfere with the CIPP liner installation. Cleaning shall conform to the requirements of

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Technical Specification Section headed "Cleaning of Wastewater System". The City shall provide a dump site for all debris removed from the wastewater system during the cleaning operation. Unless stated otherwise, these are the Northeast Water Reclamation Facility located at 1160 62nd Avenue NE, or the Northwest Water Reclamation Facility located at 7500 26th Avenue North, St. Petersburg, Florida.

It shall be the responsibility of the Contractor to clear the pipe segment of obstructions such as solids, roots, iron scale, excessive joint sealant, and grease that will interfere with and prevent the insertion of the CIPP liner and a tight fit with the host pipe. Specialty cleaning as defined under Technical Specification Section headed "Cleaning of Wastewater System" shall be authorized by the Engineer when required. When specialty cleaning is specifically called for by the Project, the Contractor shall have the responsibility of coordinating the timing of specialty cleaning with the immediate installation of the CIPP liner within 24 hours. If desired, the Engineer may arrange for others to perform the specialty cleaning necessary and the Contractor shall notify the Engineer a minimum of 7 days in advance of their planned CIPP liner installation date so that the specialty cleaning can be accomplished prior to the planned CIPP lining installation.

Protruding laterals which are determined to interfere with the Main Liner installation shall be removed by remote cutter in accordance with Technical Specification Section headed "Removal of Protruding Service Connections". This work shall be done in conjunction with wastewater system cleaning activities.

C. Pre-installation CCTV Inspection

The pre-installation CCTV Inspection of the existing host pipe shall be performed by experienced personnel trained in locating breaks, obstacles, obstructions and service connections in accordance with the requirements of the Technical Specification Section headed "Closed Circuit Television Inspection". The Contractor shall note locations of any conditions, which may prevent proper installation of the CIPP liner into the host pipe or cause defects in the final product so that these conditions can be corrected prior to the liner installation. If CCTV video inspection reveals a condition such as a protruding service connection, dropped joint, pipe deformation, active infiltration or a collapse that may adversely impact inversion, installation, curing, or the final integrity of the CIPP liner, then the Contractor shall immediately notify the Engineer/Inspector and allow same to view the defect during the inspection. The Contractor and Engineer shall coordinate arrangements for correction of the defect. CCTV video inspections documenting and coordinating such conditions prior to the pre-installation CCTV inspection will be applicable for separate payment as described under "Section 20 Pay Item Descriptions". The pre-installation CCTV video inspection provided to the Engineer shall document the correction of any such condition and state of the host pipe prior to lining or pre-liner installation.

D. Point Repairs

Prior to CIPP liner installation, all conditions/ defects such as dropped joints, pipe deformation, active infiltration or a collapse that may adversely impact inversion, installation, curing, or the final integrity of the CIPP liner shall be repaired as authorized by the Engineer. If conditions which can only be corrected by open-cut repair are encountered after the Contractor has set up preparations (pump around or traffic control) for the Work to progress, the Contractor shall leave these items in place as directed if the Engineer needs to schedule

the completion of an open-cut repair and can do so within 5 business days. Otherwise, the Contractor shall demobilize if the Engineer must schedule the work at a later date.

1. To ensure proper installation, curing of the CIPP, and a defect-free liner, any active infiltration, shall be controlled using an approved chemical grout in accordance with manufacturer recommendations. Extraneous grout material which may come in contact with the CIPP liner shall be compatible with the resin system utilized. Extreme caution should be taken during leak sealing (pressure grouting) operations in order to avoid damaging the already weakened pipe. Excessive pumping of grout which might block a service lateral shall be avoided. Any main or service laterals blocked by the grouting operation shall be cleared immediately by the Contractor. Host pipe damage caused by improper use of grouting equipment or operator error shall be repaired at the Contractor's expense. Where internal grouting may not be a viable option, the Engineer may authorize, at the City's option, an external well point dewatering system to be employed to control active infiltration under extra work performed by the Contractor or City forces.
2. Severe offsets/ dropped joints, pipe deformations, grade defects or collapses shall be repaired by open-cut methods as directed by the Engineer. The repairs shall be at the Contractor expense if they resulted from the Contractor's improper use of equipment or procedures.

E. Pump Around of Wastewater

1. The Contractor shall provide wastewater bypass pump around and/ or diversion when required for completion of preparatory work and CIPP liner installation. Wastewater bypass pump around shall be performed in accordance with the requirements of the article "Pump Around Pumping" of the Technical Specification Section headed "General".
2. The Contractor shall schedule the Work or otherwise provide wastewater collection service to allow businesses to maintain their normal hours of operation.

F. Public Notification

The Contractor shall make every effort to maintain service throughout the duration of the Project. In the event that a service connection will be out of service, the maximum amount of time of no service shall be as approved by the Engineer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the wastewater system and informing them of the Work to be conducted, and when wastewater service will be off-line. The Contractor shall also provide the following:

1. Written notice to be delivered to each home or business 7 days prior to the beginning of Work being conducted on the pipe segment. The notice shall include the Contractor's name, the date the Work will commence, the duration of the Work, the type of Work and a local telephone number of the Contractor's onsite representative they can contact to discuss the Project or any problems which could arise.
2. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

21.10 INSTALLATION

A. Resin Impregnation

1. The uncured resin in the original containers and the un-impregnated liner tube shall be properly stored in accordance with the manufacturer's recommendations. The liner tube shall be thoroughly vacuum impregnated with catalyzed resin prior to installation. The materials and 'wet-out' procedure shall be subject to inspection by the Engineer. A resin and catalyst system that is compatible with the requirements of the method shall be used.
2. The impregnated liner tube shall be transported to and stored at the site in such a manner that it will not be damaged, exposed to direct sunlight, or result in any public safety hazard. If required, the impregnated liner tube shall be kept cool during shipment and storage. All materials shall be subject to inspection and review prior to installation. Alternatively, lateral liner tube may be impregnated at the Project location. The Contractor shall erect temporary facilities to ensure the liner tube, resin, and catalyst are properly stored, and the liner tube is suitably impregnated prior to installation. The volume of resin used shall be sufficient to fill all voids in the textile lining material at nominal thickness and diameter. The volume shall be adjusted by adding 5% to 10% excess resin for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe. No dry or unsaturated area in the mainline sheet or lateral tube shall be acceptable upon visual inspection

B. Main Liner Installation

1. The use of a pre-liner may be required on sewer lines where active infiltration would affect the quality of the installation. For individual line segments where the Contractor believes active infiltration may interfere with the proper installation, curing, and cured liner integrity, a pre-liner shall be installed as approved by the Engineer.
2. Contractor shall ensure that an Engineer approved procedure is followed for sealing the liner from all groundwater infiltration and migration at connections to and within all manholes. Hydrophilic sealing material shall be placed per the Manufacturer's recommended product guidelines and Contractor's/ Manufacturer's approved procedures prior to liner installation.
3. The impregnated tube shall be inserted through an existing manhole or access structure by means of the manufacturer's recommended installation process in accordance with ASTM F1216. The application of hydrostatic head, compressed air, or other means shall fully extend the CIPP liner to the next designated manhole or termination point and inflate and firmly hold the liner to the host pipe wall. A resin impregnated sample (wick) shall be retained by the Contractor to provide verification of the curing and for testing as required.
4. The liner tube shall be installed at a rate less than 10 feet per minute at all times.
5. If the CIPP liner installation fails, the Contractor shall be responsible for operating the pump around pumping equipment for the additional time required until the installation can be completed, at the Contractor's expense.

C. Lateral Liner Installation

1. The installation device shall be pulled into the main pipe using a cable winch or robotically

transported from the access point (manhole) to the service connection point with the use of CCTV to correctly position the device as required by the Manufacturer or Assembler. The resin impregnated liner materials shall be protected from contamination until positioned at the point of repair. CCTV documentation of the placement prior to curing shall be provided to the Engineer. Approved hydrophilic end seals shall be positioned at all terminating ends of the liner assembly in accordance with manufacture's product standards.

2. Lateral Liners shall generally be installed after completion of the main CIPP liner and extend no less than 2-feet to the property line, public easement line, City owned cleanout installed at those boundaries, or transition where the liner cannot proceed, as approved by the City. Where a City owned cleanout is located at the property boundary, the end of the lateral liner shall extend a minimum of 12" beyond any PVC to VCP transition point downstream of the cleanout. Prior to installation, it is the contractor's responsibility to verify all public easement and right-of-way widths and distances from the sewer main to all lateral liner termination points to ensure that the completed CIPP lateral liner length will extend to and includes the entire publicly owned portion.
3. The Lateral Liner shall include a full circle wrap at the main connection and will be entirely installed from the main to its termination point wherever feasible. Where physical conditions may dictate, and as approved by the Engineer, the Contractor may install remaining upstream portions of the required Lateral Liner length from the top down through a cleanout/access structure at the property line. There shall be at least a 12-inch overlap from any separately installed upper portion onto the lower portion of the Lateral Liner, and any lower portion installed from the main or downstream end shall extend at least 3 feet upstream into the lateral from the main pipe. Liner overlaps and termination points shall not occur at any pipe bends and shall always contain watertight end seals using a City approved product.
4. Lateral Liners installed for lateral pipe constructed with a vertical stack shall generally follow the requirements for standard laterals described above, except as modified herein. The Lateral Liner tube shall be installed from the bottom up through the lateral opening in the main pipe for the vertical stack portion of the lateral. The vertical stack lateral may provide service to more than one connection through a double wye or other connection(s) at the top of the vertical stack. The Contractor may choose to install the entire length of the Lateral Liner(s) from the bottom up to the property line or to install the portion of the Lateral Liner(s) beyond the vertical stack from the top down, from the property line to the vertical stack. The Contractor shall obtain written directive from the Engineer for the installation of any cleanout(s) required to install Lateral Liners and the installation of the lateral liner(s) in the portion of the lateral(s) connecting to and beyond (upstream of) the vertical stack to the property line. The portion of the lateral(s) beyond the vertical stack may be replaced based on field conditions, as directed by the Engineer.
5. The application of hydrostatic head, compressed air, or other means shall fully extend the liner to the required acceptable termination point and inflate and firmly compress the liner against the host pipe. Curing shall be done without pressure interruption with air or a mixture of air and steam for the proper duration of time per the resin manufacturer's recommendations.
6. The post rehabilitation CCTV inspection for the Lateral Liner installation shall be accomplished from within the main pipe with a pan and tilt camera clearly showing the liner termination joints and from within the lateral pipe to fully document the installation and termination joint within the lateral. A resin impregnated sample (wick) shall be

retained by the Contractor to provide verification of the curing process taking place in the lateral pipe and for testing as required.

D. Curing

1. If a heat source is required after placement is completed, suitable heat source and distribution equipment shall be provided. The equipment shall be capable of circulating hot water, air, and/ or steam throughout the section by means of a pre-strung hose which has been perforated in accordance with the manufacturer's recommendations or other methods acceptable by the Engineer to raise the temperature uniformly above the temperature required to affect a resin cure. This temperature shall be determined by the manufacturer based on the resin/ catalyst system employed. The manufacturer's recommended cure schedule shall be submitted and followed.
2. The heat source piping shall be fitted with continuous monitoring thermocouples to gauge the temperature of the incoming and outgoing water, steam, and/ or air supply. Water, steam, or air temperature during the cure period shall meet the requirements of the resin manufacturer as measured at the heat source inflow and outflow return lines. The Contractor shall provide standby equipment to maintain the heat source supply. An additional continuous monitoring thermocouple shall be placed between the impregnated felt tube and the pipe invert at the upstream and downstream manholes to determine the temperature during the cure. The temperature during the cure at the boundary between the pipe wall and the liner shall be as required by the resin manufacturer.
3. The initial cure shall be deemed to be completed when inspection of the exposed portions of the liner appears hard and sound and the remote temperature sensors indicate that an exotherm has occurred. The cure period shall be of duration and temperature recommended by the resin manufacturer during which time the recirculation of the water, steam, and/ or air and cycling of the heat exchanger continuously maintain the required temperature.
4. A data logger shall be used for Main Liners to continuously record temperature, pressure and time during heating, cure and cool down of the liner at the insertion and termination manholes. This data shall be retained by the contractor and provided to the Engineer upon request for each pipe segment within 10 days of the cure. Data files shall be uploaded to the City FTP site as designated at the pre-construction conference.
5. All sewer pipe greater than 18 inches in diameter shall use Vericure or approved equal

D. Cool Down

1. The cured liner shall be cooled to a temperature below 100 degrees F before relieving the static head or pressure in the lined pipe and returning normal flow back into the system. The cool down may be accomplished by introducing cool water or air into the lined pipe.
2. Care shall be taken in the release of the static head or pressure so that a vacuum will not develop which could damage the newly installed liner. Water for cooling shall be supplied by the Contractor. All materials other than the cured liner should be removed from the pipe by the Contractor.

E. Finished Liner

1. The finished liner shall be immediately inspected by the Contractor upon completion of curing. The finished liner shall be continuous over the length of the host pipe and free from all defects such as foreign inclusions, dry spots, pinholes, and delaminations, and from lifts, sags, and wrinkles larger than 5 percent of the design inside diameter of the liner.
2. The Engineer shall be immediately notified of any defects with the finished liner. The defective liner shall be repaired or replaced as approved by the Engineer, at the Contractor's expense.

F. CIPP Main Liner Termination and Connection in Manholes

1. **Liner Termination:** The liner shall achieve a watertight seal through the manhole channel/ invert and at the host pipe(s) where it enters/ exits any manhole. The use of fiber felt and a suitable resin system, hydrophilic rubber waterstops, or injection grouting methods compatible with the liner shall be used to ensure a watertight CIPP liner system at the pipe to manhole connections. CIPP liner entries at manholes shall be smooth and free of irregularities. The top half of the CIPP liner shall be neatly cut at the wall. The channel in the manhole shall be a smooth continuation of the pipe(s) and shall be merged with other pipes or channels. All manholes shall be individually inspected for liner cut off, benches and sealing Work. Any visible leaks through or around the CIPP liner shall be corrected by an approved method at the Contractor's expense.
2. **Manhole Rehabilitation:** The channel in the manhole shall be a smooth continuation of the liner and pipe(s) and shall be merged with other channels. Inverts and/ or benches shall be resurfaced/ repaired or constructed where necessary to provide a smooth flow channel. The manhole floor and base section shall receive an approved monolithic coating which is chemically compatible with the CIPP liner, and any chemical/ cementitious grout or repair material used in the manhole.

21.11 SERVICE RECONNECTION

- A. The Contractor shall be responsible for internally reopening the service connections to the lined pipe using a pivot-head CCTV video inspection camera and a remote cutting tool, or other method as approved by the Engineer. The use of remote cutting equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and manual reconnection is acceptable. The Contractor shall locate the service connections from inside the lined pipe, cut a hole matching the connection diameter, and grout the area where the service connection enters the lined pipe to produce a water tight seal approved by the Engineer. Grouting of service connections shall be accomplished using a "Logiball" type lateral packer to seal the first 18 inches of the service connection in accordance with the manufacturer's instructions and the Technical Specification Section headed "Chemical Sealing of Service Connections."

The Contractor shall provide a nearly full-diameter hole, free from burrs, loose or abraded material, hanging fibers or projections, and with a neat, smooth and crack-free edge. The hole shall be 95 percent minimum and 100 percent maximum of the original service connection diameter. The invert of the service connection shall match the bottom of the reinstated service opening. The Contractor shall certify he has a minimum of 2 complete

working cutters plus spare key components on the site before each installation. All cuttings shall be collected and disposed of properly.

- B. All service connections shall be reopened including those that go to unoccupied or abandoned buildings or vacant lots, unless directed otherwise by the Engineer. Begin reconnection of services immediately after liner curing and cool down is complete. The Contractor shall initially reopen each connection in an expeditious manner with a less than a full size opening to release wastewater temporarily stored in the service lateral. The Contractor shall then complete reconnection of all services within 24 hours. The Contractor shall immediately reopen any missed connections and repair any holes drilled in error. Faulty cuts shall be repaired by methods approved by the Engineer at no additional cost to the City.
- C. It is the intent of these Specifications that service connections be reopened without excavation. No additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

21.12 INSPECTION AND TESTING

A. Material

- 1. All material testing shall be performed and certified by a registered independent, third-party laboratory.
- 2. Wall thickness of samples shall be determined as described in ASTM F1216, Section 8 or ASTM F1743, Section 8. The minimum wall thickness at any point shall not be less than 87.5% of the design thickness as calculated in Section 17.08 of this Specification.
- 3. The Contractor shall obtain, prepare and store appropriate samples for all liners installed under this Contract. The Contractor shall provide samples of the cured lining material from the actual installed liner at a minimum of one set per each liner insertion setup. The preparation and testing of these samples shall be in accordance ASTM F1216, Section 8. The Contractor shall coordinate the required testing of the samples with the laboratory, and the City will pay for the initial testing of these samples in accordance with the pay item. The Contractor shall pay for the cost of retests made necessary by the failure of the samples to meet the specified requirements.
- 4. The cured liner shall be sampled and tested for flexural strength and flexural modulus (short term). Flexural strength and modulus shall be tested in accordance with the requirements of ASTM D790. The liner shall be in compliance with the physical properties stated in Section 17.08D of this Specification.
- 5. Corrosion resistance requirements shall be as stated in ASTM F1216, Section X2, Chemical Resistance Tests.
- 6. Water tightness of the liner will be tested as per ASTM F2550-18

B. Field

- 1. Up to 10 percent of the installed CIPP Main Liners may be tested for infiltration or exfiltration in accordance with ASTM F1216, Section 8.2 prior to service lateral reconnections or ASTM F2550-18 after services have been opened. The Contractor, or City if it elects to use its own forces, will inspect up to 10% of the completed lined pipes.

The lines and locations will be selected at the sole discretion of the City. Based on results of this inspection, the City reserves the right to increase the inspection quantity above 10% of the project length such that City is assured CIPP installation meet all contract documents and specifications. Testing shall exclude maximum pressure limitation (4.3 psi) at lowest end. Leakage testing shall be performed after all dry and non-bondable hoses and tubes are completely removed from the liner. If the liner fails the test, Contractor shall repair or replace liner as required until the tested segment passes. A failed exfiltration test on any liner may be cause for exfiltration testing to be increased, as directed by the Engineer.

2. After completion of the installation of Main Liners, service reconnections, and finish work at the manholes, the lined pipe and adjacent manholes shall be CCTV video inspected by the Contractor at his expense, as required by these Specifications.
3. Pre-installation and post-rehabilitation CCTV video inspections shall either be recorded on the same media or shall be referenced, if recorded on separate media. Acceptance of the Work shall be based on Engineer's review of the CCTV video inspection and all other post QA/QC inspection processes. Post-rehabilitation inspection activities shall not be performed in conjunction with cleaning operations and the liner wall shall be as dry as practical during this inspection (no dripping or splashing). The post-rehabilitation CCTV inspection at the lateral connection shall be performed with a pan and tilt camera. All CCTV video inspections delivered to the City shall be in accordance with the Technical Specification Section headed "Closed Circuit Television Inspection."

END OF SECTION

SECTION 22 - CLEANING OF WASTEWATER SYSTEM

22.01 GENERAL

The Work in this section includes cleaning of wastewater collection system components prior to inspection to permit proper Closed Circuit Television (CCTV) video inspection and rehabilitation. Wastewater system components shall be defined as access structures (including manholes, vaults, junctions, wet wells, and end of line cleanout), gravity main pipe segments between two adjacent access structures, and public service laterals between the gravity main and the property line.

The Contractor shall furnish all materials, labor, equipment, and services necessary for cleaning of wastewater collection systems including, but not limited to: traffic control, locating access structures, removal of roots and other materials that require the use of specialty equipment defined as specialty cleaning, disposal of waste and sediment, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

22.02 QUALIFICATIONS

The Contractor shall have experience in the cleaning of vitrified clay pipe, concrete pipe, and other pipe materials typically found in wastewater collection systems. Documentation of experience shall be furnished to the Engineer upon request. Refer to item no. 12 in the Engineering Project Questionnaire for minimum qualifications.

22.03 SUBMITTALS

The Contractor shall submit the cleaning equipment product data to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals".

22.04 PRODUCTS

A. Cleaning Equipment

1. The wastewater system shall be cleaned with industry standard truck-mounted high velocity hydro-cleaning equipment. No mechanical bucket machinery will be acceptable for the cleaning process. The equipment shall be provided with a minimum of 500 ft of one-inch ID high-pressure hose with a selection of high velocity nozzles, as required for the normal cleaning and specialty cleaning operations.
2. The equipment shall have a minimum usable water capacity of 1000 gal. The pumps shall be capable of delivering a minimum 60 gpm at 3000 psi. Pressure to the nozzle shall be regulated by a relief valve, adjustable from 0 to 1,500 psi minimum. The nozzles shall produce a scouring action from 15 to 45 degrees in all size pipes to be cleaned.

The equipment shall carry its own 1,000 gal water tank capable of holding corrosive or caustic cleaning or sanitizing chemicals, engines and pumps, and a hydraulically-driven hose reel. The equipment shall also include a high velocity washing hose for ancillary cleaning of the walls and floor of manholes. The hose shall have an adjustable nozzle capable of producing flow from a fine spray to a solid stream. All controls shall be located so that the equipment can be operated above ground. During hydro-cleaning, the Contractor shall restrict the flow level in the pipe to a maximum of 50 percent of the pipe diameter. Particular care should be taken to avoid flooding house connections during hydro-cleaning operations.

3. The Contractor shall provide equipment capable of removing all sand, dirt, rocks and other debris to allow unobstructed CCTV inspection of all internal pipe surfaces.
4. The Contractor shall certify that backup cleaning equipment, including machines, devices, tools, etc., is available and can be delivered to the site within 24 hours.
5. Any blockages of building service connections resulting from the cleaning or other items of work shall be removed by cleaning of the building connection by the Contractor, at his own expense. Any damage caused by flooding of building service connections shall be corrected by the Contractor, at his own expense.
6. The Contractor shall provide specialty cleaning equipment capable of mechanically removing all attached, hardened and/ or cemented debris including, but not limited to, roots, grease, calcification, tuberculation, joint sealant, other hardened or tightly adherent deposits, etc. which cannot be removed by the use of industry standard high velocity hydro-cleaning equipment alone. Specialty equipment shall include, but is not limited to, a root saw, spring blade root cutter chuck or approved equal. The use of specialty cleaning equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and manual removal is acceptable.
7. Lateral cleaning equipment shall be a remote control directional unit to launch a high pressure cleaning nozzle into a lateral connection from within the main pipe. The lateral cleaning jet shall be capable of 1500-1800 PSI, at up to 80 GPM. The launch unit shall be able to rotate 180 degrees to access the lateral opening position. The equipment shall be monitored by a video camera positioned adjacent to the lateral. The lateral cleaner shall be able to clean up to 75 linear feet into the lateral from the main. The equipment shall be LCS by Cues, Inc., Lateral Launcher by Logiball, Inc. or approved equal.

22.05 EXECUTION

A. Cleaning

1. After determining the preliminary requirements and the feasibility of effective CCTV inspection, the Contractor shall thoroughly clean all required pipe segments or public laterals as required to permit an unrestricted inspection by industry standard CCTV inspection equipment. Particular emphasis shall be afforded the removal of accumulated grease, roots, sand, rocks, bricks, sludge and other debris so that the CCTV inspection will clearly show all portions of the pipe being inspected. Acceptance of pipe segment cleaning shall be made upon the successful completion of the CCTV inspection and shall be defined as removing sufficient material to permit an unrestricted view of the pipe internal surfaces and to ensure an effective rehabilitation of the pipe segment, all to the satisfaction of the Engineer. If CCTV inspection shows the cleaning to be unsatisfactory,

the Contractor shall be required to repeat the cleaning and CCTV inspection of the pipe segment at no additional cost to the City.

2. Except during drought conditions, water required for the cleaning will be provided by the City at locations to be specified by the City. The City shall furnish and install water meters at all points where water is drawn from the City's supply. The City will charge a fee for the water used. A backflow prevention device shall be used to prevent contamination of the potable water system. The Contractor is responsible for any damage resulting from improper operation of hydrants. Do not use or obstruct a fire hydrant when there is a fire in the area.
3. The Contractor shall not waste water from the public water supply because of improper connections or from hydrants left open.
4. The Contractor shall remove all bricks, rocks, debris, sludge, dirt, sand, grease, roots and other materials from the pipe segment ordered to be cleaned, and collect and remove the resulting debris from the downstream manhole of the pipe segment. Passing waste material between manholes, causing accumulations of sand, system stoppages, or damage to the pumping equipment shall not be permitted. When necessary, a dam trap or weir and screen shall be temporarily installed in the downstream manhole in such manner that debris and solids shall be trapped and retained for subsequent removal.
5. Waste and debris cleaned from the pipe segment shall be removed at the downstream manhole by pumps or other means. The discharge and drainage stream shall be returned downstream to the wastewater collection system for disposal. Under no circumstances shall wastewater or solids be dumped onto the ground surface, street, or into ditches, catch basins or storm drains. All solid and semi-solid debris resulting from the cleaning operations shall be removed from the site and taken to the City's wastewater treatment facilities. The City's wastewater treatment facilities for disposal of solids from this Project are the Northeast Water Reclamation Facility located at 1160 62nd Avenue NE, or the Northwest Water Reclamation Facility located at 7500 26th Avenue North, St. Petersburg, Florida, unless directed otherwise by the Engineer. The Contractor is responsible for transporting the debris and must remove and properly dispose of excess water from the debris prior to disposal at the City's wastewater treatment facility.
6. Where access to manholes in easements and rights-of-way is required, the Contractor shall obtain permission from the homeowner for equipment access. Refer to the Technical Specification Section headed "General" for more information on Work in Private Property.
7. Barricades and warning signs shall be used in work areas and around open manholes. The Contractor shall furnish and maintain traffic controls and safety devices as required.
8. Normal Cleaning includes the removal of sludge, sand, silt, rocks, gravel and other loose and non-adhering debris regardless of the amount in an unlimited number of passes, and requires a minimum of two passes with the high velocity hydro-cleaning equipment. The first pass shall be restricted to 800 psi at the nozzle head. The second and subsequent passes shall be at 1200 psi.
9. Specialty Cleaning includes Normal Cleaning criteria and also consists of removal of all attached, hardened and/ or cemented debris including, but not limited to, roots, grease, calcification, tuberculation, joint sealant, other hardened or tightly adherent deposits, etc. which cannot be removed by the use of industry standard high velocity hydro-cleaning

equipment alone. Specialty Cleaning consists of an unlimited number of passes using specialty cleaning equipment (or other methods as approved by the Engineer) in conjunction with high velocity hydro-cleaning equipment. All pipes shall be restored to at least 95 percent of their nominal diameter. Joint sealant shall be removed to within ¼ inch of the pipe wall. Specialty Cleaning only for the removal of excessive joint sealant will generally not be required until just prior to lining of the pipe segment (if necessary), unless the joint sealant prevents the passage of the CCTV inspection equipment. Specialty Cleaning shall only be undertaken when specifically authorized by the Engineer.

10. Employ satisfactory precautions to protect the pipe and manholes from damage that might be inflicted by improper selection of the cleaning process or improper use of the equipment. Immediately notify Engineer if fresh soil, pieces of pipe, or other visible signs of potential problems occur during cleaning operation. When using hydraulically propelled devices, take precautions to ensure that the water pressure created does not cause damage or flooding to public or private property. Do not surcharge the wastewater beyond the elevation that could cause overflow of wastewater into area waterways or buildings, or onto the ground.
11. The Contractor shall clean upstream reaches of the system before the downstream reaches are cleaned. Hydro-cleaning equipment shall typically be inserted in the downstream manhole of the pipe segment, and the cleaning work shall proceed from upstream to downstream. Winching equipment used shall not damage the pipe or manholes.

B. Final Acceptance of Pipe Cleaning

Acceptance of pipe segment cleaning shall be made upon the successful review of the CCTV inspection by the Engineer. If the CCTV inspection shows the cleaning to be unsatisfactory, the Contractor shall be required to repeat the cleaning and CCTV inspection of the pipe segment until the cleaning is shown to be satisfactory. Such repeat cleaning and CCTV inspection shall be made at the Contractor's expense.

END OF SECTION

SECTION 23 - CLOSED CIRCUIT TELEVISION INSPECTION

23.01 GENERAL

The Work in this section includes Closed Circuit Television (CCTV) video inspection of wastewater collection system gravity main pipe segments and corresponding pipe laterals between adjacent access structures (including manholes, vaults, junctions, wet wells, and end of line cleanout. Post-cleaning/ pre-rehabilitation CCTV inspection shall be defined as video inspection of the interior of pipe after cleaning has been completed in accordance with the Specifications, and prior to any rehabilitation work, and shall verify that the pipe segment is clean and permits evaluation of the condition of the pipe. Post-cleaning/ pre-rehabilitation CCTV inspection shall identify the location of service connections and pipe segment defects that may require rehabilitation. Post-rehabilitation CCTV inspection shall be defined as video inspection to verify rehabilitation of a pipe segment has been completed in accordance with the Specifications.

The Contractor shall furnish all materials, labor, equipment, and services necessary for CCTV video inspection of wastewater collection system pipe including, but not limited to: traffic control, locating access structures, wastewater bypass pump around pumping and/ or diversion, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

23.02 QUALIFICATIONS

CCTV inspections shall be in compliance with the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program and Lateral Assessment Certification Program (PACP/LACP) standards and performed by NASSCO PACP/LACP certified inspectors. The Contractor shall have experience in the CCTV inspection of vitrified clay pipe, concrete pipe, and other pipe materials typically found in wastewater collection systems. Refer to item no. 12 in the Engineering Project Questionnaire for minimum qualifications.

23.03 SUBMITTALS

- A. Submitted CCTV inspections become the property of the City. The Contractor shall maintain a master copy of all CCTV inspection data until final acceptance of the project. The CCTV inspection video shall not be edited. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
1. A complete listing of the number of and each major equipment type, including product brand name and product manufacturer, to be employed by the Contractor/ Subcontractor. All equipment manufacturer's operational guidelines for the equipment to be used.
 2. Video and data from CCTV inspection surveys shall be furnished on a portable Universal Serial Bus (USB) hard drive along with hard copy reports of inspection surveys. The

hard copies of the inspection reports shall be assembled in an orderly manner and submitted together in a binder. All final data for each completed location where payment is being requested shall be submitted in a single NASSCO PACP/LACP Data Exchange Format database (latest version).

3. Prior to the beginning of any work, a sample PACP/LACP database and video demonstrating compliance with the requirements above shall be submitted to the Engineer.

23.04 PRODUCTS

A. Equipment

1. **CCTV Equipment:** Select and use CCTV equipment that shall produce a high quality color video.
2. **Pipe Inspection Camera:** Produce a video using a pan-and-tilt, radial viewing, pipe inspection camera that pans ± 275 degrees and rotates 360 degrees. Use a camera with an accurate footage counter, which displays on the monitor the exact distance of the camera from the centerline of the starting manhole. Use a camera with camera height adjustment so that the camera lens is always centered at one-half the inside diameter in the pipe being televised. Only self-propelled cameras shall be used to provide an unobstructed view of the pipe. Provide a lighting system that allows the features and condition of the pipe to be clearly seen. A reflector in front of the camera may be required to enhance lighting in dark or large diameter pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 700-line resolution colored video picture. Picture quality and definition shall be to the satisfaction of the Engineer, if unsatisfactory, equipment shall be removed and no payment made for an unsatisfactory inspection.
3. **Lateral Inspection Camera:** Produce a video using radial viewing, pipe inspection camera that can be launched from the main pipe into the service lateral. Use a camera with an accurate footage counter that displays on the monitor both the exact distance of the lateral camera in the lateral from the main pipe and the mainline camera simultaneously. Use a centering device for the lateral camera to maximize protection and passage so that the camera lens is always centered in the pipe being televised. A Sonde locating receiver shall be attached to the camera to locate and mark the alignment and end of the public lateral at the property line surveyor's paint (green). The camera shall use a self-leveling and auto upright lateral camera to provide a properly oriented video. Provide a lighting system that allows the features and condition of the pipe to be clearly seen. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 700-line resolution colored video picture. Picture quality and definition shall be to the satisfaction of the Engineer, if unsatisfactory, equipment shall be removed and no payment made for an unsatisfactory inspection. The lateral inspection camera shall be the LAMP system by Cues, Inc., or approved equal.
4. **Video:** Video shall be recorded on a portable USB hard drive or other acceptable digital media, as required by the Engineer.
 - a. Only one pipe segment or public lateral inspection shall be permitted in each video file. The Contractor shall not be permitted to start a portion of a televised segment

on one video file and finish on another. Reverse inspections shall be included in the same video file or may be in a separate video file.

- b. Media identification labels are required. A label shall be attached to the USB hard drive with the following information:
 - 1) Project Name, Project Number and Site Location
 - 2) Contractor's name
 - 3) Inspection Type: Post-cleaning/Pre-rehabilitation, and Post-rehabilitation
 - 4) Wastewater Basin
 - 5) Video Filenames
 - 6) Date Submitted
5. The Contractor shall provide with each video a, up-to-date PACP/LACP compliant report that shall include the header data, pipe defects, service connections, and PACP/LACP Condition Grading System ratings for the structural and operational & maintenance defects.
6. The Contractor shall provide a detailed header at the beginning of each video file and log sheet. At a minimum the header shall include:
 - a. Project Name, Project Number and Site Location
 - b. Contractor's Name
 - c. Operator's Name and PACP & LACP Certification Number
 - d. Inspection Type: Post-cleaning/ Pre-rehabilitation, or Post-rehabilitation
 - e. Inspection Date
 - f. Wastewater Basin Number (if applicable)
 - g. Upstream and Downstream manhole numbers
 - h. Street Name and Number (Mainline Inspections Only)
 - i. Upstream and Downstream Rim to Pipe Invert Depth (Mainline Inspections Only)
 - j. Upstream and Downstream Grade to Pipe Invert Depth (Mainline Inspections Only)
 - k. Survey Direction (Upstream or Downstream)
 - l. Method of Flow Control (Not controlled, bypass, or plugging)
 - m. Pipe Shape and Size
 - n. Pipe Total Length
 - o. Pipe Surveyed Length
 - p. Pipe Joint Length
 - q. Pipe Material
 - r. Lateral service address (Lateral Inspections – if applicable)
 - s. Lateral GIS Location Tag Value or ID (Lateral Inspections – if applicable)
7. The Contractor shall superimpose a footage counter on the screen that runs continuously during the course of each video file. For Lateral inspections, both the mainline camera footage counter and the lateral launch camera footage counter shall be superimposed on the video capture screen continuously during the course of each video file.
8. Camera systems required for lateral inspection shall be able to be launched from a cleanout (from the top down) and capable to inspect 3, 4, and 6-inch lateral connections up to 100 ft in length. A sonde transmitter shall be included for pipe location and marking. The system shall also be capable of meeting all the requirements of Section 23.04, #4, 5, 6, and 7.

23.05 EXECUTION

A. Televising

1. After completion of cleaning in accordance with the requirements of Technical Specification section headed "Cleaning of Wastewater System", and prior to rehabilitation, conduct CCTV inspection of the pipe segment or public pipe lateral to document the condition of the pipe segment and to locate existing service connections. The CCTV inspections shall be of sufficient quality for the Engineer to evaluate the condition of the pipe, locate the service connections, and verify cleaning. Immediately after rehabilitation, televise the pipe segment to document completion of rehabilitation work and quality. Notify the City Inspector 24 hours in advance of any CCTV inspection so that the Engineer may observe inspection operations.
2. Perform CCTV inspection of pipe segments and public laterals as follows:
 - a. Perform post-cleaning/ pre-rehabilitation CCTV inspection immediately after pipe cleaning and before pipe rehabilitation work. Verify that the pipe is clean and ready for rehabilitation. Where a public lateral cannot be inspected fully from the main up to the property line, the inspection shall be performed from a clean-out if available. The above ground horizontal location of each lateral shall be marked every five (5) feet utilizing surveyor's paint (green) on an asphalt or concrete surface and surveyor's flags in grass. Approximate depth of laterals at these locations shall be recorded on the TV logs.
 - b. Collect post-cleaning/ pre-rehabilitation inspection video at each service connection for an extended period to better understand the flow from each service connection. The camera shall be positioned at each service connection for a sufficient duration to determine the nature of flow and condition of the connection (minimum of 15-seconds). If a service connection is in use, the Contractor shall pause the inspection until domestic flow has ceased. Any service connection inspection deemed unacceptable by the Engineer shall be re-televised by the Contractor at no additional cost to the City.
 - c. Perform post-rehabilitation CCTV inspection to confirm completion of rehabilitation work, including removal and replacement. Verify that the rehabilitation work conforms to the requirements of the Specifications. Provide a video showing the completed work, including the condition of restored service connections. The video shall be taken with dry or damp pipe walls (no dripping or splashing). Prepare and submit a report providing location of service connections along with the location of any discrepancies.
 - d. Videos shall pan beginning and ending manholes including pipe connection area to demonstrate that all debris has been removed. Camera operator shall slowly pan each service connection, significant defects, clamped joints, and pipe material transitions.
 - e. The accuracy of the measurements for location of defects, service connections, etc. cannot be stressed too strongly. Marking on cable, or the like, which would require interpolation for depth of manhole, shall not be allowed. The footage measurement device shall be accurate to one-tenth of a foot over the entire length of the pipe segment being inspected. Prior to recording the location of a defect, service connection, etc., slack in the cable of the CCTV inspection camera shall be taken up to assure the measuring device is designating proper footage. Accuracy of the measurement device shall be checked daily by use of a walking meter, roll-a-tape,

or other suitable means.

- f. Camera distortions, inadequate lighting, dirty lens, blurred/ hazy picture, or excessive debris, or excessive water depth shall be cause for rejection of the CCTV inspection for that pipe segment. Any pipe segment CCTV inspection deemed unacceptable by the Engineer shall be re-televised and a new video and report provided by the Contractor at no additional cost to the City. Payment for CCTV inspection and subsequent rehabilitation shall not be made until the Engineer approves the quality of the video and logs.
3. CCTV inspection video shall be continuous for a pipe segment between manholes. Do not leave gaps in the video of a segment between manholes and do not show a single segment on more than one video, unless specifically allowed by the Engineer.
4. Where access to manholes in easements and rights-of-way is required, the Contractor shall obtain permission from the homeowner for equipment access. Refer to the Technical Specification Section headed "General" for more information on Work in Private Property.

B. Flow Control

1. Perform CCTV inspection of one pipe segment at a time. Adequately control the flow in the segment being televised. The Contractor shall use pipe plugs in the upstream manhole to control the depth of flow where feasible. Do not exceed the depth of flow as follows:

<u>Pipe Diameter (Inches)</u>	<u>Depth of Flow (Percent of Pipe Diameter)</u>
6 - 10	10
12 - 24	15
>24	20

2. If the wastewater flow depth exceeds the maximum allowable during the CCTV inspection of a pipe segment, reduce the flow depth to an acceptable level by performing the CCTV inspection during minimum flow hours, by "Pump Around Pumping", by high-velocity jet nozzle or other acceptable dewatering means. Video made while floating the camera is not acceptable. Additionally, post-rehabilitation CCTV inspection shall be performed with the added requirement that the pipe walls are damp or dry (no dripping or splashing).

C. Passage of CCTV Camera

1. Do not propel the television camera through the pipe segment at a speed greater than 30 feet per minute and no slower than 15 feet per minute unless the inspection is stopped for service connection or defect viewing.
2. If the camera is unable to pass an obstruction during CCTV inspection of a pipe segment, televise the segment from the other direction (reverse setup) in order to obtain a complete CCTV inspection of the segment.
 - a. When the camera is proceeding in the opposite direction in order to survey on either side of an obstruction and a second obstruction is encountered away from the first obstruction, the inspection may be terminated and the Contractor shall be paid for

the length of the pipe segment inspected.

- b. The Engineer makes no guarantee that pipe segments specified for CCTV inspection are clear for the passage of the Contractor's cleaning and CCTV equipment. Select the appropriate equipment, tools, and methods for securing safe passage of the equipment. The Contractor shall be responsible for all costs associated with the retrieval of cleaning and CCTV inspection equipment that become stuck in the system. These costs include, but are not limited to, "Pump Around Pumping" and any resultant restoration, all in accordance with City standards. The City reserves the right to remove the Contractor's stuck equipment from the system if the Contractor fails to do so in a timely manner. All costs incurred by the City to remove the Contractor's stuck equipment from the wastewater system shall be paid by the Contractor.
3. The post-cleaning/ pre-rehabilitation CCTV inspection shall document that the pipe is ready to rehabilitate. Report any variations between previous reported (existing data) conditions and the actual conditions encountered to the Engineer.
4. The post-rehabilitation CCTV inspection shall document completion of the rehabilitation work and conformance to the Specifications. Provide a full 360-degree view of pipe, joints and service connections. Conduct post-rehabilitation CCTV inspection separately from cleaning operations in order to provide a clear view unobstructed by splashing or dripping.

D. CCTV Inspection Data Requirements

1. For each CCTV inspection survey (manhole to manhole, or lateral), provide the data/ video in electronic format and a hard copy report. Electronic inspection data shall be submitted in a database compatible with current NASSCO PACP/LACP Data Exchange format. A single database shall be submitted with Payment Request once work is completed. The hard copy inspection report (pdf file format) shall include header information and provide a log of all pipe defects, service connections and other conditions indexed to the footage counter using current PACP/LACP format. The PACP/LACP compliant database as well as multiple pipe segment video files from the project locations, and hard copy PACP/LACP reports (in PDF file format) shall be uploaded or transferred to the City's File server in accordance with the Technical Specifications and submittal procedures as outlined at the Pre-Construction conference.
2. CCTV inspection video and data shall be captured in digital format and collected with current PACP/LACP certified software. The software shall be capable of exporting the most current version of PACP/LACP data exchange files. The software shall capture the inspection data in the PACP/LACP defect coding mode.
3. All CCTV inspections shall be performed referencing the City's correct wastewater asset names/formats and use City standard file naming conventions. The Engineer may provide the City's wastewater asset master list to the Contractor (where requested). The Contractor may not alter or edit the City's asset master list without prior approval from the Engineer. All CCTV inspections shall be created referencing the City's wastewater basin as the drainage area. All asset names and format used shall match City asset names within the City's wastewater asset master list or Plans. Where asset names on maps (which may reference older style name ids) conflict with asset names on Work Orders or Worklist, the Work Order of Worklist name shall govern.
4. The CCTV inspection video files shall be encoded using MPEG1 or MPEG2 standards,

and shall be capable of producing a minimum 700 line resolution color video picture, 30 frames per second, and bitrate of 1.5 megabit per second. Extraneous video coverage before and after the completion of the pipe segment CCTV inspection shall be edited out by the Contractor to minimize the size of the associated digital video file.

