



CITY OF TAMPA

Bob Buckhorn, Mayor

Contract Administration Department

Michael W. Chucran, Director

ADDENDUM 1

February 1, 2019

Contract 18-C-00041; Stormwater Construction – Citywide FY18 REBID

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

- Item 1: Replace Proposal Pages P-2R, P-3R and P-4R with the attached pages P-1, P-2 and P-3.
- Item 2: Replace pages SP-1 through SP-23 with the attached pages SP-1 through SP-25.
- Item 3: Replace pages C-1 through C-17 with the attached pages C-1R through C-19R.
- Item 4: Replace Anita Subdivision Phase 2, Copeland Park Force Main and David E. West Pond maps with the attached Anita Subdivision Phase 2, Copeland Park Force Main and David E. West Pond maps.
- Item 5: Attached is the pre-bid meeting sign-in sheet.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to ContractAdministration@tampagov.net.

Jim Greiner

Jim Greiner, P.E. Contract Management Supervisor

Item No.	Description	Unit	Est Qty	Unit Price in Words		Unit Price		Total Price
105.2B	TREE REMOVAL - 9"-18"	EA	22		\$		\$	
110.1	CLEARING & GRUBBING POND SITE	AC	1.6		\$		\$	
120	REGULAR EXCAVATION AND DISPOSAL	CY	23,000		\$		\$	
130	CLEAN FILL	CY	7,600		\$		\$	
135	GRADE DITCH	LF	85		\$		\$	
110.3	GROUT EX. STORMWATER PIPE LATERALS	CY	10		\$		\$	
425.1	INLETS, DT BOT, TYPE E, <10'	EA	15		\$		\$	
425.2	MANHOLES, P-7, <10' deep (3.5')	EA	12		\$		\$	
425.3	MANHOLES, J-7, <10' deep (4')	EA	3		\$		\$	
425.4	INLET, COT CURB TYPE 1, <10'	EA	1		\$		\$	
425.7	INLET, COT CURB TYPE BR-1, <10'	EA	1		\$		\$	
425.8	INLET, COT GRATE TYPE T, <10'	EA	47		\$		\$	
430.15	15" ROUND STORMWATER PIPE (RCP)	LF	1,200		\$		\$	
430.1	18" ROUND STORMWATER PIPE (RCP)	LF	1,000		\$		\$	
430.11	19"x30" MITERED END SECTION	EA	3		\$		\$	
430.12A	CONNECT STORMWATER PIPE TO EXISTING STRUCTURE (0-24")	EA	18		\$		\$	
430.12B	CONNECT STORMWATER PIPE TO EXISTING STRUCTURE (30-60")	EA	1		\$		\$	
430.2	24" ROUND STORMWATER PIPE (RCP)	LF	500		\$		\$	
430.30A	30" ROUND STORMWATER PIPE (RCP)	LF	400		\$		\$	
430.60A	60" ROUND STORMWATER PIPE (RCP)	LF	100		\$		\$	
430.4	12"x18" ELLIPTICAL STORMWATER PIPE (CLASS IV) (RCP)	LF	1,093		\$		\$	
430.5	14"x23" ELLIPTICAL STORMWATER PIPE (ERCP)	LF	299		\$		\$	

Item No.	Description	Unit	Est Qty	Unit Price in Words	Unit Price	Total Price
430.6	19"x30" ELLIPTICAL STORMWATER PIPE (ERCP)	LF	1,298		\$	\$
530	Rip Rap - (2' deep)	CY	89		\$	\$
550.1	REMOVE AND RESET FENCE	LF	1,255		\$	\$
8901	SOD - AUGUSTINE	SY	9,500		\$	\$
8902	SOD - BAHIA	SY	8,056		\$	\$
8903	Hydroseeding	SY	2,900		\$	\$
285.2	BEDDING	TN	237		\$	\$
334	SUPERPAVE ASPHALTIC CONC, SP12.5 (2")	TN	936		\$	\$
520.6	F&I Type "D" concrete curb	LF	100		\$	\$
520.8	F&I CURB, DROP	LF	130		\$	\$
520.110	CONCRETE CURB AND GUTTER TYPE "F"	LF	785		\$	\$
522.1	SIDEWALK CONCRETE, 6" THICK (3000 psi)	SY	573		\$	\$
522.2	CONCRETE, 6" THICK (DRIVEWAYS) (3000psi)	SY	2,586		\$	\$
9250	ADA Compliant Ramps	EA	25		\$	\$
2103	F&I 8" ductile iron pipe offset - all inclusive with tap (<30' in length)	EA	1		\$	\$
2103.12	F&I 12" ductile iron pipe offset - all inclusive with tap (<30' in length)	EA	2		\$	\$
2106	F&I 10" DIP - polywrap w fittings and restraints - all inclusive	LF	3,040		\$	\$
2200	F&I 2" HDPE tubing by HDD w/HDPE adapters and HDPE fittings at various depths - all inclusive with tap (20' in length)	EA	2		\$	\$
6004	F&I 10" gate or tapping valve with box on DIP, CIP or PVC	EA	6		\$	\$
6005	F&I 10" air release valve	EA	2		\$	\$
6104	F&I 8" Linestop on Existing Water Main	EA	1		\$	\$
900.1	8" Dia. PVC Pipe (C-900, DR-18)	LF	25		\$	\$

Item No.	Description	Unit	Est Qty	Unit Price in Words		Unit Price		Total Price
900.2	24" Dia. PVC Pipe (C-900, DR-18)	LF	20		\$		\$	
1706	6-Inch Diameter PVC Pipe House Lateral (SDR-35) (<30' in length)	EA	25		\$		\$	
1707	6" Dia. PVC Pipe (SDR-26)	LF	30		\$		\$	
1708	8" Dia. PVC Pipe (SDR-26)	LF	80		\$		\$	
1709	10" Dia. PVC Pipe (SDR-26)	LF	20		\$		\$	
4660	6-Inch Diameter, SDR-35, PVC Clean-out and cover	EA	25		\$		\$	
100	CONTINGENCY	LS	1	Two hundred thousand dollars and no cents	\$	200,000.00	\$	200,000.00
SUBTOTAL							\$	
101	MOBILIZATION - 8% of Subtotal	LS	1		\$		\$	
102	MAINTENANCE OF TRAFFIC - 10% of Subtotal	LS	1		\$		\$	
TOTAL							\$	

SPECIFIC PROVISIONS

SP-1 Scope

The work included under these Contract Documents comprises of the construction of stormwater management systems and miscellaneous and appurtenant work associated with each of the projects.

This is an annual contract for various stormwater projects. Each project will be documented on separate work orders during the contract duration.

The Contractor work shall consist of furnishing all labor, materials and equipment for the accomplishment of all work as described in the technical specifications and construction documents. Written work orders will be submitted after approval of final proposal from the Contractor.

Project plans and estimated quantities for individual projects will be provided by the City of Tampa, Department of Transportation and Stormwater Services, for each project location.

A project map will be included for each project as part of this contract.

SP-2 Permits

The Contractor will obtain construction permits required from local or Federal agencies having jurisdiction over the roadways and for any railroad or highway crossings shown on the Plans. The Contractor shall be required to comply with all provisions of such permits regarding workmanship, schedules, maintenance of traffic, and notification of starting construction, pavement removal and replacement and other conditions under which the permit is issued. The contractor will obtain right-of-way use permits as necessary for work within right-of-ways. The contractor shall obtain tree removal, root pruning, and tree trimming permits including for both grand tree and non-grand trees as required per the plan and shall comply with conditions of said permits with any property owner noticing as necessary to remove trees per Chapter 13 of the City of Tampa Natural Resource Code.

The Contractor shall obtain all permits required to comply with SP-4.C Maintenance of Traffic and Roadway Closure Limitations, contained herein.

The Contractor is required to have the proper license to perform the work before submittal of his bid and shall obtain any required City/County building permits and shall obtain and pay for all other licenses and 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 by himself or others.

City permit fees will be paid by the City with the exception of the tree removal permit. Right-of-way permit fees are exempt for City projects.

The Contractor shall require all subcontractors to be currently licensed by the State to perform the proposed work in their respective fields and to obtain permits for the execution of said

work. All work shall be performed in accordance with the permits and the requirements of the current Stormwater and Transportation Regulations Chapter of the City of Tampa Code.

The Contractor is responsible to schedule and coordinate with the City of Tampa Contract Administration Department for all required inspections and tests for all phases of work to obtain final approval thereof.

SP-3 Intent

Stormwater facilities work not specified in either the Plans or in the Specifications, 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 in accordance with the City of Tampa Technical Standards and Florida Department of Transportation Standard Specifications for Road and Bridge Construction, as though it were specifically delineated or described. The cost of this work shall be included in the cost of the pay item to which it is incidental, and no additional payment will be made therefor.

SP-4.C Maintenance of Traffic and Roadway Closure Limitations

The Contractor shall arrange his work so as to minimize traffic disruption. As deemed necessary, roadway closures shall occur at off hours and dictated by the Right of Way Use permit.

At least seventy-two hours before starting any work in City streets, the Contractor shall obtain a City of Tampa Street Closure Permit for any traffic lane or street closure within the City. The permit will establish the requirements for closures related to the number of lanes and time of day lanes or streets may be closed. If the Contractor proposes a complete street closure, a detailed traffic maintenance plan shall be submitted to the City of Tampa Traffic Engineering Division together with the application for the Street Closure Permit. The traffic maintenance plan shall include proposed detour routes and locations and descriptions of direction signs for the construction area and detour routes. Two approved copies of all Street Closure Permits shall be submitted to the Engineer before starting any work in City streets. No changes to approved Street Closure Permits will be permitted without prior approval by the City. Any work within Hillsborough County and/or Florida Department of Transportation (FDOT) rights-of-way, contractor shall obtain any necessary permits.

The Contractor shall furnish and maintain all necessary signs, barricades, lights and flagmen necessary to control traffic and provide for safety to the public, all in compliance with the Florida Department of Transportation "Manual on Traffic Controls and Safe Practices for Street and Highway Construction, Maintenance and Utility Operations," with subsequent revisions and additions, and to the satisfaction of the Engineer.

The cost of maintaining traffic and of any additional earth excavation, selected fill, temporary wearing surface, temporary bridges, barricades, warning lights, flagmen, and like work required therefor shall be included under the various classified unit price Contract Items, or in the total Lump Sum Price, as applicable, and no additional payment will be made therefor.

SP-6 Environmental Protection

The Contractor will be held liable for the violation of any and all environmental regulations. Violation citations carry civil penalties and in the event of willful violation, criminal penalties. The fact that the permits are issued to the City does not relieve the Contractor in any way of his environmental obligations and responsibilities.

SP-7 Use of Explosives

Explosives will not be used on the work except when authorized by the Engineer. The use of same, if authorized, shall conform to laws or ordinances which may pertain to the use of same and the utmost care will be exercised by the Contractor so as not to endanger life or property. The Contractor will assume full responsibility in connection with use of any explosives even though authorized. Explosives will not be stored within the City limits.

SP-7.01 Temporary Water Supply

Supplemental to the requirements outlined in Article G-7.01 of the General Provisions, all reasonable amounts of water required by the Contractor for the water main testing and flushing under this agreement will be furnished by the City from the existing water system without cost to the Contractor. The Contractor shall request temporary hydrant meters with backflow prevention devices when connecting to existing water system hydrants. A security deposit for the meter is required. The deposit will be returned when the meter is returned to the Contractor. City Crews will install the meter with backflow-preventer on the hydrant. The Contractor shall make any necessary water supply connections at his own expense at a point designated by the City. These connections shall be maintained by the Contractor, who shall furnish all pipe, valves, and such other equipment necessary or required. Temporary piping may run above ground when there is no possibility of traffic, and it can be done safely. Otherwise, it must run underground and in such manner as to meet the approval of the City.

At the discretion of the City, unnecessary waste of water after notification will be cause for use of water to be discontinued. After temporary lines have served their purpose, they shall be removed by the Contractor and all connections closed or plugged to the satisfaction of the City.

SP-8 Construction Start

Construction will not begin prior to receipt by the City of the required permits. If issuance of the Notice to Proceed is delayed due to permit acquisition, the contract time will be extended to suit, but no extra payment will be made to the Contractor.

SP-9 Coordination and Cooperation

In performing work under this Contract, the Contractor shall coordinate his work with that of any adjacent contractors for the City, and others, and cooperate with them in every reasonable way, to the end that there shall be the minimum practicable interference with their operations.

SP-10 Connections Between Construction

The Contractor shall provide an approved type masonry bulkhead, spigot plug, bell cap, or standard pipe plug, manhole, junction chamber, pipe stub to provide for terminating construction

when the work is performed in phases and the connecting phase is not complete.

The Contractor shall remove any such bulkhead or plug encountered when connecting to previously completed pipe.

The cost of furnishing and removing bulkheads and plugs shall be included in the various classified unit price Contract Items for pipe lines, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor.

SP-11 Construction Easements

In the event that, in the opinion of the Contractor, obtaining a temporary construction easement is necessary or desirable, it shall be the sole responsibility of the Contractor to obtain such easements from the Owner of the property. If such easements are obtained by the Contractor, they shall contain provisions 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 any easement obtained by the City or of any City-owned right-of-way. A copy of the temporary construction easement agreement is to be filed with the Engineer.

SP-12 Releasing Facilities for Use

It is the intent of these Specifications that all newly constructed sewers and appurtenant facilities be placed in service as rapidly as an integrated portion of the facilities can be constructed, inspected and accepted by the Engineer. Acceptance or use by the City of any portion of the facilities prior to final acceptance shall not relieve the Contractor of any responsibilities, regarding such facilities, included in the Contract.

SP-13 Material and Equipment Approval

The Contractor shall not enter into any subcontracts, or place any order, for the furnishing of any material or equipment until he has received the Engineer's written approval of the manufacturers.

SP-14 Contractor Emergency Response Time

The Contractor must be available to service emergency calls seven (7) days a week, twenty-four (24) hours a day. The response time for emergency calls shall be within two (2) hours. A contact person and telephone number shall be provided to the Engineer for such purposes.

SP-16 Salvage

All existing pipe and appurtenances removed by the Contractor and which are not designated to be salvaged shall become the property of the Contractor and shall be removed from the site of the work to the Contractor's own place of disposal.

Items which are shown on the Plans or specified to be salvaged shall be removed by the Contractor, delivered, and unloaded at a location within the Department's service area, as directed by the Engineer. The cost of removing, disposing, delivering, and unloading salvage items of pipe and appurtenances shall be included in the various classified unit price Contract

Items or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor.

SP-16.01 Maintenance of Continuous Water Service

At the conclusion of every work day, the Contractor is responsible for ensuring that all water services within his effective work area are in service. If a water customer contacts the Department to advise that they have no water service and it is determined to be within the Contractor's work area, the Contractor will be notified of the interrupted service through the Department dispatcher and/or inspection division. Upon notification, the Contractor must mobilize to the site and reinstate the customer's water service.

If the Contractor fails to mobilize his forces to make the repairs, the Department will mobilize its own forces to reinstate the customer's water services. In this event, the Contractor shall be charged a five hundred dollar (\$500.00) flat rate fee plus actual direct department costs for labor, materials, and equipment used to reinstate the water service. This five hundred-dollar fee and Department cost will be charged for each additional service reinstated. The amount charged will be deducted from the Contractor's payment.

SP-17 Sequence of Operations

The Contractor shall develop with the Engineer a complete schedule of operations which, in the opinion of the Engineer, will permit use of the facility at the earliest possible date.

Taking over of parts of the work for operation before completion of the entire project shall not relieve the Contractor of any responsibility for proper integrated operations of all parts of the work, nor shall it act to relieve him of any responsibilities under Article A-6.04 of the Agreement, for guaranty of all parts of the work, for one year after the date of acceptance of all the work on the project.

Contractor will not be permitted to close roadway corridor accessed by residents for two or more sequences of construction. Sewer and Storm must be installed and performed in one cut unless prior approval is obtained by the City. Additional closures for restoration & other utility construction must be approved by the City.

See section SP-4.C for roadway closure limitations.

SP-17.01 Water Main Shutdowns

Unless otherwise approved by the Engineer in an emergency situation, scheduled shutdowns may only occur on Mondays, Tuesdays and Wednesdays. The Contractor shall notify the Construction Engineer and Right of Way Use Permitting Department at least two weeks in advance of the need for a scheduled shutdown.

Where connections are made to the existing mains, or where other occurrences require a shutdown, the Contractor shall work with the City to perform the work necessary to complete the shutdown. The City will make every effort in advance to perform pre-valve shutdowns, but there are no guarantees as to whether or not all valves will properly seat in order to guarantee a complete shutdown. In the event of an emergency, the Contractor shall immediately notify the

City.

SP-18 Dewatering

Dewatering is the responsibility of the Contractor. All costs associated with ground dewatering and surface water pumping shall be included in the appropriate contract price for items to which dewatering is incidental, as applicable, and no separate payment shall be made therefor. The Contractor shall apply to FDEP for dewatering permit at his cost.

Before commencing any excavation at the site of the work, the Contractor shall submit to the Engineer and obtain his approval of the methods and equipment and arrangement of facilities proposed for the removal and disposal of water at the site and of all water entering any excavation or other part of the work from any source whatsoever. Adequate standby facilities shall be provided to ensure that the excavation will be kept dry and bypass waters flow in the event of power failure or mechanical breakdown. Facilities for 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.