5. Filenames for gravity mains (video files and PACP reports): shall be created using a format of "Upstream MH ID (space) Downstream MH ID (space) Inspection Date (YYYYMMDD) (space) Type of Inspection (Pre or Post) followed by file extension".

Examples:

Gravity Main Inspection:

"N020-M125 N020-M130 20060705 Pre.mpg"

Gravity Main Inspection (Reverse Setup):

"N020-M125 N020-M130 20060705R Pre.mpg"

In the event an unknown manhole is discovered during an inspection, the unknown manhole between upstream N020-M125 and downstream N020-M130 shall receive a temporary designation of N020-A125. A 2nd manhole found between the above manholes would be designated as N020-B125. A new inspection shall be started for each pipe segment. The City will assign a permanent number at a later date.

6. Filenames for public lateral inspection (video files and LACP reports): shall be created using a format of "Upstream manhole identification# (space) Downstream manhole identification# (space) Inspection Date (YYYYMMDD) (space) GIS Location Tag Value (this is a label on City maps providing a lateral identification# and measured distance from the lateral's Downstream Manhole identification#) (space) Type of Inspection (Pre or Post) followed by file extension". In the event the lateral does not have a label (GIS Location Tag Value) on the plans the contractor is working from, the contractor shall use a measurement provided by the main line CCTV inspection counter combined with the direction of the survey ("D" for downstream, "U" for upstream). In the event the lateral connects to a node/manhole, the manhole identification# value will be use for the "GIS Location Tag Value". Where an inspection is performed from a City clean-out, "CO" shall be added after the lateral "GIS Location Tag Value".

Examples:

Lateral inspection (from main, lateral label or GIS Location Tag Value=53):

"N020-M125 N020-M130 20060705 53 Post.mpg"

Lateral inspection (from City clean-out "CO"):

"N020-M125 N020-M130 20060705 53CO Post.mpg"

Lateral inspection (lateral connected to a manhole, "N020-M130"):

"N020-M125 N020-M130 20060705 N020-M130 Post.mpg"

Lateral inspection(no "GIS Location Tag Value" on plans, use counter with direction):

"N020-M125 N020-M130 20060705 199D Post.mpg"

E. Field Quality Control

1. Contractor shall not allow wastewater or solids to be released from the wastewater

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system onto streets or into ditches, catch basins, stormwater drains, stormwater manholes, etc.

2. Acceptance of pipe cleaning and rehabilitation work is contingent upon the successful completion of the CCTV inspection. If the CCTV inspection video is not acceptable or shows that debris, solids, sand, grease, or grit remains in the pipe, the CCTV inspection and/ or cleaning shall be considered unsatisfactory. The cleaning and CCTV inspection of the pipe segment shall be repeated at the Contractor's expense until it is satisfactory.

END OF SECTION

SECTION 24 - CHEMICAL SEALING OF HOST PIPE

24.01 GENERAL

The Work in this section includes chemical sealing of the host pipe to reduce infiltration to an acceptable level prior to liner installation, to ensure that subsequent liner placement and curing is not adversely affected by the presence of excessive infiltration. Acceptable reduction of host pipe infiltration shall be defined as reducing infiltration at host pipe joints and other defects to a level that will ensure completion of liner installation in accordance with these Specifications.

The Contractor shall furnish all materials, labor, equipment, and services necessary for chemical sealing of active infiltration from inside the host pipe including, but not limited to: traffic control, locating access structures, wastewater bypass pump around and/ or diversion as necessary, removal and disposal of residual or excess grout material and debris from sealing operation, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

24.02 PRODUCTS

A. Sealing Materials

1. The sealing compound shall be Acrylic base gel – Avanti AV-100, AV-118, Urethane base gel – Avanti AV-350 or Acrylate base gel- Deneff AC-400 or approved equal, and shall be suitable for use in domestic wastewater collection systems. Handling, formulation and storage of the sealing gel compound shall be in strict conformance with the manufacturer's recommendations. The uncured gel shall be delivered to the site in unopened containers, with the date of manufacture clearly indicated, no uncured gel manufactured more than six months prior to the date of application shall be utilized. Residual sealing materials shall be removed from the wastewater collection system after injection to insure no flow reductions, restriction or blockage occur.
2. Icoset additive shall be added to the sealing compound for gel strengthening. The quantity of Icoset additive will be according to the manufacturer recommendation. The sealing compound admixture shall be adjusted to meet specified viscosity and reaction time.

24.03 SUBMITTALS

- A. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
 1. Gel compounds
 2. Installation equipment

24.04 EQUIPMENT

A. General

1. Sealing equipment shall consist of two separate pumping systems capable of supplying an uninterrupted flow of sealing materials to completely fill the voids and reduce infiltration. Pumps, fittings and hoses shall be designed to transport a high viscosity material and shall not be affected by acetone or ketone solvents.
2. Sealing materials shall pass from the pumping system through instant reading, controlled flow meters and then through a dual hose system into the sealing device. The device (referred to hereafter as a packer) shall be a cylindrical case of a size less than pipe size, with the cables at either end used to pull it through the host pipe.
3. Generally, the equipment shall be capable of performing the specified operations in pipes where flows do not exceed 25 percent without resorting to any method of flow control.
4. Air impervious inflatable sleeves shall be mounted over the cylinder with the ends of the sleeve sealed to the ends of the casting. The sleeves shall be so constructed that they can be expanded from the center to both ends. The center portion of the sleeve shall be sealed to the casing by a broad confining band. When the packer is inflated, two widely spaced annular bladders shall be formed, each having an elongated shape and producing an annular void around the confined portion of the sleeve. No sealing device which is expanded mechanically nor where the expansion sleeve is not continuous will be allowed in order to prevent damage to the pipe from excessive amounts of sealing pressures or air leakage in the center area of such sealing device. The sleeve shall be a low void packer.

24.05 EXECUTION

A. General

Sealing shall be by the pressure grout method. Generally, this shall be accomplished by forcing chemical sealing gel materials through a system of pumps and hoses into and through the joints or defects of the host pipe from the packer. The use of remote-controlled packer equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and a manual packer or other sealing method is acceptable. Jetting or driving pipes from the surface for exterior grouting of the host pipe shall not be allowed.

B. Grout Mixing

1. The Contractor shall mix all grout at the job site in the presence of the Engineer. No grout will be used on the job which has been mixed off site and is in the Contractor's tank when the truck drives on site. The Contractor's personnel shall follow the manufacturer's recommendations for the mixing and safety procedures to protect personnel from any adverse effects of the grouting compounds. Powder and additives shall be added and mixed at rates, which will minimize the formation of lumps within grout tanks solutions. All additives will be thoroughly mixed in the grouting component tanks.
2. Prior to application of grout for seal purposes, a pump test will be performed to determine

if equal quantities of grout are being pumped from the grout component tanks. Separate containers shall be used to capture the discharges from the grout component tanks. One gallon of grout shall be pumped and the pump strokes shall be counted. If unequal quantities are being pumped, the Contractor shall take corrective action. The pump test shall be repeated until equal quantities are pumped from the grout tanks.

3. During the grouting process, the Contractor shall monitor the grout component tanks to make sure that equal quantities are being pumped. If unequal levels are noted in the tanks, the pump test shall be repeated as described above. At the beginning of each day, when new batches of grout are mixed and when grout additives are modified to change gel times, a test shall be performed with quantities of grout to determine the grout mixture gel time. The Contractor shall have accurate scale(s) which shall be used to weigh the various non water grout solution components.

C. Host Pipe Sealing by Pressure Grout Method

1. The packer shall be positioned over the area of infiltration by means of a measuring device at the surface and the Closed Circuit Television (CCTV) camera in the pipe. Accurate measurement of the location of the defect to be sealed shall be made, using a portion of the packer as a "Datum" of measurement point or target. Such measurement, target or point shall also be used to obtain necessary measurement for positioning injection area of packer over the area to be sealed.
2. The packer sleeves shall then be pneumatically expanded and shall seal against the inside periphery of the pipe to form a void area at the joint or defect now completely isolated from the remainder of the pipe segment.
3. Into this isolated area sealant materials shall be pumped through the hose system at controlled pressures, which are in excess of groundwater pressures. The pumping, metering and packer shall be integrated so that proportions and quantities of materials and pressures for materials and sealing gel can be instantly monitored and regulated in accordance with the type and size of the leak, percentage of voids being filled, type of soil surrounding the pipe and the rate of flow of the sealing gel solution in relation to the back pressures. These parameters should follow the manufacturer's specifications and guidelines.
4. Upon completion of the injection, the television camera shall be moved to a position to observe and inspect the results of the injection. If inspection shows the seal was not effective, the process shall be repeated until infiltration has been reduced to an acceptable level for liner installation.
5. The packer shall be moved forward, wiping away the excess grout. The excess sealing material removed from the joint by the grouting equipment shall be flushed or pushed forward to the next downstream manhole, removed from the wastewater system and disposed of by the Contractor as specified by disposal of debris resulting from cleaning operations. In no case shall excess grout material be allowed to accumulate and be flushed down the system.
6. It is intended that chemical sealing shall be performed on host pipe immediately prior to the installation of the liner unless otherwise authorized by the Engineer. The Contractor shall notify the Engineer a minimum of 48 hours prior to commencing chemical sealing operation. The quantity of grout used shall be verified by the City Inspector.
7. Any part of the wastewater system damaged as a result of the Contractor's operations

shall be promptly repaired by, and at the expense of, the Contractor.

8. The Contractor shall perform CCTV video inspection of host pipe sealing, as required by the Engineer. The video shall be submitted to the Engineer for review and for permanent record. The video inspection shall comply with the applicable requirements of the Technical Specification section headed "Closed Circuit Television Inspection".

D. Cleanup

Residual sealing materials that extend into the pipe, reduce the pipe diameter, or restrict the flow shall be removed and disposed of by the Contractor at an approved site. Sealed joints shall be left reasonably "flush" with the existing pipe surface. Excessive residual sealing materials in the system shall be cleaned to remove the residual materials.

E. Disposal

Furnish equipment for collection of cleaning solvents used in the cleaning of the sealing equipment. Collected solvents shall be disposed of by an approved solvent recovery process. Disposal of cleaning solvents into the wastewater or stormwater collection systems is prohibited.

F. Wastewater Flow Controls

When wastewater flows are above the minimum requirements or inspection of the complete periphery of the pipe is necessary to effectively conduct the inspection and sealing operations, one or more of the following methods of flow control shall be used.

1. A plug shall be inserted into the pipe at a manhole upstream from the section to be inspected and/ or sealed. The plug shall be so designed that all or any portion of the wastewater flows can be released. During the inspection portion of the operation, flows shall be shut off or substantially reduced in order to properly inspect the pipe at the invert. After the inspection is complete, flows shall be restored to normal or not more than 1/4 of the pipe diameter during the sealing operation. The Contractor will be responsible for preventing backups and overflows.
2. Where pumping is required, in the opinion of the Engineer, to assure completion of the inspection and sealing work, the Contractor will be required to furnish pumping and bypassing equipment. Refer to the requirements of article "Pump Around Pumping" of the Technical Specification Section headed "General".

END OF SECTION

SECTION 25 - CHEMICAL SEALING OF SERVICE CONNECTIONS

25.01 GENERAL

The Work in this section includes chemical sealing of the service connections (laterals) to reduce infiltration within the lateral to an acceptable level and to seal the annular space between the liner and host pipe at service connections. Accordingly, the Engineer will base acceptance of this portion of the Work on retesting of the joints sealed and inspection of the joints with Closed Circuit Television (CCTV) video inspection.

The Contractor shall furnish all materials, labor, equipment, and services necessary for chemical sealing of active service connections from within the main pipe using a CCTV camera and inversion tube, and including, but not limited to: traffic control, locating access structures, wastewater bypass pump around and/or diversion as necessary, removal and disposal of residual or excess grout material and debris from sealing operation, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

25.02 PRODUCTS

A. Sealing Materials

1. The sealing compound shall be Acrylic base gel – Avanti AV-100, AV-118, Urethane base gel – Avanti AV-350 or Acrylate base gel- Deneff AC-400 or approved equal, and shall be suitable for use in domestic wastewater collection systems. Handling, formulation and storage of the sealing gel compound shall be in strict conformance with the manufacturer's recommendations. The uncured gel shall be delivered to the site in unopened containers, with the date of manufacture clearly indicated, no uncured gel manufactured more than six months prior to the date of application shall be utilized. Residual sealing materials shall be removed from the wastewater collection system after injection to insure no flow reductions, restriction or blockage occur.
2. Icoset additive shall be added to the sealing compound for gel strengthening. The quantity of Icoset additive will be according to the manufacturer recommendation. The sealing compound admixture shall be adjusted to meet specified viscosity and reaction time.

25.03 SUBMITTALS

- A. The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":
 1. Gel compounds
 2. Installation equipment

25.04 EQUIPMENT

A. General

1. Sealing equipment shall consist of two separate pumping systems capable of supplying an uninterrupted flow of sealing materials to completely fill the voids and reduce infiltration. Pumps, fittings and hoses shall be designed to transport a high viscosity material and shall not be affected by acetone or ketone solvents.
2. Sealing materials shall pass from the pumping system through instant reading, controlled flow meters and then through a dual hose system into the sealing device. The device (referred to hereafter as a packer) shall be a cylindrical case of a size less than pipe size, with the cables at either end used to pull it through the host pipe.
3. Generally, the equipment shall be capable of performing the specified operations in pipes where flows do not exceed 25 percent without resorting to any method of flow control.
4. Air impervious inflatable sleeves shall be mounted over the cylinder with the ends of the sleeve sealed to the ends of the casting. The sleeves shall be so constructed that they can be pneumatically expanded from the center to both ends. The center portion of the sleeve shall be sealed to the casing by a broad confining band. When the packer is inflated, two widely spaced annular bladders shall be formed, each having an elongated shape and producing an annular void around the confined portion of the sleeve. No sealing device which is expanded mechanically nor where the expansion sleeve is not continuous will be allowed in order to prevent damage to the pipe from excessive amounts of sealing pressures or air leakage in the center area of such sealing device. The sleeve shall be a low void packer.
5. Lateral service sealing is accomplished with a "Logiball" lateral packer. The objective of the lateral service packer is to seal the annular space and lateral service connection to the liner and the first 18-inches of the service connection pipe.

25.05 EXECUTION

A. General

Sealing shall be by the pressure grout method. Generally, this shall be accomplished by forcing chemical sealing gel materials through a system of pumps and hoses into and through the joints or defects of the service connection and into the annular space from the packer. The use of remote-controlled packer equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and a manual packer or other sealing method is acceptable. Jetting or driving pipes from the surface for exterior grouting of the host pipe shall not be allowed.

B. Grout Mixing

1. The Contractor shall mix all grout at the job site in the presence of the Engineer. No grout will be used on the job which has been mixed off site and is in the Contractor's tank when the truck drives on site. The Contractor's personnel shall follow the manufacturer's recommendations for the mixing and safety procedures to protect personnel from any adverse effects of the grouting compounds. Powder and additives

shall be added and mixed at rates, which will minimize the formation of lumps within grout tanks solutions. All additives will be thoroughly mixed in the grouting component tanks.

2. Prior to application of grout for seal purposes, a pump test will be performed to determine if equal quantities of grout are being pumped from the grout component tanks. Separate containers shall be used to capture the discharges from the grout component tanks. One gallon of grout shall be pumped and the pump strokes shall be counted. If unequal quantities are being pumped, the Contractor shall take corrective action. The pump test shall be repeated until equal quantities are pumped from the grout tanks.
3. During the grouting process, the Contractor shall monitor the grout component tanks to make sure that equal quantities are being pumped. If unequal levels are noted in the tanks, the pump test shall be repeated as described above. At the beginning of each day, when new batches of grout are mixed and when grout additives are modified to change gel times, a test shall be performed with quantities of grout to determine the grout mixture gel time. The Contractor shall have accurate scale(s) which shall be used to weigh the various non water grout solution components.

C. Host Pipe Sealing by Pressure Grout Method

1. Air testing laterals shall be accomplished by isolating the area to be tested with the lateral service packer and by applying positive pressure into the isolated void area. A CCTV camera shall be used prior to positioning the lateral packer. A sensing unit shall be used for continuous monitoring of the void pressure. This sensing unit shall be located within the void area and will accurately transmit continuous pressure readout to the control panel.
2. Joint testing and grouting for laterals will utilize a "Logiball" type system. The packer ends (end elements, sleeves) shall be expanded using controlled air pressure. The expanded ends shall seal against the inside periphery of the pipe to form a void area at the lateral, now completely isolated from the remainder of the pipe segment. Into this isolated area, sealant materials shall be pumped through the hose system at controlled pressures that are in excess of groundwater pressures. The pressure device shall accurately show psi to the nearest one tenth (0.1) pound and shall instantly respond to and record any change in the void pressure. The joint shall be tested with a gauge pressure of one-half psi per foot of depth of lateral pipe as measured by the deeper of the two manholes between which the lateral is located, or a minimum of 4 psi, whichever is larger. The pumping unit, metering equipment, and the packer device shall be designated so that proportions and quantities of materials can be regulated in accordance with the type and size of the leak being tested or sealed, percentage of voids being filled, type of soil surrounding the pipe and the rate of flow of the sealing gel solution in relation to the back pressures. These parameters should follow the manufacturer's specifications and guidelines and be reviewed with the Engineer prior to the beginning of any grouting activities.
3. The test procedure will consist of applying air pressure into each isolated void area. To isolate a void, a lateral sealing packer shall be positioned straddling the lateral. The operator shall insert an inflatable inversion tube and inflate the packer ends to isolate the lateral. Once the designated pressure in the isolated void is displayed on the meter of the control panel, the application of air pressure will be stopped and a thirty-second waiting period will commence. The void pressure will be observed during this period. If

the void pressure drop is greater than that allowed in the following Air Test Table, the lateral shall be considered to have failed the air test and shall be grouted as specified herein.

AIR TEST TABLE

<u>Initial Void Pressure (psi)</u>	<u>Void Pressure After 30 Seconds</u>
12 - 11	4.8 - 4.4
11 - 10	4.4 - 4.0
10 - 9	4.0 - 3.6
9 - 8	3.6 - 3.2
8 - 7	3.2 - 2.8
7 - 6	2.8 - 2.4
6 - 5	2.4 - 2.0

4. After completing the air test for each individual lateral specified herein, the lateral packer shall be deflated, with the void pressure meter continuing to display void pressure. If the void pressure does not drop to approximately zero, the equipment shall be adjusted to provide a zero void pressure reading at the monitor.
5. An air pre-test is not required for lateral sealing of service connections in main pipes that have been lined, as lateral sealing is required regardless of air test results. Pre and post-tests, and quantity of grout pumped shall be logged.
6. Lateral sealing begins if the lateral does not pass the air test as described above. The lateral packer shall remain in position, thus maintaining the isolated void. Chemical grout sealant will be pressure injected through the lateral packer into the annular space between the inversion tube and the lateral pipe. Under pressure, the grout material shall be then forced out into the soil through leaking joints and pipe defects. The amount of chemical grout pumped is based on the number of pump strokes delivered to each lateral. The number shall be recorded on the sealing log.
7. Upon completion of the lateral sealing procedure, the lateral shall be air tested to verify the sealing of the connection. The air test will be the same as outlined above. If the sealed lateral fails the air test, the grouting procedure shall be repeated at no additional cost to the City. This sequence of air testing, grouting and subsequent air testing shall be repeated until either the lateral is sealed or it is determined that the grout consumption is too high and may result in the blockage of the lateral pipe. The final determination to stop subsequent attempts to seal a lateral will be made jointly between the Engineer and the Contractor.
8. The Contractor shall verify lateral flow after the successful sealing of each lateral. With the lateral packer in position, the inversion tube shall be retracted and air pressure injected into the lateral. Should a pressure build in the lateral and not drop to zero in a few seconds, the packer will be moved off the connection and the connection shall be viewed with a television camera. With the camera viewing the connection point, an attempt will be made to obtain a water flush by the occupant. If no water is viewed during this procedure, it shall be assumed that the building service connection is blocked with grout and the responsibility to clear the lateral will be the Contractor's at no additional cost to the City.

9. The Contractor shall attach a notification form to the door of each home or building for which laterals have been grouted. This notification to the occupant shall state the following:

The lateral service connection to (address)_____ was grouted on (date) _____.

If any blockage of wastewater flow occurs, please call (emergency number) _____.

Any blockages that occur as a result of the lateral sealing operations will be cleared by the Contractor.

10. All activities shall be video inspected during both the air testing and sealing operation. The video shall be submitted to the Engineer for review and for permanent record. The video shall display at a minimum the date, manhole numbers, footage to the lateral, and void pressure readout. In addition, the data obtained during this operation shall be recorded on a lateral testing and sealing log provided by the Contractor. The log shall specify conditions of each service lateral sealed including break-in-service connection, lined pipe, etc.

D. Cleanup

Residual sealing materials that extend into the pipe, reduce the pipe diameter, or restrict the flow shall be removed and disposed of by the Contractor at an approved site. Sealed joints shall be left reasonably "flush" with the existing pipe surface. Excessive residual sealing materials in the system shall be cleaned to remove the residual materials.

E. Disposal

Furnish equipment for collection of cleaning solvents used in the cleaning of the sealing equipment. Collected solvents shall be disposed of by an approved solvent recovery process. Disposal of cleaning solvents into the wastewater or stormwater collection systems is prohibited.

F. Wastewater Flow Controls

When wastewater flows are above the minimum requirements or inspection of the complete periphery of the pipe is necessary to effectively conduct the inspection and sealing operations, one or more of the following methods of flow control shall be used.

1. A plug shall be inserted into the pipe at a manhole upstream from the section to be inspected and/ or sealed. The plug shall be so designed that all or any portion of the wastewater flows can be released. During the inspection portion of the operation, flows shall be shut off or substantially reduced in order to properly inspect the service connection invert at the main pipe. After the inspection is complete, flows shall be restored to normal or not more than 1/4 of the pipe diameter during the sealing operation. The Contractor will be responsible for preventing backups and overflows.
2. Where pumping is required, in the opinion of the Engineer, to assure completion of the inspection and sealing work, the Contractor will be required to furnish pumping and bypassing equipment. Refer to the requirements of article "Pump Around Pumping" of

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the Technical Specification Section headed "General".

END OF SECTION

SECTION 26 - REMOVAL OF PROTRUDING SERVICE CONNECTIONS

26.01 GENERAL

The Work in this section includes internally removing protruding service connections and excess mortar in wastewater pipe segments between access structures (including manholes, vaults, junctions, wet wells, and end of line cleanout), and scheduled to be rehabilitated. Remove only those service connections that protrude sufficiently, as specified herein and which are determined to interfere with the pipe rehabilitation. The intent is to remove the minimum number of protruding service connections necessary to allow the pipe segment to be rehabilitated.

The Contractor shall furnish all materials, labor, equipment, and services necessary for removal of protruding service connections including, but not limited to: traffic control, locating access structures, wastewater bypass pump around pumping and/or diversion as necessary, removing all dirt and debris caused by protruding service removal, disposal of waste and sediment, delivery of video inspection data, surface restoration, and cleanup of the Work site.

The Contractor is advised that this Contract requires work in active wastewater collection systems and shall follow all federal, state and local requirements for safety in confined spaces. The Contractor shall conform to all guidelines by the Occupational Safety and Health Administration (OSHA) Federal Regulations; 29 CFR Ch. XVII, Section 1910.146 Confined Space Entry.

26.02 PRODUCTS

A. Equipment

1. Protruding service connections shall be removed using internal, remote-controlled intruding pipe cutting equipment. The use of remote-controlled equipment may be waived by the Engineer where the Contractor's personnel can enter the pipe and manual removal is acceptable. Excavation and replacement of protruding connections will not be allowed except under special situations authorized in writing by the Engineer.
2. The equipment shall consist of a main body containing a rotating head assembly equipped with carbide cutting edges. The rotating cutting head shall be driven by air or by electricity and shall be capable of cutting concrete, vitrified clay pipe or other materials commonly used for pipe construction with the exception of cast iron or steel.
3. The equipment shall be self-propelled or pulled through the pipe using winches and a cable set up between adjacent manholes.
4. The equipment shall be positioned using a Closed Circuit Television (CCTV) camera in conjunction with the cutter assembly.

26.03 EXECUTION

A. Performance

1. The Contractor shall remove all service connections specified herein that inhibit pipe segment rehabilitation methods. The Contractor is required to remove protruding

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connections to the point where they are flush with the inside wall of the pipe.

2. The Contractor shall maintain a complete record of all protruding connections that were removed, and furnish two (2) copies of this record at the completion of this work.
 - a. The list shall show the date, street, and pipe segment (by manhole numbers), station and location (left, right and top) of each connection removed.
 - b. The list shall also show similar data for any connections that were not successfully removed, as well as the reason why removal was unsuccessful.
3. The Contractor shall protect existing main pipe and service laterals from damage caused by improper use of the equipment. Damage to a main pipe or service lateral caused by removal of a protruding connection shall be repaired immediately, as directed by the Engineer, at the Contractor's expense. Any increase in infiltration at the service connection caused by the Contractor's removal of the protruding connection shall be chemically sealed by the Contractor at no additional cost to the City, in accordance with the Technical Specification Section headed "Chemical Sealing of Service Connections".
4. The Contractor shall remove all dirt and debris from the wastewater system following completion of protruding connection removal.

B. Inspection

1. Contractor shall provide CCTV video inspection of protruding service connection prior to removal, recording location and footage to service connection. Following successful completion of removal, Contractor shall perform post-construction CCTV inspection.
2. Post-cleaning/ pre-rehabilitation and post-rehabilitation CCTV inspections shall be as specified in the Technical Specifications section headed "Closed Circuit Television Inspection." Video and data shall be submitted to the Engineer. Video and data shall become the property of the City.

END OF SECTION

SECTION 27 - WASTEWATER STRUCTURE REHABILITATION

27.01 GENERAL

The Work in this section includes furnishing and installing wastewater access structure (manhole) components and coatings for rehabilitation, structural enhancement, and corrosion protection of existing wastewater manholes, for the various diameters listed in the Proposal. Wastewater access structures include, but are not limited to, manholes, vaults, junctions, and wet wells.

The Contractor shall furnish all materials, labor, equipment, and services necessary for wastewater manhole component replacement and coating installation including: traffic control, pump around pumping and/or diversion of wastewater flows, void repair, inflow/infiltration elimination, surface preparation, structure component and coating installation, testing, surface restoration, and cleanup of the Work site.

27.02 GOVERNING STANDARDS

The following Standards are referenced in this section:

ASTM	C31	"Standard Practice for Making and Curing Concrete Test Specimens in the Field"
ASTM	C78	"Flexural Strength of Concrete"
ASTM	C109	"Standard Test Method for Compressive Strength of Hydraulic Cement Mortars"
ASTM	C157	"Standard Test Method for Length Change of Hardened Hydraulic-Cement, Mortar, and Concrete"
ASTM	C267	"Chemical Resistance of Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes"
ASTM	C293	"Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading)"
ASTM	C307	"Standard Test Method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacing"
ASTM	C308 Modified	"Standard Test Method for Working, Initial Setting, and Service Strength Setting Times of Chemical-Resistant Resin Mortars"
ASTM	C309	"Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete"
ASTM	C321	"Standard Test Method for Bond Strength of Chemical-Resistant Mortars"

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ASTM	C469	"Static Modulus of Elasticity & Poisson's Ratio of Concrete Compression"
ASTM	C496	"Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens"
ASTM	C531	"Standard Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes"
ASTM	C579	"Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes"
ASTM	C580	"Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes"
ASTM	C596	"Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement"
ASTM	C666	"Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing"
ASTM	C807	"Set Time of Hydraulic Cement Mortar"
ASTM	C882	"Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear"
ASTM	C905	"Standard Test Methods for Apparent Density of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes"
ASTM	C1090	"Shrinkage Test"
ASTM	C1138	"Standard Test Method for Abrasion Resistance of Concrete (Underwater Method)"
ASTM	C1202	"Electrical Indication of Concrete's Ability to Resist Chloride Ion Penetration"
ASTM	D543	"Resistance of Plastics to Chemical Reagents"
ASTM	D638	"Tensile Properties of Plastics"
ASTM	D695	"Compressive Properties of Rigid Plastics"
ASTM	D790	"Flexural Properties of Unreinforced and Reinforced Plastics"
ASTM	D1622	"Standard Test Method for Apparent Density of Rigid Cellular Plastics"
ASTM	D1623	"Standard Test Method for Tensile And Tensile Adhesion Properties of Rigid Cellular Plastics"

ASTM	D2126	"Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging"
ASTM	D2584	"Volatile Matter Content"
ASTM	D2842	"Standard Test Method for Water Absorption of Rigid Cellular Plastics"
ASTM	D3846	"Standard Test Method for In-Plane Shear Strength of Reinforced Plastics"
ASTM	D4258	"Standard Practice for Surface Cleaning Concrete for Coating"
ASTM	D4259	"Standard Practice for Abrading Concrete"
ASTM	D4541	"Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers"
ASTM	D4787	"Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates"
ASTM	F2414	"Practice for Sealing Sewer Manhole Using Chemical Grouting"
ASTM	F2551	"Practice for Installing a Protective Cementitious Liner System in Sanitary Sewer Manholes"
ACI	503	"Use of Epoxy Compounds with Concrete"
SSPC/ NACE	SP-13/ NACE 6	"Surface Preparation of Concrete"

27.03 DEFINITIONS

- A. **Coating Systems:** includes surface description, surface preparation, required dry film thickness, and the number and application procedure of the prime and finish coatings. Systems are defined and identified in the article headed "Coating System Specification Sheets" in this Section of the Technical Specifications.
- B. **Field Coating:** the application of the coating system in an existing manhole or structure.
- C. **Dry Film Thickness (DFT):** the thickness of a fully cured coating or coating system.
- D. **Wet Film Thickness (WFT):** the thickness of a coating while wet.
- E. **Volatile Organic Content (VOC):** the portion of a coating that is a compound of carbon, is photo chemically reactive, and evaporates during drying or curing, expressed in g/L or lbs/gal as defined in ASTM D3960.
- F. **Solvents:** Those chemicals used to dilute the liquid coating either for thinning the coating or for cleanup.
- G. **Lead Containing:** any coating that contains any detectable amount of lead.

- H. **Hard To Reach:** areas that may not be accessible with spray equipment but can be reached by brush, mitt, or roller.
- I. **Inaccessible Areas:** areas such as back-to-back angles, skip welds, and other areas that a brush, mitt, or roller cannot contact the surface.
- J. **Manhole Floor:** the bench, channel and invert of the manhole containing the concrete/brick floor of a manhole generally shaped as a fillet to direct incoming flows to the outlet piping and to minimize solids buildup, the wall/bench joint, the shaped flow-ways within the bench, the bench/channel joint, and the invert which is the line of the lowest elevation along the bottom of the channel(s).
- K. **Manhole Wall:** that part of the manhole extending from the bench/wall joint to the bottom of the cone/corbel.
- L. **Manhole Cone/Corbel:** the reducing section which tapers concentrically or eccentrically from the top wall joint to the bottom of the chimney or the ring (frame) casting where there is no chimney.
- M. **Manhole Chimney:** the narrow vertical section built from brick or concrete adjusting rings extending from the top of the cone/corbel to the bottom of the frame casting.
- N. **Leaks/Infiltration:** presence of water, or indications of water, inside the manhole caused by subsurface water entering the manhole from the exterior through cracks, fractures, holes, broken seals, or other means.
- O. **Inflow:** surface water generally entering into a manhole through or under the manhole cover, frame, frame seal, chimney wall, or at the cone/corbel chimney joint.
- P. **Void:** as defined in ACI.
- Q. **pH:** a measure of acidity and alkalinity.
- R. **Bug Holes:** small regular or irregular cavities, not exceeding 15mm in diameter, resulting from the entrapment of air bubbles of formed concrete during placement and compaction.

27.04 QUALIFICATIONS

- A. The Contractor's qualifications are addressed under item 12 of the Proposal Questionnaire. The Contractor shall be certified and/or licensed by the coating system manufacturer(s) as an approved Applicator for the products referenced in this section.
- B. The Applicator shall be the person responsible for the actual Work, either as the foreman or the person actually applying the coating system.

27.05 SUBMITTALS

The Contractor shall submit the following to the Engineer in accordance with the *General Conditions* article headed "Shop Drawings and Submittals":

- A. List of materials including coatings, repair materials, grouts, and blasting abrasive material

proposed for use.

- B. List of equipment and certification by the individual coating manufacturer that the application equipment is sufficient to adequately apply the coating.
- C. For each coating system, provide the manufacturer's application guidelines including:
 - 1. Surface preparation guidelines.
 - 2. Primer type, where required.
 - 3. Maximum wet and dry thickness per coat.
 - 4. Minimum and maximum curing time between coats, and atmospheric conditions for each.
 - 5. Curing time before submergence in municipal wastewater.
 - 6. Thinner to be used with each coating.
 - 7. Ventilator requirements.
 - 8. Allowable application methods.
 - 9. Maximum storage life.
 - 10. Material safety data sheets.
 - 11. Interpretation of batch code numbers.
 - 12. Minimum and maximum relative humidity requirements.
 - 13. Minimum and maximum surface temperature requirements.
 - 14. Minimum and maximum ambient temperature requirements.
 - 15. Manufacturer's recommended application procedure.
- D. Shop Drawings for frame and cover castings.
- E. Product Data for manhole cover inserts.
- F. Provide information on planned surface preparation procedures including, when relevant, abrasive media, minimum water cleaning pressure and flow rate (e.g. 5000 psig @ 4 gpm) , nozzle types (e.g. zero degree rotating nozzle), etc. for coating systems specified. Surface preparation methods shall be based upon the conditions of the substrate and the requirements of the protective coating to be applied. Whichever method(s) are used, they shall be performed in a manner that provides a uniform, sound, clean neutralized surface. At the request of the Engineer, the Contractor shall test for adverse chemical conditions that may hinder overall product performance.
- G. Maintenance of Traffic Plan including, but not limited to, specific dates that the Maintenance of Traffic Plan shall be in place.
- H. Wastewater Pump-Around Pumping plan, where required.
- I. List of all test equipment to be used, copies of the adhesive and equipment's instructions, adhesives, calibration procedures, MSDS sheets, and copies of all reference standards

related to the test equipment.

- J. Coating thickness calculations: Signed and sealed designs shall be prepared and submitted by a Qualified Engineer, licensed in either the state of liner application or in the state in which the headquarters of the liner Manufacturer is located, for each coating system where design parameters are identified in Section 21.12, "Coating System Specification Sheets" .

27.06 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. General

1. Deviations from the manufacturer's printed instructions will not be allowed unless approved in writing by the Engineer.
2. In the event of a discrepancy between the Contractor's, manufacturer's or City Inspector's testing equipment, all parties shall check equipment in question for proper function and calibration.
3. Where there is a conflict between the manufacturer's recommendations and these Technical Specifications, the manufacturer's recommendations shall govern.
4. Test equipment and procedures shall be the same throughout the Contract.
5. **Quality Control:** Contractor shall be responsible for the quality control of the coatings applied including surface preparation, testing, verifying access, dimensions, configuration, pipe connections, appurtenances, and details of each manhole prior to commencing any Work as well as remedial work to be completed as identified by inspection at the given check points.
6. **Quality Assurance:** City Inspector shall approve the Contractor's Work regarding surface preparation and quality control of the coatings applied. This documentation in no way relieves the Contractor of the responsibilities described under this Contract. The City Inspector may conduct tests on ambient conditions, pH and surface temperature, coating(s) applied, wet and dry film thickness, coating type coating batch numbers, and other tests.

B. QA/QC Check Points

1. **pH Testing:** Prior to surface preparation for cementitious coating application, measure and record pH of the manhole interior surface and other parameters as required by coating manufacturer to verify acceptable existing substrate conditions for application of the specified product and to document compliance with warranty requirements. After surface preparation and prior to coating system being applied to the interior of a manhole (excluding coatings to only the interior of a chimney), measure and record pH of the manhole interior surface in at least two locations as approved by the City Inspector. Adjust if required by the coating system manufacturer and per NACE 6/SSPC SP 13 Table 1 for severe service.
2. **Concrete surface tensile strength:** After surface preparation (including repair and resurfacing products) and prior to a polymer coating system being applied to the interior of a manhole (excluding coatings to only the interior of a chimney and spot type only repairs) measure and record the results of a minimum of two concrete surface tensile strength tests, without glue failures, per manhole at locations as directed by the City Inspector. Tests shall be per ASTM D4541 as modified herein. Utilize a 20 mm test dolly and portable pull-off adhesion tester. Document test failure mode. Failure of the

dolly adhesive shall require retesting. If the concrete surface tensile strength is less than 200 psi (NACE 6/SSPC SP 13 Table 1 for light service) notify manufacturer and Engineer for approval before applying coating. (Destructive testing as defined herein shall be performed on the initial manhole coated with a particular coating system. After the initial test, 10% of the manholes coated may require testing as selected by the Engineer. Initial and additional testing required due to test failures shall be at the Contractor's expense.)

3. **Wet Film Thickness (WFT):** During coating system application, measure and record WFT of the coating in at least four locations in the manhole (one in a chimney) or as directed by the City Inspector. Use an industry standard WFT gage (ASTM D4414) designed for thick coatings. Minimum WFT thickness is specified for each product in the article headed "Coating System Specification Sheets" in this Section of the Technical Specifications.
4. **Surface Moisture:** After preliminary surface preparation and prior to a polymer coating system being applied to the interior of a manhole, measure and record surface moisture of the manhole interior surface in at least two locations per ASTM D426 and use a DELMHORST ACCUSCAN moisture meter using a 0 to 100 relative scale.
5. **Blotter Test:** Upon startup of abrasive blasting, compressed air shall be checked daily for oil and water by blotter test per ASTM D4285.
6. **Anchor Profile of Surface:** After preliminary surface preparation and prior to coating application to the interior of a manhole (excluding coatings only for interior of a chimney) compare and record anchor profile by comparison to various grits of sand paper.
7. **Surface Preparation:** Shall be accepted by the coating system manufacturer prior to the application of the coating system.
8. **Ambient Conditions:** Measure and record the test results for relative humidity, manhole wall surface temperature, dew point and ambient temperature to ensure compliance for materials applied.
9. **Coating Adhesion:** After polymer coating system application and cure, measure and record the results of a minimum of two adhesion tests, without glue failures, per manhole at locations within the manhole as directed by the City Inspector. Tests shall be per ASTM D4541 as modified herein. Utilize a 20 mm test dolly and portable pull-off adhesion tester. Document test failure mode, whether failure is within the substrate, failure is within the coating, or failure is at the coating/substrate interface. Failure of the dolly adhesive shall require retesting. If the testing damages the coating, spot repair the test location while following manufacturer's recommendations. Failure at the coating/substrate interface with less than 10% of substrate adhered to the coating and less than 100 psi pull-off strength, shall be deemed a coating system failure and the Contractor shall remove the coating to soundly adhered edges, re-perform surface preparation procedures, and recoat the failed surfaces, at the Contractor's expense. Low pull-off strength values (<150 psi) may require additional testing/evaluation to determine potential adhesion defects at the sole discretion of the Engineer. (Destructive adhesion testing as defined herein shall be performed on the initial manhole coated with a particular coating system. After the initial test, 10% of the manholes coated may require testing as selected by the Engineer. Initial and additional testing required due to test failures shall be at the Contractor's expense.)
10. **Holiday Testing:** The finished polymer coating shall be inspected per ASTM D-4787

"Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates", using high-voltage spark testing equipment with variable settings. Test voltage shall be set at an initial 100 volts per mil (4,000 volts per mm) of specified film thickness, and then increased as needed to compensate for relative conductivity of the concrete substrate by spark testing an induced holiday at furthest extension of test probe from grounding location. Once test voltage is determined, it shall be used throughout that area, and then re-determined again every time a new ground is made. Detected holidays shall be marked and repaired per coating manufacturer's recommendations. Contractor shall be responsible to provide necessary Holiday Testing equipment for final inspection. Pinhole testing shall be accomplished using a Tinker Razor Holiday Detector, San Gabriel, CA, Model AP/W or an Engineer approved equal model. A test voltage of 100 volts/mil is recommended. This test shall identify and allow for the repair of pinholes in order to ensure a continuous pinhole-free coating. (Testing shall only be required where full depth manhole coating is specified.)

27.07 CONTAINMENT AND SITE CONDITIONS

- A. No grouting materials, solvents, chemicals, blasting media, or debris of any sort shall be allowed to be discharged to the wastewater collection system. Water from pressure washing (>100 psi) may be allowed to enter the system after any debris has settled, when it demonstrated to the satisfaction of the City Inspector that no debris will enter the collection system. Water applied at less than 100 psi and containing common, household strength detergents, which are used strictly for rinsing the interior surfaces of the structure, may be allowed into the system as long as no debris are washed into the system. All odors noticeable by the average person shall be confined to an area within 10 feet of the structure. The Contractor shall provide odor control equipment or methods so odors are confined and in conjunction with closed space entry or other safety requirements.
- B. Provide environmental controls such as ventilators if the cure time of the coating is slowed by the presence of coating or solvent vapor, and heaters and/or dehumidification as necessary to meet coating application requirements.
- C. Applicator shall conform to all local, state, and federal regulations including those set forth by OSHA, RCRA, and the EPA.

27.08 WARRANTY

The Contractor shall unconditionally guarantee all manhole rehabilitation Work in this Contract against defects of materials and workmanship for a period of 3 years under normal use, operation, and service in accordance with the requirements of the *Supplemental General Conditions* article headed "Guarantee Period".

The Contractor and cementitious coating manufacturer shall warrant all cementitious manhole coating Work in this Contract against defects of materials and workmanship for a period of 10 years under normal use, operation, and service. The Contractor shall provide all testing and prepare all required installation reports, warranty registration documentation, etc. and submit same to the coating manufacturer and Engineer on behalf of the City. The Contractor shall furnish a warranty certificate from the cementitious coating manufacturer indicating acceptance and commencement of the warranty period. The Contractor and coating manufacturer shall, within one (1) month of written notice thereof, propose an acceptable method and repair any defects

(including all labor and materials) that may develop during the warranty period in a manner acceptable to the Engineer and at no cost to the City. Defects shall be defined as: visible leakage of groundwater into the manhole or separation of any part of the coating from the host manhole or coating interfacing joints.

27.09 MATERIALS

- A. **Coating Products:** Blended calcium aluminate cementitious manhole coating systems shall be Product A-1, A-2 or A-3 (these products shall contain no ordinary Portland cement). Pure calcium aluminate cementitious manhole coating systems shall be Product B-1, B-2, or B-3. Polymer manhole coating systems shall be Product C-1 or C-2. Geopolymer manhole coating system shall be Product E-1. No other products will be accepted.
- B. **Repair and Resurfacing Products:** Repair materials must be compatible with specified manhole coating products and selected to minimize curing time. The following products may be accepted and approved as compatible:
1. Deneef AC 40, Avanti AV 100, or approved equal pressure grout for infiltration elimination.
 2. 100% solids, solvent-free epoxy grout specifically formulated to be suitable for top-coating with the specified coating product(s).
 3. Factory blended, rapid setting, high early strength, fiber reinforced, non-shrink repair mortar that can be troweled or pneumatically spray applied, and specifically formulated to be suitable for top-coating with the specified coating product(s).
 4. Products specifically designed for thin (1/4-inch or less) applications shall be used for channels needing to be raised to match or transition with CIPP (cured-in-place pipe) liners. Product shall be SikaTop 123 PLUS, or approved equal. Where manholes with CIPP liners are scheduled to receive a coating, any channel repair materials shall be as recommended by the specific coating manufacturer.
- C. **Brick Masonry and Precast Concrete Grade Adjustment Rings**
1. Bricks shall be new, first quality, sound, hard, uniformly burned, regular and uniform in shape and size. Under burned or salmon brick shall not be acceptable. Only whole brick shall be used. Bricks shall conform to ASTM C32, Grade SS.
 2. Precast concrete grade adjustment rings shall conform to the requirements of ASTM C 478. Precast adjustment rings shall not be less than 2 inches thick or be of multiple piece construction. To accommodate steep surface grades, non-uniform precast grade adjustment rings may be manufactured to 2 inches thick on one side and 3 inches thick on the opposite side.
 3. Precast concrete grade adjustment rings shall provide structural capacity equal to or greater than the existing or specified manhole frame casting, and shall not affect the opening size or surface appearance.
 4. Mortar shall be factory blended, rapid setting, high early strength, fiber reinforced, non-metallic, chloride free, non-shrink or low-shrink repair mortar that can be troweled.
- D. **Frame and Cover Castings**
1. Grey Iron castings shall conform to the requirements of ASTM A48 Class 35 B, unless

otherwise specified, and be designed for HS-20 load rating.

2. Castings shall be manufactured true to pattern, and component parts shall fit together in a satisfactory manner. They shall be smooth and well cleaned by shot blasting. Circular manhole frame and cover castings shall be furnished with machined horizontal bearing surfaces. Frame and cover castings of the same nominal size shall be interchangeable.

E. Internal Chimney Sealant

1. The chimney sealant shall be minimum 100 mils thick of corrosion resistant aromatic flexible urethane resin coating applied to the inside wall of the chimney and manhole frame casting. The product shall have a minimum elongation of 800% and a Durometer of 75. The seal shall remain flexible allowing repeated vertical or horizontal movements of the manhole frame due to frost lift, ground movement or the thermal movement of pavements.
2. The chimney sealant shall have a minimum tensile and adhesion strength of 1150 PSI and 175 lb. per linear inch respectively. The chimney sealing system shall conform to the physical requirements of ASTM D412. The chimney sealant shall be Flex-Seal Utility Sealant as manufactured by Sealing Systems, Inc. or approved equal.

F. Manhole Cover Insert

1. The insert body shall be manufactured of 304 stainless steel with a minimum thickness of 18 gauge. The insert shall have a deep-dish bowl design to allow for easy removal of the manhole cover. The insert shall be designed to provide a sufficiently loose fit in the manhole frame casting to allow for easy removal.
2. The insert body gasket shall seal against the frame casting, be made of closed cell neoprene, and affixed to the insert body with a pressure-sensitive adhesive. The gasket shall have a minimum thickness of 1/8 inch and be installed by the manufacturer.
3. The insert body shall have a handle made 3/16" plastic coated 304 stainless steel cable installed on the side of the bowl and attached with two 304 stainless steel round head bolts with flat washers and self-locking nuts.
4. The manhole cover insert and components shall be manufactured of materials resistant to corrosion from atmospheres containing hydrogen sulfide and dilute sulfuric acid. The manhole cover insert shall be InflowShield as manufactured by Inflow Systems, Inc. or approved equal.

G. Standardization: Materials, supplies, and articles provided shall be the standard products of the manufacturers and coating system specified. Coatings in a particular system shall be the products of a single manufacturer.

H. Delivery, Storage and Handling: Deliver materials for field application to the job site in their original, unopened, undamaged containers. Each container shall bear the manufacturer's name brand, batch number, date of manufacture, and storage life. Coatings shall be stored in enclosed structures and shall be protected from weather, excessive high or low temperatures, and spills. Coatings exceeding storage life recommended by the manufacturer or that have been visibly damaged shall be removed from the site. Coating materials are to be stored and handled in accordance with their material safety data sheets.

27.10 REPAIR AND PREPARATION

- A. **Repair of Bench and Channel:** Manhole bench, flow channels, and inverts shall be repaired and/or constructed as directed in order to provide smooth flow characteristics and transition of flow through the manhole.
1. Contractor shall prepare, clean, and repair/rebuild manhole bench and flow channel(s) in the same manner as described above. Remove obstructions and loose materials from bench prior to shaping the channel and invert. Using brick and repair/resurfacing mortar, form a smooth, U-shaped channel having a minimum depth of one-half pipe diameter across the floor of the manhole using approved manhole rehabilitation materials. The top edge of the bench at the manhole wall shall be set at an elevation above one-half diameter of the adjacent pipe(s) and sloped at 1-inch per foot to drain toward the flow-through channel and outgoing pipe, and to intersect the channel edge at the one-half diameter level. Active flow shall be diverted as required to allow sufficient setting time for material used.
 2. Form a smooth transition with a reshaped channel invert and a raised manhole bench to eliminate sharp edges on the pipe, bench, channel, or invert. Build up and smooth the invert of manhole to match flow line of the connecting pipes. Channel build-up and surface preparation for manholes to be coated shall be in accordance with the article headed "Preparation" in this Section of the Technical Specifications.
 3. Finished benches, channels and inverts shall be smooth and without defects which would allow for accumulation of debris. Finished benches, channels and inverts shall conform to the Standard Details included in the Appendix.
- B. **Repair/Replacement of Chimney and Frame and Cover Casting**
1. **Frame and Cover Casting:** Frame and cover castings shall be replaced with Contractor or City furnished frame and covers, as directed. Frame and cover replacement varies according to manhole type and shall be performed in accordance with the requirements of the Contract Documents and City Standards included in the Appendix. The existing castings shall be salvaged and delivered to the designated location.
 2. **Chimney:** Manholes that have defective chimneys, frames and/or covers, or covers below grade will be designated for adjustment or replacement of the frame and cover. The Work shall include the following:
 - a. Saw cut and remove existing asphaltic or concrete pavement. Existing brick or paver stone pavement shall be carefully removed without cutting and salvaged for reuse. Excavate to at least 6 inches below the bottom of the chimney replacement.
 - b. Remove the existing manhole frame and cover casting, salvage and reuse the existing casting where adjustment is required, or deliver the salvaged casting to the designated location where replacement is required. Frames broken during removal or handling by the Contractor shall be replaced at the Contractor's expense.
 - c. Remove loose, cracked, broken, deteriorated, deficient or otherwise unsound existing chimney materials as required or directed by the Engineer. Existing Portland cement brick shall be removed and replaced regardless of condition. Where existing frame and cover castings are being replaced with a larger frame and cover casting, the existing chimney/corbel shall be removed and replaced as

- required to provide a chimney that matches the opening of the larger replacement frame casting. Existing surfaces shall be cleaned and prepared for chimney replacement.
- d. Replace existing chimney with new specified materials. The elevation and horizontal position of the frame shall be adjusted as necessary by installing precast grade adjustment rings or a sufficient number of brick and mortar rows to obtain the desired elevation. The frame and cover elevation and cross slope shall match the existing adjacent pavement. The frame and cover elevation shall be minimum 1 inch above existing grade in unpaved areas, or higher as directed by the Engineer. No materials other than the prepared mortar bed shall be used to obtain final elevation and slope of the frame. The prepared mortar bed shall be minimum 1/2 inch thick.
 - e. Backfill the excavation and restore surfaces to a condition equal or better than the existing condition prior to construction, in accordance with the requirements of the Contract Documents.
- C. **Elimination of Infiltration:** Infiltration shall be considered as "Minor" or "Severe". (1) "Minor" infiltration consists of water penetration of the manhole structure, appearing as a wet stain or a minute flow (trickle) of water on the interior surface of the manhole. (2) "Severe" infiltration consists of multiple leaks penetrating an area or of single leaks that spray into the interior of the manhole which require drilling through the manhole structure and pumping grout by the use of pressurized injection grouting equipment to stop active leaks. Contractor shall ensure that all visible leaks are eliminated in accordance with the Contract Documents and the coating manufacturer's material recommendations prior to surface preparation and coating application.
- 1. **"Minor" infiltration:** If observed within the manhole structure after surface preparation is complete, the area shall be prepared and a product specifically formulated for infiltration control and recommended by the specified manhole coating manufacturer(s) shall be used to stop minor infiltration flows in accordance with the product manufacturer's guidelines.
 - 2. **"Severe" infiltration:** Requires manhole drilling and pressure grouting. The products used for pressure grouting shall be installed in accordance with the manufacturer's guidelines. Substitute materials shall meet manhole coating manufacturer's recommendations for the particular manhole coating system specified.
 - a. Manhole grouting shall only be performed where approved and after associated Work such as CIPP lining.
 - b. Chemical grouting shall be performed beginning at the bottom of the manhole continue up as required to seal all points of severe infiltration.
 - c. Grouting, once commenced, shall be completed without stoppage. In case of equipment breakdown, wash out grouting system sufficiently to ensure fresh grout and adequate bond and penetration will occur upon restart. Maintain grout pressure until grout has set.
 - d. Grout travel shall be verified by migration of grout to defects or adjacent injection holes.
 - e. Injection holes shall be cleaned and patched with waterproof quick setting mortar as recommended by grout manufacturer.

D. General Coating Preparation

1. Surfaces to be coated shall be cleaned and prepared per the coating manufacturer's recommendations. Before applying coating, all contaminants including wastewater, oil, grease, dirt, rust, loose mill scale, waxes, efflorescence, sealers, salts, old coatings, and other foreign substances shall be removed. Oil and grease shall be removed before mechanical cleaning (hydro-blasting) is started. Where mechanical cleaning is accomplished by abrasive blast cleaning, the abrasive used shall be washed, graded and free of contaminants which might interfere with the adhesion of the coating.

Steam cleaning, detergent, industrial degreasers, and/or hot water shall be used to clean wall surfaces unless this is contrary to the recommendations of the specific coating system manufacturer. Acid solutions shall not be used.
2. As necessary, wastewater flow shall be stopped, bypassed or diverted for the preparation and application of the coating product(s).
3. Contractor shall prepare, clean, and seal all manhole wall penetrations in accordance with coating manufacturer's recommendations and as approved by the Engineer. Bench, channel, invert, chimney, and frame and cover casting repairs and/or replacements shall be completed before coatings are applied.
4. During surface preparation and coatings application, all nearby equipment, vehicles, structures, etc. shall be protected from blasting grit, dust and over sprayed, dropped or spilled materials. Surfaces adjacent to a proposed leading edge of coating application shall be taped-off or otherwise protected.
5. Clean cloths and clean fluids shall be used in solvent cleaning.
6. Contractor shall inspect all surfaces specified to receive a protective coating prior to surface preparation. Contractor shall notify Engineer of any noticeable disparity in the surfaces which may interfere with the proper preparation or application of the repair mortar and coating. Surface profile created by mechanical cleaning shall be per the coating manufacturer's recommendations.
7. Damaged surfaces shall be observed by the City Inspector before repairs are made. Where concrete or brick deterioration in a manhole structure is severe, structural integrity may need to be restored prior to application of coating, at Engineer's approval.
8. All active infiltration must be eliminated prior to proposed repair with materials as recommended by the coating manufacturer.
9. Plug or place covers over all pipe openings to prevent extraneous material from entering the wastewater system.

E. Surface Preparation of Concrete and Masonry Surfaces

1. **Concrete:** prepare per SSPC SP13/NACE 6 "Surface Preparation for Concrete," and the coating manufacturer's recommendations. All leaks evidenced by indications of infiltration, shall be plugged with materials as recommended by coating manufacturer. Surface profile created by abrasive blasted surfaces shall be per the manufacturer's recommendation for the coating system.
2. **Brick Manhole:** prepare per the coating manufacturer's recommendations. Contractor shall remove all oil, grease, chemicals and paints or protective coatings by chemical cleaning prior to hydro-blasting or abrasive blasting. All foreign particles and attacked

or unsound mortar shall be removed from the joints. All leaks evidenced by indications of infiltration, shall be plugged with materials as recommended by coating manufacturer. Loose brickwork and voids in the mortar joints shall be re-grouted with repair materials to provide a void free smooth surface for coating application.

3. Loose or protruding brick, mortar and concrete shall be removed by using a mason's hammer and chisel. The surface to be repaired must be clean and free of any loose materials.
4. Repair products shall be used to fill bugholes, holes, honeycombs, for patching of deep craters, voids or spalled areas of concrete, and/or smoothing transitions between components prior to coating installation. Products used must be compatible with the specified coating system(s), and used/applied in accordance with the repair product manufacturer's recommendations. Materials used shall be recommended by the coating system manufacturer.
5. Resurfacing/repair products shall be mixed, applied, allowed to cure, and treated per their manufacturer's recommendations, before they are coated. The Contractor shall ensure that resurfacing/repair and/or patching materials are fully cured before final surface preparation or coating application. The Contractor shall follow manufacturer's cure schedule before over coating.
6. Surfaces which are to be coated shall be allowed to dry to the moisture content recommended by the coating manufacturer.

F. Coating Interface with Adjoining Construction Materials

1. Coating product(s) shall interface with adjoining construction materials throughout the manhole structure to effectively seal and protect concrete or masonry substrates from infiltration and attack by corrosive elements. Procedures and materials necessary to effect this interface shall be as recommended by the coating product(s) manufacturer and approved by the Engineer. Termination points of the polymer coating product(s) shall have a minimum three (3) inch interface overlap with each pipe penetration. Termination points of the cementitious coating product(s) shall have flush interface abutting each pipe penetration. Wastewater flow shall be stopped, bypassed or diverted for the preparation and application of the coating product(s) to the invert and interface with pipe materials.
2. **CIPP Liners:** Polymer manhole coatings shall be chemically compatible with and have the ability to bond with the external or internal (with required surface preparation) surface of CIPP liners. Where manholes are coated in conjunction with CIPP lining activities by others, coating shall take place after pipe lining and utilize the existing wastewater Pump-Around Pumping setup where possible. Resurfacing/repair products shall be selected to minimize curing time. Manhole surface preparation and repair materials prior to coating shall be placed within the invert, channel, and benches at proper depth to allow for proper coating thickness, interface matching with CIPP profile, and minimum three (3) inch overlap of polymer coatings with CIPP terminal edges (internally or externally) in the invert, channel, benches, and remaining areas. The coating shall be monolithic with piping and manhole components. The CIPP surface to be interfaced with and overlapped with polymer coatings shall be clean and remain protected prior to coating. Surface preparation of internal CIPP surfaces shall require wire brushing or other approved means prior to coating to ensure bonding.

- G. **Final Cleaning:** The Contractor shall ensure that all surfaces to be coated are free of dust, moisture, and condensation. Nearby surfaces shall be cleaned to prevent contamination of substrate or freshly applied coatings.

H. **Internal Chimney Sealant Application**

1. All loose and protruding mortar and brick that would interfere with the seal's performance shall be removed and the manhole frame casting, chimney and cone/corbel cleaned by wire brushing. Prepare the surface as required by the manufacturer.
2. Active infiltration shall be corrected in accordance with the requirements of the article headed "Elimination of Infiltration" in this Section of the Technical Specifications prior to installing the internal chimney sealant. Resurfacing/repair products shall be completely cured in accordance with the manufacturer's requirements prior to installing the internal chimney sealant. The substrate surface must be free of sand, loose debris, dust, dirt, oil, grease or chemical contamination. A blower may be required to completely dry the substrate surface as recommended by the manufacturer.
3. Ensure the frame casting and structure is clean and dry prior to applying the adhesive primer. Brush the adhesive primer onto the casting and structure surfaces where the sealant is intended to adhere, in accordance with the requirements of the manufacturer.
4. The chimney sealant shall be evenly brush applied to the required thickness after the adhesive primer has dried, in accordance with the requirements of the manufacturer.
5. The chimney sealant shall be applied and extend vertically from 1-inch above the frame seal to 2-inches below the chimney and cone/corbel joint. The chimney sealant shall be applied and extend vertically from 1-inch above the frame seal to 12-inches below the frame seal for brick manholes where the frame is installed directly on the cone/corbel.

I. **Manhole Cover Insert Installation**

1. The Contractor shall accurately measure the existing frame and cover casting prior to ordering the manhole cover insert.
2. The manhole frame casting seat shall be free of all dirt, debris, rust and scale prior to the installation of the manhole cover insert. The insert shall be fully seated around the frame casting seat to ensure against water seepage between the insert and frame casting, and as recommended by the manufacturer.

27.11 COATING MATERIAL APPLICATION

- A. **Workmanship:** Coating shall be conducted in accordance with the requirements of SSPC, Good Painting Practice, Volume 1.
1. Coated surfaces shall be free from significant runs, drips, ridges, waves, laps and brush marks, etc. Coats shall be applied so as to produce an even film of uniform thickness.
 2. Coating equipment shall be designed for application of the materials specified.
 - a. Compressors shall have traps and filters to remove water and oils.
 - b. Spray equipment shall be equipped with mechanical agitators, pressure gages, and pressure regulators, and spray nozzles of the proper sizes and functioning in a manner suitable to perform the Work.

- c. The spray equipment shall be specifically designed to accurately ratio and apply the specified protective coating materials and shall be regularly maintained and in proper working order. Spray application equipment must be approved by the coating manufacturer and shall be used to apply each coat of the protective coating.

3. Each coat shall be applied evenly and sharply cut to line.

B. Coating Properties, Mixing, and Thinning

1. Coating shall provide a monolithic film with coverage of all specified surfaces and interfacing joints. Undercoats shall be sanded as required to provide a surface suitable for the proper application and adhesion of subsequent coats. Coating shall be thoroughly stirred, strained, and kept at a uniform consistency during application.
2. Coatings shall be mixed in accordance with the manufacturer's instructions.

C. Method of Coating Application

1. Where two or more coats are required, all coats shall be WFT tested.
2. Coating shall not be applied to a surface until it has been prepared as specified and approved for coating by the manufacturer.

D. Film Thickness and Continuity

1. Coating system thickness is the total thickness of primer and finish coats. Coatings shall be applied to the thickness specified.
2. Overspray, pinholes and other surface defects shall be repaired.

27.12 COATING SYSTEM SPECIFICATION SHEETS

Coating Systems specified for use appear on the following pages.

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Coating System Identification:

Product A-1

Manufacturer:	The Strong Company, Inc., 4505 Emmett Sanders Road, Pine Bluff, AR - 1-800-982-8009 or FAX 870-850-6933.
Product name:	MS-2C
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged blended calcium aluminate fiber reinforced cementitious monolithic coating composed of fused calcium aluminate cement and inert quartz aggregates (shall contain no ordinary Portland cement), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement binder: $\text{Al}_2\text{O}_3 \geq 43\%$, $\text{CaO} \leq 40\%$, $\text{FeO}+\text{Fe}_2\text{O}_3 \geq 4\%$, $\text{SiO}_2 \leq 10\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>800 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,500 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	0% @ 28 Days per ASTM C596
Bond:	>2,000 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: **Product A-1**

Environmental controls: Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.

Design: Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third-party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch | 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch | 25.4 mm for structural restoration of existing infrastructure.

Application: Field application by “wet-shotcrete” method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer’s recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.

Curing: Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.

Thickness: Minimum of 1/2 inch DFT

Tolerances: Minus 0 inches.

Cleanup: Water

Inspection Check Points: See the article headed “Quality Assurance/Quality Control” in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product A-2

Manufacturer:	Quadex Inc., 4801 Crystal Hill Rd., North Little Rock, AR – 713-750-9081, or FAX 501-758-3814.
Product name:	Aluminaliner
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged blended calcium aluminate fiber reinforced cementitious monolithic coating composed of fused calcium aluminate cement and inert quartz aggregates (shall contain no ordinary Portland cement), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement binder: $\text{Al}_2\text{O}_3 \geq 43\%$, $\text{CaO} \leq 40\%$, $\text{FeO} + \text{Fe}_2\text{O}_3 \geq 4\%$, $\text{SiO}_2 \leq 10\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>700 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,600 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	<0% @ 28 Days per ASTM C596
Bond:	>2,500 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product A-2

Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product A-3

Manufacturer:	Madewell Products Corporation, 7561 Industrial Court, Alpharetta, GA 30004 –800-741-8199, or FAX 770-475-8167.
Product name:	Mainstay ML-CA
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged blended calcium aluminate fiber reinforced cementitious monolithic coating composed of fused calcium aluminate cement and inert quartz aggregates (shall contain no ordinary Portland cement), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement binder: Al_2O_3 = 39–42%, CaO = 37-40%, Fe_2O_3 = 14-17%, SiO_2 = 2-5%.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Dark Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>600 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,600 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	<0% @ 28 Days per ASTM C596
Bond:	>3,000 psi @ 28 Days per ASTM C1042
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed “Preparation” in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product A-3

Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product B-1

Manufacturer:	Kerneos Inc., 1316 Priority Lane, Chesapeake, VA - 1-877-KERNEOS, 757-284-3200 or FAX 757-284-3300.
Product name:	SewperCoat PG
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged 100% calcium aluminate fiber reinforced cementitious monolithic coating composed of pure fused calcium aluminate cement and manufactured calcium aluminate aggregate (no other aggregate material permitted), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement and aggregate portion: $\text{Al}_2\text{O}_3 = 39 - 44\%$, $\text{CaO} = 34 - 38\%$, $\text{FeO} + \text{Fe}_2\text{O}_3 = 9 - 15\%$, $\text{SiO}_2 = 6 - 8\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>7,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>700 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,300 psi @ 28 Days per ASTM C348
Shrinkage @ 90% RH:	<0.07% @ 28 Days per ASTM C596
Bond:	>2,500 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product B-2

Manufacturer:	The Strong Company, Inc., 4505 Emmett Sanders Road, Pine Bluff, AR - 1-800-982-8009 or FAX 870-850-6933.
Product name:	High Performance Mix
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged 100% calcium aluminate fiber reinforced cementitious monolithic coating composed of pure fused calcium aluminate cement and manufactured calcium aluminate aggregate (no other aggregate material permitted), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement and aggregate portion: $\text{Al}_2\text{O}_3 = 39 - 44\%$, $\text{CaO} = 34 - 38\%$, $\text{FeO} + \text{Fe}_2\text{O}_3 = 9 - 15\%$, $\text{SiO}_2 = 6 - 8\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>800 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,300 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	0% @ 28 Days per ASTM C596
Bond:	>3,000 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product B-3

Manufacturer:	Global Materials Company, 5580 State Road 524, Cocoa, FL 32926 - 1-800-470-8450 Ext 1 or FAX 800-470-8450 Ext 2.
Product name:	Refratta HAC 100
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Pre-packaged 100% calcium aluminate fiber reinforced cementitious monolithic coating composed of pure fused calcium aluminate cement and manufactured calcium aluminate aggregate (no other aggregate material permitted), and is resistant to biosulfuric acid attack. Chemical composition of the calcium aluminate cement and aggregate portion: $\text{Al}_2\text{O}_3 = 39\text{-}44\%$, $\text{CaO} = 34\text{-}38\%$, $\text{FeO}+\text{Fe}_2\text{O}_3 = 9\text{-}15\%$, $\text{SiO}_2 = 6\text{-}8\%$.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Light Gray to Gray
Compressive Strength:	>9,000 psi @ 28 Days per ASTM C109
Tensile Strength:	>875 psi @ 28 Days per ASTM C496
Flexural Strength:	>1,500 psi @ 28 Days per ASTM C293
Shrinkage @ 90% RH:	0% @ 28 Days per ASTM C596
Bond:	>2,000 psi @ 28 Days per ASTM C882
Freeze - Thaw:	No visible damage after 300 cycles per ASTM C666
Density:	Per manufacturer.
Service condition:	Immersed, non-immersed, domestic wastewater corrosive environment.
Surface preparation:	Per the International Concrete Repair Institute (ICRI) Guideline No. 03732 B and the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Prepared surface shall be thoroughly moistened with water prior to the application. Do not apply to surfaces with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product B-3

Environmental controls:	Minimum air temperature 40 degrees F and do not expose to rain or snow. Maximum mix temperature 90 degrees F at time of application. Provide ventilation as recommended by manufacturer. Provide wastewater bypass as necessary.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure or typical structures within a range a values shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.
Application:	Field application by "wet-shotcrete" method typically with a low-pressure progressive cavity (rotor/stator) type pump that is clean and free of any Portland cement residue. Only unopened manufacturer pre-packaged material permitted for use, and mixed with clean potable water per manufacturer's recommendation. Applied by trained technician who is experienced in the application of spray applied cementitious coatings and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound, if required, shall meet the requirements of ASTM C309 and be approved by the coating material manufacturer and the Engineer prior to use. Minimum 6 hours curing prior to contact or immersion with flowing wastewater.
Thickness:	Minimum of 1/2 inch DFT
Tolerances:	Minus 0 inches.
Cleanup:	Water
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product C-1

Manufacturer:	Raven Lining Systems, 13105 East 61st Street, Suite A, Broken Arrow, Oklahoma - 800-324-2810, 918-615-0020 or FAX 918-615-0140.
Product name:	Raven 405 Epoxy
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	100% solids, solvent free ultra-high build epoxy monolithic coating. Amine cured. Materials per ASTM D638-Test Method for Tensile Properties of Plastics, and ASTM D790-Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Light blue, others can be specified.
Compressive Strength:	18,000 psi per ASTM D695
Tensile Strength:	7,600 psi per ASTM D638
Flexural Strength:	13,000 psi per ASTM D790
Flexural Modulus:	600,000 psi minimum per ASTM D790
Bond:	Shall exceed tensile strength of substrate
Low Temp. Flexibility:	Per manufacturer, per ASTM D1790
Density:	Per manufacturer.
Recovery:	Per manufacturer
Service condition:	Immersed, non-potable, non-immersed, domestic wastewater, corrosive environment, interior and exterior water pressure, traffic areas.
Surface preparation:	Per the article headed "Preparation" in this Section of the Technical Specifications. Inject or hand pack grout to seal holes, leaks and seeping. Do not apply to surfaces that are wet (including condensation) or covered with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product C-1

Environmental controls:	Minimum 50 degrees F, Maximum 120 degrees F, less than 90 percent humidity and do not expose to rain or snow. Provide heaters, dehumidification, and ventilation as recommended by manufacturer and as needed to prevent condensation before and during cure. Provide wastewater bypass as necessary.
Design:	The coating thickness shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third party independent testing lab paid for by the Contractor. The test results and design information for each individual structure shall be submitted to the Engineer for review.
Application:	Field application by heated plural component airless or air-assisted spray, applied by trained technician who is experienced in the application of a spray applied epoxy resin and has been certified by the manufacturer. Coating shall be applied within 24 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Generally 6hrs at 70 degrees F curing time after the completion of spraying before subjecting the manhole to active flow. Near maximum physical properties achieved in 8 hours. In cold weather, manhole shall be protected while curing is in process to maintain temperatures above 50 F. No more than 24 hrs at 70 F between coats.
Thickness:	Per manufacturer's design. Minimum of 125 mils WFT. Maximum of 200 mils per coat recommended on vertical or overhead surfaces.
Tolerances:	Plus 20 mils or minus 10 mils.
Cleanup:	Acetone, xylene, or MEK. Dispose of solvent and debris as required by code.
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product C-2

Manufacturer:	SPRAYROQ, Inc., 4707 Alton Court, Birmingham, AL. 35210 - 205-957-0020 or Fax 205-957-0021 or Fax 318-687-4337
Product name:	SPRAYWALL Polyurethane
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals.
Material Classification:	Spray-applied monolithic urethane resin coating. Materials per ASTM D638-Test Method for Tensile Properties of Plastics, and ASTM D790-Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
Surfaces:	Field applied to existing manholes. Coat all of interior of existing concrete, brick, and block manholes, including channels, and interfacing pipe joints.
Color:	Natural color of resin
Compressive Strength:	18,000 psi per ASTM D695
Tensile Strength:	7,450 psi per ASTM D638
Flexural Strength:	12,000 psi per ASTM D790
Flexural Modulus:	735,000 psi per ASTM D790
Bond:	Shall exceed tensile strength of substrate
Low Temp. Flexibility:	Passing at -4 degrees F, per ASTM D1790
Density:	87 lb/cu. ft.
Recovery:	98 percent, per ASTM C920
Service condition:	Immersed, non-potable, non-immersed, domestic wastewater, corrosive environment, interior and exterior water pressure, traffic areas.
Surface preparation:	Per the article headed "Preparation" in this Section of the Technical Specifications, and including the application of manufacturer recommended primer for steel and cast iron. Inject or hand pack grout to seal holes, leaks and seeping. Do not apply to surfaces that are wet (including condensation) or covered with running water.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.

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Coating System Identification: Product C-2

Environmental controls:	Minimum 50 degrees F temperatures, less than 90 percent humidity and do not expose to rain or snow. Provide heaters, dehumidification, and ventilation as recommended by manufacturer and as needed to prevent condensation before and during cure. Provide wastewater bypass as necessary.
Design:	The urethane coating thickness shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third party independent testing lab paid for by the Contractor. The test results and design information for each individual structure shall be submitted to the Engineer for review.
Application:	Field application, manually sprayed onto all surfaces by trained technician who is experienced in the application of a spray applied urethane resin and has been certified by the manufacturer. Coating shall be applied within 48 hours of completion of surface preparation. The finished bench surfaces shall be smooth, free of ridges and will be sloped in the direction of flow. Special care shall be used to insure a smooth transition between the new manhole invert and intersecting pipe inverts such that flow will not be impaired. Manufacturer to certify equipment proposed for use by Contractor.
Curing:	Minimum of 30 minutes curing time after the completion of spraying before subjecting the manhole to active flow. A minimum of 3 hours curing time or until all sprayed materials have returned to the ambient temperature of the manhole interior before. In cold weather, manhole shall be protected while curing is in process to maintain temperatures above 50F.
Thickness:	Per manufacturer's design. 125 mils minimum thickness.
Tolerances:	Plus 20 mils or minus 10 mils.
Cleanup:	As required. Dispose of solvent and debris as required by code.
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.

Coating System Identification:

Product E-1

Manufacturer:	Quadex LLC, a Vortex Company, 18150 Imperial Valley Dr., Houston TX, 77060. Phone: (713) 750-9081.
Product name:	GeoKrete Geopolymer.
Qualifications:	Applicator shall be trained and certified by the manufacturer as qualified to apply the specified coating. Applicator qualifications are addressed under item 12 of the Proposal Questionnaire. Provide references and documentation of certification and experience with submittals. NEED Manufacturers CERTIFICATION REQUIREMENTS/PROCEDURES
Material Classification:	Geopolymer mortar or Geopolymer (Alumina Silicate powder-based product). A factory blended, one-component (just add water), eco-friendly, micro-fiber reinforced geopolymer mortar synthesized from reactive SiO ₂ and Al ₂ O ₃ from industrial byproducts, enhanced with monocrystalline quartz aggregate.
Surfaces:	Where specified and approved, can be used for structural restoration of large diameter pipes, culverts and tunnels, including raw, storm and wastewater, consisting of metal, concrete, stone, masonry and others. Other applicable structures include manholes, wet-wells, and treatment plant structures.
Color:	Light grey
Compressive Strength:	Minimum 8,000 psi per ASTM C39 & C109, @ 28 days
Split Tensile Strength	Minimum 900 psi @ 28 days, per ASTM C496
Flexural Strength:	Minimum 800 psi per ASTM D78, @ 28 days, per ASTM C78
Modulus of Elasticity	Minimum 5,400,000 psi @ 28 days, per ASTM C469
Bond:	Shall exceed tensile strength of substrate. Bond strength to concrete shall be minimum 3,000 psi @ 28 days, per ASTM C882
Low Temp. Flexibility:	Per manufacturer, per ASTM D1790
Density:	Per manufacturer.
Chemical Resistance	Maximum 10% mass loss in 8-week sulfuric acid @ pH 1.0 immersion, per ASTM C267
Chloride Ion Penetration Resistance	28-Day < 250 Coulombs (very low), per ASTM C1202
Shrinkage	28-days ≤ 0.02%, per ASTM C1090

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Coating System Identification:

Product E-1

Service condition:	Immersed, non-potable, non-immersed, domestic wastewater, corrosive environment, interior and exterior water pressure, traffic areas, PH as low as 1.0 and temperature exceeding 212°F 100°C for industrial effluent.
Surface preparation:	Per the article headed "Preparation" in this Section of the Technical Specifications. Prepare surface to be patched by removing unsound concrete, dirt, dust, oil and other debris using high pressure (3,500 PSI 241.3 bar) water blasting, abrasive blasting. Stop active infiltration. Then rinse with potable water to remove all remaining dirt, sand and loose debris. This will provide a clean, damp surface to allow for a good bond.
Repair materials:	Patching grout, infiltration control grout, and any other repair materials shall comply with the recommendations of the manufacturer. No holes or honeycomb surfaces should remain after the application of the repair mortar. Materials shall be fully cured before coating is applied.
Environmental controls:	Stop active infiltration. Provide wastewater bypass as necessary. Temp must be maintained above freezing at all times.
Design:	Shall be designed to withstand the hydraulic load generated by the groundwater table. The invert and bench coating thickness shall be the same as that required at the bottom of the manhole wall as determined by the manufacturer's standard engineering calculations for groundwater pressure. Coating thickness design to be based on the groundwater table being one foot below the ground surface. Testing required for design values of the flexural modulus of the coating will be verified by a third- party independent testing lab paid for by the Contractor. The test results and design information for each individual structure shall be submitted to the Engineer for review. Coating thickness shall be the minimum required to meet the requirements stated in this section and in no case less than 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure.

Coating System Identification:

Product E-1

Application:	Field application depending on temperature and conditions of application by trained technician who has been certified by the manufacturer. Manufacturer to certify equipment proposed for use by Contractor. Use approximately 0.48 to 0.57 gallons 1.82 to 2.16 liters of potable water per 60 lb. 27.2 kg bag of GeoKrete geopolymer. For 1,000 lb. 454 kg. supersack use approximately 8.0 to 9.5 gallons 30.3 to 36 liters of potable water. First add water to mixer, start the mixer and add GeoKrete geopolymer until mortar is completely mixed. Once all geopolymer material and water has been added to mixer, it needs to mix for approximately five (5) minutes prior to being transferred into the material hopper. Once fully mixed, additional water may be added, as approved by Quadex, should it be necessary for proper consistency. Apply GeoKrete geopolymer by low pressure spraying, hand trowel, or the spin cast application process on horizontal or vertical surfaces to a monolithic minimum thickness meeting the design parameters or as directed by the Engineer. of 1/2-inch 12.7 mm for a protective layer to new or non-corroded infrastructure and 1.0-inch 25.4 mm for structural restoration of existing infrastructure. Troweling of materials shall begin immediately following the spray application. Initial troweling shall be in a motion, to compress the material into any voids within the structure walls. Precautions should be taken not to over trowel. After troweling, the applied liner should be brushed or sponged to remove trowel marks and to break up the latent surface brought about by troweling. Brushing/sponging should be in the horizontal plane and as with troweling do not over work the lining material.
Curing:	Coating shall Per manufacturer's recommendations and minimum 18 hours moist curing. Curing compound is not to be used. Minimum 6 hours curing prior to contact or immersion with flowing wastewater, with deviation only upon written approval from manufacturer.
Thickness:	As approved, Per manufacturer's design design requirements. In no case less than 250 mils (.5 inch) minimum thickness.
Tolerances:	Plus 20 mils or minus 10 mils.
Cleanup:	Clean equipment with water. Clean hands with water and hand cleaner.
Inspection Check Points:	See the article headed "Quality Assurance/Quality Control" in this Section of the Technical Specifications. Check Points 1 through 10.
Precautions/PPE	Avoid eye contact or prolonged contact with skin. Wash thoroughly after use. Persons using Quadex GeoKrete geopolymer should wear necessary PPE consisting at minimum of eye protection, dusk mask and rubber gloves. Read all product labels and technical literature prior to use.

END OF SECTION

Engineering & Capital Improvements Department

Field Order – Annual Projects



Project Number	20013-111
Project Title	SAN Annual CIPP Lining FY20
Contractor	LMK Pipe Renewal, LLC
Field Order No.	FO23-009
Date	10/27/22

The following directive is given pursuant to Contract Standards. Article "Issuance of Change Orders and Field Orders". The Contractor is hereby directed to proceed with this Field Order. In accordance with Contract Standards Article "Changes in the Work", the Contractor must make written claim for an increase in the contract price or time within five (5) days, if so desired.

Location / Plan Reference:

(All Plans as defined in the contract documents includes all Field/Work Orders).

Directive:

All items listed below result in no changes to the overall contract time or total amount.

- (1) Execute all Work issued per contract specs within the contract period specified.
- (2) Adjustment of bid pay item unit rates is per Contract Standards Article G-39. According to ENG CCI index the bid item unit rates are authorized to be increased by 14.16% for current annual renewal period (9/1/2022).

Required Completion Date: 8/31/23

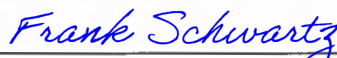
Check appropriate box below for Work Order based Water/Wastewater projects:

- ☐ Contractor may invoice the City monthly as the Work proceed.
- ☒ Contractor may invoice the City monthly for completed Work Orders only.

Engineering Construction Manager

 10/27/22
Thomas Rice, P.E., Construction Manager

Contractor Representative:



Project Manager

Name and Title

cc: Matt Wilson, Project Manager

Roger Larkin, Inspector

Mike Littlewood, CI Construction Coordinator

ECID Records

Updated December 2019

From BID#7737										
20013-111 City of St. Petersburg - Price Increase Calculations for LMK Pipe Renewal										
inv 1-2, only										
Item	Description	Cost	Unit	Contract B	ENR Inde	ENR Inde	ENR % in	Calc	Calc	New Cost - Effective 9/1/22
G-1.1	Emergency Response	3000	DAY	10/15/2020	11539	13173.43	1.141644	3424.932	3424.93	3424.930
G-2.1	Traffic Control	450	DAY	10/15/2020	11539	13173.43	1.141644	513.7398	513.74	513.740
S-1.1	Sewer Main Cleaning and CCTV Inspection - 8" Diameter and Less (Not part of CIPP Lining Work)	2.25	LF	10/15/2020	11539	13173.43	1.141644	2.568699	2.57	2.570
S-1.2	Sewer Main Cleaning and CCTV Inspection - 10" to 12" Diameter (Not part of CIPP Lining Work)	2.95	LF	10/15/2020	11539	13173.43	1.141644	3.36785	3.37	3.370
S-1.3	Sewer Main Cleaning and CCTV Inspection - 14" to 18" Diameter (Not part of CIPP Lining Work)	5.25	LF	10/15/2020	11539	13173.43	1.141644	5.993631	5.99	5.990
S-1.4	Sewer Main Cleaning and CCTV Inspection - 20" to 27" Diameter (Not part of CIPP Lining Work)	8.95	LF	10/15/2020	11539	13173.43	1.141644	10.21771	10.22	10.220
S-1.5	Sewer Main Cleaning and CCTV Inspection - 30" to 48" Diameter (Not part of CIPP Lining Work)	14.5	LF	10/15/2020	11539	13173.43	1.141644	16.55384	16.55	16.550
S-2	Sewer Lateral CCTV Inspection - In Conjunction with Sewer Main Cleaning and CCTV Inspection (Not part of CIPP Lining Work)	285	EA	10/15/2020	11539	13173.43	1.141644	325.3685	325.37	325.370
S-3.1	Specialty Cleaning - 8" Diameter and Less	9	LF	10/15/2020	11539	13173.43	1.141644	10.2748	10.27	10.270
S-3.2	Specialty Cleaning - 10" to 12" Diameter	11	LF	10/15/2020	11539	13173.43	1.141644	12.55808	12.56	12.560
S-3.3	Specialty Cleaning - 14" to 18" Diameter	13	LF	10/15/2020	11539	13173.43	1.141644	14.84137	14.84	14.840
S-3.4	Specialty Cleaning - 20" to 27" Diameter	25	LF	10/15/2020	11539	13173.43	1.141644	28.5411	28.54	28.540
S-3.5	Specialty Cleaning - 30" Diameter and Greater	32	LF	10/15/2020	11539	13173.43	1.141644	36.53261	36.53	36.530
S-4.1	Chemical Sealing of Host Pipe - 10" Diameter and Less	495	EA	10/15/2020	11539	13173.43	1.141644	565.1138	565.11	565.110
S-4.2	Chemical Sealing of Host Pipe - 12" to 15" Diameter	525	EA	10/15/2020	11539	13173.43	1.141644	599.3631	599.36	599.360
S-4.3	Chemical Sealing of Host Pipe - 18" to 24" Diameter	650	EA	10/15/2020	11539	13173.43	1.141644	742.0686	742.07	742.070
S-4.4	Chemical Sealing of Host Pipe - 27" Diameter and Greater	835	EA	10/15/2020	11539	13173.43	1.141644	953.2727	953.27	953.270
S-5	Chemical Sealing - Grout	400	GAL	10/15/2020	11539	13173.43	1.141644	456.6576	456.66	456.660
S-6	Additional Access Cost	350	EA	10/15/2020	11539	13173.43	1.141644	399.5754	399.58	399.580
S-7	Chemical Sealing of Service Lateral Connection	450	EA	10/15/2020	11539	13173.43	1.141644	513.7398	513.74	513.740
M-13	Allowance for Contract Amendment	50000	--						50000	50000.000
S-24	Initial Service Lateral CCTV From Main	290	EA	10/15/2020	11539	13173.43	1.141644	331.0768	331.08	331.080
S-25	Initial Service Lateral CCTV Inspection From Clean Out	5	EA	10/15/2020	11539	13173.43	1.141644	5.70822	5.71	5.710
S-26.1	CIPP Lateral Lining, 8" to 10" Full Circle Main/Lateral Connection, Up To 15 LF	3597	EA	10/15/2020	11539	13173.43	1.141644	4106.493	4106.49	4106.490
S-26.2	CIPP Lateral Lining, 12" to 15" Full Circle Main/Lateral Connection, Up To 15 LF	3825	EA	10/15/2020	11539	13173.43	1.141644	4366.788	4366.79	4366.790
S-27.1	CIPP Lateral Lining, 8" to 10" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral	3750	EA	10/15/2020	11539	13173.43	1.141644	4281.165	4281.16	4281.160
S-27.2	CIPP Lateral Lining, 12" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Single Lateral	3900	EA	10/15/2020	11539	13173.43	1.141644	4452.412	4452.41	4452.410
S-28.1	CIPP Lateral Lining, 8" to 10" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral	7600	EA	10/15/2020	11539	13173.43	1.141644	8676.494	8676.49	8676.490
S-28.2	CIPP Lateral Lining, 12" to 15" Full Circle Main/Lateral Connection, Up To 15 LF, Stack Pipe, Double Lateral	8200	EA	10/15/2020	11539	13173.43	1.141644	9361.481	9361.48	9361.480
S-29	CIPP Lateral Lining, Up To 15 LF (From Access Structure)	3385	EA	10/15/2020	11539	13173.43	1.141644	3864.465	3864.46	3864.460
S-30	CIPP Lateral Lining - Additional, Beyond 15 LF (Only Applies with Pay Items S-26 to S-29)	70	LF	10/15/2020	11539	13173.43	1.141644	79.91508	79.92	79.920
S-31	Replacement or Installation of Cleanouts - Not In Bulk	1500	EA	10/15/2020	11539	13173.43	1.141644	1712.466	1712.47	1712.470
S-32	Replacement or Installation of Cleanouts - Bulk Installation (10 or more within localized area)	1400	EA	10/15/2020	11539	13173.43	1.141644	1598.302	1598.3	1598.300
S-33	Replacement or Installation of Cleanouts - Dewatering - Targeted Areas	1800	EA	10/15/2020	11539	13173.43	1.141644	2054.959	2054.96	2054.960
S-35	Clean-Out Restoration in Grass/Mulch Area	1300	EA	10/15/2020	11539	13173.43	1.141644	1484.137	1484.14	1484.140
S-36	Clean-Out Restoration in Asphalt Area	1450	EA	10/15/2020	11539	13173.43	1.141644	1655.384	1655.38	1655.380
S-37	Clean-Out Restoration in Concrete Driveway	1500	EA	10/15/2020	11539	13173.43	1.141644	1712.466	1712.47	1712.470
S-38	Clean-Out Restoration in Paver Driveway	2500	EA	10/15/2020	11539	13173.43	1.141644	2854.11	2854.11	2854.110
M-13.1	Allowance for Contract Amendment	50000	--						50000	50000.000
M-13.2	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000
M-13.3	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000
M-13.4	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000
M-13.5	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000
M-13.6	AS NEEDED		EA	10/15/2020	11539	13173.43	1.141644	0	0	0.000



Cured-In-Place Lining Proposal	
DATE	June 28, 2023
CONTACT PERSON	Ken Rubach Director of Public Works
COMPANY NAME	Lauderdale by the Sea 4501 N. Ocean Drive Lauderdale by the Sea, FL 33308
CELL PHONE	954-640-4233
OFFICE PHONE	
EMAIL ADDRESS	kenr@lbts-fl.gov
PROJECT NAME	4607 Tradewinds Ave. Mainline Rehabilitation Project
PROJECT NUMBER	23-TBD
CONTRACT	St. Petersburg Piggyback
PRICES VALID UNTIL	30 Days from the Date on this Proposal

LMK Pipe Renewal, LLC (Hereinafter known as LMKPR) would like to thank you (Hereinafter known as Client) for your interest in our Trenchless Technologies and the opportunity to quote you on this project. The costs that are provided and the scope of work to be performed will be based on the following criteria. If the actual project differs from what has been outlined, contact us immediately to revise this quotation prior to the mobilization of crew/equipment.