Contractor shall prepare well point dewatering to incrementally move storm pipe and sewer pipe installation and prepare for roadway open cuts on a timely schedule to minimize the time frame of roadway and driveway closures to residents. Contractor may utilize FDOT type sediment removal box system to treat water prior to discharge to manage turbidity.

SP-19 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.

He shall provide, install, construct, and maintain any covering, mulching, sodding, sand bagging, berms, slope drains, sedimentation structures, or other devices necessary to meet City, County, State and Federal regulatory agency codes, rules and laws.

The Contractor shall take sufficient precautions to prevent pollution of streams, canals, lakes, reservoirs and other water impoundments with fuels, oils, bitumen, calcium chloride or other harmful materials. Also, he shall conduct and schedule his operations so as to avoid or otherwise minimize pollution or siltation of such streams, and the like, and to avoid interference with movement of migratory fish. No residue from dust collectors or washers shall be dumped into any live stream.

Storm drainage facilities, both open and closed conduit, serving the construction area shall be protected by the Contractor from pollutant and contaminants. If the Engineer determines that siltation of drainage facilities has resulted due to the project, the Engineer will advise the Contractor to remove and properly dispose of the deposited material. Should the Contractor fail to or elect not to remove the deposits, the City will provide maintenance cleaning as needed and will charge all costs of such service against the amount of money due or to become due the

Contractor.

Construction operations in rivers, channels, streams, tidal waters, canals and other impoundments shall be restricted to those areas where it is necessary to perform filling or excavation to accomplish the work shown in the Plans and to those areas which must be entered to construct temporary or permanent structures. As soon as conditions permit, rivers, channels, streams and impoundments shall be promptly cleared of all obstructions placed therein or caused by construction operations.

Except as necessary for construction, excavated materials shall not be deposited in rivers, streams, canals or impoundments, or in a position close enough thereto to be washed away by high water or runoff.

The Contractor shall not disturb lands or waters outside the limits of construction except as may be found necessary and authorized by the Engineer.

The location of and methods of operation in all detention areas, borrow pits, material supply pits and disposal areas furnished by the Contractor shall meet the approval of the Engineer as being such that erosion during and after completion of the work will not likely result in detrimental siltation or water pollution.

The Contractor shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operations; and the duration of exposed, uncompleted construction to the elements shall be as short as practicable.

Clearing and grubbing shall be so scheduled and performed that grading operations can follow immediately thereafter and grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.

The Engineer may limit the surface areas of unprotected erodible earth exposed by clearing and grubbing, excavation or filling operations and may direct the Contractor to provide immediate erosion or pollution control measures to prevent siltation or contamination of any river, stream, channel, tidal waters, reservoir, canal or other impoundment or to prevent damage to the project or property outside the project right of way.

SP-20 Layout Data

The City will provide horizontal and vertical control or reference points for each project. From these control or reference points, the Contractor will set construction layout stakes and/or offsets necessary to complete the required work. All work shall be subject to field changes as directed by the Engineer.

Compensation for construction layout will be included in the price of the various respective pay items for pipeline installation. Prior to commencement of construction, the Contractor shall obtain the Department's acceptance of the layout. It shall be the Contractor's

responsibility to protect said stakes and/or offsets until, in the opinion of the Department they have served their designated purpose. If re-staking and/or re-offsetting are required, the cost of re-staking and/or re-offsetting will be at the Contractor's expense.

All survey and layout costs will be included in the appropriate other unit prices and for which no separate payment will be made. The survey will be performed by Florida Registered Land Surveyor. A copy of the signed and sealed survey layout will be provided to the Engineer as certification of the completion of the layout.

SP-21 Informational Signs/Project Signs

The Contract Administration Department will provide the template for informational signs. The Contractor will have a minimum of two (2) and up to four (4) each 48" x 48" informational signs. Locations of signs will be in accordance with the Contract Administration Department, Construction Division.

The cost of fabrication, erection, maintenance and removal upon project completion of the informational signs, including all labor and materials, shall be deemed included in the prices bid for the various Contract Items of this Contract, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor. No extra payment will be made for obliterating of certain information and replacement thereof with other because of changes during the course of the Contract. The signs can be reused for each project.

SP-22 Construction Operations

In City streets, excavated materials shall, where practicable, be deposited upon streets, sidewalks, driveways, or other paved surfaces within the street right-of-way, except that interruptions to the use of driveways shall be kept to a minimum. The Contractor shall clean up areas from which soil has been removed at the end of each day by sweeping, washing, or other approved methods. When the work is halted by rain, the Contractor shall clean up the working areas before leaving the site.

Trenches shall be protected at the close of each day's operations by lighted barricades, fences, and other methods to the satisfaction of the Engineer. Fences shall meet OSHA standards and be structurally stable as approved by the Engineer. No excavations shall be left open over a weekend.

In general, pipes shall be laid in open cut, except when another method, such as jacking, augering or tunneling is shown on the Plans, specified or ordered.

In City, State and County highways, excavated materials shall not be stored or cast upon the pavement, unless an advance approval of the governing agency is first obtained by the Contractor.

Please refer to roadway closure limitations in SP4.C

SP-23 Project Cleanup

The Contractor shall conduct his operations in such a manner that will result in a minimum of inconvenience to occupants of adjacent homes and business establishments and shall provide temporary access as directed or as conditions in any particular location may require as determined by the Engineer. All restoration must be performed to an equal or better condition than that which existed prior to construction.

Good housekeeping on this project is extremely important and the Contractor will be responsible for keeping the construction site neat and clean, with debris being removed daily as the work progresses or as otherwise directed by the Engineer. Good housekeeping at the job site shall include: removing all tools and temporary structures, dirt, rubbish, etc.; hauling all excess dirt, rock, etc. from excavations to a dump provided by the Contractor; and all clean-up shall be accomplished to the satisfaction of the Engineer. Immediately after construction is completed in an area or part thereof (including restoration), barricades, construction equipment and surplus and discarded materials shall be removed by the Contractor.

In the event that the timely clean-up and restoration of the job site is not accomplished to the satisfaction of the Engineer, the Engineer may make arrangements to effect the necessary clean-up by others. The Contractor shall be back-charged for these costs. If such action becomes necessary on the part of and in the opinion of the Engineer, the Department shall not be responsible for the inadvertent removal from the work site of materials which the Contractor would not normally have disposed of had he affected the required clean-up.

At the completion of each workday, the Contractor shall fill all open trenches and pits. Trenches and pits may remain open only if the Contractor has obtained permission from the appropriate permitting agency and all protection and warning devices are in place in working order.

The Contractor shall replace all open cut road pavements with a temporary compacted surface capable of supporting sustained vehicular loads as soon as possible once the trench or pit has been filled and compacted in 6-inch lifts. The temporary surface shall be maintained by the Contractor at the elevation of the adjacent road surfaces.

The Contractor is responsible for the security of all tools, materials and equipment required for this project and must make all arrangements for safeguards he may deem necessary. The City will assume no liability for any such security or losses resulting from lack of security.

SP-25 Work in Streets

All work within streets and highways shall be subject to the regulations and requirements of the appropriate agencies. Within the City of Tampa, streets and highways are under the jurisdiction of the City of Tampa, Department of Transportation and Stormwater Services or State of Florida, Department of Transportation. Outside the City of Tampa, streets and highways are under the jurisdiction of the County of Hillsborough or the State Department of Transportation.

Methods and materials of construction used in restoration within such streets and highways, including pavement, sidewalk, curb, curb and gutter removal and replacement, replacement of storm sewerage facilities, excavation and backfilling, and the storage of plant, materials and equipment shall conform to the requirements of the City of Tampa and, where applicable, the County of Hillsborough or State Department of Transportation, and will be subject to the inspection and approval of the duly authorized representatives of the City, County and the State.

SP-26 Surface Restoration

Where construction activities are conducted in existing grassed areas, the grassed areas shall be restored as specified or directed by sodding or grassing. Such restoration of grassed areas shall conform to the requirements of the Workmanship and Materials section headed "Sodding and Hydroseeding."

The Contractor shall replace or repair all ground surfaces damaged during construction. Any bushes, flowers, gardens, patios, lighting system, other landscaping, and irrigation systems disturbed by the construction project shall be repaired or replaced by the Contractor. The cost of such ground surface repair shall be included in the various classified unit price Contract Items, or in the specific contract item, as applicable, and no separate payment will be made therefor. Existing corrugated metal and concrete pipe culverts removed during the construction work shall be stored and maintained in sound, useful condition and replaced upon completion of the work. Culverts damaged by the Contractor shall be replaced with new culverts meeting the applicable requirements of the Standard Specifications for Road and Bridge Construction published by the Florida Department of Transportation. No separate payment will be made for replacement of damaged culverts.