General Description of Project

1. Location: 4607 Tradewinds Ave.
2. Mainline Diameter: 15"
3. Length of Segment: 133' (Completed with walk-off wheel, above ground)
4. Pipe Type: RCP
5. Pipe Use: Storm
6. All work will need to be completed and timed with tidal flows.



LMK PIPE RENEWAL

Pricing Schedule

<u>Bid Item</u>	<u>Description</u>	<u>Qty</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Extended Price</u>
S-1.3	Sewer Main Cleaning and CCTV Inspection 14" to 18" Diameter. Pre and Post Videos	133	LF	\$5.99	\$796.67
S-3.3	Clean and Remove Barnacles – Specialty Cleaning 14" to 18" Diameter	133	LF	\$14.84	\$1,973.72
S-35	Clean-Out Restoration in Grass/Mulch Area (Used to repair sink holes are located 8', 21' & 125' from the Downstream End	3	EA	\$1,484.14	\$4,452.42
M-13.1	Allowance for Contract Amendment: Install two cured-in-place Sectional Liners 15" x 6' in Length (Option A)	2	EA	\$6,805	\$13,610
M-13.1	Allowance for Contract Amendment: Install one Full Length Liner from end to end (Option B)	135	LF	\$154	\$20,790
M-13.1	If applicable: Any expenses incurred for dumping shall be the cost of dumping/permits, etc. plus 10%.				

TERMS AND CONDITIONS

1. Client to provide water meter and any costs associated with it at the start of the project.
2. If in the sole opinion of our Field Superintendent, conditions become unsafe or unsuitable for our method(s) of repair, we reserve the right to terminate work in that section without prejudice against any other structures that may be completed on the project.
3. If work is required that deviates in any way from the work outlined in this proposal, a signed and dated change order or a separate proposal must first be obtained through our office before completion.

LMK Pipe Renewal LLC | 1131 N.W. 55th Street, Ft. Lauderdale Florida, 33309 |

Office: 954.772.0075 | Fax: 954.772.0086

Website: <https://www.lmkpipe.com/>



LMK PIPE RENEWAL

4. Traffic Control shall be limited to traffic cones and signs at each end of the project area.
5. Any unauthorized additions, deletions or alterations to any part of this document will null and void these prices and this proposal.
6. The outline for payment terms are as follows:
 - 6.1. Payment due date is defined as net thirty-days from date of invoice.
7. All material/work is guaranteed to be "as specified". All work to be completed in a workmanlike manner according to standard practices and technical specifications for this project.
8. LMKPR shall not be held responsible for delays, strikes, acts of God or any other event that is beyond our control that would affect the performance and execution of this agreement or its deadline. Work must be given to LMK in adequate time to allow for completion by our forces. LMK will not be liable for liquidated damages or subject to any other penalties for work issued without adequate time to complete.
9. The laws of the State of Florida shall govern the construction and performance of this agreement. Both parties agree that any disputes relative to the terms of this agreement or work performed will be resolved in the jurisdiction of the Broward County Courts.
10. Increased insurance limits or specialty insurance such as but not limited to Railroad Protective insurance, bonding, extended warranties, etc. is available at customer's request and shall be IN ADDITION TO the project prices listed.
11. All work in a confined space shall be performed under LMKPR confined space entry procedures, (OSHA Guideline 1910,146) found in the LMKPR's, 2023 Health & Safety Policies.
12. Upon proper execution of this document, Client acknowledges that this document accurately reflects all work to be performed by LMKPR as outlined and all information about the repair(s) is accurate.
13. Both parties agree that any transmission of documents with authorized signatures, pertaining to this project using email is hereby permissible and binding.
14. LMKPR will provide: One copy of the pre-lining video, one copy of the post lining video documentation. Video documentation will be completed with a color, straight view, lateral push camera from the clean-out down to the connection at the mainline.
15. You may indicate acceptance by returning a signed and dated copy of this proposal in its entirety.

Accepted By: Ken Rubach
Director of Public Works

Date

Approved By: Shaun M. Flanery, President
LMK Pipe Renewal LLC

Date

LMK Pipe Renewal LLC | 1131 N.W. 55th Street, Ft. Lauderdale Florida, 33309 |
Office: 954.772.0075 | Fax: 954.772.0086
Website: <https://www.lmkpipe.com/>



Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Katie Anderson, Special Events and Community Marketing Coordinator

Submitting Department: Administration

Item Type: Action Item

Agenda Section: CONSENT AGENDA

Subject Title: Boo! By The Sea 2024

Explanation: Every October, the Town celebrates the Halloween holiday with Boo! By The Sea. This old-fashioned, trick or treat-inspired event takes place in the four West plazas, with participating local businesses offering treats, games, and other family-friendly entertainment throughout the event space. Boo! is geared towards young children, ages 12 and under, and their families.

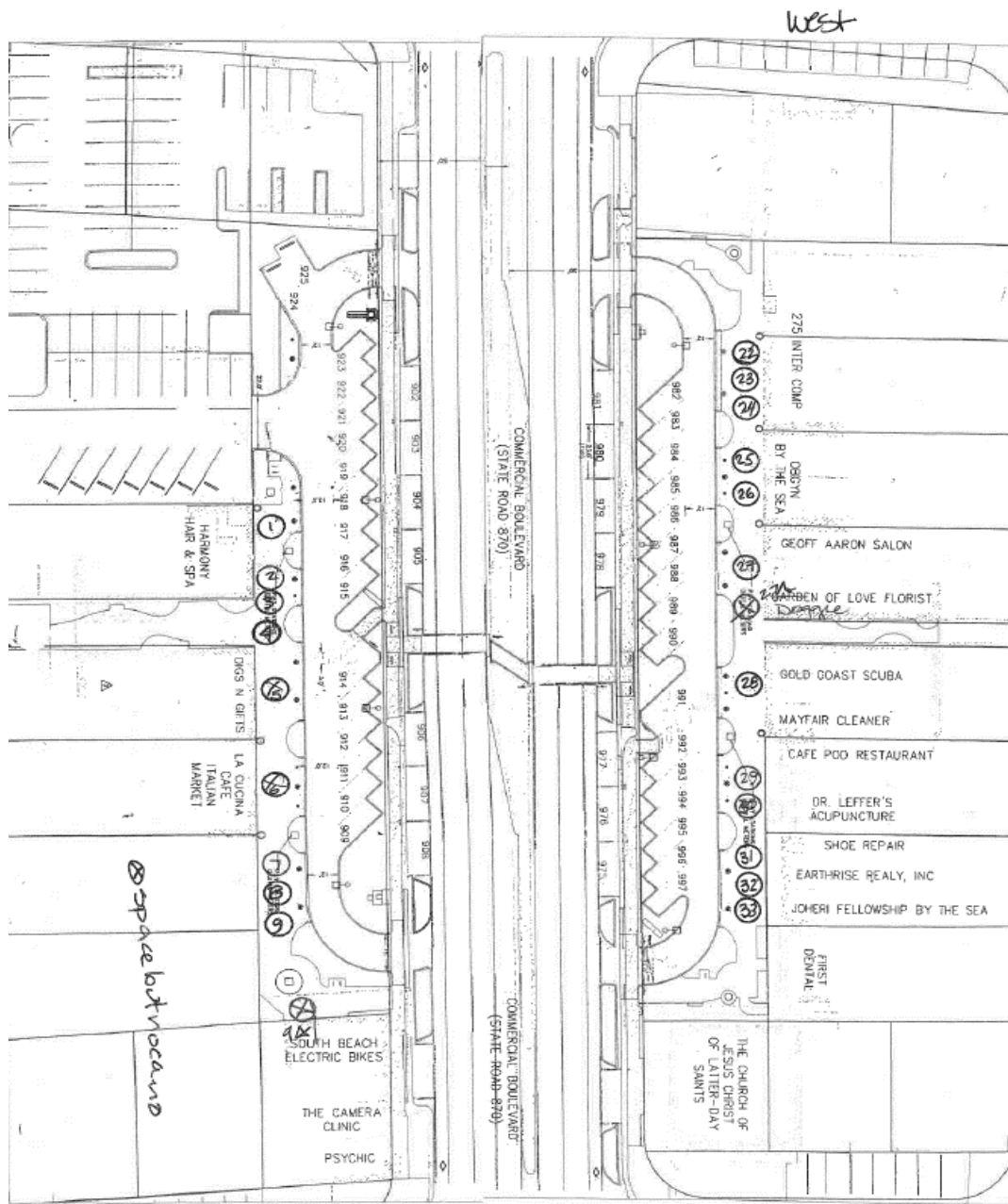
On the Saturday morning of the event, the parking lots of the West plazas are closed to allow for the event set-up. These lots are opened approximately one hour following the conclusion of the event. Businesses are notified on several occasions leading up to the event day regarding the impending closures.

Historically, Boo! took place from 1:00 p.m. to 4:00 p.m. Taking into account feedback provided from prior years, the Town staff is proposing moving the time of the event to take place from 10:00 a.m. to 1:00 p.m. Key contributing factors in this decision were the heat of the day, nap time for children in the target demographic, and allowing the Town parking lots to re-open earlier for the West plaza businesses.

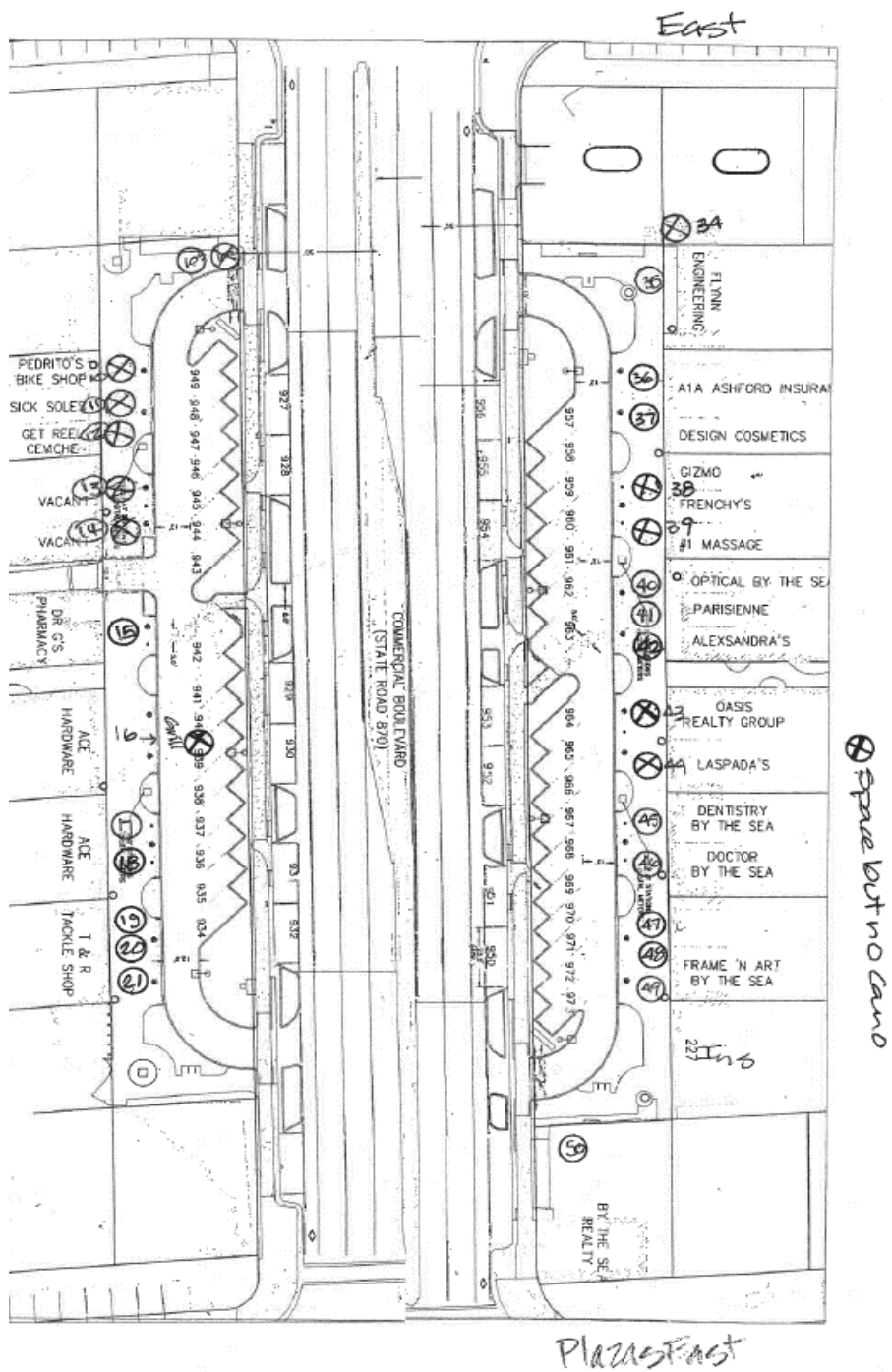
Recommendation: Town recommends Commission approval of the Boo! By The Sea event, and the newly proposed time of 10:00 a.m. to 1:00 p.m.

Exhibits:

1. Boo!2023_4PlazasDiagram



⊗ = space but no cand





Agenda Item No: 11.d.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Ken Rubach, Deputy Town Manager/Public Works Director

Submitting Department: Administration

Item Type: Resolution

Agenda Section: CONSENT AGENDA

Subject Title: RESOLUTION 2023-54: A RESOLUTION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A MAINTENANCE MEMORANDUM OF AGREEMENT WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION FOR LANDSCAPE/HARDSCAPE IMPROVEMENTS WITHIN THE RIGHT OF WAY OF STATE ROAD A1A - NORTH OCEAN BOULEVARD; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND FOR AN EFFECTIVE DATE (Exhibit 1).

Explanation: As part of the work associated with the Downtown Refurbishment Project (the "Project"), the Florida Department of Transportation ("FDOT") requires that the Town execute a Maintenance Memorandum of Agreement ("MMOA") between the Town and the Florida Department of Transportation. This is a customary process since the Town is liable for the work since our contractor (State Contracting & Engineering Corporation) will perform the installation of the Project and we will accept responsibility for maintenance associated with the Project moving forward.

A resolution (**Exhibit 1**) is required as part of the MMOA process acknowledging these maintenance responsibilities and authorizing the Town Manager to execute the MMOA, Exhibit A in the Resolution, on the Town's behalf.

Recommendation: Approve Resolution 2023-54 approving and authorizing the Town Manager to execute the MMOA with FDOT.

Exhibits:

1. Resolution 2023-54 FDOT MMOA A1A

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WHEREAS, the Florida Department of Transportation (“FDOT”) has jurisdiction over and maintains State Road A1A (“North Ocean Boulevard”) as part of the State Highway System; and

WHEREAS, the Town and FDOT executed an agreement dated November 23, 1999, for the maintenance of landscaping and brick pavers on State Road A1A from Imperial Lane to Pine Avenue and State Road 870 (Commercial Blvd.) from the Intracoastal waterway to State Road A1A, and

WHEREAS, at the Town’s request, FDOT has agreed to permit the Town to install and maintain the Landscape Improvements within the right-of-way of North Ocean Boulevard, as further set forth in the District Four Landscape Maintenance Memorandum of Agreement attached hereto as Exhibit “A” (the “Agreement”); and

**NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION
OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, THAT:**

Section 1. Recitals. Each “WHEREAS” clause set forth above is true and correct and incorporated herein by this reference.

Section 2. Agreement Approved. The Agreement with FDOT, attached hereto as Exhibit “A,” is hereby approved.

Section 3. Authorization to Execute the Agreement. The Town Manager is hereby authorized to execute the Agreement with FDOT, in substantially the same form attached hereto as Exhibit “A,” together with such non-substantial changes as are deemed necessary by the Town Manager and approved as to form and legal sufficiency by the Town Attorney.

Section 4. Implementation. The appropriate Town officials are authorized to execute all necessary documents and to take any necessary action to effectuate the intent of this Resolution.

Section 5. Effective Date. This Resolution shall become effective upon passage and adoption.

PASSED AND ADOPTED this 13th day of September, 2023.

Mayor Chris Vincent

Attest:

Katrina Adler, Town Clerk
(CORPORATE SEAL)

APPROVED AS TO FORM:

Susan L. Trevarthen, Town Attorney

SECTION: 86050000
 PERMIT: 2023-L-491-00006
 COUNTY: Broward
 STATE RD: A1A

**STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
 DISTRICT FOUR
 LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT**

THIS AGREEMENT, made and entered into this _____ day of _____ 20__, by and between the **STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION**, a component agency of the State of Florida, hereinafter called the **DEPARTMENT** and the **TOWN OF LAUDERDALE BY THE SEA**, a municipal corporation, existing under the Laws of Florida, hereinafter called the **AGENCY**.

W I T N E S S E T H:

WHEREAS, the DEPARTMENT has jurisdiction over **A1A (North Ocean Boulevard)** as part of the State Highway System as described in **Exhibit "A"**; and

WHEREAS, the AGENCY seeks to install by permit and maintain certain landscape improvements within the right of way of **A1A (North Ocean Boulevard)** as described within **Exhibit "B"**; and

WHEREAS, as part of the continual updating of the State of Florida Highway System, the DEPARTMENT, for the purpose of safety, protection of the investment and other reasons, has constructed and does maintain the highway facility as described in **Exhibit "A"** attached hereto and incorporated by reference herein, within the corporate limits of the AGENCY; and

WHEREAS, the Department and the Agency signed an agreement dated November 23, 1999, for the maintenance of landscaping and brick pavers on State Road A1A from Imperial Lane to Pine Avenue and State Road 870 (Commercial Blvd.) from the Intracoastal waterway to State Road A1A, and

WHEREAS, the Department and the Agency signed an agreement dated October 9, 2002, for landscape and irrigation on State Road 870 (Commercial Blvd.) from the Intracoastal waterway to State Road A1A, and

WHEREAS, the intent of this Agreement is to supplement the 1999 and 2002 agreements for SR A1A (N. Ocean Drive) at Commercial Blvd, East side, from M.P. 6.910 to M.P. 6.971 for the hardscape improvements indicated in **Exhibit "B"**. The maintenance responsibilities for the areas and items identified in the 1999 and 2002 agreements shall continue and shall not be impacted by this Agreement; and

WHEREAS, the AGENCY is agreeable to maintaining those landscape improvements within the AGENCY'S limits including plant materials, irrigation system and/or hardscape which may contain specialty surfacing (concrete pavers, color stamped concrete and color stamped asphalt [also known as patterned pavement]) including any other nonstandard hardscape (if applicable), but excluding standard concrete sidewalk, and agree such improvements shall be maintained by

periodic mowing, fertilizing, weeding, litter pick-up, pruning, necessary replanting, irrigation repair and/or repair of the median concrete replacements associated with the specialty surfacing (if applicable) as needed; and

WHEREAS, it is the intent of the AGENCY and the DEPARTMENT that the AGENCY shall maintain all right of way within the medians, outside the traveled way and improvements made to the traveled way that was made at the request of the AGENCY; and

WHEREAS, the parties hereto mutually recognize the need for entering into an Agreement designating and setting forth the responsibilities of each party; and

WHEREAS, the AGENCY, by Resolution No. _____, dated _____, 20_____, attached hereto as **Exhibit "D"** and by this reference made a part hereof, desires to enter into this Agreement and authorizes its officers to do so.

NOW THEREFORE, for and in consideration of the mutual benefits to flow each to the other, the parties covenant and agree as follows:

1. The recitals set forth above are true and correct and are deemed incorporated herein.
2. INSTALLATION OF FACILITIES

The AGENCY shall install and agrees to maintain the *landscape improvements* described herein as: plant materials, irrigation and/or hardscape on the highway facilities substantially as specified in plans and specifications hereinafter referred to as the Project(s) and incorporated herein as **Exhibit "B"**. *Hardscape* shall mean, but not be limited to, any site amenities such as landscape accent lighting, bike racks, fountains, tree grates, decorative free-standing walls, and/or sidewalk, median and/or roadway specialty surfacing such as concrete pavers, stamped colored concrete and/or stamped colored asphalt (also known as patterned pavement).

- (a) All plant materials shall be installed and maintained in strict accordance with sound nursery practice prescribed by the International Society of Arboriculture (ISA). All plant materials installed shall be Florida #1 or better according to the most current edition of Florida Department of Agriculture, *Florida Grades and Standards for Nursery Stock*; and all trees shall meet Florida Power & Light, *Right Tree, Right Place, South Florida*.
- (b) Trees and palms within the right of way shall be installed and pruned to prevent encroachment to roadways, lateral offsets, and sidewalks. Definition of these criteria is included in the most current editions of FDOT standards for design, construction, maintenance, and utility operations on the state highway system and **Exhibit "C"**, the Maintenance Plan.
- (c) Tree and palm pruning shall be supervised by properly trained personnel trained in tree pruning techniques and shall meet the most current standards set forth by the International Society of Arboriculture (ISA) and the American National Standard Institute (ANSI), Part A-300.

- (d) Irrigation installation and maintenance activities shall conform to the standards set forth by the Florida Irrigation Society (FIS) latest edition of FIS, *Standards and Specifications for Turf and Landscape Irrigation Systems*.
- (e) The AGENCY shall provide the FDOT Local Operation Center accurate as-built plans of the irrigation system so if in the future there is a need for the DEPARTMENT to perform work in the area, the system can be accommodated as much as possible. (See paragraph (g) for contact information)
- (f) If it becomes necessary to provide utilities (water/electricity) to the median or side areas, it shall be the AGENCY'S responsibility to obtain a permit for such work through the local Operations Center (see paragraph (g) below) and the AGENCY shall be responsible for all associated fees for the installation and maintenance of these utilities.
- (g) The AGENCY shall provide the local FDOT Operation Center located at Broward Operations, 5548 NW 9th Avenue, Ft. Lauderdale, FL 33309, (954) 776-4300 a twenty-four (24) hour telephone number and the name of a responsible person that the DEPARTMENT may contact. The AGENCY shall notify the local maintenance office forty-eight (48) hours prior to the start of the landscape improvements.
- (h) All specialty surfacing shall be installed and maintained in strict accordance with the most current edition of the *Florida Accessibility Code for Building Construction* and the *Interlocking Concrete Pavement institute (ICPI)*.
- (i) All activities, including landscape improvements installation and future maintenance operations performed on State highway right of way, must be in conformity with the most current edition of the *Manual on Uniform Traffic Control (MUTCD)* and *FDOT Standard Plans for Road Construction, 102-XXX series, Maintenance of Traffic*.
- (j) The most current edition of *FDOT Design Manual, Section 212.11 and Exhibits 212.4 through 212.7 regarding clear sight triangles at intersections* must be adhered to.
- (k) Clear Zone Lateral Offset and as specified in the *FDOT Design Manual*, Chapter 215 must be adhered to.
- (l) Landscape improvements shall not obstruct roadside signs or permitted outdoor advertising signs, (see Florida Administrative Code [F.A.C.] Rule Chapter 14-10.)
- (m) If there is a need to restrict the normal flow of traffic, it shall be done on non-holiday, weekday off-peak hours (9 AM to 3 PM), and the party performing such work shall give notice to the local law enforcement agency within whose jurisdiction such road is located prior to commencing work on the landscape improvements. The DEPARTMENT'S Operation Center Public Information Officer (see telephone number in paragraph (g) above) shall also be notified.
- (n) The AGENCY shall be responsible for ensuring no impacts to utilities will occur within the landscape improvement limits before construction commences.

- (o) The AGENCY shall follow the minimum level of maintenance guidelines as set forth in FDOT'S Rule Chapter 14-40 *Highway Beautification and Landscape Management*, in the FDOT *Guide to Roadside Mowing and Maintenance Management System*, and **Exhibit "C"**, the *Maintenance Plan* for maintenance activities for landscape improvements.

3. MAINTENANCE OF FACILITIES

- A. The AGENCY agrees to maintain the landscape improvements, as existing and those to be installed, within the physical limits described in **Exhibit "A"** and as further described in **Exhibit "B"**. The non-standard improvements within and outside the traveled way shall be maintained by the AGENCY regardless if the said improvement was made by the DEPARTMENT, the AGENCY, or others authorized pursuant to Section 7, by periodic mowing, pruning, fertilizing, weeding, curb and sidewalk edging, litter pickup, necessary replanting, irrigation system repair and/ or repair of any median concrete replacement associated with specialty surfacing (if applicable) following the DEPARTMENT'S landscape safety and maintenance guidelines, **Exhibit "C"**, the Maintenance Plan. The AGENCY'S responsibility for maintenance shall include all landscaped, turfed and hardscape areas on the sidewalk or within the medians and areas outside the traveled way to the right of way and/or areas within the traveled way containing specialty surfacing. It shall be the responsibility of the AGENCY to restore an unacceptable ride condition of the roadway caused by the differential characteristics of non-standard traveled way surfacing (if applicable) on DEPARTMENT right of way within the limits of this Agreement.
- B. Such maintenance to be provided by the AGENCY is specifically set out as follows: to maintain, which means to properly water and fertilize all plant materials; to keep them as free as practicable from disease and harmful insects; to properly mulch the planting beds; to keep the premises free of weeds; to mow the turf to the proper height; to properly prune all plants which at a minimum includes: (1) removing dead or diseased parts of plants, (2) pruning such parts thereof to provide clear visibility to signage, permitted outdoor advertising signs per Florida Statute 479.106 and for those using the roadway and/or sidewalk; (3) preventing any other potential roadway hazards. *Plant materials* shall be those items which would be scientifically classified as plants, and include trees, palms, shrubs, groundcover, and turf. To maintain also means to remove or replace dead or diseased plant materials in their entirety, or to remove or replace those that fall below original project standards. Palms shall be kept fruit free year-round. To maintain also means to keep the header curbs that contain the specialty surfacing treatment in optimum condition. To maintain also means to keep the nonstandard hardscape areas clean, free from weeds and to repair said hardscape as is necessary to prevent a safety hazard. To maintain also means to keep litter removed from the median and areas outside the travel way to the right of way line. All plants removed for whatever reason shall be replaced by plants of the same species type, size, and grade as specified in the original plans and specifications. Any changes to the original plans shall be submitted by permit application to the DEPARTMENT for review and approval.
- C. If it becomes necessary to provide utilities (water/electricity) to the medians or areas outside the traveled way to maintain these improvements, all costs associated with the utilities associated for the landscape improvements including any impact and/or

connection fees, and the on-going cost of utility usage for water and electrical, are the maintaining AGENCY'S responsibility.

The AGENCY shall be directly responsible for impact and connection fees.

- D. The maintenance functions to be performed by the AGENCY may be subject to periodic inspections by the DEPARTMENT at the discretion of the DEPARTMENT. Such inspection findings will be shared with the AGENCY and shall be the basis of all decisions regarding repayment, reworking or agreement termination. The AGENCY shall not change or deviate from said plans without written approval of the DEPARTMENT.

4. DEPARTMENT ACCESS TO FACILITIES

The DEPARTMENT will periodically need access to various features within the limits of this agreement. Upon request of the DEPARTMENT, the AGENCY will have 14 calendar days to provide access to the items noted by the DEPARTMENT. This may require temporary or permanent removal of improvements such as hardscape, landscape or other items conflicting with the items to which the Department needs access.

Should the AGENCY fail to remove or relocate items as requested, the Department may:

- (a) Remove conflicting improvements or any portion thereof.
- (b) Restore the area with any material meeting Department standards.
- (c) Restore the improvements at the request and funding of the AGENCY.

5. NOTICE OF MAINTENANCE DEFICIENCIES

If at any time after the AGENCY has undertaken the landscape improvements installation and/or maintenance responsibility for the landscape improvements it shall come to the attention of the DEPARTMENT'S District Secretary that the limits, or a part thereof, are not properly maintained pursuant to the terms of this Agreement, said District Secretary, may at his/her option, issue a written notice that a deficiency or deficiencies exist(s), by sending a certified letter to the AGENCY, to place said AGENCY on notice thereof. Thereafter, the AGENCY shall have a period of thirty (30) calendar days within which to correct the cited deficiencies. If said deficiencies are not corrected within this time period, the DEPARTMENT may, at its option, proceed as follows:

- (a) Maintain the landscape improvements or any part thereof, with the DEPARTMENT or Contractor's personnel and invoice the AGENCY for expenses incurred, and/or
- (b) At the discretion of the DEPARTMENT, terminate the Agreement in accordance with Paragraph 9 of this Agreement and remove, by the DEPARTMENT or Contractor's personnel, all of the landscape improvements installed under this Agreement or any preceding Agreements, except as to trees and palms, and charge the AGENCY the reasonable cost of such removal.

6. FUTURE DEPARTMENT IMPROVEMENTS

It is understood between the parties hereto that the landscape improvements covered by this Agreement may be removed, relocated, or adjusted at any time in the future, as determined to be necessary by the DEPARTMENT in order that the adjacent state road be widened, altered, or otherwise changed to meet future criteria or planning needs of the DEPARTMENT.

The AGENCY shall be given sixty (60) calendar day notice to remove said landscape improvements at the AGENCY'S expense after which time the DEPARTMENT may remove same. All permits (including tree permits), fees, and any mitigation associated with the removal, relocation or adjustments of these improvements are the maintaining AGENCY'S responsibility.

7. FUTURE AGENCY IMPROVEMENTS

The AGENCY may construct additional landscape improvements within the limits of the landscape improvements rights of ways identified as a result of this document, subject to the following conditions:

- (a) Plans for any new landscape improvements shall be subject to approval by the DEPARTMENT. The AGENCY shall not change or deviate from said plans without written approval by the DEPARTMENT.
- (b) All landscape improvements shall be developed and implemented in accordance with appropriate state safety and roadway design standards.
- (c) The AGENCY agrees to comply with the requirements of this Agreement with regard to any additional landscape improvements it chooses to have installed and there will be no cost to the DEPARTMENT.

8. ADJACENT PROPERTY OWNER IMPROVEMENTS

The DEPARTMENT may allow an adjacent property owner to construct additional landscape improvements within the limits of the right of way identified in **Exhibit "A"** of this Agreement that the AGENCY shall be responsible for maintaining under this Agreement, subject to the following conditions:

- (a) Plans for any new landscape improvements shall be subject to approval by the DEPARTMENT and shall require a valid permit attached with a letter of consent to said plans by the AGENCY. The plans shall not be changed or deviated from without written approval by the DEPARTMENT and the AGENCY.
- (b) All landscape improvements shall be developed and implemented in accordance with appropriate state safety and roadway design standards.
- (c) The AGENCY agrees to comply with the requirements of this Agreement with regard to any additional landscape improvements installed by an adjacent owner.

9. AGREEMENT TERMINATION

In addition to those conditions otherwise contained herein, this Agreement may be terminated under any one (1) of the following conditions:

- (a) By the DEPARTMENT, if the AGENCY fails to perform its duties under this Agreement, following ten (10) days written notice.
- (b) By the DEPARTMENT, for refusal by the AGENCY to allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119, Florida Statutes, and made or received by the AGENCY in conjunction with this Agreement.

10. AGREEMENT TERM

- (a) The term of this Agreement commences upon execution by all parties and shall remain in effect for the life of the improvement, or until this Agreement is terminated by either party in accordance with Paragraph 9.
- (b) If the DEPARTMENT chooses to cancel the landscape improvements described in **Exhibit "B"**, this Agreement becomes void and the original Agreement is reinstated, if any.

11. LIABILITY AND INSURANCE REQUIREMENTS

- A. With respect to any of the AGENCY'S agents, consultants, sub-consultants, contractors and/or sub-contractors, such party in any contract for the landscape improvements shall agree to indemnify, defend, save and hold harmless the DEPARTMENT from all claims, demands, liabilities, and suits of any nature arising out of, because of or due to any intentional and/or negligent act or occurrence, omission or commission of such agents, consultants, subconsultants, contractors and/or subcontractors. The AGENCY shall provide the DEPARTMENT with written evidence of the foregoing upon the request of the DEPARTMENT. It is specifically understood and agreed that this indemnification clause does not cover or indemnify the DEPARTMENT for its own negligence.
- B. In the event that AGENCY contracts with a third party to provide the services set forth herein, any contract with such third party shall include the following provisions:
 - (1) AGENCY'S contractor shall at all times during the term of this Agreement keep and maintain in full force and effect, at contractor's sole cost and expense, Comprehensive General Liability with minimum limits of \$1,000,000.00 per occurrence combined single limit for Bodily Injury Liability and Property Damage Liability and Worker's Compensation insurance with minimum limits of \$500,000.00 per Liability. Coverage must be afforded on a form no more restrictive than the latest edition of the Comprehensive General Liability and Worker's Compensation policy without restrictive endorsements, as filed by the Insurance Services Office. The AGENCY and DEPARTMENT shall be named as additional insured on such policies.
 - (2) AGENCY'S contractor shall furnish AGENCY with Certificates of Insurance of

Endorsements evidencing the insurance coverage specified herein prior to the beginning performance of work under this Agreement.

- (3) Coverage is not to cease and is to remain in full force and effect (subject to cancellation notice) until all performance required of AGENCY'S contractor is completed. All policies must be endorsed to provide the DEPARTMENT with at least thirty (30) day notice of cancellation and/or restriction. If any of the insurance coverage will expire prior to the completion of work, copies of renewal policies shall be furnished at least (30) days prior to the date of expiration.

12. E-VERIFY REQUIREMENTS

The AGENCY shall:

- (a) Utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the AGENCY during the term of the contract; and
- (b) Expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

13. SUPERSEDED AGREEMENTS

This writing embodies the entire Agreement and understanding between the parties hereto and there are no other Agreements and understanding, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby.

14. FISCAL TERMS

The DEPARTMENT, during any fiscal year, shall not expend money, incur any liability, or enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money will/may be paid on such contract. The DEPARTMENT shall require a statement from the Comptroller of the DEPARTMENT that funds are available prior to entering into any such contract or other binding commitment of funds. Nothing herein contained shall prevent the making of contracts for periods exceeding one (1) year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years; and this paragraph shall be incorporated verbatim in all contracts of the DEPARTMENT which are for an amount in excess of TWENTY-FIVE THOUSAND DOLLARS (\$25,000.00) and which have a term for a period of more than one year.

15. DISPUTES

The DEPARTMENT'S District Secretary shall decide all questions, difficulties, and disputes of any nature whatsoever that may arise under or by reason of this Agreement, the prosecution or fulfillment of the service hereunder and the character, quality, amount, and value thereof; and his decision upon all claims, questions, and disputes shall be final and conclusive upon the parties hereto.

16. ASSIGNMENT

This Agreement may not be assigned or transferred by the AGENCY, in whole or in part, without the prior written consent of the DEPARTMENT.

17. LAWS GOVERNING

This Agreement shall be governed by and construed in accordance with the laws of the State of Florida. In the event of a conflict between any portion of the contract and Florida law, the laws of Florida shall prevail. The AGENCY agrees to waive forum and jurisdictional venue. The DEPARTMENT shall determine the forum and venue in which any dispute under this Agreement is decided.

18. NOTICES

Any and all notices given or required under this Agreement shall be in writing and either personally delivered with receipt acknowledgement or sent by certified mail, return receipt requested. All notices shall be sent to the following addresses:

If to the DEPARTMENT:

Florida Dept. of Transportation
3400 West Commercial Blvd.
Ft. Lauderdale, FL 33309-3421
Attn: Kaylee Kildare
District IV Landscape Manager

If to the AGENCY:

Town of Lauderdale by the Sea
4501 North Ocean Drive
Lauderdale by the Sea, FL 33308
Attn: Ken Rubach
Title: Deputy Town Manager

19. LIST OF EXHIBITS

Exhibit A: Landscape Improvements Maintenance Boundaries
Exhibit B: Landscape Improvement Plans
Exhibit C: Maintenance Plan for Landscape Improvements
Exhibit D: Resolution

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective the day and year first written above.

TOWN OF LAUDERDALE BY THE SEA

By: _____
Chairperson / Mayor / Manager

Date: _____

Attest: _____
City Clerk

(SEAL)

Legal Approval: _____

**STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION**

By: _____
Transportation Development Director

Date: _____

Attest: _____
Executive Secretary

(SEAL)

Legal Review: _____
Office of the District General Counsel

SECTION: 86050000
PERMIT: 2023-L-491-00006
COUNTY: Broward
STATE RD: A1A

EXHIBIT A

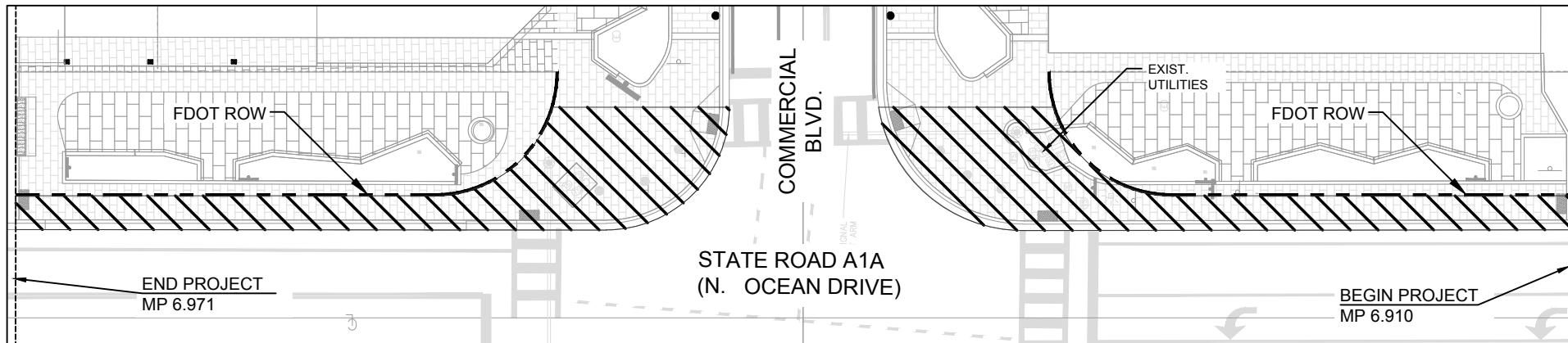
LANDSCAPE IMPROVEMENTS MAINTENANCE BOUNDARIES

I. LIMITS OF MAINTENANCE FOR LANDSCAPE IMPROVEMENTS:

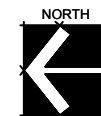
SR A1A (N. Ocean Drive) at Commercial Blvd, East side, from M.P. 6.910 to M.P. 6.971

II. LANDSCAPE IMPROVEMENTS MAINTENANCE BOUNDARIES:

See attached map



LIMITS OF MAINTENANCE PROVIDED BY
TOWN OF LAUDERDALE BY THE SEA



LANDSCAPE IMPROVEMENTS
MAINTENANCE BOUNDARY MAP
TOWN OF LAUDERDALE BY THE SEA
FDOT LANDSCAPE PERMIT NO: 2023-L-491-00006
SR A1A (N. OCEAN DRIVE)
MP6.910 - MP6.971
June 1, 2023

SECTION: 86050000
PERMIT: 2023-L-491-00006
COUNTY: Broward
STATE RD: A1A

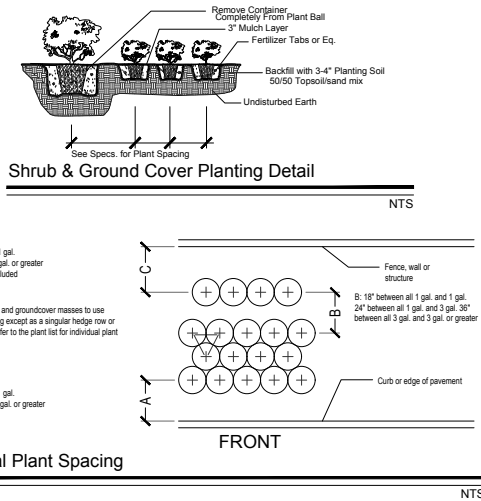
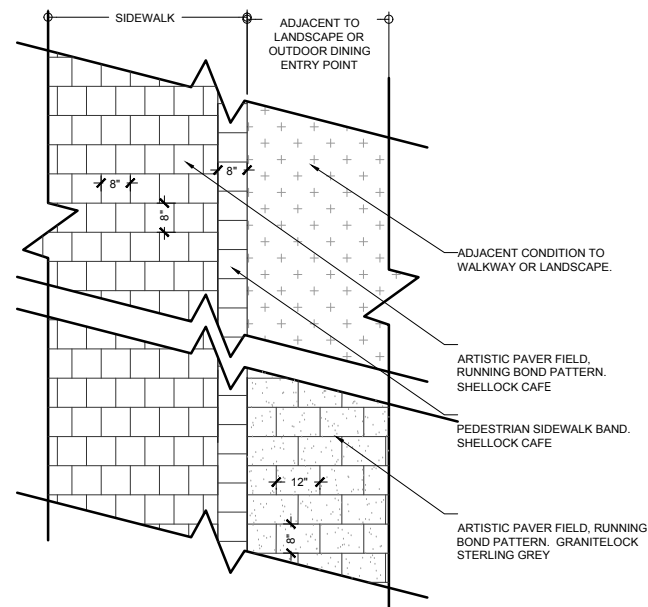
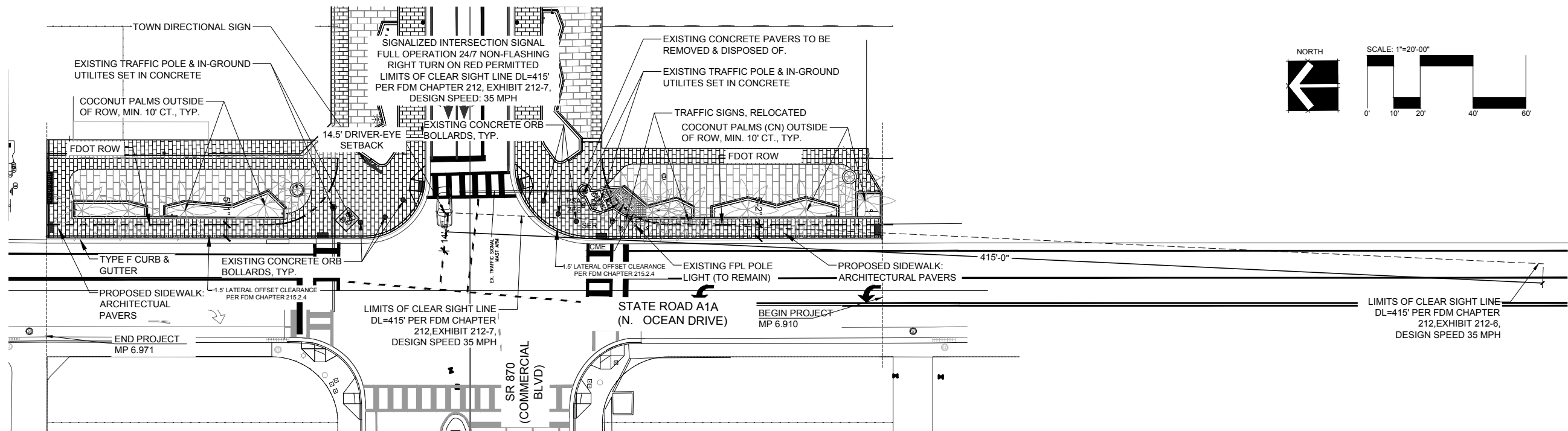
EXHIBIT B

LANDSCAPE IMPROVEMENT PLANS

The AGENCY agrees to install the landscape improvements in accordance with the plans and specifications attached hereto and incorporated herein.

Please see attached plans prepared by: Hugh Johnson, RLA
AAL Architectural Alliance Landscape

Date: May 5, 2023

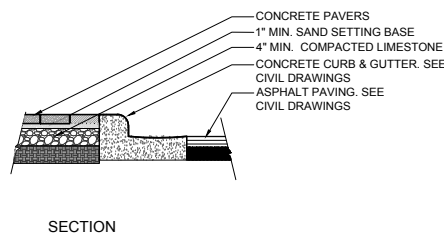


PLANT SCHEDULE			
PALM TREES	BOTANICAL NAME	COMMON NAME	SIZE
CN	COCOS NUCIFERA	COCONUT PALM "GREEN MALAYAN"	VARYING HEIGHTS; 10' CT - 18' CT,
SHRUB AREAS	BOTANICAL NAME	COMMON NAME	SIZE
CME	CARISSA MACROCARPA 'EMERALD BLANKET'	EMERALD BLANKET CARISSA	18" HT X 18" SPR
SER	SERENOA REPENS	SAW PALMETTO	36" HT X 36" SPR, FULL TO BASE
ZFC	ZAMIA FLORIDANA	COONTIE PALM	24" HT. X 24" SPR.
TALL GROUND COVERS	BOTANICAL NAME	COMMON NAME	SIZE
PSA	PENNISETUM SETACEUM 'WHITE'	WHITE FOUNTAIN GRASS	24" HT. X 24" SPR.



01 - PAVERS - PEDESTRIAN SIDEWALK

PLAN SCALE 1/2" = 1'-0"



02 - PAVER AT CURB

SECTION SCALE 1-1/2" = 1'-0"

FDOT GENERAL NOTES:

- GOVERNING STANDARD PLANS: Florida Department of Transportation, FY 2022-23 Standard Plans for Road and Bridge Construction and applicable Interim Revisions. (IR's)
website: <https://www.fdot.gov/design/standardplans>
- GOVERNING STANDARD SPECIFICATIONS: Florida Department of Transportation, July 2022 Standard Specifications for Road and Bridge Construction.
website: <https://www.fdot.gov/programmanagement/implemented/specbooks>
- Contractor shall repair any and all damage done to FDOT property during demolition, relocation &/or installation activities at his sole expense.
- Any plant material substitution within or impacting the FDOT Right of Way whether requested by the Contractor, Owner, Landscape Architect or other will need to get approval from the FDOT District Landscape Architect.
- Ownership of all suitable excavated materials, as determined by the Department, shall remain in the Department until a final acceptance of the permitted project is fulfilled. Excavated materials shall be hauled by the Permittee, at their cost and expense from the site to the Broward Operations Center or stockpiled in those areas as directed by the Department, including asphalt millings.
- Maintenance of Traffic (MOT) for this project will comply with FDOT Standard Plans Index (102 Series) and the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). Special attention will be given to FDOT Design Plans Standard Index 102-005, 102-010, 102-045, and 102-075.
- Permittee will restore the Right-Of-Way as a minimum, to its original condition or better in accordance w/ FDOT's latest Standard Specifications for Road and Bridge Construction or as directed by the Resident Operations Engineer.
- Restricted hours of operations will be from 9:00am to 3:30pm, (Monday-Friday), unless otherwise approved by the operations Engineer, or designee.
- Permittee will ensure that all locates have been performed prior to scheduling of any WORKING activities. This shall include soft digs to verify vertical and horizontal alignment.
- Permittee will coordinate all work with Asset Managment. Contact David Moore of Transfield Services at 954-317-8044, moore@transfieldservices.com. Coordination will include a Pre-Construction meeting.
- Architectural Pavers installation for sidewalks, medians, driveways, or roadways within the FDOT right of way shall comply with current FDOT Standard Specification 526.
Online Reference:
https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/implemented/specbooks/fy-2023-24/fy2023-24ebook.pdf?sfvrsn=6b69416d_6

FDOT LANDSCAPE PERMIT NO: 2023-L-491-00006

SECTION: 86050000
PERMIT: 2023-L-491-00006
COUNTY: Broward
STATE RD: A1A

EXHIBIT C

MAINTENANCE PLAN FOR LANDSCAPE IMPROVEMENTS

This Exhibit forms an integral part of the DISTRICT FOUR (4) LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT between the State of Florida, Department of Transportation and the AGENCY.

Please see attached

MAINTENANCE PLAN

Landscape Improvements

Project Location: SR A1A (N. Ocean Drive) at Commercial Blvd, East side
Mileposts: M.P. 6.910 to M.P. 6.971
Permit Number: 2023-L-491-00006
RLA of Record: Hugh Johnson
Maintaining Agency: Town of Lauderdale by the Sea
Date: June 1, 2023

The purpose of a plan for the landscape improvements maintenance practices is to allow the plant material on your project to thrive in a safe and vigorous manner while fulfilling their intended purpose and conserving our natural resources. Plantings and all other landscape improvements within FDOT right of way shall be maintained to avoid potential roadway hazards and to provide required clear visibility, accessibility, clearance, and setbacks as set forth by Florida Department of Transportation (FDOT) governing standards and specifications: FDOT Standard Plans, FDOT Plans Design Manual and FDOT Standard Specifications for Road and Bridge Construction, as amended by contract documents, and all other requirements set forth by the District 4 Operations Maintenance Engineer.

***Part I** of the Maintenance Plan describes general maintenance requirements and recommendations that are standard for all projects. **Part II** provides recommendations prepared by the Registered Landscape Architect of Record specific to the attached approved plans.*

PART I. GENERAL MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS:

WATERING REQUIREMENTS

Watering is a critical concern for not only the maintenance of healthy plant material but also for observing water conservation practices. The amount of water to apply at any one time varies with the weather, drainage conditions and water holding capacity of the soil. For plant materials that have been established, it is imperative that any mandated water restrictions be fully conformed to on FDOT roadways.

Proper watering techniques should provide even and thorough water dispersal to wet the entire root zone, but not saturate the soil or over-spray onto travel lanes.

IRRIGATION SYSTEM

The Agency shall ensure there are no roadway overspray or irrigation activities during daytime hours (most notably "rush hour" traffic periods). It is imperative the irrigation controller is properly set to run early enough that the watering process will be entirely completed before high traffic periods, while adhering to mandated water restrictions. To ensure water conservation, the Agency shall monitor the system for water leaks and the rain sensors to ensure they are functioning properly so that the system shuts down when there is sufficient rainfall.

MULCHING

Mulch planting beds to prevent weed growth, retain moisture to the plants, protect against soil erosion and nutrient loss, maintain a more uniform soil temperature, and improve the appearance of the planting beds. Do not mound mulch against the trunks of trees, palms, and the base of shrubs to allow air movement which aids in lowering disease susceptibility. Cypress mulch is prohibited on state right of way.

INTEGRATED PLANT MANAGEMENT

An assessment of each planting area's soil is recommended to periodically determine the nutrient levels needed to sustain healthy, vigorous plant growth.

Palms, shrubs, trees, and turf areas shall be fertilized in such a manner and frequency to ensure that the plant material remains healthy and vigorously growing. Please be alert to changes in fertilization types per University of Florida, Institute of Food and Agricultural Services (I.F.A.S.) recommendations. Establishment of an integrated pest management program is encouraged to ensure healthy plants, which are free of disease and pests.

PRUNING

All pruning, and the associated safety criteria, shall be performed according to American National Standard Institute (ANSI) A300 standards and shall be supervised by an International Society of Arboriculture (ISA) Certified Arborist. Pruning shall be carried out with the health and natural growth of plant materials in mind, to achieve the FDOT requirements for maintaining clear visibility for motorists, and provide vertical clearance for pedestrian, bicyclist, and truck traffic where applicable. Visibility windows must be maintained free of view obstructions, and all trees and palms must be maintained to prevent potential roadway and pedestrian hazards. All palms are to be kept fruit free. The understory plant materials selected for use within the restricted planting areas (Limits of Clear Sight) are to be mature height in compliance with the *FDM Window Detail*. Vertical clear zones for vegetation heights over roadways and sidewalks must meet the requirements of the *FDOT Maintenance Rating Program* (MRP) standards. See Reference pages. The R.L.A. of Record will provide the specific pruning heights for mature or maintained height and spread of all plant material to achieve the design intent shall be noted in Part II., Specific Project Site Maintenance Requirements and Recommendations.

STAKING AND GUYING

All staking materials are to be removed after one year or as directed by the RLA of Record.). Any subsequent staking and guying activities by the Agency must adhere to *FDOT Standard Plans* guidelines (See Index 580-001). The Agency shall closely monitor staking and guying attachment materials so that they are securely fastened to avoid potential roadway hazards.

TURF MOWING

All grassed areas are to be mowed and trimmed with sufficient frequency to maintain a deep, healthy root system while providing a neat and clean appearance to the urban landscape. All turf efforts, mowing, curb/sidewalk edging and turf condition, must at a minimum, meet *FDOT Maintenance Rating Program* (MRP).

LITTER CONTROL

The project site shall remain as litter free as practicable. It is recommended to recycle this litter to avoid unnecessary waste by its reuse. Litter removal efforts must meet *FDOT Maintenance Rating Program* (MRP) standards.

WEEDING/HERBICIDE

All planting areas shall be maintained as weed free as practicable by enlisting integrated pest management practices in areas specified on the plans and maintaining proper mulch levels. Extreme care is recommended when using a chemical herbicide to avoid overspray onto plant materials. It is the applicator's responsibility to restore any damage resulting from overspray to the plantings, per the approved plans.

PLANT REPLACEMENT

Plant replacement shall be the same species and specification as the approved plan. Move and replace all plant materials that may conflict with utility relocations and service. Only plants graded Florida #1 or better, per the *Florida Department of Agriculture and Consumer Services, Grades and Standards for Nursery Plants* are permitted on FDOT roadways. Should it become necessary to change the species, a permit is required from FDOT for approval by the FDOT District Landscape Architect.

TREE CELL STRUCTURES

Underground tree cells shall be maintained in such a manner as to prolong the life of the structure and prevent potential safety hazards. If the structures fail or become damaged, they shall be replaced with the same type and specification as the approved plan.

LANDSCAPE ACCENT LIGHTING

Landscape accent lighting shall be maintained in such a manner as to prolong the life of the lighting fixture and prevent potential safety hazards. If the lighting fixtures and their system become damaged, they shall be replaced with the same type and specification as the approved plan. Landscape lighting shall meet requirements for the sea turtle nesting and hatching.

HARDSCAPE (SPECIALTY SURFACING)

All tree grates and specialty surfacing (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the surfacing and tree grates. Final surface tolerance from grade elevations shall, at a minimum, meet the most current FDOT Maintenance Rating Program Handbook for a sidewalk; ADA accessible sidewalk; and FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on The State Highway System. If the specialty surfacing or tree grates become damaged, they shall be replaced with the same type and specification as the approved plan.

HARDSCAPE (CONCRETE PAVERS)

All concrete pavers (if applicable) shall be maintained in such a manner as to prevent any potential tripping hazards and protect damage to the pavers. Final surface tolerance from grade elevations shall, at a minimum, meet the most current *Interlocking Concrete Pavement Institute (ICPI), Guide Specifications for Pavers on an Aggregate Base, Section 23 14 13 Interlocking Concrete Pavers*, Part 3.05. If the concrete pavers become damaged, they shall be replaced with the same type and specification as the approved plan.

It shall be the responsibility of the AGENCY to maintain all signs located within a non-standard surfacing area. Such maintenance to be provided by the AGENCY shall include repair and replacement of the sign panel, post, and base.

HARDSCAPE (NON-STANDARD TRAVELED WAY SURFACING)

It shall be the responsibility of the AGENCY to restore an unacceptable ride condition of the roadway, including asphalt pavement (if applicable), caused, or contributed by the installation or failure of non-standard surfacing, and/or the header curb, on the Department of Transportation right of way within the limits of this Agreement. Pavement restoration areas or "patches" will have a minimum length of 10-ft, measured from the edge of the header curb, and a width to cover full lanes for each lane affected by the restoration.

Pavement restoration will be performed in accordance with the most current edition of the *FDOT Standard Specifications for Road and Bridge Construction*, and the *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System*.

SITE FURNISHINGS

Site furnishing such as Trash Receptacles, Benches, Bollards and Bicycle Racks shall be maintained in such a manner as to prolong the life of the fixture and prevent potential safety hazards. If the fixtures and their overall function and mounting systems become damaged, they shall be replaced with the same type and specification as the approved plan.

MAINTENANCE OF TRAFFIC CONTROL

Reference the FDOT website regarding the selection of the proper traffic control requirements to be provided during routine maintenance and / or new installations of this DOT roadway.

**VEGETATION MANAGEMENT AT OUTDOOR ADVERTISING (ODA)
(IF APPLICABLE)**

To avoid conflicts with permitted outdoor advertising, please reference the State of Florida website regarding the vegetation management of outdoor advertising. This website provides a portal to search the FDOT Outdoor Advertising Inventory Management System Database. The database contains an inventory of outdoor advertising structures, permits and other related information maintained by the Department.

Also, reference the *Florida Highway Beautification Program* website link for *Vegetation Management at ODA signs* Florida Statutes and Florida Administrative Code related to vegetation management at outdoor advertising sign, permit applications for vegetation management and determining mitigation value of roadside vegetation.

PART II.

SPECIFIC PROJECT SITE MAINTENANCE REQUIREMENTS AND RECOMMENDATIONS

1. Planting beds were designed with a minimal variety of species to give a clean, yet natural look. Shrubs and groundcovers should be allowed to grow into maturity with minimal maintenance.
2. To maintain the intended appearance of all palms, apply the latest palm fertilizer recommended by the University of Florida IFAS Extension per the manufacturer's specifications.
3. To maintain the intended appearance of all shrubs, apply the latest fertilizer recommended by the University of Florida IFAS Extension per the manufacturer's specifications.
4. Do not remove fronds from self-cleaning palms, unless damaged. Palms with persistent fronds shall only have dead fronds removed, do not remove any green fronds. If it is deemed necessary to prune a palm's fronds, no fronds shall be trimmed above 3 o'clock and 9 o'clock on the horizontal plain.
5. Groundcover and shrub horizontal growth shall be maintained to prevent foliage from growing beyond the limits of the planting areas shown on the plan. Maintain a 2"-4" setback from the foliage to the edge of curb, pavement, sidewalk and/or other hardscape improvements.
6. Maintain the vertical height of:
 - Emerald Blanket Carissa between 18" and 24", full to ground
 - Coontie at mature height, full to ground
 - Saw Palmetto at mature height, full to ground
 - White Fountain Grass at mature height, trim down to 12" once per year in early fall.
7. Inspect groundcovers and shrubs monthly for maintaining full ground coverage.
8. Evaluate plant material monthly for pests, diseases, drought stress or general decline. If required, follow the integrated pest management program established by the Agency to ensure healthy plants.
9. Concrete pavers shall be inspected on a bi-monthly basis for the aesthetic appearance and safety conditions. Address any issues identified by repairing or replacing those specific locations. To maintain the overall aesthetic appearance and safety of the concrete pavers they shall be cleaned on a quarterly basis to prevent mold, dirt, oil, and gum build up. Joints and cracks in concrete, patterned concrete or asphalt, concrete pavers, concrete curbs, expansion joints, catch basins, gutter areas, etc. shall be inspected on a monthly to keep those areas free of weeds.

REFERENCES (4-27-20)

This reference list is provided as a courtesy. The list may not contain the most current websites. The most current references must be accessed for up-to-date information.

Accessible Sidewalk (ADA) <http://www.access-board.gov/guidelines-and-standards/streets-sidewalks>

Americans with Disabilities Act (ADA) (ADAAG) http://www.ada.gov/2010ADASTandards_index.htm

American National Standard Institute, ANSI A300, (Part 1) for Tree Care Operations – Trees, Shrub, and Other Woody Plant Maintenance – Standard Practices (Pruning), available for purchase
<http://webstore.ansi.org>

Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Florida Grades and Standards for Nursery Plants 2015 <http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Bureau-of-Plant-and-Apiary-Inspection>

Florida Department of Community Affairs (DCA), Florida Board of Building Codes & Standards, 2017 Florida Building Code, Chapter 11 Florida Accessibility Code for Building Construction Part A
http://www.floridabuilding.org/fbc/workgroups/Accessibility_Code_Workgroup/Documentation/CHAPTER_11_w_florida_specifics.htm

Florida Department of Transportation, Program Management, Maintenance Specifications Workbook Supplemental Specifications, Section 580 Landscape Installation
<http://www.fdot.gov/programmanagement/Maintenance/2019Jan/default.shtm>

Florida Department of Transportation, FDOT Standard Plans for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index 580-001 Landscape Installation
<http://www.fdot.gov/design/standardplans/current/IDX/580-001.pdf>

Florida Department of Transportation, FDOT Design Manual for Design, Construction, Maintenance and Utility Operations on the State Highway System, Chapter 212.11 Clear Sight Triangles
<http://www.fdot.gov/roadway/FDM/current/2018FDM212Intersections.pdf>

Florida Department of Transportation, FDOT Design Manual for Design, Construction, Maintenance and Utility Operations on the State Highway System, Chapter 215.2.3 Clear Zone Criteria and 215.2.4 Lateral Offset, Table 215.2.1 Clear Zone Width Requirements, Table 215.2.2 Lateral Offset Criteria (for Trees)
<http://www.fdot.gov/roadway/FDM/current/2018FDM215RoadsideSafety.pdf>

Florida Department of Transportation, FDOT Standard Plans for Design, Construction, Maintenance and Utility Operations on the State Highway System, Index Series 102-600 Traffic Control through Work Zones <http://www.fdot.gov/design/standardplans/current/IDX/102-600.pdf>

Department of Transportation, Landscape Architecture Website www.MyFloridaBeautiful.com

Florida Department of Transportation, Maintenance Rating Program Handbook
<http://www.dot.state.fl.us/statemaintenanceoffice/MaintRatingProgram.shtm>

Florida Department of Transportation Outdoor Advertising Database
<http://www2.dot.state.fl.us/rightofway/>

Florida Exotic Pest Plant Council Invasive Plant Lists <http://www.fleppc.org/list/list.htm>

Florida Irrigation Society <http://www.fisstate.org>

Florida Power and Light (FPL), Plant the Right Tree in the Right Place
http://www.fpl.com/residential/trees/right_tree_right_place.shtml

SECTION: 86050000
PERMIT: 2023-L-491-00006
COUNTY: Broward
STATE RD: A1A

EXHIBIT D

RESOLUTION

This Exhibit forms an integral part of the DISTRICT FOUR (4) HARDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT between the State of Florida, Department of Transportation and the AGENCY.

Please see attached

(To be provided by City)



Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Ken Rubach, Deputy Town Manager/Public Works Director

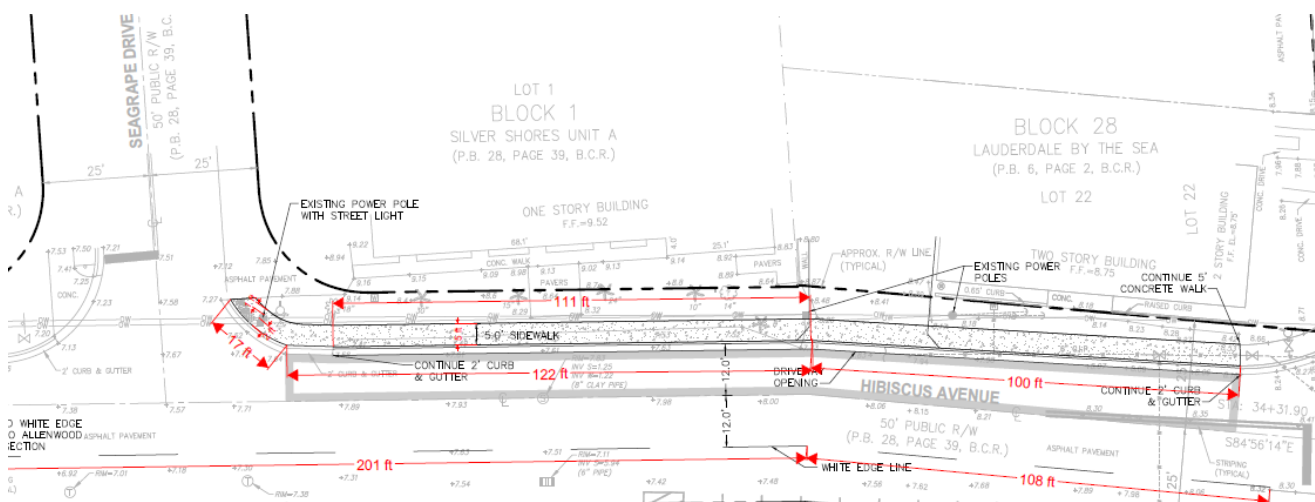
Submitting Department: Administration

Item Type: Resolution

Agenda Section: NEW BUSINESS

Subject Title: Resolution 2023-51: A RESOLUTION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PIGGYBACK AGREEMENT WITH JANICE M. RILEY INC. DBA THE PAVING LADY FOR SIDEWALK INSTALLATION ON HIBISCUS AVE FROM BOUGAINVILLE DR TO SEA GRAPE DRIVE, IN AN AMOUNT NOT TO EXCEED \$49,886.44; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION AND FOR AN EFFECTIVE DATE.

Explanation: In 2021, the Town moved forward with plans to install a sidewalk and new crosswalk at Hibiscus and A1A. This project was completed in late 2022, and provided a safe path for pedestrians to access areas east of A1A. The final phase of this project contemplates providing a connection to existing sidewalks on Bougainville and Seagrape by installing a sidewalk along the north side of Hibiscus. The sidewalk project will include approximately 239 linear feet of 5' wide concrete sidewalk and 211 lineal feet of concrete curb and gutter.



Section IV.E of the Town Purchasing Manual authorizes the Town to select and contract using the competitive bid process of another government entity as an exception to the otherwise required formal bidding process. This is considered “piggybacking.”

On May 5, 2020, the City of Aventura entered into a contract with The Paving Lady, pursuant to Bid # 20-03-19-3, (the "Aventura Contract") for maintenance and repair for city streets and facilities (the "Services"). The Aventura Contract is for a three (3) year term, beginning on August 1, 2021, through July 31, 2024, with the option to renew the contract for two (2) additional one (1) year terms (**Exhibit 2**). The Town would like to piggyback the Aventura Contract with The Paving Lady for installation of the sidewalk along Hibiscus as shown in Exhibit A of the Resolution.

The anticipated cost for this project is \$49,886.44 (**Exhibit 3**). Funding for the construction is available within the CIP under the "Pedestrian Amenities" line item.

Recommendation: Staff recommends that the Town Commission approve Resolution 2023-51 approving the piggyback agreement with The Paving Lady for sidewalk installation on Hibiscus between Bougainvillea and Seagrape, utilizing the City of Aventura Bid #20-03-19-for Maintenance and Repair for City Roads, Streets, and Facilities in an amount not to exceed \$49,886.44.

Exhibits:

1. Resolution 2023-51 Paving Lady Agreement
2. City of Aventura
3. Paving Lady Quote

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A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A PIGGYBACK AGREEMENT WITH JANICE M. RILEY INC. DBA THE PAVING LADY FOR SIDEWALK INSTALLATION ON HIBISCUS AVENUE BETWEEN BOUGANVILLA DRIVE AND SEAGRAPE DRIVE IN AN AMOUNT NOT TO EXCEED \$49,886.44; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION AND FOR AN EFFECTIVE DATE

WHEREAS, on May 5, 2020, the City of Aventura entered into a contract with Janice M. Riley Inc. dba The Paving Lady (the “The Paving Lady”), pursuant to the City of Aventura Bid No. 20-03-19-3 (the “Aventura Contract”) for Maintenance and Repair for City Streets and Facilities (the “Services”); and

WHEREAS, the Town wishes to contract with The Paving Lady for the Services, utilizing the Aventura Contract, for sidewalk installation on Hibiscus Avenue between Bougainvilla Drive and Seagrape Drive (the “Project”); and

WHEREAS, Section IV.E. “Cooperative Purchasing (Piggybacking)” of the Town’s Purchasing Manual provides that purchases made under the provisions of another government’s purchasing contracts shall be exempt from the competitive bidding requirements provided that certain criteria set forth are all satisfied; and

WHEREAS, The Paving Lady has provided the Town with a quote, consistent with the terms of the Aventura Contract, to perform the Services for the Project in an amount not to exceed \$49,886.44 (the “Quote”); and

WHEREAS, pursuant to Section IV.E. of the Town's Purchasing Manual, the Town Commission desires to enter into an agreement with The Paving Lady, attached hereto as Exhibit “A,” to perform the Services for the Project, consistent with the terms of the Avenutra Contract and the Quote (the “Piggyback Agreement”); and

WHEREAS, the Town Commission deems it to be in the best interest of the Town and its residents to approve the Piggyback Agreement.

**NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION OF THE
TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, THAT:**

Section 1. Recitals. The foregoing “Whereas” clauses are hereby ratified and confirmed as being true and correct and incorporated herein by this reference.

Section 2. Piggyback Agreement Approved. The Town Commission hereby approves the Piggyback Agreement with The Paving Lady, attached as Exhibit “A,” to provide the Services for the Project in an amount not to exceed \$49,886.44.

Section 3. Authorization to Execute the Agreement. The Town Manager is hereby authorized to execute the Piggyback Agreement with The Paving Lady, in substantially the same form attached hereto as Exhibit “A,” together with such non-substantial changes as are deemed necessary by the Town Manager and approved as to form and legal sufficiency by the Town Attorney.

Section 4. Authorization to Implement. The appropriate Town officials are authorized to execute all necessary documents and to take any necessary action to effectuate the intent of this Resolution.

Section 5. Effective Date. This Resolution shall become effective immediately upon passage and adoption.

PASSED AND ADOPTED on this 13th day of September, 2023.

MAYOR CHRIS VINCENT

Attest:

Katrina Adler, Town Clerk

APPROVED AS TO FORM:

Susan L. Trevarthen, Town Attorney

**TOWN OF LAUDERDALE-BY-THE-SEA AGREEMENT FOR SEWER
REHABILITATION AND REPAIR SERVICES
(Piggyback Competitive Award)**

This Agreement is made this ____ day of Sept, 2023 (the "Effective Date") between the Town of Lauderdale-By-The-Sea, a municipal corporation organized and existing under the laws of the State of Florida and whose address 4501 North Ocean Drive, Lauderdale-By-The-Sea, FL 33308 (the "Town"), and Janice M. Riley Inc. dba The Paving Lady (the "The Paving Lady"), whose address is 1000 W Industrial Ave, Boynton Beach FL 33426.

WITNESSETH

WHEREAS, the Town wishes to enter into an agreement with Contractor (this "Agreement") for the provision of sewer rehabilitation and repair services (the "Services"); and

WHEREAS, the parties wish to incorporate the terms and conditions of the solicitation and contractual arrangement between the City of Aventura, Florida and the Contractor as set forth in the City of Aventura Bid No. 20-03-19-3 for Maintenance and Repair for City Streets and Facilities and resulting agreement dated May 5, 2020, attached hereto and incorporated herein as Exhibit "A" (the "Aventura Contract"); and

WHEREAS, the Town Procurement Manual authorizes the Town to select and contract through the use of the competitive bid process of another government entity as an exception to the otherwise required formal bidding process.

NOW THEREFORE, in consideration of the mutual covenants set forth in this Agreement, the receipt and sufficiency of which is acknowledged, the parties agree as follows:

Section 1. Term. The term of this Agreement shall expire upon completion of the project.

Section 2. Contract Terms. The Contractor agrees to provide the Town the Service as set forth in the Aventura Contract, which terms are incorporated into this Agreement for all purposes and represent the entire agreement between the parties except for those modifications made herein. In the event of conflict between or among

this Agreement and the terms and conditions of the Aventura Agreement, the order of priority shall be: this Agreement, and the Aventura Agreement.

The following additional provisions are included:

- A. The "Town of Lauderdale-By-The-Sea" and "the Town" shall be deemed substituted for "City of Aventura" and "the City" with regard to any and all provisions of the Aventura Contract, including by example, and not limitation, with regard to bond requirements, insurance, indemnification, licensing, termination, default and ownership of documents, which is incorporated herein by this reference. All recitals, representations, and warranties of Contractor made in the Aventura Contract, including Contractor's proposal, are restated as if set forth fully herein, made for the benefit of the Town, and incorporated herein.
- B. The Town shall compensate the Contractor pursuant to the rates set forth in the Aventura Contract, in an amount not to exceed \$49,886.44.
- C. This Agreement shall be construed in accordance with and governed by the laws of the State of Florida. Venue for any litigation arising out of this Agreement shall be proper exclusively in Broward County, Florida.
- D. **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 townclerk@lauderdalebytheseafl.gov, OR BY MAIL: KATRINA ADLER, Town Clerk, Town of Lauderdale-By-The-Sea, 4501 Ocean Drive, Lauderdale-By-The Sea, Florida 33308.**

Refusal of the Contractor to comply with the provisions of this Section shall be grounds for immediate termination for cause by the Town of this Agreement.

E. ETHICS

1. Contractor warrants and represents that its employees shall abide by the Code of Ethics for Public Officers and Employees, Chapter 112, Florida Statutes.
2. No officer or employee of the Town, during his or her term of employment or for one year thereafter, shall have any interest, direct or indirect, in this Agreement or the proceeds thereof. Any subcontractors hired by the firm must also adhere to this policy and it must be included in their contracts as well.
3. No vendor shall give, solicit for, deliver or provide a campaign contribution directly or indirectly to a candidate, or to the campaign committee of a candidate, for the offices of Mayor or Commissioner.
4. Compliance with Applicable Law: Contractor covenants to promptly comply with all applicable federal, state, county, and municipal laws, ordinances, regulations, and rules relating to the Services to be performed hereunder and in effect at the time of performance. CONTRACTOR covenants that it will conduct no activity or provide any service that is unlawful or offensive.

Section 3. Notice. Notice hereunder shall be provided in writing by certified mail, return receipt requested, or customarily used overnight transmission with proof of delivery, to the following parties, with mandatory copies as provided below:

For Town: Town Manager
 Town of Lauderdale-By-The-Sea
 4501 North Ocean Drive
 Lauderdale-By-The-Sea, FL 33308

Copy to: Town Attorney
 Town of Lauderdale-By-The-Sea
 4501 North Ocean Drive
 Lauderdale-By-The-Sea, FL 33308

For Contractor: Mauro Comuzzi, President
 Janice M. Riley Inc. dba The Paving Lady
 1000 W. Industrial Ave
 Boynton Beach, FL 33426

Section 4. Certificates of Insurance. Prior to Contractor's commencement of services pursuant to this Agreement, Contractor shall deliver to Town, in a form acceptable to the Town in its sole discretion, the following documents within 15 days of execution of this Agreement:

- a) All required certificates of insurance as described in the Aventura Contract, naming the Town as an additional insured.

Section 5. Severability. This Agreement sets forth the entire agreement between Contractor and the Town with respect to the subject matter of this Agreement. This Agreement supersedes all prior and contemporaneous negotiations, understandings and agreements, written or oral, between the parties. This Agreement may not be modified except by the parties' mutual agreement set forth in writing and signed by the parties.

Section 6. Waiver of Jury Trial. The Town and Contractor knowingly, irrevocably, voluntarily and intentionally waive any right either may have to a trial by jury in state and or federal court proceedings in respect to any action, proceeding, lawsuit or counterclaim based upon this Agreement or arising out of, under, or in connection with the services performed hereunder, or any course of conduct, course of dealing, statements or actions or inactions of any party hereto.

IN WITNESS WHEREOF, the parties hereto have accepted, made and executed this Agreement upon the terms and conditions above stated on the day and year first above written.

TOWN:

CONTRACTOR:

TOWN OF LAUDERDALE-BY-THE-SEA

JANICE M. RILEY INC. DBA THE
PAVING LADY

Linda Connors, Town Manager

Mauro Comuzzi, President

Date: _____

Date: _____

Attest: _____
Katrina Adler, Town Clerk

APPROVED AS TO FORM:

Susan L. Trevarthen, Town Attorney

RESOLUTION NO. 2020-28

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF AVENTURA, FLORIDA AWARDING AND LETTING A BID/CONTRACT FOR BID NO. 20-03-19-3, CITY OF AVENTURA MAINTENANCE AND REPAIR FOR CITY STREETS AND FACILITIES, TO STONE CONCEPT MIAMI INC., METRO EXPRESS INC., THE PAVING LADY, WEEKLEY ASPHALT PAVING INC., AND ALL COUNTY PAVING AT THE INDIVIDUAL BID PRICES AS CONTAINED IN EXHIBIT “A” ATTACHED; AUTHORIZING THE CITY MANAGER TO EXECUTE ASSOCIATED CONTRACTS; AUTHORIZING THE CITY MANAGER TO TAKE NECESSARY AND EXPEDIENT ACTION TO CARRY OUT THE AIMS OF THIS RESOLUTION; PROVIDING FOR THE APPROPRIATION AND ALLOCATION OF FUNDS FOR SAID BID AWARD; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City Manager of the City of Aventura, Florida has, pursuant to the various laws of the State of Florida and the Code of the City of Aventura, properly solicited and accordingly accepted bids for **BID NO. 20-03-19-3 CITY OF AVENTURA MAINTENANCE AND REPAIR FOR CITY STREETS AND FACILITIES**; and

WHEREAS, sealed bids have been submitted to and received by the City pursuant to the City’s invitation to bid/notice to bidders, specifications, proposals and requirements for the project/work as cited above; and

WHEREAS, staff has determined that Stone Concept Miami Inc., Metro Express Inc., The Paving Lady, Weekley Asphalt Paving Inc. and All County Paving have submitted the lowest responsible and responsive bids for said project/work; and

WHEREAS, the City Commission, upon the recommendation of the City Manager, is therefore desirous of awarding said bid/contract to said lowest responsible and responsive bidders.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF AVENTURA, FLORIDA:

Section 1. That bid/contract for BID NO. 20-03-19-3, CITY OF AVENTURA MAINTENANCE AND REPAIR FOR CITY STREETS AND FACILITIES is hereby

awarded to Stone Concept Miami Inc., Metro Express Inc., The Paving Lady, Weekley Asphalt Paving Inc., and All County Paving, at the bid prices as contained in the attached bid documents.

Section 2. That the City Manager is hereby authorized to execute, on behalf of the City, a contract by and between the parties embodying the terms, conditions, and specifications as set forth in the subject Invitation to Bid/Notice to Bidders, bid specifications, bid proposal and bid requirements, or if a City prepared contract was part of said bid proposal, said parties shall execute said prepared contract on behalf of the City.

Section 3. That the City Manager is hereby authorized and requested to take all necessary and expedient action to carry out the aims of this Resolution in awarding this bid/contract.

Section 4. That the funds to be allocated and appropriated pursuant hereto and for the purpose of carrying out the tenets of this Resolution shall be from Budget Line Item Numbers 001-5401-541-4691 and 410-5401-538-3460.

Section 5. This Resolution shall become effective immediately upon its adoption.

The foregoing Resolution was offered by Commissioner Shelley, who moved its adoption. The motion was seconded by Vice Mayor Mezrahi, and upon being put to a vote, the vote was as follows:

Commissioner Denise Landman	<u>Yes</u>
Commissioner Dr. Linda Marks	<u>Yes</u>
Commissioner Marc Narotsky	<u>Yes</u>
Commissioner Robert Shelley	<u>Yes</u>
Commissioner Howard Weinberg	<u>Yes</u>
Vice Mayor Gladys Mezrahi	<u>Yes</u>
Mayor Enid Weisman	<u>Yes</u>

PASSED AND ADOPTED this 5th day of May, 2020.



ENID WEISMAN, MAYOR



ATTEST:



ELLISA L. HORVATH, MMC
CITY CLERK

APPROVED AS TO LEGAL SUFFICIENCY:



CITY ATTORNEY

RESOLUTION NO. 2020-28

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Commissioner Denise Landman	<u>Yes</u>
Commissioner Dr. Linda Marks	<u>Yes</u>
Commissioner Marc Narotsky	<u>Yes</u>
Commissioner Robert Shelley	<u>Yes</u>
Commissioner Howard Weinberg	<u>Yes</u>
Vice Mayor Gladys Mezrahi	<u>Yes</u>
Mayor Enid Weisman	<u>Yes</u>

PASSED AND ADOPTED this 5th day of May, 2020.



ENID WEISMAN, MAYOR

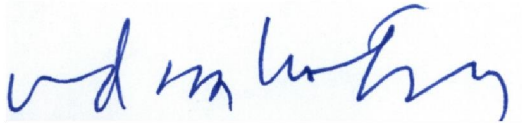


ATTEST:



ELLISA L. HORVATH, MMC
CITY CLERK

APPROVED AS TO LEGAL SUFFICIENCY:



CITY ATTORNEY



1000 W Industrial Ave
Boynton Beach FL 33426
Office: 561-572-2600
Fax: 561-572-2601

Aug 10, 2023

Attention:

Ken Rubach
Municipal Services Director
Lauderdale – By – The - Sea
4501 N. Ocean Drive
Lauderdale – By – The – Sea,
FL 33308

Project:

New sidewalk and curbing on Hibiscus Avenue and Bougainvillea Drive

Pricing is based on City of Aventura Bid No. 22-08-11-3 unit pricing.