SP-27 Existing Public Facilities

Existing public facilities that are removed by construction operations under this contract shall be replaced by the Contractor to City of Tampa specifications. These items shall include all public benches, playground light poles, shelters, roadway signs, and replacement of these items shall be considered incidental to the cost of construction, and no separate payment will be made therefor.

SP-29 Utility Protection Considerations and Work Adjacent to Utilities

The Contractor shall protect all utilities and other facilities within and adjacent to the construction as covered in Section G-1.03, unless a utility firm has conclusively indicated, or such is shown on the Plans, that the certain adjustment, removal, reconstruction, or protection of the utility's facility will be performed by that respective utility.

The Contractor shall furnish, install, and remove sheeting and shoring and other protective measures as may be necessary to satisfactorily accomplish the construction of this project. The cost of such sheeting and shoring and other protective measures shall be included in the unit prices as bid for the storm or sanitary sewer pipe items, and no separate payment shall be made therefor.

SP-30 Conflict Structure

Where a sanitary sewer line runs through a conflict structure, the portion of sanitary sewer spanning the structure shall be PVC encased in a steel sleeve. The annular space between the PVC pipe and the steel sleeve shall be sealed at each end as shown in the plans and contract documents. Payment shall be made under the appropriate conflict structure item. Unit bid price in this case shall reflect the PVC pipe, steel sleeve, etc., required to meet the above requirements and the standard details.

SP-31 House Services

The various utilities, along the line of the work, which are shown on the Plans or located in the field during the course of the work, may have house services connected to them. The Contractor is required to give all utility agencies 48 hours' notice prior to start of work. The Contractor shall notify the various utility companies by calling the Sunshine State One Call of Florida, Inc. (1-800-432-4770) or, if necessary, by contacting the utilities individually. When such notice is properly given, the utility having jurisdiction will locate house services along the line of work. The Contractor shall protect all existing house services which are shown on the Plans or located in the field during the course of the work. The Contractor shall arrange his operations to avoid any damage or disruption of water, gas, sewer, electric, telephone, and other house services.

Methods and techniques used by the Contractor to protect and maintain house services shall be subject to the prior approval of the Engineer. Water and sewer services shall be maintained during construction and should be maintained active throughout the course of construction. Contractor shall provide temporary services for sewer and water to avoid interruption. Upon completion of storm, sewer, and water piping construction, contractor shall restore to final condition the water and sewer services as depicted in the plans and the project specifications.

Water and sewer services damaged or removed due to the work methods of the Contractor shall be replaced by the Contractor to such limits as directed by the Engineer, unless otherwise noted on the plans. Materials used for such replacements shall be similar to those in the existing service or shall conform to the current standards of the utility as directed by the Engineer. All damaged water and sewer services shall be promptly repaired and shall be returned to service within 24 hours after the damage has occurred.

Other public utility house services which are damaged or removed due to the work methods of the Contractor will be repaired by the utility having jurisdiction and the cost of such repairs shall be borne by the Contractor.

Where the relocation or special maintenance of house services, as shown on the Plans, is required during construction of new pipelines the disruption of such services shall be kept to a minimum period of time as approved by the Engineer.

Unless otherwise specified in other Contract Items, or in the total Lump Sum Price, as applicable, the cost of protecting, replacing, repairing, relocating and maintaining house services shall be included in the various classified unit price Contract Items for pipelines, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor.

The maintenance and guaranty provisions of the Agreement shall also apply to all repairs and replacements of damaged or relocated services accomplished by the Contractor.

SP-33 Protection of Trees and Shrubs

All trees and shrubs, except where otherwise shown or ordered, shall be adequately protected by boxes, fences, or otherwise carefully supported, as necessary, by the Contractor Per Chapter 13 of the City of Tampa Natural Resources Code Protective barricades shall be placed around all protected trees and grand trees and shall remain in place until all potentially damaging construction activities are completed The Parks Department must inspect the site after tree protection devices have been installed and prior to construction. A 48-hour notice must be given to Planning and Growth Management, Natural Resources to schedule the inspection. No excavated or backfill material shall be placed in a manner which, in the opinion of the Engineer, may result in damage to trees or shrubs. Prior to mobilization, all exposed roots shall be covered with a two (2)-inch layer of mulch. The Contractor shall replace all trees or shrubs which are destroyed or damaged to such extent, in the opinion of the Engineer, to be considered destroyed. Replacement of destroyed trees or shrubs shall be made with new stock conforming to the requirements of the City's Tree Ordinance at the expense of the Contractor, and no separate payment will be made therefor.

Beneath trees within the limits of the excavation, and where possible, pipelines shall be built in short tunnels, except as otherwise shown or specified. When the tree is outside the limits of the excavation but, where the distance from the centerline of the new pipeline to the trunk of any tree is such that, in the opinion of the Engineer, the excavation would result in serious damage to the tree, the pipeline shall be constructed in short tunnel or the root system shall be pruned, as ordered in writing by the Engineer. The Contractor shall be responsible for all damage to trees and shrubs as a result of his operations, whether the pipeline is placed by trench, tunnel, or other excavation.

The Contractor shall provide the services of an approved licensed tree professional when it is necessary to trim or cut a branch from a tree, or for required root pruning. The City's approved arborist shall be present for all activities associated with both grand tree and non-grand trees. The contractor shall trim necessary tree canopies and root prune within excavation areas the trees that are to remain to allow for construction activities with the City's approved arborist present during such activities.

The cost of protection of trees and shrubs, replacement or repair of trees or shrubs destroyed by the Contractor, short tunnels, cutting or trimming of tree branches, and root pruning shall be included in the various classified unit price Contract Items for pipelines, tree and root pruning, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor.

SP-34 Existing Storm Sewer Facilities

In the course of the work, it will be necessary to perform construction activities under or closely adjacent to existing culverts and other storm sewer facilities. The Contractor shall protect all existing storm sewer facilities which are shown on the Plans or located in the field

during the course of the work. When approved by the Engineer, relocation or special maintenance of storm sewer facilities during construction will be permitted. Disruption of service shall be kept to a minimum.

Facilities which are damaged due to the work method of the Contractor shall be replaced by the Contractor to such limits as directed by the Engineer. Materials used for such replacements shall be similar to those used in the existing facility and shall conform to City Standards for the construction of storm sewers for work done in the City of Tampa. Work done outside the City shall conform to the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction."

The cost of protecting, replacing, relocating and maintaining storm sewer facilities shall be included in the various classified unit price Contract Items for pipelines, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor, unless otherwise specified in other Contract Items.

The maintenance and guarantee provisions of the Agreement shall also apply to all replacements of damaged or relocated storm sewer facilities accomplished by the Contractor.

The contractor shall be responsible for maintaining all existing private and public stormwater drainage connections into the existing stormwater system. All drainage connections shall be maintained and/or restored.

SP-35 Work in Private Property

Where portions of the work are constructed in easements through private properties, the limits of such City-owned easements are as shown on the Plans. Temporary construction access within private property can also be processed through a right of entry letter which will be between each private property owner and the Contractor. The right of entry letter can be used in the event of construction that impacts private property. Property owners shall be notified prior to any alterations in the construction plans that may affect their property. The contractor will relocate, repair, and/or reconstruct any items that may be impacted for the purpose of constructing each project.

Upon completion of work in City-owned easements, the Contractor shall restore the property, including all fences or other structures disturbed by his operations, as nearly as possible to the condition in which he found it. No material shall be used or removed from private property without the approval of the Engineer.

The Contractor shall confine his operation in such private properties within the limits of the easements as shown or directed by the Engineer.

The Contractor shall further comply with all provisions of the grants of the City-owned easement and shall assume full responsibility as the agent of the City for all obligations of the City under such grants of easement in connection with the construction of pipelines.

The Contractor shall not enter upon or occupy any private land outside of the limits of the City-owned easement unless a copy of the written consent of the Owner is filed with the Engineer. The Contractor shall conduct his operations along easements through private property so as not to damage the property and to interfere with its ordinary use as little as possible.

SP-36 Fences

Temporary fences, where required, shall be "wood and wire fence" or other suitable fencing as approved by the Engineer.

Permanent fences shall be restored by the Contractor and shall be finished and installed so that the restoration is equal to or better than the original. Only those portions of original fencing or materials therefrom, that the Engineer approved for reuse shall be used by the Contractor in fence restoration. All other materials, including lumber, paint, creosote, concrete and metal products, shall be furnished by the Contractor.

The cost of temporary fences and permanent fence restoration shall be included under the various classified unit price Contract Items, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefor.

SP-37 Data to be Submitted on Pipe

Within ten days after the date the Contractor is issued the Notice to Proceed and prior to his entering into any subcontract for the manufacture or purchase of any pipe, the Contractor shall submit to the Engineer, in an amount equal to four (4) sets to be retained by the City plus the number of sets desired by the Contractor, the following information:

1. The name and address of the pipe manufacturer and the location of the plant at which the pipe will be manufactured.
2. A general description of and specifications for the pipe and pipe joints proposed.
3. Notarized certificates of manufacture for VCP, PVC, HDPE, and DIP stating conformance to applicable standards and specifications.
4. Any additional information that the Engineer may deem necessary in order to evaluate the qualifications of the manufacturer and to determine the suitability of the proposed pipe to meet the requirements of the Contract Documents.

The Contractor shall not enter into any subcontract for the furnishing of pipe until he has received the Engineer's approval, in writing, of the proposed manufacturer and pipe.

All pipes of specified classes and materials shall be of one kind and shall be produced by a single manufacturer.

SP-38 Inspection of Reinforced Concrete Pipe

All reinforced concrete pipes, reinforced concrete arch culverts, storm drain, and sewer pipe,

and all reinforced concrete elliptical pipes shall be inspected and accepted by a testing laboratory approved by the Engineer.

Each pipe shall bear the stamp of acceptance of the testing laboratory and the Engineer shall be supplied with a copy of each inspection report, including a certification of "D-load," absorption test, conformance to the dimensional requirements, and all other designations of ASTM specifications. The cost of such inspection services shall be included in the unit prices for the respective pipe items.

Unless specified otherwise on the Plans, or directed by the Engineer, all storm sewer pipes shall be ASTM Class III, B wall thickness.

Prior to the manufacture of any reinforced concrete sewer pipe, details of the steel reinforcing and concrete strength together with proof of the adequacy of the pipe design for each size and class of pipe shall be submitted to the Engineer for approval.

As proof that the design of the pipe meets the 0.01-inch crack and ultimate load strength requirements for this class of pipe, the manufacturer shall submit the results of properly certified three-edge-bearing tests already witnessed and verified by an approved independent testing laboratory on identical pipe of identical design or, if such three-edge-bearing test results are not already available or are not acceptable, shall have one pipe, at least four feet in length, tested in three-edge-bearing and witnessed and verified by an approved independent testing laboratory and shall submit certified test results. All costs associated with proof-of-design tests shall be borne by the Contractor.

Concrete sewer pipe shall be tested in accordance with the applicable provisions of ASTM Des: C 497 as required by the ASTM Specification for the pipe.

The basis of acceptance for reinforced concrete pipe shall be in accordance with Section 5.1.1 of ASTM Des: C 76 (round pipe) or ASTM Des: C 507 (elliptical pipe). During manufacture, at least one pipe section shall be shop tested to destruction in three-edge-bearing in the presence of an approved independent testing laboratory for each 1,000 feet of pipe or fraction thereof made. The test pipe sections shall be a minimum of four feet in length. The manufacturer shall have a pipe casting form, of the same inside diameter as the pipe being manufactured, together with the proper reinforcing steel cages, available at all times during manufacture for the purpose of casting test pipes at the times designated by the Engineer. Test pipe sections shall not be lined with plastic sheet. No pipe shall be tested at an age of less than 12 days, and no pipe shall be delivered to the job site until satisfactory completion of shop tests on representative pipe specimens for each 1,000-foot lot of pipe manufacturer. Proof-of-design tests performed on pipe manufactured for this Contract will be accepted by the City in lieu of shop tests for the first 1,000-foot lot of pipe of each size and class manufactured. This test must be within one (1) year of shipment for each size and class of pipe.

The basis for acceptance of nonreinforced concrete pipe shall be in accordance with Section 4.1 of ASTM Des: C14

The Contractor shall obtain, review and submit to the Engineer four (4) copies of certified test reports made by the City's inspection engineer. All costs associated with shop testing shall be borne by the Contractor.

SP-39 Elliptical Concrete Pipe and Round Concrete Pipe Joints

All joints in elliptical concrete pipe and round R.C.P. shall be provided with filter fabric or concrete jacket as per Standard Index No. 280 and as directed by the Engineer. Filter fabric shall be provided at all joints, except the last two joints not supported by a structure; these joints shall be provided with a concrete collar.

The cost of the filter fabric jackets and concrete collars shall be included in the unit cost of pipe. No extra payment will be paid for such jackets or collars.

SP-43 Sand-Cement Riprap Bags

Bags made from synthetic fiber or material shall not be used on this project. The preferred bag material is jute.

SP-44 Standard for Filter Fabric

Unless specified otherwise on the Plans, filter fabric shall be nonwoven fabric per F.D.O.T. Specification Sections 514 and 985. Payment for furnishing and placing the filter fabric shall be included in the contract price for the item or items to which it is incidental.

SP-45 Measurement for Payment

The quantity, in linear feet, to be measured for payment under the various classified unit price Contract Items for pipelines in open-cut, or in the total Lump Sum Price. Depth of cut for sanitary sewers shall be measured from the original ground surface to the pipe invert. Pipelines will be measured along the centerline of the pipe as follows:

1. The measured length of gravity sanitary sewers, regardless of pipe material, will include all fittings, short tunnels and manholes with no deductions for wyes, tees and the width of manholes. Deductions in the measured length of gravity sanitary sewers will be made for the width of structures, such as junction boxes, measured from the outside face to the outside face of the structure walls, plus one foot.
2. The measured length for sanitary or stormwater force mains will include all fittings and short tunnels with deductions for the laid length of valves.
3. Deductions in the measured length of storm sewers will be made for the width of all structures, including manholes and inlets, measured from the inside wall to the inside wall of the structure.

SP-46 Filling Abandoned Sanitary and Stormwater Pipes

The Contractor shall pump a lean mixture of grout into stormwater and sanitary sewers as shown

on the Plans and as directed by the Engineer.

The grout shall be a mixture of flyash and cement, the ratio of which shall be submitted to the Engineer for approval. The grouting shall be carried out by pumps.

This work shall be carried out after the proposed sanitary sewer or stormwater pipe is in service.

The Contractor shall take measures to ensure the pipe is completely filled with the grout. Such measures may consist of constructing temporary stand pipes, grout injection tubes, or other measures approved by the Engineer and as directed in the FDOT Workmanship and Materials Section 121 – Flowable Fill. The Contractor shall also construct approved plugs into the ends of the abandoned sewers. All costs to construct the plugs, stand pipes, grout injection tubes (or other approved measures), and any other necessary steps to provide for a complete item shall be included in the unit cost of the grout, and no additional payment shall be made therefore

SP-47 Sanitary Sewer House Lateral Reconstruction

All sanitary sewer house laterals, in conflict, shall be reconstructed as indicated on the plans and as directed by the Engineer.

SP-50 Cut Sheets

The Contractor shall furnish the Engineer with cut sheets for all pipelines installed under this Contract. The cut sheets shall be arranged in a format approved by the Engineer and shall indicate the pipe invert elevation shown on the Plans; the actual, existing ground surface elevation; and the computed cut from ground surface to pipe invert at manholes and at changes in pipe class and bedding class. The cut sheets will be reviewed by the Engineer and shall be revised as necessary by the Contractor to meet the approval of the Engineer.

SP-51 City Testing

The cost of retesting materials and/or workmanship, which has been initially tested by the City and found to be unacceptable, is to be borne by the Contractor.

SP-56 Removal & Abandonment of Ex. Sewer Systems within Pipeline Construction Payment Limits

The cost of removal or abandonment of existing sewer systems within pay limits including, but not limited to, pipe, inlets, manholes, manhole frames and covers, catch basins, and any other appurtenances as well as the cost to grout or sand-fill any pipe or manholes, where specified on the Plans, shall be included under the various classified unit price Contract Items for pipelines, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefore.

Removal or abandonment of existing storm or sanitary sewer systems outside the sewer system pay limits, as shown on the Plans and directed by the Engineer, shall be paid for at the appropriate

Contract Unit Price, or in the total Lump Sum Price, as applicable.

SP-57 Copeland Park Forcemain

This project consists only of the construction of a dry-line ductile iron pipe stormwater force main. There will be no construction of pump stations or installation of pumps for this project.

SP-61 Monthly Schedules

In addition to the Progress Schedule required in Article 4.02 of the Agreement, the Contractor shall submit a monthly schedule with each pay estimate. Pay estimates will not be processed unless accompanied by an updated monthly schedule per City of Tampa.

SP-62 Replacement of Traffic Markings and Signalization Loops

The Contractor shall furnish all labor, equipment and materials to replace, test and maintain all traffic markings (temporary and permanent) and signalization loops removed or damaged by pipeline construction and appurtenant work as shown on the Plans, specified and directed by the Engineer.