PAY ITEM	DESCRIPTION	QNTY	UNITS	RATE	TOTAL
HOURLY RATES	Laborer - Tree Removal	30	HR	\$35.00	\$1,050.00
HOURLY RATES	Superintendent - Tree Removal	30	HR	\$125.00	\$3,750.00
7	Type 1 Barricade - 14 Days	30	EA	\$24.00	\$720.00
26	Remove and Dispose of Unsuitable Material	19.75	CY	\$57.50	\$1,135.63
42	Remove and Dispose of Existing Asphalt	177.78	SY	\$8.00	\$1,422.24
25	Import Suitable Fill Material	20.7	CY	\$35.00	\$724.50
60	4" Concrete Sidewalk	161.1	SY	\$85.00	\$13,693.50
61	6" Concrete Sidewalk	16.67	SY	\$95.00	\$1,583.65
58	Type "F" Curb	211	LF	\$60.00	\$12,660.00
66	Pot Hole Repair - 251 SF +	660	SF	\$10.00	\$6,600.00
74	Furnish and Install Detectable warning mat	1	LS	\$40.00	\$40.00
				SUB TOTAL	\$43,379.52
3	General Conditions			15%	\$ 6,506.93
				TOTAL	\$49,886.44

Notes: _____



Aug 10, 2023

1000 W Industrial Ave
Boynton Beach FL 33426
Office: 561-572-2600
Fax: 561-572-2601

*** Jobsite will be barricaded during work. This contractor will not be responsible for persons breaking through the barricades, tracking sealer, damage or injury to cars or persons trespassing designated areas.
*** Contractor is not responsible for any pre-existing environmental conditions or subsurface conditions.
*** Contractor is not responsible for any traffic censor loops disturbed or damaged during construction. All replacement, repair or any other cost associated with traffic censor loops is to be by owner.
*** This proposal is based on work being completed on Mon - Friday 7 am - 7 pm.
*** Any changes in the scope of work for any items not specified in this proposal will be an extra to this contract.
*** All testing, as-builts, plans, and surveying is by owner.
*** Contractor not responsible for existing asphalt drainage or standing water problems.
*** Any additional work requested by owner and/or the building department during review or inspections will be priced accordingly.
*** Permits will be obtained by contractor. Permit fees and procurement fees are to be paid by owner once permit is issued.

WE PROPOSE to furnish labor and material - complete in accordance with above specifications, and subject to conditions stated herein, for the sum of: **\$49,886.44 (Forty Nine Thousand- Eight Hundred – Eighty Six Dollars and Forty Four Cents.)**

PAYMENTS TO BE MADE AS Follows: - balance upon completion

Accepted: The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature: _____

Date: _____

Print Name: _____

Title: _____

All material is guaranteed to be as specified. There shall be a one year guarantee against peeling or flaking of sealcoat material, except that as applied on cracks and oil stains All work is to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders and will become an extra charge over and above the estimate. All agreements are contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance upon above work. Our workers are covered by Workmen's Compensation Insurance.

X Mauro Comuzzi – President

Date:8/10/23



Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Ken Rubach, Deputy Town Manager/Public Works Director

Submitting Department: Administration

Item Type: Action Item

Agenda Section: NEW BUSINESS

Subject Title: Traffic Calming Study for South Silver Shores

Explanation: Staff met with South Silver Shores residents on June 29, 2023 to listen to general concerns the residents had about the neighborhood. Below is a summary of the items and staff actions to date:

FPL Pole Maintenance:

Residents had raised concerns about the condition of some of the poles and whether placing the lines underground was possible. Staff had reached out to FPL to ensure poles are inspected and replaced as needed on a regular basis. We spoke with the hardening team who stated there were currently no funds available to underground wires. At a meeting with Senator Pizzo in August we raised this concern and his office is working with us to get in contact with a different department within FPL that may have funding available to assess and complete potential projects to underground and harden their infrastructure with the Town. We are in contact with his staff and hope to have a meeting scheduled with this FPL department shortly.

Removal of Parking Spaces:

Residents requested that the parking spaces along Basin Drive be removed. Staff removed the spaces and placed no parking signs in the right of way. Residents had also requested to look into the feasibility of turning the spaces into a landscaped area. This would require removing and reinstalling new curb as well as relocation of storm sewer catch basins in addition to the landscaping and irrigation work. State Contracting is currently working on a proposal to provide a rough estimate to these costs.

Condition of Benihana Site:

Residents raised concerns regarding the traffic as well as the general upkeep of the property. Staff has reached out to Benihana and have been working with them on these issues. They have been extremely cooperative and want to ensure they are good neighbors to the surrounding community.

Traffic Calming:

Residents requested the Town look into traffic calming options and had a proposed a number

of solutions ranging from gates to installation of a landscaped area on basin utilizing the old parking spaces. Staff requested a quote to perform this work and the scope of the project is listed below:

Specific Scope of Work

Task 1: Project Management/Coordination. This task is general project management and administration. It includes a project kick-off meeting, a field meeting with Town staff to review the site (this meeting can be held in conjunction with the kick-off meeting if the Town desires).

Task 2: Data Collection and Analysis

Baxter & Woodman will contract with Traffic Survey Specialists, Inc. to collect data at ten (10) locations throughout the neighborhood. There will be three (3) locations along both East and West Tradewinds Avenues and one (1) location on Basin Drive, Miramar Avenue, Capri Avenue, and South Tradewinds

Avenue between East and West Tradewinds Avenues. We will collect 24-hour two-way traffic volumes with speed data for seven (7) consecutive days covering a one-week period. We will calculate average 24- hour, peak morning hour, and evening peak hour expected traffic volumes for the neighborhood using Institute of Transportation Engineers (ITE) trip generation data for comparison to the actual data collected. Due to its mixed land uses, Basin Drive will be examined separately from the remainder of the neighborhood. This data and analysis will help the Town understand the extent of any cut-through traffic or speeding in the neighborhood.

Task 3: Technical Memorandum

Using the data and analysis performed in Task 2, Baxter & Woodman will consider appropriate traffic calming and traffic control devices that can be used to mitigate issues. In addition to the automated gate system requested by the community, devices to be considered may include traffic control signing, vertical deflections such as speed humps, speed cushions or raised intersections, partial street closures, chicanes, diverters, chokers or other traffic calming devices. Additionally, we will also look at the impact of removing parking from Basin Drive within the public right-of-way. Advantages and disadvantages of devices will be discussed in the technical memorandum and a preliminary cost estimate provided for the recommendations. A Draft Technical Memorandum will be presented to the Town for review and comment. A Final Technical Memorandum will be prepared addressing any comments received.

Task 4: Conceptual Plan

Conceptual plan documents will be prepared with locations and types of devices will be provided. Standard details for devices recommended will be provided. It is not intended that these conceptual plans be used as final plans for construction. A preliminary construction cost estimate will be provided with the preliminary documents. It is anticipated that a preliminary submittal of the conceptual plans will be made and reviewed by Town staff. Baxter & Woodman will respond to comments and provide the final documents.

The cost for the work is estimated at \$30,951.87 (**Exhibit 1**).

Staff recommends at this time delaying the study as potential pending development in the area may greatly impact the results of the study, thereby resulting in a new study having to be performed and an additional expenditure of funds being necessary.

Recommendation: Staff recommends against approval of the study at this time pending potential development within the area, after which time a study would be more prudent.

Exhibits:

1. B&W South Silver Shores Proposal-7-21-2023

July 21, 2023

Mr. Ken Rubach
Deputy Town Manager
Lauderdale-By-The-Sea
4501 N. Ocean Drive
Lauderdale-By-The-Sea, FL 33308

Subject: *South Silver Shores Traffic Calming Study*

Dear Mr. Rubach,

Baxter & Woodman is pleased to present the following Task Order Scope of Work and Fee Proposal to the Town of Lauderdale-By-The-Sea. Jeffrey Weatherford, P.E., PTOE will serve as the project manager/Principal Traffic Engineer for this assignment. The detailed cost proposal is attached as Exhibit A.

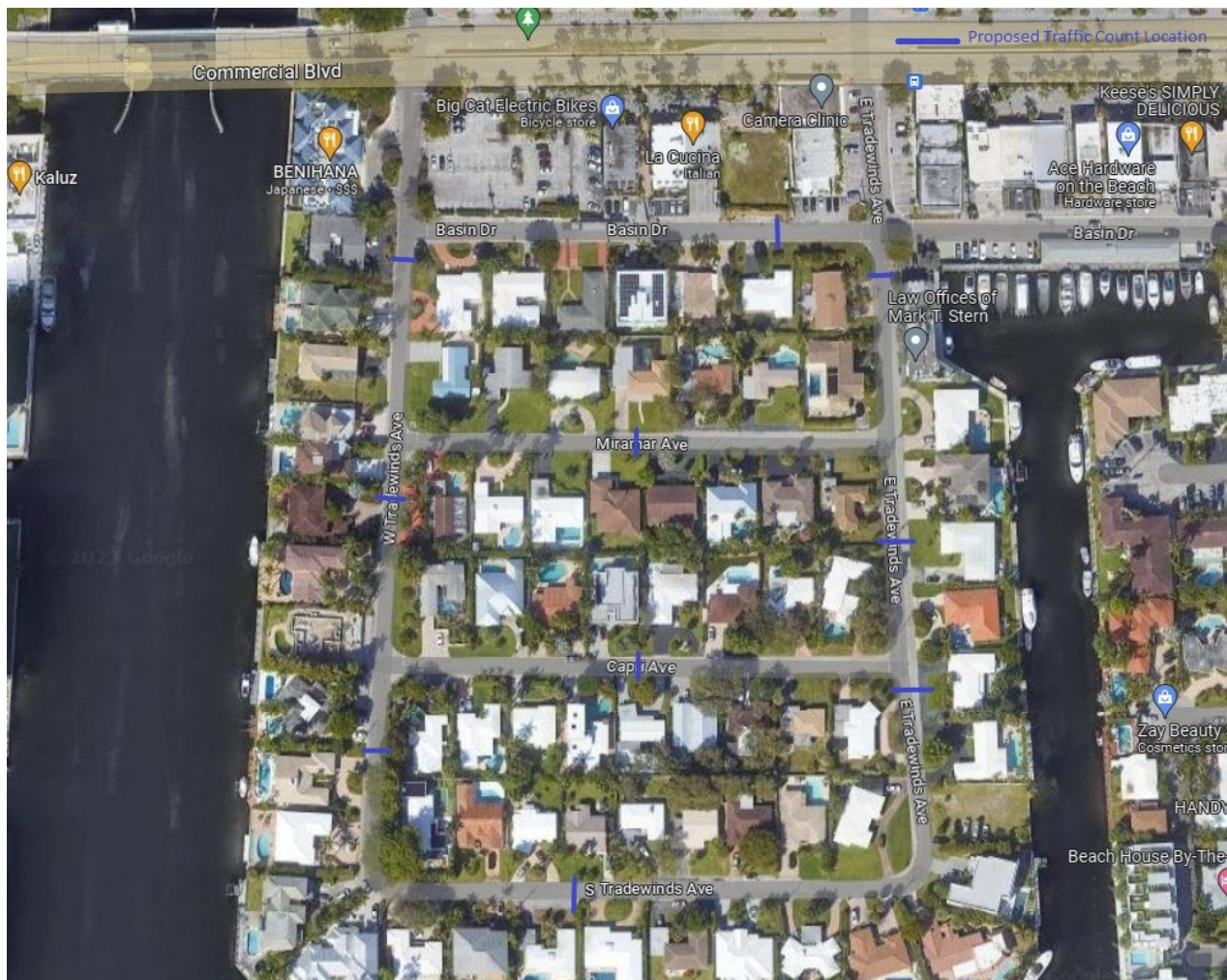
The community of South Silver Shores is concerned with a perceived increase in cut through traffic and speeding in the neighborhood and has asked the Town for assistance in mitigating the issues. Specifically, they have asked for automatic gates with cameras at the entrance of the community and removal of on-street parking along Basin Drive. The community has expressed that they feel the valet operations at the Benihana Restaurant are poorly run and exacerbate the situation. The community has additional concerns related to crime and drainage that are not covered in this proposal.

The neighborhood consists of six streets (W. Tradewinds Avenue south of Basin Drive, E. Tradewinds Avenue South of Basin Drive, Basin Drive, Miramar Avenue, Capri Avenue, and S. Tradewinds Avenue) with a combined length under one mile. Except for Basin Drive between West and East Tradewinds Avenue, the land use is single family residential. Basin Drive is mixed with single family residential on the south side and commercial along the north side of the roadway. All roadways are typically twenty feet in width asphalt streets without curb or shoulders. Portions of the north side of Basin Drive have parking with curb and wide commercial driveways accommodating lateral parking giving the illusion of a wider street.

Baxter & Woodman recommends the collection of traffic and speed count data for a full week along each roadway segment (see figure on the following page). While this may seem excessive, experience shows that neighborhoods continually question the accuracy of data and complain that the data does not consider what is happening on every block or that particular times or days have heavier traffic and were not counted. This data will be analyzed and will be compared to traffic generation rates for similar neighborhoods to determine the extent of any traffic issues.

Baxter & Woodman will provide a technical memorandum providing our traffic analysis findings and the advantages and disadvantages of various treatments. Upon approval of the proposed improvements presented in the technical memorandum, Baxter and Woodman will prepare conceptual plans. The conceptual plan will provide standard details, locations and types of devices recommended. It is not intended that these conceptual plans are full construction documents; however, in many cases, an agency may be able to use the locations and standard details to build devices should they choose to do so. Due

to the uncertainty of the type and scope of the problem and the many possible variations of solutions, it is not recommended that a final project be scoped and cost proposals be prepared at this time. If the Town desires full construction documents, the production of these documents can be negotiated as an additional service or change order.



Proposed Traffic Count Locations

Specific Scope of Work

Task 1: Project Management/Coordination. This task is general project management and administration. It includes a project kick-off meeting, a field meeting with City staff to review the site (this meeting can be held in conjunction with the kick-off meeting if the Town desires).

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Avenues and one (1) location on Basin Drive, Miramar Avenue, Capri Avenue, and South Tradewinds Avenue between East and West Tradewinds Avenues. We will collect 24-hour two-way traffic volumes with speed data for seven (7) consecutive days covering a one-week period. We will calculate average 24-hour, peak morning hour, and evening peak hour expected traffic volumes for the neighborhood using Institute of Transportation Engineers (ITE) trip generation data for comparison to the actual data collected. Due to its mixed land uses, Basin Drive will be examined separately from the remainder of the neighborhood. This data and analysis will help the Town understand the extent of any cut-through traffic or speeding in the neighborhood.

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Exclusions

This scope of work and cost estimate does address the concerns related to crime, drainage or the private valet operational issues described by the community. No permits are anticipated. No work within FDOT right-of-way is anticipated.

Deliverables

Deliverables will include traffic report results, a draft technical memorandum and conceptual plan for review to the Town. After receiving and responding to any comments, a final technical memorandum and conceptual plan will be submitted. Both the technical memorandum and conceptual plan will be provided in an electronic format (pdf).

Project Schedule

Traffic volumes fluctuate based on the time of year. Typically, agencies are advised that traffic data should be collected between Labor Day and Thanksgiving or between late January and Memorial Day to account for what are typically higher volumes during the school year. Due to the proximity of the neighborhood to both the Intracoastal Waterway and the beach, coupled with the limited number of crossings over the

Intracoastal and the potential impact that Commercial Boulevard may be having on cut through traffic, this may not be a concern. However, since the new school year for Broward County schools begins August 21st, we would recommend collecting data in early September. Total project time including data collection will be four (4) weeks from the start date.

Expenses and fees

The fees are separated into tasks related to the preparation of the Technical Memorandum and for the task of preparation of the Conceptual Plans. This allows the Town to review the results of the Technical Memorandum and then determining whether to proceed with preparation of the plan documents.

Lump sum fees for the project are \$20,215.82 for the Technical Memorandum plus \$10,236.05 for preparation of the Conceptual Plans for a total of **\$30,951.87**. A more detailed breakdown of costs can be found in Exhibit A.

Baxter & Woodman is excited to pursue this opportunity with the Town of Lauderdale-By-The-Sea. Please feel free to contact either Jeff Weatherford or myself with any questions or comments.

Sincerely,



Rebecca Travis, P.E.
Executive Vice President

Project: South Silver Shores Traffic Calming
Date: 7/20/2023
Client: Town of Lauderdale-By-The-Sea

Baxter & Woodman Consulting Engineers
Continuing Engineering Services Activity and Fee Schedule

Baxter & Woodman Labor Costs - Task 4	\$10,236.05
Baxter & Woodman Labor Costs - ALL Tasks	\$30,451.87
Direct Reimbursables (Out of Pocket)/ Other	\$500.00
Total Baxter & Woodman Costs	\$30,951.87



Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Katie Anderson, Special Events and Community Marketing Coordinator

Submitting Department: Administration

Item Type: Action Item

Agenda Section: NEW BUSINESS

Subject Title: Special Event Application for Chanukah Festival Sunday, December 10, 2023

Explanation: Rabbi Benzion Singer ("The Applicant"), on behalf of Chabad Lauderdale By The Sea, has submitted a Special Event Application (**Exhibit 1**) to hold their annual Chanukah Festival ("the Event") in Connie Hoffman Plaza on Sunday, December 10, 2023. The Event includes a live band on a stage, a Menorah lighting ceremony, and complimentary food for attendees. One (1) 3 x 10 banner will be hung behind the stage. The Applicant is expecting 100 spectators and 10 volunteers.

Last year, as in previous years, Aruba Beach Café removed their outdoor dining tables, and assisted in the catering for the Event, as well as some of the setup and cleanup. Town staff and Aruba understand that the Applicant is coordinating these same details directly with Aruba again this year.

Chanukah Festival Sunday, December 10, 2023	
Start of Set Up	1:00 PM
Event Starts	5:30 PM
Event Ends	8:30 PM
Clean Up Starts	8:30 PM
Clean Up Completed	10:30 PM

Because the Menorah lighting ceremony predates the Town's Plaza use fees, the Commission has consistently waived the Plaza use fees (\$425) for this Event in the past. Additional fees that the Town has traditionally waived include the application fee and electrical service fee.

The applicant is also requesting a waiver of these fees. The total fee waiver is outlined in the table below. The waiver of these fees is consistent with the Commission's treatment of fees associated with the annual Community Church Easter Sunrise Service that is also traditionally held at the Connie Hoffman Plaza.

FEES	WAIVER REQUEST
Plaza Use Fee	\$425.00
Application Fee	\$100.00
Electrical Service Fee	\$25.00
TOTAL REQUEST:	\$550.00

In addition to the fee waiver, the Applicant is requesting seven (7) undesignated parking permits from 3:00 PM until 10:00 PM (7 spaces x \$3.50 x 7.5 hours = \$183.75 value). This is an increase of 2 spaces from the prior year.

Finally, the Applicant is requesting the Town co-sponsor the Event with a financial sponsorship of \$10,000. Last year, the Town Attorney advised it is possible for the Town to co-sponsor this event (and the Easter Sunrise Service event) if there is no indication that the Town is proselytizing, advancing or disparaging any faith or belief, and if a disclaimer is provided. The Town has not previously sponsored either this Event or the Easter service event, and chose not to change its approach last year. Town staff is recommending to continue our past practice of declining the co-sponsorship request. In addition, it is important to note that funding for co-sponsorship is unbudgeted.

Recommendation: Staff recommends the following:

1. Approve the Chanukah Festival with the conditions outlined in the pending permit **(Exhibit 2)**
2. Approve waiving the \$550 in Town fees
3. Approve the seven (7) parking permits (\$183.75 value)
4. DENY the sponsorship request.

Exhibits:

1. SEA Chanukah Festival 12.10.23
2. LBTS Permit Chanukah Festival 12.10.23



SPECIAL EVENT APPLICATION INFORMATION

For your event to be considered by the Town Commission, a ***fully completed*** application must be submitted ***at least*** 60 days prior to the date of the event.

This application is available in Word format at www.lbts-fl.gov/town/docs.htm. If possible please use the Word document and your computer to complete the application.

An application is not considered complete unless it includes:

1. A full description of the proposed event,
2. A detailed site plan (*very important!*),
3. All required documents, and
4. The application fee.

A meeting with Special Events Permitting is required before submitting a Special Event Application. Questions? Call our Special Projects Coordinator at 954-640-4200 or email debbieh@lbts-fl.gov.

Payment of Special Event Permit fee is required at the time of Application submission via hand delivery or by mail to:

***Town of Lauderdale-By-The-Sea
4501 Ocean Drive
Lauderdale-By-The-Sea, Florida 33308***

A Special Event shall be approved by the Town Commission before an event is advertised to the public. A special event is defined as a concert, festival, race, walk, carnival, show, exhibition, parade, or any other similar outdoor event whether operated totally outdoors, on stage, under tents, or with the use of any temporary building or structure, ***to which members of the public are invited as participants or spectators.***

Please review the Town's special event requirements by clicking on: https://www.Special_Event_Requirements
Or download a copy of the Special Event Requirements from our website and review them before submitting your application.

Important to remember:

1. Your event is approved by the Town Commission with "Conditions" that must be met or your event is cancelled. READ and understand the Conditions. *Talk with us if you have questions.*
2. You are responsible for securing and paying for all fees, licenses, and permits required by any governmental agency having jurisdiction, providing the Town evidence of all required insurances, and providing evidence of organization and/or charity.
3. You have to file all of the required documents shall be provided not later than 30 days prior to the event date or the event authorization terminates (unless prior arrangements have been approved by Town).
 - a. Insurance
 - b. Vendor lists and licenses
 - c. File site plan

4. Parking is limited in Lauderdale-By-The-Sea, and will be a consideration when approving your event.
5. You may have to obtain permits from the Building & Fire Departments to meet Florida Building Code and Fire Code standards.
6. You are responsible for securing and paying for all fees, licenses, and permits required by any governmental agency having jurisdiction.

I (Applicant) have read and fully understand the above:



Signature of Applicant

Print Name: BENZION SINGER

Event Name: CHANUKAH FESTIVAL



SPECIAL EVENT APPLICATION

Submit this completed application at least 60 days prior to the proposed date of your event.

DETAILED SITE PLAN REQUIRED (see details at end of application)

Site Plans often do not include details that are necessary to approve an application or to issue a permit and delays are caused by rejections of initial applications.

Once you have completed the written portion of the application, provide a Site Plan on the last page or attach separately to this application.

Name of Event: CHANUKAH FESTIVAL

Event Purpose, Description and Activities: MENORAH LIGHTING, MUSICAL ENTERTAINMENT.

New Event ☐ or Returning Event ☒ Previous Attendance 100

Day(s) and Date(s) of Event: SUNDAY, DEC 10, 2023

Proposed location of the Event (location, streets, landmarks):

OCEAN PLAZA. E. COMMERCIAL BLVD.

How many people do you anticipate on site at any peak time?

Participants: NA #Spectators 100 #Adult volunteers: 10

Please complete the following table:

Activity	Day	Time
Start of set-up:	<u>12-10-23</u>	<u>1:00 PM</u>
Start time of the Event:	<u>12-10-23</u>	<u>5:30 PM</u>
EVENT		
End time of the Event:	<u>12-10-23</u>	<u>8:30 PM</u>
Start of Clean up:	<u>12-10-23</u>	<u>8:30 PM</u>
Clean-up completed by: (Site restored to original condition)	<u>12-10-23</u>	<u>10:30 PM</u>

Name and address of host or sponsoring organization: CHABAD LAUDERDALE BY THE SEA

Is applicant a Non-Profit Organization?

YES NO

Please attach Organization's proof of 501c3 IRS exemption, background, history, accomplishments, and other events:

Person submitting Application ("Responsible Party"):

Name: BENZION SINGER

Mailing address: 4761 N. OCEAN DR. SEA RANCH LAKES, FL 33308

Phone: 954 607 1104

Mobile phone: 954 263 7692

Email: rabbi@jewishlauderdale.com Fax:

Representative(s) who will be at each day of the event:

Name(s): BENZION SINGER

Mailing address: SAME AS PERSON SUBMITTING APPLICATION.

Phone:

Mobile phone:

Evening phone:

Fax:

Email:

Add information as necessary:

Will you have an event contractor or planner?

YES ☒ NO

If yes, please provide the contact information of your event contractor (event planner)

Name:

Company Name:

Business Address:

Company Email:

Phone Office:

Phone Mobile:

List contractors that will be on site before, during or after the event (use separate page if needed) – final list required 30 days prior to event.

Request for Town Involvement:

Are you requesting the Town be involved with this event in any way? YES ☒ NO

If yes, describe services requested, if any:

STATEMENT OF BENEFIT

If the applicant is seeking sponsorship/co-sponsorship from the Town of Lauderdale-By-The-Sea, a Statement of Benefit is required by Town Code and shall be included here or attached to this application.

If the Town is a sponsor or co-sponsor of the event, the Applicant shall keep financial records of the event sufficient to document all revenues and expenditures. These records shall be available at reasonable time within Broward County for inspection by the Town.

(Insert here or denote if attached)

FEES

Are there fees or donations collected on site from the participants or spectators?

YES



If yes, provide details:

SOUND SYSTEMS

The event sound systems shall be operated so as not to violate the Town's Code, including and especially Section 13-6, Noise Limitation. Violations of the Town's noise ordinance are grounds for the immediate termination of the source of the noise and may be grounds to terminate the event.

Do you plan to use amplified sound? Provide details, time and location, and if you require electrical connections for:

☒ Proposed amplified sound/speaker system:

☒ Proposed live music: List genre, type, ambiance: *APPROPRIATE CHANUKAH MUSIC.*

☐ Planned recorded music

☒ Do you require electrical connections for any of the above? Please give details:

USE OF AVAILABLE OUTLETS AS IN PREVIOUS YEARS.

CLEAN EVENT STANDARDS

Keeping the event area clean during the event and immediately following the event, including trash removal, walkways, and streets, is the responsibility of the applicant. See Clean Up Deposit under Conditions

Please note that, except for very small events, all events shall provide a recycling plan and follow recycling requirements. See Recycling Requirements under Conditions. For more info email recycle@lbts-fl.gov.

Name the contractor or organization (including contact information) who is responsible for your Event's recycling:

Name: *CHABAD LAUDERDALE BY THE SEA*

Email: *rabbie@jewishlauderdale.com*

Address: *4761 N. OCEAN DR. SEA RANCH LAKES, FL 33308*

Daytime phone: *954 607 1104*

Mobile phone: *954 263 7692*

TENTS, CANOPIES, STAGES, BLEACHERS

Tents are generally defined as temporary structures having two or more sidewalls or drops.

A canopy is a tent without sides.

All Tents, canopies larger than 120 sq. ft., multiple canopies without separation, and stages require a building permit. The use of tents or large canopies require approval of the LBTS Fire Marshal and are required to have building permits obtained via LBTS Building Department prior to Event. Manufacture labels are required to be attached to the tents and canopies.

Rental agencies shall provide documentation of the flame spread labeling of 25 or less submitted with application. All canopies larger than 120 sq. ft. shall submit copies the manufacture's labels attached to the tents or canopies with application.

Stages and bleachers shall include product approvals that are supplied by the manufacturer.

Indicate if any of the following will be assembled at the Event and include locations on Site Plan. List sizes and numbers of each:

Tents: 0

Canopies: 0

Stages: 1 - STAGE AS LAST YEAR.

Bleachers: 0 list size and max load:

UTILITIES

All utilities requirements shall be approved by the Director of Development Services and the Fire Marshall prior to Application submission to Town Commission.

Depending on location of event, electrical and/or water may be available from the Town for a fee.

Electrical Requirements: Electrical work requires an Electrical Building Permit.
Generators over 5KW require an Electrical Building Permit.
A Florida Licensed Electrical Contractor is required to obtain permits.

All electrical requests shall meet the requirements of the Florida Building Code with final approval from the Town's Building Official at least 30 days prior to the Event. Contractor is required to schedule and successfully complete inspection of work prior to Event opening. Florida Building Code 101.4.1, 105.4.5.

Will any **electrical equipment be installed** in conjunction with the Special Event? (i.e. lighting in tents, outlets for cooking, stages, etc.) Yes NO AT PLAZA FOR SOV#P/MUSIC

If the Event requires the following on public property, list what equipment is to be installed and locations (include voltage, amperage, and phases of wiring) as well as company name providing the equipment. Describe below, include location and use, and also include locations on Site Plan:

~~_____~~ Electrical power:

~~_____~~ Water:

~~_____~~ Gas, propane, BBQ grills, generators:

~~_____~~ Fuel Storage:

NA

SIGNAGE

All signage shall be included in the application if you wish to exceed the Town Code requirements. Signage shall be reviewed by Development Services (LindaC@lbtz-fl.gov) before Application is submitted to Town Commission). No signage shall be installed without permit.

Information on signage shall include location, colors, size and number of signs. Indicate signage to be placed in any right of way that directs traffic to the Event and their approximate size.

Are you requesting permission to erect signage for this Event? YES NO

For each sign please provide: 1 BANNER SIZE 3X10, BEHIND STAGE.

Description, number of signs, proposed dates, location, size of signs in square feet and letter size:

Include sign locations on detailed Site Plan or attach a separate sheet.

RESTROOMS (show on Site Plan)

The number of portable toilets required depends on the number of attendees, length and type of event, as determined by the Building Official.

Local businesses that have more than the required number of restroom facilities that allow their facilities to be used may count towards the extra restroom facilities required.

If Event is downtown, permit holder is required to obtain written approval from restaurants to allow participants to use their restroom facilities.

Number of restroom facilities required by Town: TBD

Number of additional restroom facilities, and type, that will be on event site: _____

(Show on Site Plan) Will use town's restrooms at EL MAR PLAZA.

STREET CLOSURES

Street closures may be required at the Event's expense

Are you requesting that any public streets be closed for the Event? YES ☒ NO
I don't know, please advise _____

If yes, indicate the streets and blocks and times the closure is requested:

TRAFFIC CONTROL/BARRICADES

A traffic control contractor may be required for events which require barricades or traffic control signage.

Please list your traffic control contractor, if applicable:

VEHICLES

Vehicles are not allowed to drive or park on Town property or park grounds due to damage to underground irrigation systems and to the sod. Applicant shall be responsible for restoration of any damage to Town property.

Are you requesting to drive or park on town property or park grounds: YES ☒ NO

If you are requesting that vehicles be permitted to drive or park on Town property, please indicate the type(s) of vehicles, the locations, and times they would be parked. Must be approved by Town's Parking Department prior to Event.

LOADING/UNLOADING: If you are requesting that vehicles be permitted to load/unload in non-metered areas, please indicate the location and times loading and unloading would occur:

ENTERTAINMENT, CHAIRS, FOOD SUPPLIES DROP OFF/PICK UP AT PAVILION

TRAFFIC CONTROL PLAN

Parking exemptions shall be approved by Assistant Town Manager prior to Application submission to Town Commission). Town may block spaces for safety and other reasons at the expense of the Event.

Include detailed Site Plan indicating how on and off street parking will be accommodated.

Are you requesting the reservation of any Town parking meter spaces for the Event? ☒ YES ☐ NO

If yes, provide the meter numbers on the Site Plan and purpose for which they will be used.
NO SPECIFIC METER NUMBERS REQUIRED, REQUESTING 7 SPACES
All parking meter fees are paid 30 days prior to the event.

OFF DUTY POLICE/CODE COMPLIANCE OFFICERS

Off duty police officers are required, at the applicant's expense, for street closures, events with alcohol, or large crowds, as determined by the Sheriff's Department. Large events may require a code compliance officer to ensure compliance with Town codes.

Do you anticipate needing off duty police officers for your Event?

YES

NO

Do you anticipate needing code compliance officers for your Event?

YES

NO

CONCESSIONS:

A no-compete clause pertaining to local restaurants will be required where applicable.

Are you planning to have any type of concessions?

YES NO

If YES, has the Florida Health Department approved the food vending Site Plans?

YES **NO**

If yes, is the food provided by a Non-Profit ☒ or For Profit _____ organization?

Is the food free of charge ☒ or for sale _____

Do all food vendors have a temporary food service permit?

YES NO

NO VENDORS - CHABAD THE SPONSORING ORGANIZATION SUPPLIES FOOD.

Please list the types of food that will be served:

PASTERIES, POTATO CATHES.

Are you requesting any of the following types of cooking equipment be used on site:

Charcoal Grills ☒

Sterno ☒

Fryers ☒

Open fires ☒

Propane Grills ☒

Refrigerators ☒

Smokers ☒

Hoods ☒

Concession trailers ☒

Warmers ☒

LP Tanks ☒

Other ☒

Provide details of dispensing locations here and on Site Plan

ALCOHOL

State license is required to be submitted to the Town at least 30 days prior to the event

Are you planning on selling alcoholic beverages at the event?

YES **NO**

If YES, has a liquor permit been obtained from the State of Florida?

YES NO

Provide details of dispensing locations here and on Site Plan

Provide contact information for all license holders that will be serving alcohol:

VENDORS

A list of all vendors their company name is required for initial approval and final list is required 30 days prior to event and subject to approval (add here or on separate page, and vendor location on site Plan):

Name

Company

Vendor Type

ANIMALS

Any exhibition or similar undertaking in which animals are required to participate in performances for the amusement or entertainment of an audience is subject to Town Commission approval.

Are animals included in your event?

YES ☒ NO

If yes, please give details:

FIREWORKS

(Fireworks require a separate permit approval process and application)

Are you requesting approval to discharge fireworks at the event?

YES ☒ NO

SALE OF MERCHANDISE

Are you requesting approval to offer other items for sale at the event?

YES ☒ NO

List items for sale:

RIDES

Rides or other amusement may require a State of Florida inspection

Copies of contracts with any provider of rides, mechanical devices and amusements shall be submitted to the Town at least 30-days prior to the event.

Are rides to be included in the Event?

YES ☒ NO

If yes, please provide the number and description of each type:

Mechanical/Electrical:

Inflatable (bounce house etc.):

Manual (slides, trampolines):

Other:

NO BALLOONS RELEASED

When balloons are released over the ocean, they become a major source of pollution and significantly increase the mortality rate among sea turtles, birds and other marine life. Sea turtles and fish often mistake the balloons for jellyfish, eat them and die when their stomachs become blocked. Birds can become entangled in the balloon strings and drown. To help reduce the threats caused by balloons, I agree that there will be no release of balloons at this event and I have been informed that the release of balloons is illegal under Florida Statute 379.233. Balloons may be used for decorations at an event but they must either be deflated or taken home at the end of the event, NEVER released into the air. Failure to abide by this requirement will result in the cancellation of the current Event and denial of future special event permits.

I agree no balloons will be released B.S.

FIRE WATCH or EMS ONSITE

If required by the Fire Marshall, the applicant shall provide for a fire watch and/or an EMS Crew during the event. Large events or those using combustible materials may require qualified stand-by personnel and the appropriate equipment, the cost of which is the responsibility of the applicant.

First Aid facilities may be required by Town at Event's expense. Initial B.S.

INSURANCE

Insurance requirements differ depending on the type of event and if alcohol is served.

For events not serving alcohol and without fireworks, the Applicants shall provide a Certificate of Liability Insurance written in comprehensive form naming the Town as additional insured in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and \$1,000,000 per occurrence and \$2,000,000 general aggregate for property damage with thirty days written notice required for cancellation.

Certificate of Liability Insurance naming the Town as additional insured is required from all Event businesses, promoters, and other related event planners

An approved form of a Certificate of Liability Insurance may be required with your Application for approval by the Town Commission and/or shall be provided the Town at least 30 days prior to the Event date.

Talk to Town Staff representative if your Event proposes serving alcohol or having fireworks about insurance requirements, as both require additional insurance.

Do you and all parties involved have the required insurance coverage needed for this Event?

☒ YES ☐ NO

EVENT CONDITIONS

Approval for this Event shall expire without future action of the Town if all documents such as but not limited to insurance certificates, health and liquor licenses, BSO police detail contract(s), Fire Marshall or Development Services approvals, MOT Plan, Solid Waste Plan, final Site Plan, any monies due to Town, and other material requirements are not submitted at least 30 days prior to the Event.

Copies of State and County licenses for all vendors and contractors shall be filed with the Town 30 days in advance of the Event. (Final list of vendors and their locations shall be submitted to the Town no later than two weeks prior to the event unless otherwise approved in advance by Town)

If the Event is approved by the Commission, they will establish the Event conditions that the application shall abide by during the Event. Standard Conditions shall include, but are not limited to the following:

1. Permission for this Event may be suspended or modified by the Commission, Town Manager or his designated Staff.
2. Turtle Clause: If any of the set-up will take place on the beach sand please avoid any marked sea turtle nests with a minimum buffer of 30 feet.
3. Setup of the Event will start at about _____ and the area will be cleaned and open by _____
4. The Police Chief shall specify the number of BSO detail officers needed for traffic and crowd control. The Applicants shall contract with BSO Detail Office for the detail BSO deputies within ten (10) days of receiving Event approval.

5. The Police Chief shall approve the Applicant's Maintenance of Traffic Plan (MOT), if one is required.
6. The Applicants shall submit a solid waste and recycling plan for approval at least 30 days prior to the Event to the Municipal Services Director. The Applicant shall provide additional waste receptacles and recycling bins. During the event as needed and at the end of the event, the Applicant shall empty all of the waste receptacles and recycling bins and pick up litter within the event site and 100 feet of the site.
7. All signage will be approved and permitted with Development Services at least 30 days prior to the event
8. All related Fire Marshall and Building Official's related requirements have been approved
9. Provide proof of additional restroom facilities ordered at least 30 days prior to event
10. The event and its approved sound systems shall be operated so as not to violate the Town's Code, including and especially Section 13-6, Noise Limitation. All music shall end promptly at _____ pm.
11. The event site shall be organized in a safe manner to protect attendees. All electric cords and similar material shall be covered so as to not pose a hazard to the public or event staff, or will be battery operated.
12. Parking Requirements have been identified, fees paid and listed on site plan
13. The Applicant shall provide a written notice to all properties affected by this event by (date), (30 days in advance) for approval prior to distribution; and confirm in writing which properties have been notified.
14. Clean up Deposit may be imposed, based on the final Site Plan, and due two weeks prior to the event.
15. Clean up fee starting at \$150 will be charged if area is not cleaned to Town standards.
16. Final Site Plan must be presented for approval at least 48 hours in advance of the event.
17. Streets and sidewalks will be free of any debris and cleaned at the end of tear down.
18. A Damage Deposit may be imposed, based on size of event and location.
19. There will be no release of balloons at this Event.
20. Any inspections or work required by Town Staff after normal working hours will incur additional costs set forth by the respective department.
21. Upon showing by the Applicant of a valid reason, or if required by the Town, the Town Manager may approve minor logistical changes that are consistent with the Commission's policy direction on special Events.
22. The Applicant shall meet the following minimum insurance requirements per Ordinance 2015-06, which may be modified by action of the Town Commission for a specific Event:
 - a) Prior to issuance of the requested permit, proof of commercial general liability insurance, whether through a single policy, or a combination of policies, in the amount of \$1,000,000 per occurrence and \$2,000,000 in the aggregate for bodily injury and property damage.
 - b) No required policy shall have a deductible or self-insurance retention greater than \$15,000.
 - c) All policies must be issued by companies authorized to do business in the State of Florida and rated A- or better per Best's Key Rating Guide, latest edition. The certification of insurance shall provide for the Town to receive 30 days' written notice prior to any cancellation, non-renewal or material change in the coverage provided, unless the insurance company refuses to provide such notice, as evidenced by affidavit of the policy holder or written documentation from the insurance company. In any Event, the Applicants shall be held responsible for providing the Town notice of any change in insurance coverage. The Town shall be named as an additional insured on all required insurance policies, and an endorsement reflecting this requirement shall be issued as part of any required policies. The Applicants shall provide an original certificate of insurance as evidence of continued coverage prior to any annual renewal of the permit. Failure

to comply with these requirements shall justify a denial, suspension or revocation of the requested approval by the Town Manager or designee.

- d) In the Event that control of any applicable Event or activity, by contract or other arrangement, becomes the responsibility of a party other than the Applicant (the "sub-applicant"), the sub-applicant shall provide insurance and indemnification meeting the requirements of this Section under which the Applicant is applying, as if they were the Applicant and shall be held responsible for compliance with the Town Code as if the sub-applicant were the Applicant.
 - e) If applicable, at least thirty (30) days prior to the first Event, the Applicants shall provide a Certificate of Liquor Liability Insurance written in comprehensive form naming the Town as additional insured in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and \$1,000,000 per occurrence and \$2,000,000 general aggregate for property damage, which provides coverage for each Event authorized by this permit. The Certificate shall specify that the Town will be given at least thirty (30) days written notice of any cancellation.
23. In the Event that insurance certificates, licenses and other material requirements are not provided by the required dates, the approval for this Event shall expire unless the Town Manager finds there are extenuating circumstances that the Event sponsors have cured or can immediately cure without compromising the health, welfare and safety of the citizens of the Town of Lauderdale-By-The-Sea and those attending the Event, without increasing the administration costs of the Town.
24. Applicant shall owe no monies to the Town at the time of the Event. There shall be no past due fines, moneys, fees, taxes or other charges owed to the Town by the current or past property owners or operators requesting the special Event permit. A special Event permit will not be issued until all past due debts to the Town are paid in full.
25. The Town Manager may suspend permission for this Event due to failure of the Applicants to comply with the terms and conditions of the Town's permit, due to conflicting activities, for health or safety issues, or for the best interests of the Town.
26. The onsite Town representative may terminate an Event due to the Applicant not complying with the terms and conditions of the Town's Event permit, for health or safety issues, and for such as but not limited to, crowds that exceed the capacity of the Event site.

INDEMNIFICATION

Applicant shall indemnify, defend and hold harmless the Town, its officers, agents and employees, from and against any and all claims, suits, actions, damages, liabilities, expenditures or causes of action of any kind arising directly or indirectly from this Special Event and resulting or accruing from any intentional act or any negligent act, omission or error of Applicant which in turn results in or relates to injuries to body, life, limb or property sustained in, about or upon the Special Event Area, and arising from the use of the Town property.

Applicant shall defend, at its sole cost and expense, any legal action, claim or proceeding instituted by any person against the Town as a result of any claim, suit or cause of action accruing or in any way arising out of this Special Event Application for injuries to body, life, limb or property as set forth above.

Applicant shall save the Town harmless from and against all judgments, orders, decrees, attorneys' fees, costs, expenses and liabilities incurred in and about any claim, and the investigation or defense of them, which maybe entered, incurred or assessed as result of the foregoing.

PERMISSION OF THE PROPERTY OWNER

Applicant's and Property Owner's Certification

An event held on property that is not owned by the applicant requires the permission of the property owner, which is granted by having the property owner sign this special event application.

By signing this event application, the petitioner agrees to all terms, conditions, and indemnification in this application, and understands that this application or the approval of this event application by the Town Commission does not grant any permission to violate any laws, ordinances or statutes.

Additions and/or revisions to this application must be submitted in writing.

<i>Applicant</i>	<i>Property Owner</i>
<i>I understand the Town's requirements to hold a special event and the information provided in this application is complete to the best of my knowledge.</i>	<i>I give the applicant permission to use my/our property for the proposed special event and I understand the Town's requirements to hold a special event and the information given by the applicant is complete to the best of my knowledge.</i>
Applicant's Signature (required): _____	Property owner's Signature (required): _____
Date _____	Date: _____
Applicant's (Print information below) Name: Title: Organization: Telephone: Mobile: Email:	Property Owner's (Print information below) Name: Title: Organization: Telephone: Mobile: Email:
STATE OF FLORIDA: COUNTY OF BROWARD:	STATE OF FLORIDA: COUNTY OF BROWARD:
SWORN TO AND SUBSCRIBED BEFORE ME, a Notary Public of the State of Florida, by _____ who is personally known to me/provided _____ as identification and who did/did not take an oath.	SWORN TO AND SUBSCRIBED BEFORE ME, a Notary Public of the State of Florida, by _____ who is personally known to me/provided _____ as identification and who did/did not take an oath.
My Commission Expires: _____	My Commission Expires: _____
_____ Notary Public, State of Florida	_____ Notary Public, State of Florida

SITE PLAN DETAILS

Site Plans often do not include the details that are necessary to approve an application or to issue a permit and delays are caused by rejections of initial applications.

The following details are intended to be a guide to assist you in developing a Site Plan. A current survey of the property is most helpful. If a survey is not available, a drawing depicting the area of the Event should include these details, as necessary. More than a one page Site Plan may be included in your application if details of specific areas are important to your Event.

*A detailed map of the Event site identifying location of each of the following **MUST** be drawn here or attached to this application prior to submission. Dimensions are required to determine if available site will support all of the proposed activities.*

Cooking Areas need to be separated from public areas with fences or barricades

Canopy, tents or other covers: locations should include the size, type, & (shelter, vending, food, EMS)

Location:

- The site of the event, with streets, parks and other landmarks identified
- Routes for races, parades, etc.
- Traffic routing and road closures
- Ticket Kiosks
- Access control points
- Signage (*shall be approved by Development Services prior to Application submission to Town Commission*)
- Signs (location, size, color and wording)*

Public Services:

- Fire lanes (emergency access for fire equipment and EMS)
- Restroom facilities (incl. Portable & Private)
- Locate electrical equipment, permanent and temporary (temporary electrical installation (must be to code and approved by Town)
- Trash and Recycling receptacle locations
- Smoking and No Smoking areas
- Pedestrian walkways
- Garbage Cans
- Recycling Bins

Hazard/ Precautions:

- Hazards at the site (ditches, construction areas, obstructions to pedestrian traffic, bodies of water)
- Fencing, barriers, barricades, walls, gates, etc.
- Gasoline, propane, grills, fire, charcoal, generators, any other flammable fuel
- Fuel Storage and dispensing areas
- Fire Extinguishers Minimum size 4A/10BC one every 75 ft. of travel. If cooking, Class K or 1 40BC rated Fire Extinguisher for every cooking station or canopy (at discretion of Fire Marshall)
- Generators (shall be approved by Fire Marshall in advance)

Event:

- Canopies, tents, stages (types shall be specified) locations for sales, food service, etc. *Large tents will require Fire Marshall approval of illuminated exit signs and fire extinguishers*
- Vendor locations (booths or tables and approximate size, (Vendor's company names phone numbers and email addresses required on separate page at least 48 hours in advance of the Event)
- Restrooms – Portable and Private
- First Aid facilities
- Trailers, storage, sleeping facilities, service boxes, displays, etc.
- Alcohol serving/consuming areas
- Rides and Amusements, Rides, demonstrations, performance areas and stages including Musicians and Artists

Parking:

- Parking areas, location, parking spaces, and parking space numbers that will be blocked; to load/unload before, during or after the event and the amount of time for each occurrence

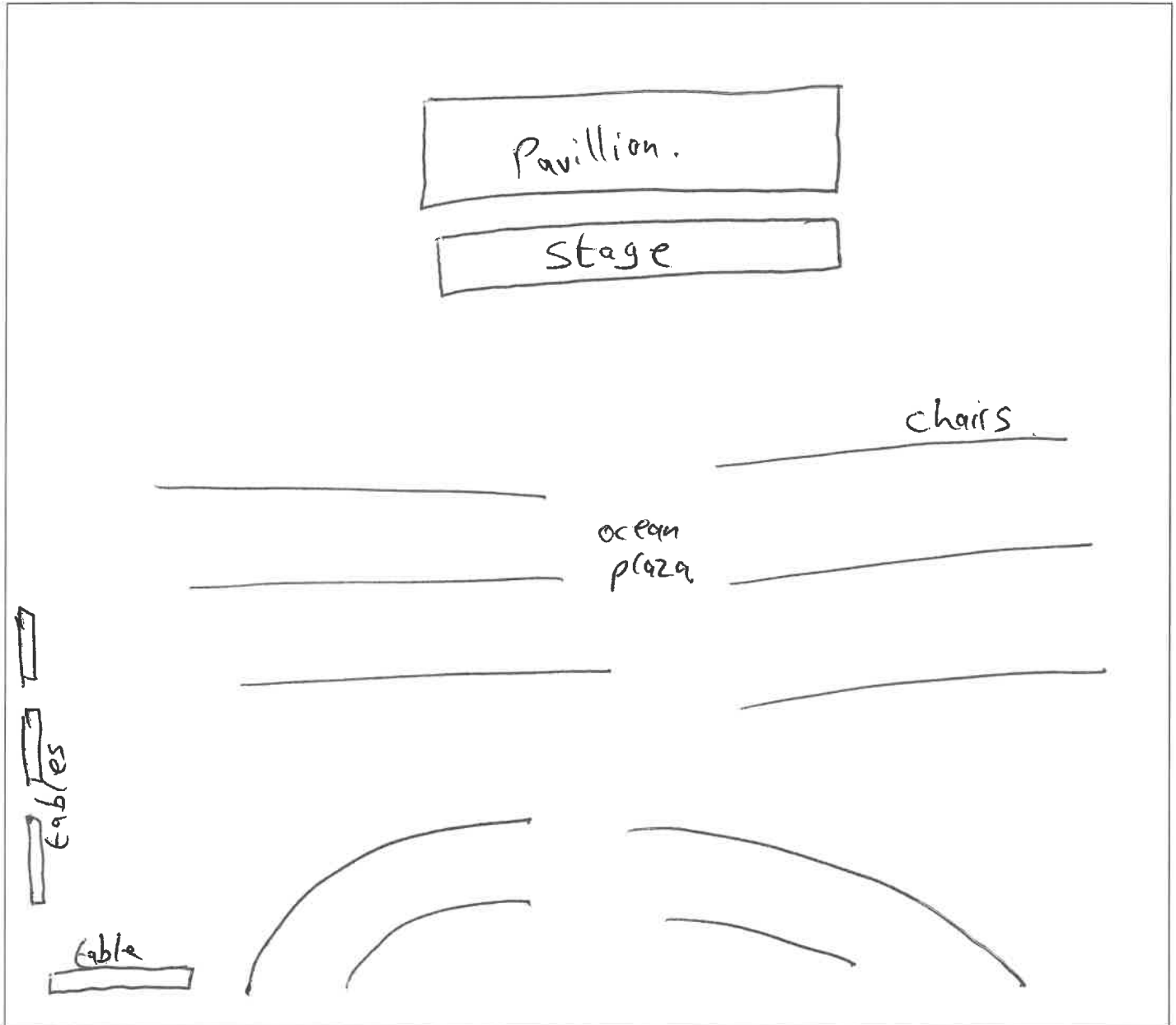
Code or Security Enforcement (paid by Event)

- EMS stand-by or Fire watch areas (include first aid stations)
- Police: Off duty police officers (if known)

DETAILED SITE PLAN

See above for inclusion examples

A detailed map of the event site identifying location of each of the following **MUST** be drawn here or attached to this application prior to submission. Dimensions are required to determine if available site will support all of the proposed activities.



Applicant's Certification

By signing this event application, the petitioner agrees to all terms, conditions, and indemnification in this application, and understands that this application or the approval of this event application by the Town Commission does not grant any permission to violate any laws, ordinances or statutes.

Additions and/or revisions to this application shall be submitted in writing.

I understand the Town's requirements to hold a special event and the information provided in this application is complete to the best of my knowledge.

B. Singer
Applicant's Signature (required)

7/26/23
Date

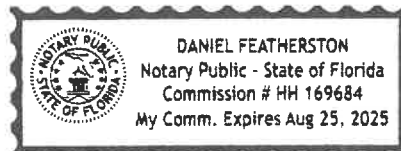
BENZION SINGER - DIRECTOR
Applicant's Printed Name and Title/Organization

954 607 1104
Telephone Number

STATE OF FLORIDA:
COUNTY OF BROWARD:

SWORN TO AND SUBSCRIBED BEFORE ME, a Notary Public of the State of Florida,
by Benzion Singer who is personally known to me/provided
Drivers License as identification and who did/did not take an oath.

[Signature]
Notary Public, State of Florida
My Commission Expires:





Consumer's Certificate of Exemption

Issued Pursuant to Chapter 212, Florida Statutes

DR-14
R. 01/18

85-8015481650C-3	08/19/2021	08/31/2026	501(C)(3) ORGANIZATION
Certificate Number	Effective Date	Expiration Date	Exemption Category

This certifies that

CHABAD LUBAVITCH LAUDERDALE
BY THE SEA INC
4747 N OCEAN DR STE 238
LAUDERDALE BY THE SEA FL 33308-2948

is exempt from the payment of Florida sales and use tax on real property rented, transient rental property rented, tangible personal property purchased or rented, or services purchased.



Important Information for Exempt Organizations

DR-14
R. 01/18

1. You must provide all vendors and suppliers with an exemption certificate before making tax-exempt purchases. See Rule 12A-1.038, Florida Administrative Code (F.A.C.).
2. Your *Consumer's Certificate of Exemption* is to be used solely by your organization for your organization's customary nonprofit activities.
3. Purchases made by an individual on behalf of the organization are taxable, even if the individual will be reimbursed by the organization.
4. This exemption applies only to purchases your organization makes. The sale or lease to others of tangible personal property, sleeping accommodations, or other real property is taxable. Your organization must register, and collect and remit sales and use tax on such taxable transactions. Note: Churches are exempt from this requirement except when they are the lessor of real property (Rule 12A-1.070, F.A.C.).
5. It is a criminal offense to fraudulently present this certificate to evade the payment of sales tax. Under no circumstances should this certificate be used for the personal benefit of any individual. Violators will be liable for payment of the sales tax plus a penalty of 200% of the tax, and may be subject to conviction of a third-degree felony. Any violation will require the revocation of this certificate.
6. If you have questions about your exemption certificate, please call Taxpayer Services at 850-488-6800. The mailing address is PO Box 6480, Tallahassee, FL 32314-6480.

The Chanukah celebration is a well-attended event by many residents in town a number of years.

Given this celebration of universal values, we are requesting the Town to provide the same level of support for the Chanukah Festival as it does for all community Holiday events.

We are requesting the rental and \$100 application fee to be waived, including plaza usage-\$425, \$25 electric fee and fees for requested parking spaces to be waived. We are kindly requesting a financial sponsorship of \$10000 towards this community Holiday Festival.

Sponsorship of this event will demonstrate the Town's commitment to community, cultural diversity, as well as the values of justice and tolerance. As part of the Town's sponsorship, we will include the Town's logo on all flyers, emails, websites, and other venues reaching an estimated 2-3 thousand persons. In addition, the event also benefits local businesses.

In the past, our festival of lights event has been attended by the town's citizens of all backgrounds. While there, they visit local businesses. The event also brings in people from outside of Lauderdale by the Sea who support local businesses in the area during and after the event.

CHABAD LUBAVITCH LBTS INC
1850 CORAL REEF DR
LAUDERDALE BY THE SEA, FL 33062

2788

63-751/631

DATE 7/26/23

PAY TO THE ORDER OF Town of Lauderdale By The Sea

\$ 550

Five hundred and fifty dollars

WELLS FARGO

DOLLARS

Security
Features
Details on
back

FOR

R. S. S. S.

MP

⑈002788⑈ ⑆063107513⑆ 2601733914⑈



Town of Lauderdale-By-The-Sea Special Event Permit

PERMIT HOLDER INFORMATION

NAME/ORGANIZATION	Chabad Lauderdale By The Sea	REPRESENTATIVE	Rabi Benzion Singer
STREET ADDRESS	4747 N. Ocean Dr #238	CITY, STATE ZIP	Sea Ranch Lakes, FL 33308
PHONE NUMBER(S)	954-263-7692 Mobile	FAX # • EMAIL	rabbi@jewishlauderdale.com

DATE AND LOCATION OF EVENT

TYPE OF EVENT	Chanukah Festival	DATE(S) OF EVENT	Sunday, December 10, 2023
HOUR(S) OF OPERATION	5:30 – 8:30 PM	ADDRESS OR LOCATION OF EVENT	Connie Hofmann Ocean Plaza

DESCRIPTION OF EVENT (TEMPORARY STRUCTURES, SIGNAGE, BANNERS, BALLOONS, ETC. - LOCATION, COLORS, SIZE AND NUMBER)

MENORAH LIGHTING, LIVE MUSIC ENTERTAINMENT FROM STAGE:

Set Up	1:00 PM
Event Starts	5:30 PM
Event Ends	8:30 PM
Clean Up Completed By	10:30 PM

SPECIAL CONDITIONS

- The Police Chief will:
 - Specify the number of BSO detail officers needed for traffic and crowd control; and
 - Arrange for the number of detail BSO deputies required to work on public property for crowd and traffic control. **The Permit Holder will reimburse the Town for this expense.**
- Permit holder will direct the attendees to the public bathrooms at the El Mar Plaza.
- Permit holder will arrange for an inspection of the event site from Town staff to ensure that it is organized in a safe manner to protect attendees and that all electrical cords and similar materials are covered to avoid a trip hazard.
- Parking will operate according to normal parking regulations. The Town will provide seven (7) undesignated parking permits to the Permit Holder.
- No road closures are approved. Volunteers may load / unload at the entrance to the plaza.
- Tables, chairs, stage, equipment, etc., will not interfere with pedestrian walkways, ingress, or egress.
- The Permit Holder shall keep the sidewalks next to the event site and within the event site open and clear for pedestrian traffic.
- Setup of the event will start no earlier than 1:00 p.m. and the area will be cleaned and opened by 10:30 p.m.
- Power supply needed shall not exceed Town's power supply of 20 amps.
- Permit Holder shall provide one 4A/10BC fire extinguisher at the stage and one next to the food warming area.
- Stage is required to have two sets of steps for egress.
- Streets and sidewalks will be free of any debris and cleaned at the end of tear down.

13. During the Event as needed and at the end of the Event, the Permit Holder shall empty all the waste receptacles and recycling bins and pick up litter within the event site and 100 feet of the site and appropriately disposal of all refuse.
14. Clean-up fee starting at \$150 will be charged if area is not cleaned to Town standards.
15. All sound systems will be operated so as not to exceed 95 dBA or 95 dBC between the hours of 5:30 PM and 8:30 PM, which is the noise level established for this event.
16. All music and noise from the Event will end promptly at 8:30 p.m.
17. The Permit Holder shall provide written notice to all properties within a one-block of the event by November 10, 2023. The notice and distribution area will be approved by the Town prior to distribution.
18. Final Site Plan must be presented for approval at least 48 hours in advance of the Event.
19. Any inspections or work to support the event required by Town Staff after normal working hours will incur additional costs set forth by the respective department.
20. At least thirty (30) days prior to the Event, the Permit Holder shall provide a Certificate of Liability Insurance that meets all the insurance requirements of Chapter 17, which may be modified by action of the Town Commission for a specific event:
 - a. Prior to issuance of the requested permit, proof of commercial general liability insurance, whether through a single policy, or a combination of policies, in the amount of \$1,000,000 per occurrence and \$2,000,000 in the aggregate for bodily injury and property damage.
 - b. No required policy shall have a deductible or self-insurance retention greater than \$15,000.
 - c. All policies must be issued by companies authorized to do business in the State of Florida and rated A- or better per Best's Key Rating Guide, latest edition. The certification of insurance will provide for the Town to receive 30 days' written notice prior to any cancellation, non-renewal or material change in the coverage provided, unless the insurance company refuses to provide such notice, as evidenced by affidavit of the policy holder or written documentation from the insurance company. In any event, the Applicants will be held responsible for providing the Town notice of any change in insurance coverage. The Town will be named as an additional insured on all required insurance policies, and an endorsement reflecting this requirement will be issued as part of any required policies. The Applicants will provide an original certificate of insurance as evidence of continued coverage prior to any annual renewal of the permit. Failure to comply with these requirements will justify a denial, suspension, or revocation of the requested approval by the Town Manager or designee.
21. In the event that control of any applicable event or activity, by contract or other arrangement, becomes the responsibility of a party other than the Permit Holder (the "Sub-Permit Holder"), the Sub-Permit Holder shall be required to meet the insurance and indemnification requirements of this Section under which the Permit Holder is applying, as if they were the Permit Holder and will be held responsible for compliance with the Town Code as if the Sub-Permit Holder were the Permit Holder.
22. In the event that insurance certificates, licenses, and other material requirements are not provided by the required dates, the approval for this Event will expire unless the Town Manager finds there are extenuating circumstances that the event sponsors have cured or can immediately cure without compromising the health, welfare, and safety of the citizens of the Town of Lauderdale-By-The-Sea and those attending the Event without increasing the administration costs of the Town.
23. Permit Holder shall owe no monies to the Town at the time of the Event. There will be no outstanding fines, moneys, fees, licenses, permits, taxes, or other charges owed to the Town by the current or past property owners or operators requesting the special event permit. A special event permit will not be issued until all outstanding debts to the Town are paid in full.
24. The Permit Holder will advise the Town and BSO of an updated estimated number of spectators within 24 hours of the Event.
25. Permission for this Event may be suspended or modified by the Commission, Town Manager, or designated Staff.

26. The Town Manager may suspend permission for this Event due to construction activities, failure of the Permit Holder to comply with the terms and conditions of the Town's event permit, for health or safety issues, or for the best interests of the Town.
27. Upon showing by the Permit Holder of a valid reason, or if required by the Town, the Town Manager may approve minor logistical changes that are consistent with the Commission's policy direction on special events.
28. The onsite Town representative may terminate the Event due to the Permit Holder not complying with the terms and conditions of the Town's event permit, for health or safety issues, and for such as but not limited to, crowds that exceed the capacity of the event site.

DOCUMENTS AND PERMITS REQUIRED

Certificate of Insurance needed; Town fees of \$550 paid

APPROVAL

This Special Event Permit was approved by the Town Commission on September 13, 2023, based on the above conditions.

Signature:

Courtney Easley, Assistant to the Town Manager

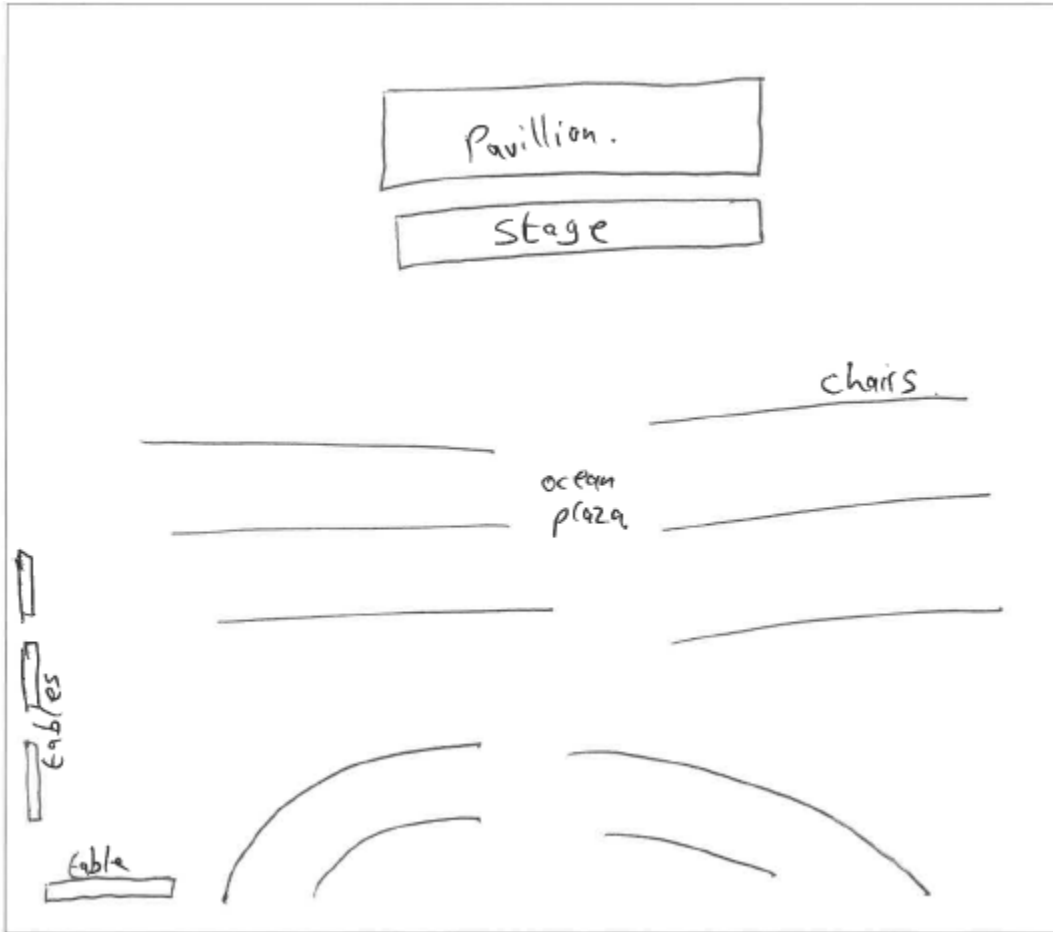
Date:

APPLICANT: I AGREE TO COMPLY WITH ALL OF THE CONDITIONS OF THIS PERMIT.

Signature of Applicant:

Rabbi Benzion Singer

Date:





Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Linda Connors, Town Manager

Submitting Department: Administration

Item Type: Action Item

Agenda Section: NEW BUSINESS

Subject Title: Resolution 2023-47: A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A REVOCABLE LICENSE AGREEMENT WITH ARUBA BAY, INC. FOR USE OF THE OCEAN PLAZA FOR OUTDOOR DINING; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND FOR AN EFFECTIVE DATE.

Explanation: At their November 9, 2022 meeting, the Town Commission approved Resolution 2022-50 which amended the current plaza policy to allow Aruba Beach Café (“Aruba”) to continue utilizing an 800 square foot section of the Connie Hoffmann Ocean Plaza (“Ocean Plaza”) for outdoor dining. One of the stipulations of the policy was to require annual approval for the use of Ocean Plaza prior to October 1 of each year.

On August 18, 2023, Town staff received a request from Aruba Beach Cafe to continue to utilize the 800 square foot section of the Connie Hoffmann Ocean Plaza for the upcoming fiscal year.

Staff has prepared Resolution 2023-47 which incorporates the conditions previously outlined in Exhibit A of Resolution 2022-50 as outlined below.

Based on the successful experience with piloting a program of outdoor dining in Ocean Plaza during the COVID-19 pandemic, and subsequent refinement to limit the impacts on other uses and users of Ocean Plaza, Aruba is eligible to enter into a revocable license agreement for the use of the portion of Ocean Plaza closest to their property for outdoor dining. The outdoor dining use may be applied for annually and requires approval by the Town Commission prior to October 1. It:

1. shall not occupy more than 800 square feet of the north end of the Ocean Plaza within the knee wall; and
2. shall provide for removal of the outdoor dining use when necessary to accommodate a Town event or other event approved in accordance with this policy after giving a minimum of 48 hours’ notice;
3. shall require regular maintenance of the Ocean Plaza including cleaning the pavers

- in the licensed area and keeping Ocean Plaza clean and free from litter and debris;
and
- 4. shall be conducted in accordance with all of the requirements of the revocable license agreement with the Town, including timely payment of fees specified therein.

As required by the conditions listed above, a revocable license agreement has also been prepared and is included as Exhibit A to the resolution. Fees were previously established at \$18 per square foot, which is the same as sidewalk cafe fees for the area east of Seagrape Drive.

Recommendation: Staff recommends discussion of Resolution 2023-47 and, if approved, establishing a fee for the area.

Exhibits:

1. Resolution 2023-47 Approving Aruba Revocable License Agreement - Outdoor Dining Ocean Plaza

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A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, APPROVING A REVOCABLE LICENSE AGREEMENT WITH ARUBA BAY, INC. FOR USE OF THE OCEAN PLAZA FOR OUTDOOR DINING; AUTHORIZING THE TOWN MANAGER TO EXECUTE THE AGREEMENT; PROVIDING FOR IMPLEMENTATION, CONFLICTS, AND FOR AN EFFECTIVE DATE.

WHEREAS, the Town Commission of the Town of Lauderdale-By-The-Sea (“Town”) adopted policies governing the use of the Ocean and Dune Plazas in the two easternmost blocks of Commercial Boulevard by others, and for the Beach Pavilion at the eastern end of Commercial Boulevard by Resolution 2014-18 (“Plaza Policies”); and

WHEREAS, on November 9, 2022, the Town Commission adopted Resolution No. 2022-50, amending the Plaza Policies to authorize and regulate Aruba Bay, Inc.’s (“Aruba”) continued outdoor dining use of the Ocean Plaza; and

WHEREAS, pursuant to the amended Plaza Policies, Aruba is eligible to enter into a revocable license agreement for the use of Ocean Plaza for outdoor dining, provided that Aruba applies for the outdoor dining use annually and subject to approval by the Town Commission prior to October 1; and

WHEREAS, the Town received a request from Aruba for the continued outdoor dining use on Ocean Plaza; and

WHEREAS, Town staff recommends the Town enter into a revocable license agreement with Aruba, attached hereto as Exhibit “A,” to allow Aruba to use Ocean Plaza for outdoor dining (the “Revocable License Agreement”); and

WHEREAS, the Town Commission deems it to be in the best interest of the Town and its residents to approve the Revocable License Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, THAT:

Section 1. Recitals. Each “WHEREAS” clause set forth above is true and correct and incorporated herein by this reference.

Section 2. Revocable License Agreement Approved. The Revocable License Agreement with Aruba, attached hereto as Exhibit “A,” is hereby approved.

Section 3. Authorization to Execute the Agreement. The Town authorizes the Town Manager to execute the Revocable License Agreement, in substantially the same form attached hereto as Exhibit “A,” together with such non-substantial changes as are deemed necessary by the Town Manager and approved as to form and legal sufficiency by the Town Attorney.

Section 4. Implementation. The appropriate Town officials are authorized to execute all necessary documents and to take any necessary action to effectuate the intent of this Resolution.

Section 5. Effective Date. This Resolution shall become effective upon passage and adoption.

PASSED AND ADOPTED this 13th day of September, 2023.

Mayor Chris Vincent

Attest:

Katrina Adler, Town Clerk
(CORPORATE SEAL)

APPROVED AS TO FORM:

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66 Susan L. Trevarthen, Town Attorney

REVOCABLE LICENSE AGREEMENT

THIS REVOCABLE LICENSE AGREEMENT (the “Agreement”) is accepted, made and entered into as of the ____ day of _____, 2023 (“Effective Date”), by and between **TOWN OF LAUDERDALE-BY-THE-SEA**, a Florida municipal corporation, (the “Town”), and the Property Owner, **DEMKO FAMILY HOLDINGS, LTD**, a Florida limited partnership (“Owner”), and the Tenant, **ARUBA BAY, INC.**, a Florida profit corporation (the “Licensee”).

RECITALS

WHEREAS, the Licensee is the operator of the **ARUBA BEACH CAFÉ** restaurant on that certain real property located at 1 E Commercial Blvd in the Town of Lauderdale-By-The-Sea, Florida (the “Property”); and

WHEREAS, on November 15, 2022, the Town Commission adopted Resolution No. 2022-50, which amended the Town’s policies for the use of the Ocean Plaza by the Licensee, **ARUBA BEACH CAFÉ**, attached hereto as Exhibit “A” (the “Policy”); and

WHEREAS, consistent with the Policy, the Town desires to grant Licensee a revocable license to use a portion of the Town’s property located on Ocean Plaza as described in Exhibit “B,” attached hereto and incorporated herein (the “Licensed Area”) for Licensee to use as an outdoor dining area (the “Outdoor Dining”); and

WHEREAS, the Town finds that the limited use of the Licensed Area, in accordance with the terms of this Agreement, is a benefit to the community and consistent with the Policy; and

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Licensee and the Village agree as follows:

1. **Recitals.** The Recitals set forth above are accurate and are hereby incorporated by reference and made a part of this Agreement.
2. **Grant of License.**
 - 2.1. **License.** The Town grants to Licensee a revocable license (this “License”) to use the Licensed Area described in Exhibit “B” for Outdoor Dining as contemplated herein and outlined in the Scope of Licensed Activities attached hereto as Exhibit “C”. This License is personal to Licensee and may not be assigned or transferred to any party. Licensee shall not permit the Licensed Area to be occupied or utilized by other organizations, entities, or persons. This authorization is not a lease or an easement and is not intended and shall not be construed to transfer any real property interest in the Licensed Area or other Town property.
 - 2.2. **Non-Exclusivity.**

- 2.2.1. Licensee acknowledges and understands that this license granted to the Licensee by the Town is a non-exclusive license permitting Licensee to provide Outdoor Dining in the Licensed Area for the term of this Agreement. The Town specifically reserves the right to use the Licensed Area for a Town event or other event approved in accordance with the Policy.
- 2.2.2. Licensee, its agents, employees, contractors, invitees and guests shall have the non-exclusive right to ingress and egress to the Licensed Area for the Outdoor Dining Use.
- 2.3. **“As is” condition.** The Town makes the Licensed Area available to Licensee in an "as is" condition. The Town makes no representations or warranties concerning the condition of the Licensed Area or its suitability for use by Licensee, its customers, or the public, and assumes no duty to warn either Licensee, its customers, or the public concerning conditions that exist now or may arise in the future.
- 2.4. **Waiver.** In making the Licensed Area available for use by Licensee, the Town assumes no liability for loss or damage to equipment, supplies, or other property owned by or in the custody of Licensee. Licensee agrees that the Town is not responsible for providing security at the Licensed Area, and Licensee hereby waives any claim against the Town in the event equipment, supplies, or other property owned by or in Licensee’s custody is lost, damaged, or stolen.
- 2.5. **No vested or property right.** The Licensee has no vested right or property interest in the Licensed Area or the continuation of the Agreement or the activity it allows within the Town’s Licensed Area. The Town does not by virtue of this Agreement warrant or represent to the Licensee that the Encroachment complies with applicable Town, State and/or federal laws, statutes, ordinances, rules or regulations.
3. **License Fee; Costs.**
- 3.1. **License Fee.** An annual License fee of **\$14,400 (\$18 x 800 sq. feet)** shall be due and paid annually on October 1st. Notwithstanding the foregoing, the total License fee may be divided into quarterly payments upon receipt of written request from the Licensee. All Town fees are non-refundable upon payment and are subject to change in future years.
- 3.2. **Costs.** Licensee shall pay utility costs associated with Licensee’s use of the Licensed Area, including, but not limited to, electricity, water and sewer, and ordinary trash collection. Licensee shall be solely responsible for costs associated with obtaining any permits or other governmental approvals necessary to use the Licensed Area.
4. **Licensee’s Responsibilities; Representations and Warranties.**
- 4.1. **Terms and Conditions.** Licensee agrees to comply with the following terms and conditions:
- 4.1.1. This Agreement is based on the Licensee’s request dated August 18, 2023.
- 4.1.2. The Licensed Area shall be limited to no more than 800 square feet of the north end of the Ocean Plaza within the knee wall.

- 4.1.3. Sidewalk Café Area must, at all times, remain in compliance with the policies for use of the Ocean and Dune Plazas & the Pavilion by entities other than the Town established pursuant to Resolution No. 2022-50, attached hereto as Exhibit “A,” and any applicable provisions of the Town Code.
- 4.1.4. This License may be temporarily suspended, and the furniture and fixtures required to be removed by the Town Manager, designee or authorized law enforcement official when necessary, for the following reasons: (a) to clear sidewalk areas for a “community or special event” authorized by a permit issued by the Town; (b) when street, sidewalk, or utility repairs necessitate such action; or (c) in emergency situations (police, fire, and life safety). In such an event, the Town and its officers and employees shall not be responsible for Outdoor Dining furniture and fixtures relocated during emergencies.
- 4.1.5. The Town may remove, without notice, any furniture or fixtures which are placed or located outside the perimeter of the Licensed Area.
- 4.1.6. Upon the issuance of a "Hurricane Warning" or "Hurricane Watch" by the Broward County Office of Emergency Management, the Licensee shall be required to remove all furniture and fixtures from the Licensed Area. Failure to remove any furniture and/or fixtures from the Licensed Area within twenty-four (24) hours from the issuance of a “Hurricane Warning” or “Hurricane Watch,” may result in the Town Manager or designee directing Town staff to remove furniture and/or fixtures. The Licensee shall be responsible for any and all expenses incurred by the Town for the removal, storage, and return of furniture or fixtures. The Town shall not be responsible for any damages to Outdoor Dining furniture or fixtures resulting from the removal, storage and return.
- 4.2. **Maintenance.** The Licensee agrees to comply with the following maintenance plan requirements for the maintenance of the Licensed Area:
- 4.2.1. The Licensee agrees to empty Town trash cans on the sidewalk adjacent to the Licensed Area, as needed during hours of operation to ensure that they do not overflow and are available for the public’s use.
- 4.2.2. The Licensee shall, during the entire period that the Outdoor Dining exists, maintain the premises in a neat, clean, and sanitary appearance and condition.
- 4.2.3. Furniture and fixtures may be stored on the sidewalk, after closing, in a neat and orderly manner, provided that such furniture is staked no earlier than 10:30 PM and the furniture layout for the Licensed Area is restored no later than 10:30 AM the following day.
- 4.2.4. The Licensee shall remove all un-affixed furniture and fixtures from the Licensed Area at the close of business the day before the Town’s scheduled cleaning date. Failure to remove all un-affixed furniture and fixtures from the Licensed Area may result in removal by the Town at the Licensee’s expense.
- 4.2.5. The Licensee shall be responsible for removal of stains in the designated Licensed Area, including but not limited to those caused by dirt, grease and food or beverages.

- 4.2.6. The Licensed Area shall be cleared of all debris as may be necessary throughout the course of the day, and then again at the close of each business day.
- 4.2.7. The Licensee is responsible for maintaining the furniture, fixtures and any other improvements related to the Licensed Area in the same or comparable condition to that originally approved by the Town.
- 4.2.8. The Licensee shall take preventive measures such as ensuring the bottom of tables and chairs have protective feet and are appropriately treated to avoid damage to pavers.
- 4.2.9. Licensee shall be responsible for the Town's cost of materials and labor that may be necessary to replace any and all landscaping, paving, and other public improvements which are damaged or stained resulting from the operation of the Outdoor Dining. The cost of labor and materials calculated shall be premised upon the same quality of materials and workmanship previously approved and utilized by the Town for landscaping, paving and other public improvements.
- 4.2.10. During the period of this Agreement, the Licensee shall be solely responsible for maintenance and repair of the designated and approved Licensed Area.

5. **Term of Agreement/Removal of Outdoor Dining.**

- 5.1. **Term.** The term of this Agreement shall commence on the date when the last one of the parties have signed this Agreement and shall continue until September 30th. Subject to verification of compliance with the Policy and the annual Ocean Plaza Application and License fees being current at the time of renewal as approved by the Town Commission, this Agreement shall automatically renew annually for a period of one (1) year from October 1st to the following September 30th, unless terminated by either party as provided herein. This Agreement may be terminated by either party upon thirty (30) days' advance written notice to the other party.

5.2. **Termination by Town.**

- 5.2.1. In the event the Outdoor Dining poses a threat or danger to the safety and welfare of the general public, or the Town Manager or designee deems it to be in the best interests of the general public, the Town shall have the right to terminate this Agreement immediately and remove, or cause the Outdoor Dining to be removed.
- 5.2.2. The Licensee shall properly remove the Outdoor Dining from the Licensed Area within twenty-four (24) hours of receipt of the Town Manager's or designee's final notice of violation, revocation or suspension. The Town Manager or designee may direct Town staff to remove the Outdoor Dining from the Licensed Area. The Licensee shall be responsible for all expenses incurred by the Town for the removal of the Outdoor Dining and shall be required to restore and return the Licensed Area to its original condition. Outdoor Dining furniture and fixtures shall only be released upon a proper showing of ownership and payment of reasonable and actual removal, administrative and storage charges.

6. **Licensee's Maintenance and Repair Obligations.**

- 6.1. **Licensee Maintenance.** Licensee shall be solely responsible for maintenance of the Licensed Area and the maintenance and repair of any improvements made to the Outdoor Dining and Licensed Area related to this Agreement, which may include without limitation, mowing, sodding, planting, general maintenance, repair, and clearing the Licensed Area of all debris, and ensuring that all structures or improvements constituting the Encroachment remain in good and safe condition.
- 6.2. **Town Maintenance.** In exchange for the right to use the Licensed Area, the Licensee acknowledges that the Town will perform certain maintenance functions, including pressure cleaning, within the Licensed Area, and hereby authorizes access to the Licensed Area as needed to perform such maintenance.

7. **Insurance.**

- 7.1. Pursuant to Section 17-9 and Section 17-90 of the Town Code, the Licensee shall secure and maintain at Licensee's own expense and throughout the duration of this Agreement general liability insurance covering the restaurant and the Outdoor Dining activities and Licensed Area, with combined single limits of no less than \$1,000,000.00 per occurrence and \$2,000,000 in the aggregate, for bodily injury and property damage coverage, naming the Town as an additional insured, in a form of endorsement acceptable to the Town Manager or designee. The Licensee shall maintain Worker's compensation and employers' liability insurance as required by the State of Florida.
- 7.2. If alcohol is to be served or sold in the Licensed Area, the Licensee shall secure a Certificate of Liquor Liability Insurance written in comprehensive form in the amount of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and property damage.
- 7.3. Simultaneously with the execution of this Agreement, and by October 1st of each year during the Term of this Agreement, the Licensee shall furnish the Town with a policy or certificate of insurance coverage in the minimum amount stated above, together with the endorsement. All policies must be issued by companies authorized to do business in the State of Florida and rated A- or better per Best's Key Rating Guide, latest edition.
- 7.4. The Town must receive thirty (30) days' written notice prior to any cancellation, nonrenewal or material change in the coverage provided.
- 7.5. The Licensee shall not maintain the Outdoor Dining in the Licensed Area unless and until after Licensee has obtained all insurance required herein and the certificate(s) of insurance have been received and approved by the Town.
- 7.6. Failure to comply with these requirements shall result in suspension or revocation of this License and Agreement by the Town Manager or designee.

8. **Indemnification.** Licensee agrees to indemnify, defend, save and hold harmless the Town, its officials, employees, and agents, from and against any loss, damage or expense (including all costs and reasonable attorneys' fees at both the trial and appellate levels) suffered by the Town, its officials, employees and agents as a result of any claims, suits, actions, damages or causes of action (collectively, the "Claims") arising out of any personal injury, loss of life or property damage occurring on the Licensed Area, any increase in costs to the Town stemming from the construction and/or repair of utilities located within the Licensed Area or in connection with, related to the Outdoor Dining, the use and activity thereon, or arising out of this Agreement or Licensee's performance or failure to perform under this Agreement, including, but not limited to any damage to the Licensed Area caused by the Licensee, its employees, contractors, agents and invitees. Furthermore, the parties understand and agree that the covenants and representations relating to this indemnification provision shall survive the term of this Agreement and continue in full force and effect as to the Licensee's responsibility to indemnify.
9. **Release.** Town shall have no liability to the Licensee, successors or assignees or their employees, contractors, agents, and invitees in connection with the Outdoor Dining or Licensed Area, this Agreement and the subject matter hereof, including, without limitation, any Claims in connection with, related to, or arising from the Town's maintenance or repair of the Licensed Area including, but not limited to, any Claims for damage to the Licensed Area, Outdoor Dining, improvements on the Outdoor Dining or Licensed Area, or the Property. The Licensee hereby releases the Town, its officials, employees and agents with respect to the foregoing.
10. **Enforcement/Authorization to Withhold Permits and Inspections.**
- 12.1 The Town, or its agents or representatives, may enter upon the Property and Licensed Area at all reasonable times and hours to examine same and determine if the Licensee is properly maintaining the Licensed Area in accordance with this Agreement.
- 12.2 In the event that the Licensee fails to maintain the Licensed Area in a manner acceptable to the Town, or the Licensed Area is damaged or impaired in any way because of the Outdoor Dining, Licensee shall, at its expense, repair the Licensed Area to its original condition before such damage, or to the standards specified by the Town Manager or designee. If the Licensee fails to timely make such restoration or repair, the Town may perform the restoration or repair work and charge the cost thereof to the Licensee.
- 12.3 If the terms of this Agreement are not being complied with, in addition to any other remedies available at law or in equity, the Town is hereby authorized to withhold any approvals regarding the Outdoor Dining or the Property or any portion thereof, and to refuse to make any inspections or grant any approvals for the Outdoor Dining or the Property or any portion thereof, until such time as the Licensee is in compliance with the terms and conditions of this Agreement.
11. **Attorney's Fees.** The prevailing party in any action or suit pertaining to or arising out of this Agreement shall be entitled to recover, in addition to costs and disbursements allowed by law, reasonable attorneys' fees and costs as well as attorneys' fees and costs incurred in enforcing

this prevailing parties attorneys' fees provision.