The replacement of traffic markings (temporary and permanent), signalization loops and all appurtenant work shall be replaced by the Contractor in kind.

It shall be the Contractor's responsibility to field verify before construction begins all markings and signalization loops to be replaced.

All traffic markings and signalization loops shall conform to the Workmanship and Materials standards set forth in the latest edition of the Florida Department of Transportation Standard and Specifications.

Payment for the replacement of temporary and permanent traffic markings, signalization loops and all appurtenant work shall be included in the various classified unit price Contract Items, and no separate payment shall be made.

SP-64 Sewer and Stormwater Bypass Pumping

Maintaining sanitary sewer flows and stormwater flows during all phases of construction is the responsibility of the Contractor. The Contractor shall review the plans, phasing, and the construction schedule to determine the need for bypassing to suit the sequence of operations. The bypass operation must provide continuous service. If so directed by the Engineer, the Contractor will provide around-the-clock monitoring to ensure continuous operation and service. To further ensure that no interruptions occur, the Contractor must have adequate back-up pumps on site at all times. The number of back-up pumps shall conform to the following chart:

OPERATING BYPASS PUMPS	REQUIRED BACK-UP PUMPS
1-3	1
4-6	2
7-9	3

The hydraulic design of the bypass system shall be the sole responsibility of the Contractor. All pumps shall be of a type suitable for pumping sanitary and stormwater over an indefinite period without clogging or requiring shutdown for routine maintenance. The Contractor shall submit a complete plan for his bypass system including, but not limited to, pump size and type, pump flow characteristics, and piping size, type, and diameter. All pumps shall be properly secured to avoid damage/vandalism/unauthorized shutdown and baffled to comply with all noise abatement standards. The costs of bypass pumping shall be included in the various Contract Unit Price Items, or in the total Lump Sum Price, as applicable, and no separate payment will be made therefore.

SP-72 Request for Information and Shop Drawings

Contractor shall prepare and submit up to four (4) hardcopies and one (1) bookmarked, unsecured electronic pdf document format (PDF) file for all Submittals, RFI, and Shop Drawings. The City will review the submittals and return one (1) hardcopy and PDF file of the marked up submittal to the contractor. The contractor shall have approved hard copies of all submittals at the job site. Each electronic submission must be in a high resolution color format and shall be original electronic documents from the manufacturer. Hardcopies shall be high quality printed in color. Scanned printouts or poor quality resolution PDF files will not be accepted.

SP-73 Work Directive Change

A Work Directive Change is a written directive to the Contractor, issued on or after the date of the execution of the Agreement, and signed by the Engineer on behalf of the City, ordering an addition, deletion or revision in the work, or responding to an emergency. A Work Directive Change will not change the contract price or the time for completion, but is evidence that the parties expect that the change directed or documented by an Authorization to Proceed with Extra Work letter will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the contract price or the time for completion.

Without invalidating the Agreement, additions, deletions or revisions in the work may, at any time or from time to time, be authorized by a Change Order or a Work Directive Change. Upon receipt of any such document, the Contractor shall promptly proceed with the work involved.

SP-85 Storage of Materials

Unless otherwise directed, the Contractor may not use that portion of the right-of-way located between the existing/proposed curb lines or existing/proposed edges of pavement to store pipe, structures, materials, surplus excavated fill, or equipment other than that used for excavating or dewatering. The Contractor may use that portion of the right-of-way behind the existing or proposed curb line or off the edge of pavement for storage provided that this use does not obstruct pedestrian or vehicular traffic and conforms to the City's Tree Ordinance. If the area behind the curb line/off the edge of pavement is insufficient in size to accommodate the Contractor's storage needs, the Contractor is required to secure the use of a vacant parcel of land for use as a storage site for the duration of this project. Upon completion of the project, all storage areas will be restored to a condition which meets or exceeds the pre-construction condition of the storage area. Payment for use and restoration of storage areas will be included in

the appropriate lump sum pay items and unless the area is within the pipeline pay limits, no separate payment will be made therefor.

Staging and storage sites are the responsibility of the Contractor to obtain.

SP-86 Temporary Stockpiling

For temporary stockpiling of the excavated material within project limits (and anywhere within City limits), the Contractor shall follow the following procedure:

Public Right-of-Way

a. The Contractor will not be allowed to stockpile suitable, excavated material within right-of-way for a period in excess of 30 calendar days. Unsuitable excavated material shall not be stockpiled within public right-of-way for a period in excess of 7 calendar days.

Location other than Public Right-of-way

b. The Contractor shall:

- 1) Obtain the permission (in writing) from the owner of the property where stockpiling is desired.
- 2) At his own expense present the above letter and a contour plan of the site to the Engineer for approval of the stockpiling site.

The time periods of stockpiling shall be specified by the Contractor in writing.

Upon removal of stockpiled material, the Contractor shall clean up and grade the site to its original contours and conditions.

The City of Tampa shall not be a party to the agreement between the Contractor and the property owner.

Regardless of the location of stockpiling, it shall be the Contractor's responsibility to make sure that stockpiling in no way constitutes a public hazard or nuisance and does not interfere with the natural surface runoff in the area.

SP-89 Temporary Work Stoppages

The Contractor shall temporarily discontinue all construction activities from, and including, Thanksgiving Day through the following Sunday, and December 24 through January 2.

Prior to temporary work stoppages, all streets shall be restored to permit access to all businesses and residences and to allow ingress and egress by local traffic only. The Contractor shall maintain all streets at this condition level for the duration of the shutdown period.

All equipment, except that used for excavation and well pointing, and all materials including, but not limited to, manhole structures, pipe, and stockpiled material shall be removed to either the Contractor's storage lot or to a location outside the project area as approved by the Engineer.

The Contractor will also be required to accommodate the annual Gasparilla Parade and Gasparilla Run by ceasing construction activities and providing ingress and egress to allow local traffic only. The time limits for these requirements shall be from one day before to one day after the Gasparilla Parade and the Gasparilla Run. Accommodation of these events will entail restoration of all streets to at least a sand seal coat of crushed concrete or limerock base. All equipment, except that used for excavation and well pointing, and all materials including, but not limited to, manhole structures, pipe, and stockpiled material shall be removed to either the Contractor's storage lot or to a location outside the project area as approved by the Engineer.

All costs associated with furnishing labor, equipment, temporary pavement restoration, demobilization, mobilization, signage, barricades, clean-up, security, and any other incidentals required to accommodate the Thanksgiving, Christmas and New Years' Holidays and Gasparilla Parade and Race shall be included in the various contract unit prices, and no additional payment shall be made therefor.

SP-92 Project Videotaping

Prior to commencing work, the Contractor shall submit to the Engineer for approval, a DVD containing a continuous color video recording including complete coverage of pre-construction conditions of all surface features within the construction's zone of influence, (including detour routes) simultaneously produced audio commentary and electronic display of time and date. The video recording shall be sufficient to fulfill the technical and forensic requirements of the project and provide continuous unedited coverage, establishing locations and viewer orientation with clear, bright, steady and sharp video images with accurate colors free of distortion or other imperfections. The DVD must be accompanied by a detailed log of its contents including date, locations, video counter numbers and features. No work shall be allowed until the completed DVD and log are approved by the Engineer.

SP-93 Stormwater Pipe T.V. Inspection

All proposed stormwater mainline pipe shall be T.V. inspected as per FDOT specification section 430-4.8. The video DVD shall be provided to the City Construction Engineer as well as the final as-builts. The submittal video and as-built shall require acceptance by the City Construction Engineer, prior to the final payment being issued.

All costs associated with T.V. pipe inspection shall be included in the various contract item unit prices for pipelines and no separate payment will be made therefor.

SP-95 Reconstruction of Swales

This contract consists of areas where existing ditches or swales shall be regraded according to the typical section and design as indicated on the Plans.

The Contractor may be required to fill existing ditches or swales as per designed elevations. The Contractor is to use excavated, suitable material from the work site first before importing suitable fill material.

The cost of ditch or swale reconstruction including all material, labor, equipment, etc., to complete the job, excluding the cost of sodding and/or hydroseeding, shall be included under the various classified unit price items, or in the total Lump Sum Price, as applicable, and no additional payment shall be made therefor.

SP-104 Castings Identification

All casting covers, such as for inlets and manholes, shall bear the appropriate City of Tampa identification for stormwater pipe and for sanitary sewers, as shown on the Plans and directed by the Engineer per the applicable City of Tampa Stormwater Technical Specification and Details.

SP-105 Rubble Riprap

Rubble riprap shall be placed against the embankment or other work to be protected in conformity with the specifications, lines, grades, dimensions, and notes shown in the Plans.