12. **Recordation/Modification.** This Agreement may be recorded by the Town Clerk in the Public Records of Broward County with the Licensee paying the costs for such recordation. This Agreement shall remain in full force and effect and be binding upon the undersigned and the heirs, successors and assigns of the undersigned, until such time as the same is modified or terminated in writing by the Town Manager or designee or the Licensee as may be applicable.
13. **Notice of Sale.** Upon the sale, conveyance or transfer of the Property or the restaurant business associated with this Agreement, the Licensee, new owner and/or tenant, or assignee shall notify the Town in writing of the sale or transfer and shall be required to file a new application for Outdoor Dining, Revocable Non-Exclusive License Agreement, along with providing the Town with the minimum insurance required pursuant to Section 7 of this Agreement. Failure to provide such notice or to provide the required insurance documentation by the date the new owner and/or tenant takes possession or within fifteen (15) days of the transfer of the Property, shall terminate this Agreement.
14. **Successors in Interest.** The obligations and benefits of this Agreement shall inure to all successors in interests to the parties to this Agreement.
15. **Assignment and Amendment** – This Agreement may not be assigned, without prior written approval of the Town. This Agreement may only be amended, by the parties, with the same formalities as this Agreement.
16. **Town Attorney Approval.** The Town Attorney has approved the standard, pre-printed terms and conditions set forth in this Agreement as to form and legality. Accordingly, no modification of these terms and conditions shall be binding upon the Town unless they are specifically endorsed and approved by the Town Attorney.
17. **Notices.** All notices required by law and by this Agreement to be given by one party to the other shall be in writing, and the same shall be served by certified mail, return receipt requested, to the following addresses:

Grantor: Town of Lauderdale-By-The-Sea
 c/o Town Manager
 Town Hall
 4501 Ocean Avenue
 Lauderdale-By-The-Sea, Florida 33308

With a copy to: Town Attorney
 Town Hall
 4501 Ocean Avenue
 Lauderdale-By-The-Sea, Florida 33308

Licensee: _____

 Lauderdale-By-The-Sea, FL 33308

18. **Entire Agreement/Modification/Amendment.**

- 18.1. This Agreement, including the exhibits attached hereto, contains the entire agreement of the parties and supersedes any prior oral or written representations. No representations were made or relied upon by either party, other than those that are expressly set forth herein.
- 18.2. No agent, employee, or other representative of either party is empowered to modify or amend the terms of this Agreement, unless executed with the same formality as this document.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

OWNER:

Lauderdale-By-The-Sea, FL 33308

By: _____

Print Name: _____

STATE OF FLORIDA)
COUNTY OF BROWARD)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023,
by _____ (Licensee), who is (check one) [☐] personally known to me or [☐] has produced
_____ as identification by means of physical presence or [☐] online
notarization.

Notary Public, State of Florida

My commission expires:

Print or Type Name of Notary Public

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

LICENSEE:

Lauderdale-By-The-Sea, FL 33308

By: _____

Print Name: _____

STATE OF FLORIDA)
COUNTY OF BROWARD)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023,
by _____ (Licensee), who is (check one) ☐ personally known to me or ☐ has produced
_____ as identification by means of physical presence or ☐ online
notarization.

Notary Public, State of Florida

My commission expires:

Print or Type Name of Notary Public

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

TOWN:

**TOWN OF LAUDERDALE-BY-
THE-SEA a Florida municipal
corporation**

By: _____
Linda Connors, Town Manager

STATE OF FLORIDA)
COUNTY OF BROWARD)

The foregoing instrument was acknowledged before me this _____ day of _____, 2023,
by Linda Connors, as Town Manager of Lauderdale-By-The-Sea Florida municipal corporation,
on behalf of the corporation, who is (check one) [☐] personally known to me or [☐] has produced
_____ as identification by means of physical presence or [☐] online
notarization.

Notary Public, State of Florida

My commission expires:

Print or Type Name of Notary Public

ATTEST:

TOWN CLERK Katrina Adler

APPROVED AS TO FORM:

TOWN ATTORNEY Susan L. Trevarthen



Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Katrina Adler, Town Clerk

Submitting Department: Administration

Item Type: Ordinance

Agenda Section: ORDINANCES 1st Reading

Subject Title: Ordinance 2023-06 AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, SETTING MARCH 19, 2024 FOR THE TOWN'S 2024 GENERAL MUNICIPAL ELECTION DATE TO COINCIDE WITH THE PRESIDENTIAL PREFERENCE PRIMARY ELECTION DATE AS ALLOWED BY SECTION 101.75, FLORIDA STATUTES; ESTABLISHING THE QUALIFYING PERIOD FOR THE 2024 GENERAL MUNICIPAL ELECTION TO OCCUR FROM NOON ON TUESDAY, JANUARY 2, 2024 THROUGH NOON ON TUESDAY, JANUARY 9, 2024, AS REQUIRED BY THE SUPERVISOR OF ELECTIONS; PROVIDING FOR THE DATE ON WHICH ELECTED OFFICIALS TAKE OFFICE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; AND PROVIDING FOR AN EFFECTIVE DATE.

Explanation: Section 6.1(4) of the Town Charter for Lauderdale-By-The-Sea sets the date of municipal election as the second Tuesday in March "or as provided for by law", which would set the 2024 election date as Tuesday, March 12, 2024. (Exhibit 1) For the 2024 election cycle, the Presidential Preference Primary is scheduled to be held on Tuesday, March 19, 2024 and if both election dates were held, Lauderdale-By-The-Sea would have two separate elections one week apart.

The Supervisor of Elections administers all election procedures and the Town pays the Supervisor for their assistance. The Town Clerk contacted the Elections office regarding our upcoming election schedule and they advised us that they would not accommodate our scheduled date because of the proximity of the county wide Presidential Preference Primary on March 19th.

Section 101.75 of the Florida Statutes (Exhibit 2) authorizes municipalities to move their elections to the same date as the Presidential Preference Primary Election (or other statewide or countywide election) by adopting an ordinance. (Exhibit 3) Ordinance 2023-06 accomplishes this task.

Recommendation: Staff recommends adopting Ordinance 2023-06 which moves the 2024 General Municipal Election to Tuesday March 19, 2024.

Exhibits:

1. Lauderdale-By-The-Sea, FL Code of Ordinances
2. FS 101.75 Municipal Election Change
3. Ordinance 2023-06 to Move Election Date

Sec. 6.1. - Mayor-Commissioner and Commissioners; term of office; election; transition.

- (1) Beginning with the regular election to be held on the second Tuesday in the month of March, 2008, and every two (2) years thereafter, a Mayor-Commissioner shall be elected for a term of two (2) years until his successor is elected and qualifies.
- (2) Commencing with the regular election of the Town held in March, 2006, and continuing with successive elections at intervals of four years, candidates may qualify for the offices of Town Commissioner Seat 1 and Town Commissioner Seat 2, each elected at large. Town Commission Seat 1 and Town Commission Seat 2 shall replace the two Commission seats vacated by the expiration of the term of the two Commissioners in March, 2006. The candidate for Seat 1 shall reside in the north district of the Town. The candidate for Seat 2 shall reside in the south district of the Town. The candidates receiving the most votes for each seat shall be elected, and shall serve a term of four (4) years.
- (3) Commencing with the regular election of the Town held in March, 2008, and continuing with successive elections at intervals of four years, candidates may qualify for the offices of Town Commission Seat 3 and Town Commissioner Seat 4. Town Commission Seat 3 and Town Commission Seat 4 shall replace the two Commission seats vacated by the expiration of the term of two Commissioners in March of 2008. The candidate for Seat 3 shall reside in the north district of the Town. The candidate for Seat 4 shall reside in the south district of the Town. The candidates receiving the most votes for each seat shall be elected, and shall serve a term of four years.
- (4) All elections for the position of Town Commissioner or Mayor-Commissioner shall be held on the second Tuesday of March of each even-numbered year, or as provided for by law.
- (5) The geographic boundary for the northern and southern districts shall be designated, prepared and identified no later than the first of September, 2004, and again in 2012 through a contract entered into by the Town with an accredited four (4) year college or university located within the state of Florida for the purpose of identifying and designating the northern and southern election districts within the Town. The Town Commission district boundaries shall be of equal population, compact, proportional, and logically related to the natural internal boundaries of the neighborhoods within the Town. The principal of nondiscrimination and one person/one vote shall be adhered to strictly.
- (6) In the event no candidate qualifies for election for any designated Town Commission seat within the first ten (10) calendar days of the qualifying period, then any qualified person who resides anywhere in the Town may qualify for such seat. Thereafter, if no person qualifies for such seat, a vacancy shall be declared and filled in accordance with this Charter.
- (7)

The Town Commission shall adopt by Ordinance the creation and establishment of the boundaries of the initial northern and southern Town Commission seat districts no later than January 1, 2005. The Ordinance shall provide for the implementation of said election districts to be effective for the elections to be held in the Town commencing in March, 2006.

Exhibit 2

Select Year: 2022 ▼ Go

The 2022 Florida Statutes (including 2022 Special Session A and 2023 Special Session B)

[Title IX](#)

ELECTORS AND ELECTIONS

[Chapter 101](#)

VOTING METHODS AND PROCEDURE

[View Entire Chapter](#)**101.75 Municipal elections; change of dates for cause. —**

(1) In any municipality, when the date of the municipal election falls on the same date as any statewide or county election and the voting devices of the voting system used in the county are not available for both elections, the municipality may provide that the municipal election may be held within 30 days prior to or subsequent to the statewide or county election.

(2) The date of the municipal election shall be set by the municipality by ordinance.

(3) Notwithstanding any provision of local law or municipal charter, the governing body of a municipality may, by ordinance, move the date of any municipal election to a date concurrent with any statewide or countywide election. The dates for qualifying for the election moved by the passage of such ordinance shall be specifically provided for in the ordinance. The term of office for any elected municipal official shall commence as provided by the relevant municipal charter or ordinance.

History.—ss. 1, 2, ch. 59-493; s. 1, ch. 76-68; s. 24, ch. 77-175; s. 5, ch. 92-16; s. 26, ch. 2001-40; s. 4, ch. 2007-30; s. 23, ch. 2008-95; s. 42, ch. 2011-40.

Note.—Former s. 104.451.

ORDINANCE 2023-06

AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, SETTING MARCH 19, 2024 FOR THE TOWN'S 2024 GENERAL MUNICIPAL ELECTION DATE TO COINCIDE WITH THE PRESIDENTIAL PREFERENCE PRIMARY ELECTION DATE AS ALLOWED BY SECTION 101.75, FLORIDA STATUTES; ESTABLISHING THE QUALIFYING PERIOD FOR THE 2024 GENERAL MUNICIPAL ELECTION TO OCCUR FROM NOON ON TUESDAY, JANUARY 2, 2024 THROUGH NOON ON TUESDAY, JANUARY 9, 2024, AS REQUIRED BY THE SUPERVISOR OF ELECTIONS; PROVIDING FOR THE DATE ON WHICH ELECTED OFFICIALS TAKE OFFICE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS; AND PROVIDING FOR AN EFFECTIVE DATE.

1 **WHEREAS**, for the 2024 election cycle, the 2024 Presidential Preference Primary
2 Election is scheduled to be held on March 19, 2024; and

3 **WHEREAS**, Section 6.1(4) of the Town of Lauderdale-By-The-Sea ("Town") Charter sets
4 the date of the municipal election as the second Tuesday in March, "or as provided for by law";
5 and

6 **WHEREAS**, Section 101.75, Florida Statutes, authorizes municipalities to move their
7 elections to the same date as the Presidential Primary Election (or other statewide or countywide
8 election) by adopting an ordinance; and

9 **WHEREAS**, the Broward County Supervisor of Elections ("Supervisor") has established
10 dates and deadlines for the March 19, 2024 election, and has provided that all qualifying periods
11 be completed no later than noon Tuesday, January 9, 2024, in order to meet the Supervisor's
12 timeline for preparation for the March 19, 2024 ballot; and

13 **WHEREAS**, Supervisor has advised municipalities within Broward County that they will
14 not accommodate alternative election dates in March 2024; and

15 **WHEREAS**, Section 101.75, Florida Statutes, provides that the ordinance moving the date
16 of the Town’s General Municipal Election must establish a qualifying period for the election; and

17 **WHEREAS**, the Town Commission deems it to be in the best interest of the citizens and
18 residents of the Town to modify its General Municipal Election in 2024, to coincide with the
19 Presidential Preference Primary Election on March 19, 2024; and

20 **WHEREAS**, the Town Commission desires to schedule the swearing in of duly elected
21 Town Officials.

22 **NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COMMISSION OF THE TOWN**
23 **OF LAUDERDALE-BY-THE-SEA, FLORIDA, THAT:**

24 **SECTION 1. Recitals.** The preceding “Whereas” clauses are ratified and incorporated as
25 the legislative intent of this Ordinance.

26 **SECTION 2. Election Date Modified.** The Town Commission of the Town of
27 Lauderdale-By-The-Sea, pursuant to the authority of Section 101.75, Florida Statutes, modifies
28 the date of its 2024 General Municipal Election to occur on March 19, 2024, to coincide with the
29 Presidential Preference Primary Election.

30 **SECTION 3. Qualifying Period Set.** The Town Commission hereby provides that the
31 qualifying period for the 2024 General Municipal Election shall run for seven (7) calendar days from
32 noon on Tuesday, January 2, 2024, through noon on Tuesday, January 9, 2024.

33 **SECTION 4. Swearing In.** The Mayor-Commissioner and the Town Commissioners who
34 are elected in the March 2024 election shall be sworn in and assume the duties of office at the

commencement of the first regular Town Commission meeting that is at least two days following the release of certification of the results by the Supervisor of Elections.

SECTION 5. Terms Extended. The term of office for the Mayor-Commissioner and the Town Commissioners currently seated in Seat 3 and Seat 4, shall pursuant to the authority in Section 100.3605 and 166.021(4), Florida Statutes, be extended until their successors to office are sworn in.

SECTION 6. Severability. If any section, sentence, clause, or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Ordinance.

SECTION 7. Conflicts. All prior ordinances or resolutions, or parts thereof, in conflict herewith are hereby repealed to the extent of said conflict.

SECTION 8. Effective Date. This Ordinance shall be in full force and effect immediately upon its passage on second reading.

Passed on the first reading, this ____ day of _____, 2023.

Passed and adopted on the second reading, this ____ day of _____, 2023.

MAYOR CHRIS VINCENT

	First Reading	Second Reading
Mayor Vincent	_____	_____
Vice-Mayor Malkoon	_____	_____
Commissioner Oldaker	_____	_____
Commissioner Pouloupoulos	_____	_____
Commissioner Strauss	_____	_____

ATTEST:

62 _____
63 Katrina Adler, Town Clerk

64

65 APPROVED AS TO FORM:

66

67 _____
68 Susan L. Trevarthen, Town Attorney



Agenda Item No: 16.a.

Town Commission Agenda Item Report

Meeting Date: September 13, 2023

Submitted By: Linda Connors, Town Manager

Submitting Department: Administration

Item Type: Ordinance

Agenda Section: ORDINANCES 2Nd Reading

Subject Title: ORDINANCE 2023-05: AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-THE-SEA, AMENDING CHAPTER 9, "FIRE PREVENTION AND PROTECTION," OF THE CODE OF ORDINANCES BY AMENDING ARTICLE 1" IN GENERAL" AND ARTICLE II "FIRE DEPARTMENT" TO ADOPT THE CITY OF POMPAÑO BEACH'S FIRE PREVENTION CODE AND FEE SCHEDULE; AMENDING ARTICLE VI "FIRE PREVENTION SPECIAL ASSESSMENT" TO CLARIFY AND UPDATE PROVISIONS; PROVIDING FOR CODIFICATION, SEVERABILITY, CONFLICTS AND AN EFFECTIVE DATE.

Explanation: On June 20, 2023, the Town entered into a contract with the City of Pompano Beach for Pompano Beach Fire Rescue to provide the Town's fire suppression and emergency medical services. As part of the contract with the City of Pompano Beach, the Town agreed to adopt their fire code and fire related fees. Ordinance 2023-05, which was adopted on first reading on August 15, accomplishes this task. In addition, the ordinance updates outdated language and deletes conflicting language. The Town's contract with the City of Pompano Beach began on September 1st, which is why the approval for second reading was scheduled for the meeting following first reading.

Recommendation: Staff recommends approval of Ordinance 2023-05

Exhibits:

1. Ordinance 2023-05 Amending Chapter 8 - Fire Prevention and Protection

1 **AN ORDINANCE OF THE TOWN OF LAUDERDALE-BY-**
2 **THE-SEA, AMENDING CHAPTER 8, “FIRE PREVENTION**
3 **AND PROTECTION,” OF THE CODE OF ORDINANCES BY**
4 **AMENDING ARTICLE I “IN GENERAL” AND ARTICLE II**
5 **“FIRE DEPARTMENT” TO ADOPT THE CITY OF**
6 **POMPAÑO BEACH’S FIRE PREVENTION CODE AND FEE**
7 **SCHEDULE; AMENDING ARTICLE VI “FIRE**
8 **PROTECTION SPECIAL ASSESSMENT” TO CLARIFY**
9 **AND UPDATE PROVISIONS; PROVIDING FOR**
10 **CODIFICATION, SEVERABILITY, CONFLICTS AND AN**
11 **EFFECTIVE DATE**

12
13 **WHEREAS**, the Town Commission of the Town of Lauderdale-By-The-Sea (the “Town”)
14 recognizes that changes to the adopted Code of Ordinances are periodically necessary in order to
15 ensure that the Town’s regulations are current and consistent with the Town’s regulatory needs;
16 and

17 **WHEREAS**, on June 20, 2023, the Town Commission approved Resolution 2023-24 to
18 enter into an agreement with the City of Pompano Beach (the “City”) for Pompano Beach Fire
19 Rescue to provide fire suppression and emergency medical services for the Town; and

20 **WHEREAS**, to implement the transition of fire/EMS services to Pompano Beach, the
21 Town agreed to adopt the fire prevention code and fire-related fees of the City; and

22 **WHEREAS**, the Town Commission desires to amend Chapter 8, “Fire Prevention and
23 Protection,” of the Town Code of Ordinances (the “Code”) to adopt the City’s fire prevention code
24 and fee schedule; and

25 **WHEREAS**, the Town Commission further desires to amend Article VI “Fire Protection
26 Special Assessment” of Chapter 8 of the Code to clarify the process of implementing the fire
27 assessment in accordance with state law, and to remove obsolete provisions; and

WHEREAS, the Town Commission finds that this Ordinance is in the best interests of the Town and its residents.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COMMISSION OF THE TOWN OF LAUDERDALE-BY-THE-SEA, FLORIDA, THAT:

SECTION 1. Recitals. The foregoing “Whereas” clauses are ratified and incorporated as the legislative intent of this Ordinance.

SECTION 2. Amendment. Chapter 8, “Fire Prevention and Protection,” of the Town Code of Ordinances, is hereby amended to read as follows¹:

Chapter 8 – FIRE PREVENTION AND PROTECTION

ARTICLE I. - IN GENERAL

~~Sec. 8-1. Fire detectors; emergency lighting and extinguishers required in or on designated buildings and premises.~~

(a) ~~All buildings in the Town built after October 1, 1988 shall be equipped with suitable fire detection equipment approved by the Town Manager. Emergency lighting and fire extinguishing equipment shall be required in all multi-family, hotel, motel or like dwellings.~~

(b) ~~Such devices or appliances may consist of automatic fire alarm systems, automatic sprinklers or water spray systems, standpipe and hose, fixed or portable fire extinguishers of a type suitable for the probable class of fire. Every sprinkler system, standpipe system, fire alarm system and other fire protection or extinguishing systems or appliances which have been installed in compliance with any law or ordinance, shall be installed, maintained and regulated in compliance with the recommendations of the National Board of Fire Underwriters and the National Fire Protection Association.~~

~~Sec. 8-2. Inspection of certain premises by Fire Prevention Bureau; fees.~~

(a) ~~Fire Prevention Bureau authorized; inspections; exemptions. The Town Manager is hereby empowered and instructed to establish a Fire Prevention Bureau and to hire such personnel as is necessary to inspect every commercial business and common area of~~

¹ Additions to existing text are shown in underline. Deletions are shown in ~~striketrough~~. Additions between first and second reading are shown in double underline. Deletions between first and second reading are shown in ~~double striketrough~~.

~~multi-family condominiums on an annual basis. The interior of private (single-family/duplex) residential units shall be exempt from inspection.~~

~~(b) Fee established. Fees for said inspection shall be set by resolution of the Town Commission. Failure to pay for the inspection or meet the requirements of said inspection may result in the revocation of the business tax receipt of the business and a lien against the real property that the business is located upon. No business tax receipt shall be revoked until a hearing is held by the Town Commission at a regularly scheduled meeting.~~

~~(c) Plans to be examined. Every new construction shall have its plans examined and approved by the Fire Prevention Bureau. No certificate of occupancy shall be issued without the plans of the new construction meeting the approval of the Fire Prevention Bureau. Multi-residential construction is not exempt from this section. Fees for said plans examinations shall be contained in the resolutions establishing administrative~~

Sec. 8-31. Florida Fire Prevention Code adopted and fees established.

(a) The Florida Fire Prevention Code (NFPA 1) and (NFPA 101) is hereby adopted as the fire code for the Town.

~~(b) All subsequent amendments to such code are hereby adopted and incorporated by reference.~~

(b) The City of Pompano Beach's Fire Prevention Code and fee schedule (Chapter 95) is hereby adopted as the fire prevention code and fee schedule for the Town. All subsequent amendments to Chapter 95 are hereby adopted and incorporated by reference.

~~(c) Fire inspection and review fees shall be established by resolution of the Town Commission.~~

(c) Fire inspection and review fees that are not included within Chapter 95 shall be established by resolution of the Town Commission.

Secs. 8-42—8-20. Reserved.

ARTICLE II. FIRE DEPARTMENT

Sec. 8-21. Created; composition.

A Fire Department for the Town is hereby created and established. The Town Manager shall operate the Department by:

- (1) Providing personnel employed by or assigned by the Town Manager;
- (2) Contracting with other governmental or private entities;
- (3) Contracting with a not-for-profit organization which will provide volunteer personnel for fire suppression activities; or
- (4) Any combination of subsections (1), (2), and (3).

Sec. 8-22. Chief.

~~The Town Manager shall hire or contract for the services of a Fire Chief, whose duties shall be set forth in either a professional services agreement between the Fire Chief and the Town~~

~~Manager, or through a contract with a governmental entity, a private entity or a not-for-profit organization.~~

~~Sec. 8-23. Suspension.~~

~~All members of the Fire Department, including the Fire Chief, are subject to suspension or discharge because of incompetency, general inefficiency, neglect of duty, immorality, drunkenness, failure to obey orders given by proper authority, or for any other just or reasonable cause, in the manner provided for by Town personnel rules or the provision of contract, whichever is applicable.~~

Sec. 8-24~~2~~. Equipment inventory; inspection of water system.

(a) The Town Manager, in his/her discretion, may request funding for fire protection equipment sufficient to protect the public health and welfare in the Town Manager's annual budget request.

(b) The Town Manager shall administer or contract for an inspection program to ensure that the Town's water system is functionally sound and sufficient to support fire suppression services in the Town.

~~Sec. 8-25. Town employees as active members.~~

~~All Town employees who are active members of a not-for-profit organization that provides volunteer personnel for fire suppression services within the Town, during Town working hours, are relieved of their responsibilities as a Town employee during such time as they are responding to an incident.~~

Secs. 8-26~~3~~—8-45. Reserved.

* * *

ARTICLE VI. FIRE PROTECTION SPECIAL ASSESSMENT

Sec. 8-101. Fire protection special assessment boundaries.

The Town hereby establishes the following boundaries for fire protection special assessments, in the event the Town establishes a special assessment program relating to the provision of fire protection services within the Town:

~~(1) Fire Protection Special Assessment—North. The boundaries for the area known as Fire Protection Special Assessment—North shall be as follows:~~

~~A parcel of land in Sections 6 and 7 of Township 49 South, Range 43 East, being more particularly described as follows:~~

~~Begin at the intersection of the South line of Section 7, Township 49 South, Range 43 East and the centerline of the Intracoastal Waterway; thence northerly along the centerline of the Intracoastal Waterway to the intersection with a line 25 feet south of and parallel with the north line of Section 7, Township 49 South, Range 43 East; thence easterly along the said parallel line to the Easterly right of way line of the Intracoastal Waterway; thence~~

Northerly along the said easterly right-of-way line to the Southwest corner of Lot 1, Block 16 of Terra Mar Island Estates, Second Addition, as recorded in Plat Book 31, Page 20 of the Public Records of Broward County, Florida; thence Southeasterly along the south line of said Lot 1, Block 16 to the southeast corner of said Lot 1, Block 16; thence northeasterly along the east line of said Lot 1, Block 16 to the westerly extension of the south line of Block 12 of said Terra Mar Island Estates, Second Addition; thence easterly along the said south line of Block 12 and the extension thereof to the west line of Lot 1, Block 15 of said Terra Mar Island Estates, Second Addition; thence southerly along the said west line of Lot 1, Block 15 and the west line of Lot 10, Block 11 of Terra Mar Island Estates, First Addition as recorded in Plat Book 31, Page 10 of the Public Records of Broward County, Florida, to the southwest corner of said Lot 10, Block 11; thence easterly along the south line of said Lot 10, Block 11 and its extension thereof to the centerline of Spanish River, thence southerly along the said centerline of Spanish River to a point 1,350 feet south of the north line of the southeast one quarter (SE $\frac{1}{4}$) of said Section 6, Township 49 South, Range 43 East; thence south 200 feet to a point on a line 1,550 feet south of and parallel with the said north line of the southeast one quarter (SE $\frac{1}{4}$) of Section 6, and being 1,127.43 feet east of the said easterly right-of-way line of the Intracoastal Waterway; thence easterly along said parallel line to the easterly right-of-way line of Florida State Road A-1-A (South Ocean Boulevard); thence northeasterly along the said easterly right-of-way line of State Road A-1-A to a line 850 feet south of and parallel with the said north line of the southeast one quarter (SE $\frac{1}{4}$) of Section 6; thence easterly along said parallel line and its Easterly extension thereof, through Government Lot 2, Section 5, Township 49 South, Range 43 east to the shore line of the Atlantic Ocean; thence southerly along said shoreline to a line 380 feet North of and parallel with the south line of the northeast one quarter (NE $\frac{1}{4}$) of the southeast one quarter (SE $\frac{1}{4}$) of Section 7, Township 49 South, Range 43 East; thence westerly along said parallel line and along a line 380 feet North of and parallel with the south line of the northwest one quarter (NE $\frac{1}{4}$) of the southeast one quarter (SE $\frac{1}{4}$) of said Section 7 to the westerly right-of-way line of Florida State Road A-1-A; thence northerly along said westerly right-of-way line of State Road A-1-A to the intersection of the north line of the southeast one quarter (SE $\frac{1}{4}$) of Section 7, Township 49 South, Range 43 East; thence westerly along the said North line of the southeast one quarter (SE $\frac{1}{4}$) of Section 7, Township 49 South, Range 43 East and along the north line of the southwest one quarter (SW $\frac{1}{4}$) of said Section 7 to the easterly right-of-way line of the Intracoastal Waterway; thence southerly along said easterly right-of-way line to the south line of Section 7, Township 49 South, Range 43 East; thence westerly along the said south line of Section 7, Township 49 South, Range 43 East to the point of beginning.

- (2) ~~Fire Protection Special Assessment—South.~~ The boundaries for the area known as Fire Protection Special Assessment—South shall be as follows:

Beginning at the intersection of the north boundary line of Section 18, Township 49 South, Range 43 East with the centerline of the right-of-way of the Intracoastal Waterway (Florida East Coast Canal), the point of beginning; thence in a southerly direction along the centerline of the right-of-way of the Intracoastal Waterway to the intersection of said centerline with the South boundary line of said Section 18; thence in an easterly direction along the south boundary line of said Section 18 to the intersection of said south boundary

~~line with the ordinary low watermark of the Atlantic Ocean; thence in a northerly direction along said ordinary low watermark of the Atlantic Ocean to a point on said ordinary low watermark located one 180 feet north of the south line of the north one half (N½) of the southeast one quarter (SE¼) of Section 7, Township 49 South, Range 43 East; thence in a westerly direction along a line located 180 feet north of and parallel to the south line of the north one half (N½) of the southeast one quarter (SE¼) of said section 7 to the intersection of said line with the west line of the right of way of State Road A-1-A; thence in a southerly direction along the west line of the right of way of SR A-1-A to the intersection of said west line with the north boundary line of Section 18, Township 49 South, Range 43 East; thence in a westerly direction along the north boundary line of said Section 18 to the point of beginning.~~

- (3) *Fire Protection Special Assessment—Townwide.* The boundaries of a fire protection special assessment to be levied throughout the Town to fund a unified fire protection service, should the Town Commission determine to do so, shall be the same as the boundaries of the entire Town, as may be amended from time to time. As of the October 1, 2004, the boundaries of the Town and the Townwide Special Assessment Area is:

Beginning at the intersection of the south boundary line of Section 7, Township 49 South, Range 43 East with the centerline of the Intracoastal Waterway (Florida East Coast Canal), the point of beginning; thence in a northerly direction along the centerline of the Intracoastal Waterway to the intersection of said centerline with a line located 25 feet south of and parallel to the north line of Section 7, Township 49 South, Range 43 East; thence in an easterly direction along a line located twenty-five (25) feet south of and parallel to the north line of said Section 7 to the intersection of said line with the east right-of-way line of the Intracoastal waterway; thence in a northerly direction along the east right-of-way line of the Intracoastal Waterway to the intersection of said east right-of-way line with the southwest corner of Lot 1, Block 16 of Terra Mar Island Estates, Second Addition, as recorded in Plat Book 31, Page 20 of the Public Records of Broward County, Florida; thence in an easterly direction along the south line of said Lot 1, Block 16 to the southeast corner of said Lot 1, Block 16; thence in a northerly direction along the east line of said Lot 1, Block 16 to the intersection of said east line with the westerly extension of the south line of Block 12 of said Terra Mar Island Estates, Second Addition; thence in an easterly direction along the westerly extension of the south line of said Block 12, along the south line of said Block 12 and along an easterly extension of said south line to the intersection of said extended line with the west line of Lot 1, Block 15 of said Terra Mar Island Estates, Second Addition; thence in a southerly direction along the west line of Lot 1, Block 15 and along the west line of Lot 10, Block 11 of Terra Mar Island Estates, First Addition as recorded in Plat Book 31, Page 10 of the Public Records of Broward County, Florida to the southwest corner of said Lot 10, Block 11; thence in an easterly direction along the south line of said Lot 10, Block 11 and along an easterly extension of said south line to the intersection of said extended line with a centerline of Spanish River; thence in a southerly direction along the centerline of the Spanish River to a point thirteen hundred and fifty (1,350) feet south of the north line of the southeast one-quarter (SE¼) of said Section 6, Township 49 South, Range 43 East; thence in a southerly direction for two hundred (200) feet to a point on a line located fifteen hundred and fifty (1,550) feet south of and parallel to the north line of the southeast one-

quarter (SE¼) of said Section 6, said point being 1,127.43 feet east of the east right-of-way line of the Intracoastal Waterway; thence in an easterly direction along the line 1,550 feet south of and parallel to said north line of the southeast one-Quarter (SE¼) of said Section 6 to the intersection of said line with the east right-of-way line of State Road A-1-A; thence in a northerly direction along the east right-of-way line of State Road A-1-A to the intersection of said east right-of-way line with a line located 850 feet south of and parallel to the north line of the southeast one-quarter (SE¼) of said Section 6; thence in an easterly direction along said parallel line and an easterly extension of said line, through Government Lot 2, Section 5, Township 49 South, Range 43 East to the intersection of said extended line with the ordinary low watermark of the Atlantic Ocean; thence, continue in an easterly direction along said parallel line a distance of 3 miles (15,840 ft.) to the intersection of said extended line with the eastern boundary of the State of Florida; thence in an southerly direction along said eastern boundary of the State of Florida to the intersection with a line located 380 feet north of and parallel to the south line of the northeast one-quarter (NE¼) of the southeast one-quarter (SE¼) of Section 7, Township 49 South, Range 43 East; thence in a westerly direction along said parallel line to the intersection of said line with the west right-of-way line of State Road A-1-A; thence in a northerly direction along the west right-of-way line of State Road A-1-A to the intersection of said west right-of-way line with the north line of the southeast one-quarter (SE¼) of Section 7, Township 49 South, Range 43 East; thence in a westerly direction along the north line of the southeast one-quarter (SE¼) and the southwest one-quarter (SW¼) of Section 7, Township 49 South, Range 43 East to the intersection of said north line with the east right-of-way line of the Intracoastal Waterway; thence in a southerly direction along the east right-of-way line of the Intracoastal Waterway to the intersection of said east right-of-way line with the south line of Section 7, Township 49 South, Range 43 East; thence in an easterly direction along the south line of Section 7, Township 49 South, Range 43 East to the intersection of said south line with the west line of the right-of-way of State Road A-1-A; thence in a northerly direction along the west line of the right-of-way of SR A-1-A to the intersection of said west line with a line located 180 feet north of and parallel to the south line of the north one-half (N½) of the southeast one-quarter (SE¼) of Section 7, Township 49 South, Range 43 East; thence in an easterly direction along a line located 180 feet north of and parallel to the south line of the north one-half (N½) of the southeast one-quarter (SE¼) of Section 7, Township 49 South, Range 43 East to the intersection of said parallel line with the ordinary low watermark of the Atlantic Ocean; thence continue in an easterly direction along said line located 180 feet north of and parallel to the south line of the north one-half (N½) of the southeast one-quarter (SE¼) of Section 7, Township 49 South, Range 43 East for a distance of 3 miles (15,840 ft) to the intersection of said parallel line with the eastern boundary of the State of Florida; thence in a southerly direction along the said eastern boundary of the State of Florida to the intersection with the extension of south boundary line of Section 18, Township 49 South, Range 43 East; thence in a westerly direction along the extension of the south boundary line of Section 18, Township 49 South, Range 43 East to the intersection of said south boundary line with the centerline of the right-of-way of the Intracoastal Waterway; thence in a northerly direction along the centerline of the right-of-way of the Intracoastal Waterway to the intersection of said centerline with the north boundary line of Section 18, Township 49 South, Range 43 East, the point of beginning.

Should the boundaries of the Town be amended by annexation, special act or otherwise, the legal description set forth in this subsection (3) shall be deemed automatically amended to reflect the amended Town boundaries unless the Town Commission expresses a contrary intent at the time the Town boundaries are amended.

~~Sec. 8-101.1. Continuation of annexed area within municipal service benefit unit and municipal service taxing unit of Broward County for fire and emergency medical services.~~

~~(a) Consent of Town to have annexed area remain within municipal service benefit unit and municipal service taxing unit of Broward County for fire protection and emergency medical services. The Town hereby consents to the continuation of the annexed area as described in the interlocal agreement and within section 8-101(1) and (2) of this Code within the municipal service benefit unit and municipal service taxing unit of Broward County for fire and emergency medical services. The boundaries of the municipal service benefit unit and municipal service taxing unit of Broward County for fire protection and emergency medical services shall include all the incorporated area of the Town of Lauderdale By The Sea within the annexed area, as described in the interlocal agreement and section 8-101(1) and (2) of this Code. The initial term of this consent shall be one year, with such consent automatically renewing on an annual basis during the term of the interlocal agreement, unless Town notifies County of its intent not to participate in the MSBU and MSTU on or before April 1 of each year, or the County ceases to provide fire protection and emergency medical services within the annexed area.~~

~~(b) Method of termination of consent. The Town hereby authorizes that the consent given under this section shall continue unless and until Broward County has received written notice of the Town's intent not to renew its consent or on or before April 1 of each year, during the term of the interlocal agreement, for the following fiscal year, or such shorter time as approved by Broward County in its sole discretion, this subsection (b) shall be known as the "termination clause."~~

Sec. 8-102. Intent of fire protection special assessment.

It is the intent of this article to provide a methodology for the fair and reasonable levy and collection of a special assessment to fund the provision of fire protection services by the Town within ~~one or both of the~~ Townwide fire protection special assessment areas described in section 8-101, as prescribed in the initial, preliminary, and annual assessment resolutions. The Town intends to utilize the uniform method for the levy and collection of special assessments, provided in F.S. §§ 197.3632 and 197.3635, as amended from time to time, as those provisions set forth a fair and reasonable procedure to levy and collect special assessments that ensures proper notice and adequate due process to affected parties, and provides for the cooperation between the Town and other governmental entities toward the collection and use of data, providing notice to affected parties, and ensuring the collection of proceeds for use by the Town. It is not the intent of the Town to create any additional due process rights other than those set forth in F.S. §§ 197.3632 and 197.3635. To the extent any provisions herein conflict with those statutory provisions, the aforementioned statutes shall prevail.

* * *

Sec. 8-104. Authority for fire protection special assessments.

* * *

(d) This article authorizes the Town Commission to levy a special assessment to fund fire protection services in the Townwide ~~either or both~~ fire protection special assessment areas as described in section 8-101. The Town Commission shall levy a fire protection special assessment ~~in Area North, Area South, or both~~ Townwide through the adoption of the initial resolutions and subsequent preliminary and annual assessment resolutions for the ~~area or areas~~ in which the special assessment is levied.

* * *

Sec. 8-105. Definitions.

* * *

Fire protection costs means the amount determined by the Town Commission to be assessed in any fiscal year to fund all or any portion of the cost of providing fire protection services, ~~in either or both~~ the Townwide assessment areas, including without limitation: costs of physical construction of or modifications to required facilities; the costs of vehicles, equipment, fuel, supplies, maintenance and repairs; insurance and indemnity costs; personnel costs, including salaries, benefits, uniforms, training, traveling and per diems; all costs associated with the implementation, collection, and enforcement of the fire protection assessment; a reasonable contingency for anticipated delinquencies and uncollected assessments; all other costs reasonably associated with the provision of fire protection services by the Town. Fire protection costs do not include any costs for providing emergency medical services (EMS).

* * *

Sec. 8-106. Initial assessment resolution.

(a) Prior to the preparation of a non-ad valorem assessment roll for the initial fire protection special assessment, the Town Commission shall adopt an initial assessment resolution which shall include, without limitation, the following:

- (1) The fire protection special assessment area ~~or areas~~ in which the fire protection special assessment is levied;
- (2) Brief description of the fire protection services to be funded by the fire protection assessment;
- (3) Legislative determinations of special benefits and fair apportionment for the fire protection special assessment;
- (4) The apportionment methodology for the fire protection special assessment;
- (5) The determination of the fire protection costs to be assessed;

- (6) The establishment of initial fire protection assessments, through an estimated fire protection assessment rate schedule, which may include a maximum rate for any fiscal year subsequent to the initial assessment rate;
- (7) Provide that the fire protection assessment is to be collected on an annual basis until such time as the Town Commission decides otherwise; and
- (8) Direction to the appropriate Town officials to prepare the assessment roll and provide the required notice for the public hearing.

- (b) The Town Commission may, but is not obligated to, provide for the date, time, and location for the public hearing to adopt the assessment roll for the fire protection special assessment within the initial assessment resolution.

Sec. 8-107. Public hearings.

- (a) Using the methodology adopted by the Town Commission pursuant to the initial assessment resolution, the Town shall hold a public hearing to adopt the fire protection assessment roll ~~for the first time between June 1 and September 15 2001.~~ annually;
- (b) The Town Commission shall set the date, time, and location of the public hearing by resolution or by motion.
- (c) A public hearing shall not be required to adopt the annual assessment roll in ~~subsequent a~~ given years unless:

- (1) The fire protection assessment is increased beyond the maximum rate authorized by law or judicial decree at the time of the initial imposition;
- (2) The boundaries of the fire protection special assessment areas or the Town have changed, unless all newly affected property owners have provided written consent for such assessment to the local governing board;
- (3) A substantial change in the purpose for such assessment or in the use of the revenue generated by such assessment; or
- (4) Assessed property is reclassified or the apportionment method is changed, resulting in an increased special assessment.

Sec. 8-108. Preparation of assessment roll.

- (a) The Town shall prepare, or direct appropriate Town officials to prepare, the initial assessment roll, which shall include without limitation the following:

- (1) Summary description of all assessed property in the fire protection special assessment area ~~or areas~~ in which the fire protection special assessment is being levied, conforming to the description contained on the tax roll;
- (2) The record owner of the real property on which the fire protection assessment is levied; and

(3) The amount of the fire protection assessment to be imposed against each parcel of assessed property in the fire protection special assessment area ~~or areas~~ in which the fire protection special assessment is being levied.

(b) The initial assessment roll shall be retained by the Town Clerk and shall be open to inspection by the public. The initial assessment roll need not be in printed form unless the amount of the fire protection assessment for each parcel of property cannot be ascertained by use of a computer terminal available to the public.

Sec. 8-109. Notice requirements for public hearing.

(a) *Notice by mail.* At least 20 days prior to the public hearing, the Town shall notice the hearing by mail.

(1) Consistent with the uniform method, the Town may provide the mailed notice required by this section through the use of TRIM notices pursuant to F.S. § 200.069, as amended from time to time, provided the TRIM notice complies with requirements for mailed notice under section 197.3632(4)(b), Florida Statutes, of the uniform method.

(2) Should ~~{the}~~ Town elect to provide the notice by mail, separate from the annual TRIM notices or if such TRIM notice does not comply with the requirements of section 197.3632(4)(b), such notice shall be sent to each person owning property subject to the assessment via first-class United States mail, and shall include the following information:

* * *

(b) *Notice by publication.* At least 20 days prior to the public hearing, the Town shall notice the hearing by publication in a newspaper generally circulated within Broward County. The published notice shall contain at least the following information:

(1) Notice that the governing board of the Town is the Town Commission;

(2) The date, time, and location of the public hearing;

(3) A geographic depiction of the fire protection special assessment area ~~or areas~~ subject to the fire protection assessment;

* * *

SECTION 3. Codification. This Ordinance shall be codified in accordance with the

foregoing. It is the intention of the Town Commission that the provisions of this Ordinance shall become and be made a part of the Town of Lauderdale-By-The-Sea Code of Ordinances; and that the sections of this Ordinance may be renumbered or re-lettered and the word “ordinance” may be

changed to “section”, “article” or such other appropriate word or phrase in order to accomplish such intentions.

SECTION 4. Severability. If any section, sentence, clause, or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Ordinance.

SECTION 5. Conflicting Ordinances. All prior ordinances or resolutions or parts thereof in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 6. Effective Date. This Ordinance shall become effective immediately upon passage on second reading.

Passed on the first reading, this 15th day of August, 2023.

Passed on the second reading, this ____ day of _____, 2023.

MAYOR CHRIS VINCENT

	First Reading	Second Reading
Mayor Vincent	<u>YEA</u>	<u> </u>
Vice-Mayor Malkoon	<u>YEA</u>	<u> </u>
Commissioner Pouloupoulos	<u>YEA</u>	<u> </u>
Commissioner Oldaker	<u>YEA</u>	<u> </u>
Commissioner Strauss	<u>YEA</u>	<u> </u>

Attest:

Katrina Adler, Town Clerk

(CORPORATE SEAL)

ORDINANCE 2023-05

436 APPROVED AS TO FORM:

437

438 _____

439 Susan L. Trevarthen, Town Attorney