Rubble riprap shall consist of broken concrete or of broken stone. The material shall be sound and durable, with specific gravity of at least 1.90. It shall be free of cracks, soft seams, and other structural defects. The pieces shall be roughly angular and shall be reasonably free from thin, flat, or elongated pieces.

The cost of rubble riprap shall include all material, filter fabric underlayment, labor, equipment, etc., to complete the job, and shall be included under the various classified unit price items, or in the total Lump Sum Price, as applicable, and no additional payment shall be made therefor.

SP-109 Existing Sprinkler System

Existing sprinkler systems for lawns and/or shrubbery within the City right-of-way shall be protected or, if disturbed, replaced by the Contractor. All sprinkler systems shall be replaced with those of equal or better quality as approved by the Engineer. The replacement of sprinkler systems shall include all necessary parts, labor, equipment, etc., to complete the existing sprinkler system in operating condition.

In areas where the construction might be in close proximity to existing sprinkler systems, the Contractor shall limit his trench width by using a trench/drag box, at no additional expense to the City. The allowable width of the construction area around existing sprinkler systems shall be as per the detail for sheeted (trench/drag box) trench plus 4 feet for a working area, to either side of the sheeted trench.

All costs associated with any sprinkler system repaired or replaced within the described construction area shall be included in the various unit price items and no additional payment shall be made thereof unless the plan specifically allows for the irrigation system to be replaced or noted and contract line items are in the work order.

SP-112 Removal of Existing Pavement

The Contractor shall remove existing pavement and additional excavated material required for proposed pavement grade as indicated on the Plans and as directed by the Engineer.

The removal of existing pavement shall include the regrading of the shoulder, etc., as indicated on the Plans.

The cost of existing pavement removal and additional dirt removal including all labor, equipment, etc., to complete the job shall be included under the various classified unit price items, or in the total Lump Sum Price, as applicable, and no additional payment shall be made therefor.

SP-122 Foundation Rock (#57)

The Contractor shall also provide 2-foot thick foundation rock fully wrapped with filter fabric under all manholes and inlets of this project. The filter fabric shall be included in the price of rock, and no additional payment shall be made. Where found necessary, the Engineer has the right to increase foundation rock with filter fabric at the same unit bid price.

SP-129 As-Built Plans

The Contractor shall provide the Engineer with “As-Built” plans, as follows:

1. All As-Built information shall be annotated by a Florida Registered Professional Surveyor and Mapper on a separate layer of each AutoCAD drawing file as provided on a disk by the City. Annotation of the new drawing files shall be in accordance with City of Tampa Department of Transportation and Stormwater Services drafting standards, as well as the Standards of Practice / Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. Settings shall be as follows: Color: CYAN, Line Type: CONTINUOUS, Font: ROMANS, Layer Name: AS-BUILT, AutoCAD Menu Name: ACAD.MNU, and File Format: AUTOCAD latest version.
2. All surveys shall be completed and certified by a Florida Registered Professional Surveyor and Mapper hired and/or employed by the Contractor, and shall be in accordance with the Standards of Practice / Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. Survey data shall be submitted as an electronic data file in AutoCAD latest version. The Contractor shall also include as supporting data the ASCII files of digital raw survey data, closure reports, adjustment reports, and/or copies of any hand written field notes or sketches.
3. “As-Built”, or “Record”, surveys, as may be required by contract, or agreement, shall consist of survey data collected on all constructed improvements, so they may be compared to and contrasted with the design plans and/or construction drawings. The annotated disk shall delineate all changes and deviations to the planned improvements within the project limits, to include, but not be limited to, pavement, curb & gutter, sidewalk, driveways, inlets, manholes, all piping, inverts, ditches, ponds, valves, hydrants, water meters, signalization, hand holes, signing & pavement marking, landscaping, and irrigation. All changes and deviations shall be delineated by Station-Offset and vertical alignment values (or in the same format as depicted on the construction plans) and shall be clearly shown on the drawing files.
4. The Contractor shall comply with the above requirements and shall submit one check print set of the plans at the same scale as the construction plans, and all the supporting survey data files, to the Engineer for review within three weeks of substantial completion of the project. Final payment for the project shall not be made until the As-Built information is

received for review, any corrections are made, and approval granted by the Engineer. Upon approval, the Contractor shall provide the final As-Built drawings on the disk, at the same scale as the construction plans. These files shall be AutoCAD Drawings and Adobe PDF. One signed and sealed paper copy shall be sent to the Department of Transportation and Stormwater Services, Engineering Division.

The cost for this work shall be included in the contract price for Mobilization and no separate payment shall be made for meeting the above As-Built requirements.

SP-130 SAFETY:

A.Responsibility: Employees shall immediately report any unsafe work practice or unsafe condition to their supervisor(s). The Contractor is solely responsible for the safety of its workers, and shall comply with all applicable requirements [i.e.: 29 CFR 1910 -Occupational Safety and Health Standards, 29 CFR 1926 - Safety and Health Regulations for Construction, etc.] and industry safety standards while at the work site. The fact that City personnel may bring un-safe conditions to the attention of any member of the Contractor's work force does not relieve the Contractor of this responsibility.

All Contractors' employees and sub-contractors should be given a copy of SP-130.

The Contractor shall have a designated Safety Officer within its organization. At the Pre-Construction meeting, the Contractor shall provide the name and contact information of the Safety Officer to the Engineer.

At the Pre-Construction meeting, the Contractor will be given pertinent safety related information, necessary forms and instructions that pertain to any work that might be utilized during the contract. The Contractor shall be responsible to disseminate that information to its employees and sub-contractors. Special care shall be taken by the Contractor to ensure that any new employee or sub-contractor to the work site shall be briefed on these safety instructions.

If warranted by the project and directed by the Engineer, the Contractor shall develop and implement a comprehensive health and safety plan for its employees that will cover all aspects of onsite construction operations and activities associated with the Contract. This plan must comply with all applicable health and safety regulations and any project specific requirements specified in the Contract.

B. Incident Reporting: All accidents that result in personal injury, illness or property damage shall be immediately reported and investigated, regardless of the extent of injury, illness or property damage. Employees must report accidents within one hour (or as soon as practical) from the time of occurrence to their immediate supervisor, who in turn will report it to the City's inspector. The City inspector will record the incident in the daily report and report it to the Risk Management Division (274-5708).

C. Air-Borne Debris: All personnel in proximity to drilling, sawing, sanding, scraping, spraying, power-washing or other work being done, either in enclosed spaces or in the open,

that creates dust or air-borne debris shall wear eye protection [29 CFR 1910.133] and a respirator [29 CFR 1910.134].

D.Confined Spaces: OSHA defines a confined space as having limited or restricted means for entry or exit, and is not designed for continuous employee occupancy. Confined spaces include, but are not limited, to vaults, tanks, manholes, wet-wells, pipelines, utility tunnels, etc.

The Contractor shall take measures [29 CFR 1910.146 (c)(5)] to ensure that atmospheric conditions in confined spaces are not hazardous to occupants. This can be accomplished by forcing a sufficient amount of clean air through the confined space and testing the atmosphere by using a portable certified, calibrated, atmosphere monitor that meets OSHA requirements [29 CFR 1910.146(c)(5)(ii)(C)]. The atmosphere monitor should record oxygen content, flammable gases and vapors and toxic air contaminants, such as the Industrial Scientific TMX-412.

E.Trench Safety: Any excavation deeper than four (4) feet shall adhere to the requirements contained in 29 CFR 1926.650 thru 652 and the Florida Trench Safety Act [Florida Statutes, ss 553.60 - 553.64].

F.Open Flames: No fires shall be allowed. No open flames necessary for any construction activity shall ever be left un-attended. A current, portable, fully charged fire extinguisher shall be located with each activity requiring an open flame.

G.Sparks: Any activity lasting more than 10 continuous minutes that creates sparks, such as grinding or chipping, shall have a dedicated fire watch in attendance. A current, portable, fully charged fire extinguisher shall be located with each activity creating sparks, regardless if a fire watch is required or not.

H.First Aid: The Contractor shall furnish appropriate First Aid Kits [29 CFR 1910.151] and shall be responsible to ensure its employees are properly trained to render first aid. If injurious corrosive materials are to be utilized, eyewash and body wash facilities must be provided in the immediate area.

I. Related Costs: All costs associated with these, or any safety measures shall be included in the total lump sum contract price or the various contract item unit prices, as applicable, and no separate payment shall be made therefor.

SP-137 Post-installation Testing of PVC Gravity Pipe

In accordance with the provisions of Workmanship and Materials Section 11 – PVC Pipe Gravity, subsection W- 11.07, all PVC pipelines shall be leakage tested, deflection tested, and T.V. inspected prior to final acceptance of the project. The Contractor shall be responsible for performing all tests and inspections on the pipeline. The City will no longer perform the T.V. inspection.

In the instance of a “point repair” the requirements to leakage test, deflection test and/or perform a TV inspection will not be required. A point repair in a gravity line is defined as

replacing any distance of sewer pipe, but not the entire length of pipe, between manholes. If the entire length of pipe between manholes is replaced the leakage test, deflection test and TV inspection will be required. A point repair in a force main is defined as replacing a length of up to two contiguous nominal sections of pipe.

All costs associated with pipeline testing and TV inspection shall be included in the various contract unit prices, and no separate payment will be made therefore.

CONTRACT PAY ITEMS

C1.00 - Contingency

The Contractor shall include a \$250,000 contingency sum, to be included as part of the total bid amount for this contract. The contingency is for the purpose of compensating the Contractor for any incidental work that may arise as construction operations proceed and was not addressed as part of the original work portrayed in the Plans and Specifications.

The \$250,000 contingency sum is an upset limit. Any amount of the contingency shall be paid only after negotiations.

Contingency funds shall be disbursed at the discretion of the Engineer. No contingency funds shall be disbursed if there are no contingent items.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
100	Contingency	LS

C1.01 - Mobilization

The Contractor shall furnish all equipment, labor, and materials necessary to mobilize his forces as necessary to perform all the work under this Contract.

Work under this section includes bonding and insurance; transportation, and otherwise movement of all personnel, equipment, supplies, materials and incidentals to the project site; establishment of temporary offices, buildings, safety equipment and first aid supplies, sanitary and other facilities; and all other preconstruction expense necessary for the start of the work, excluding the cost of construction materials, to be constructed under this Contract as shown on the Plans and directed by the Engineer.

Payment for Mobilization will be made at 8% of each separate Work Order, not to exceed the lump sum bid amount.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
101	Mobilization – 8% of work order	LS

C1.02– Maintenance of Traffic

The Contractor shall furnish all materials, equipment, and labor to establish and maintain all traffic maintenance devices and personnel as shown on the Plans, specified, and directed by the Engineer.

The work includes installation of all signs, video and photographic preconstruction pictures, structural testing, barricades, lights and flagmen, additional earth excavation, selected fill, temporary wearing surface, temporary bridges, temporary ADA paths, roadway closures and requirements, as-built survey and all appurtenant work complete in place as necessary to control traffic and provide for safety to the public, all in compliance with the Manual on Uniform Traffic Control Devices, "MUTCD," with subsequent revisions and additions, and to the satisfaction of the Engineer. MOT direction shall conform to project Plans and Specific Provisions. Contractor shall provide metal walkways for pedestrian access from on-street parking to residential homes during street closures.

The Contractor will be required to have a licensed Professional Engineer sign and seal a Maintenance of Traffic Plan to be submitted to the City’s Right-of-Way Department for permit.

Payment for Maintenance of Traffic will be made at 10% of each Work Order, not to exceed the lump sum bid amount.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
102	Maintenance of Traffic – 10% of work order	LS

C1.052 - TREE REMOVAL

The Contractor shall furnish and install all labor, materials, services, permitting, public noticing, equipment and appurtenances to remove existing grand trees and non-grand trees within the limits of construction as shown in the Contract Drawings for removal and properly dispose of material off site.

The work includes, but is not limited to, the following: removal of stumps and brush and the removal of any undesirable material within the limits of construction as shown in the Contract Drawings. All tree removal shall be done via hand methods with chainsaw and a rubber tire skid steer to prevent an impact to adjacent trees, properties, structures, and shall conform to the City of Tampa Natural Resources Chapter 13.

Payment for the Tree Removal will be made at the appropriate Contract Unit Price per Each (EA).

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
105.2B	Tree Removal – 9”-18” dbh	EA

C1.101 - CLEARING AND GRUBBING POND SITE

The Contractor shall furnish all materials, equipment, and labor for clearing and grubbing as shown on the Plans, specified, and directed by the Engineer.

Work in this Contract Item includes, but is not limited to, removal and disposal of stumps, roots, concrete, building structures, fencing, pavement, and tree protection, as specified on the Plans.

Clearing and Grubbing shall conform to the City Standard Specifications for Workmanship and Materials Section 110 – Clearing and Grubbing of the Specifications; disposal of debris, to the City Standard Specifications for Workmanship and Materials Section 113 – Disposal of Debris.

Payment for clearing and grubbing will be made at the Contract Unit Price per Acre (AC).

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
110.1	Clearing and Grubbing Pond Site	AC

C1.103– GROUTING OF EXISTING STORM PIPE

The Contractor shall furnish and install all labor, materials, services, equipment and appurtenances to access pipe at both ends, plug, grout and abandon the existing stormpipes that are located in the project

area which may include areas outside the limits of new construction as shown on the Plans, specified, and directed by the Engineer.

The work includes, but is not limited to, the following: grouting and abandonment of existing stormpipe in the project area which may include areas outside the limits of the new construction of pipe areas as shown in the Contract Drawings.

Grouting shall conform to the FDOT Workmanship and Materials Section 121 – Flowable Fill.

Payment for the grouting and abandonment of existing storm pipe will be made at the appropriate Contract Unit Price per Cubic Yard (CY).

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
110.3	Grout existing stormwater pipe	CY

C1.20 – EXCAVATION AND REMOVAL OF SOIL

The Contractor shall furnish all materials, equipment, and labor for excavation shown on the Plans, specified, and directed by the Engineer.

Work in this Contract Item includes the excavation required as shown on the Plans. The work also includes all necessary grading, testing, backfilling, sheeting, shoring, bracing, temporary ramps, construction fencing, dewatering, regrading of excavated soil per grading plans, disposal of surplus excavated material, and protection of adjacent facilities, and all appurtenant work, complete and in place.

The work shall conform to the City of Tampa Standard Specifications – Workmanship and Materials Section 1 – Excavation – Earth and Rock and Section 108- Dewatering.

The Contractor shall refer to the latest version of FDOT Workmanship and Materials Section 120 – Excavation and Embankment.

Disposal of unsuitable materials shall conform to the requirements of the City Standard Specifications for Workmanship and Materials Section 113 – Disposal of Debris and Section 108- Dewatering.

Payment for excavation will be made at the Contract Item Unit Price per Cubic Yard (CY) of soil material excavated per truck load.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
120	Regular subsoil excavation	CY

C1.30 CLEAN FILL MATERIAL - SAND

The Contractor shall furnish, from sources other than excavations made in the Contract, transport, place, and compact select sand as ordered by the Engineer in writing and not specifically included under other Contract Items. The work also includes disposal of surplus excavated material and all labor and equipment. Select sand shall be as defined under Workmanship and Materials Section 2 – Backfilling.

The work does not include transporting, placing, and compacting approved surplus sand from excavations made in this Contract. The Contractor shall use all such approved surplus sand available from excavations made in this Contract prior to supplying select sand from other sources.

The quantities of Select Clean Fill Material - Sand, obtained from sources other than excavations in this Contract, in cubic yards, to be measured for payment will be the actual compacted volume of select sand placed within the payment limits shown on the Plans or established by the Engineer.

Select sand used to fill voids resulting from unauthorized excavation, or where required for dewatering, will not be measured for payment even though their use is ordered by the Engineer.

Payment for Select Fill Material - Sand, ordered by the Engineer in writing, will be made at the Contract Unit Price per Cubic Yard (CY) of sand fill material.

No payment will be made under this Contract Item for approved surplus sand obtained from excavations made in this Contract.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
130	Clean Fill	CY

C1.35 DITCH GRADING

The Contractor shall furnish all materials, equipment, and labor for ditch cleaning shown on the Plans, specified, and directed by the Engineer.

Work in this Contract Item includes the excavation required as shown on the Plans. The work also includes all necessary grading, testing, backfilling, sheeting, shoring, bracing, temporary ramps, construction fencing, dewatering, regrading of excavated soil per grading plans, disposal of surplus excavated material, and protection of adjacent facilities, and all appurtenant work, complete and in place.

The work shall conform to the City of Tampa Standard Specifications – Workmanship and Materials Section 1 – Excavation – Earth and Rock and Section 108- Dewatering.

The Contractor shall refer to the latest version of FDOT Workmanship and Materials Section 120 – Excavation and Embankment.

Disposal of unsuitable materials shall conform to the requirements of the City Standard Specifications for Workmanship and Materials Section 113 – Disposal of Debris and Section 108- Dewatering.

Payment for ditch grading will be made at the Contract Item Unit Price per Linear Foot (LF) of excavated soil.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
135	Ditch Grading	LF

C2.85 – BEDDING

The Contractor shall furnish all materials, equipment, and labor for the required for bedding shown on the Plans, specified, and directed by the Engineer.

Items included in this Contract Item include, but are not limited to, the material, equipment and labor necessary to construct bedding composed of one of the optional materials as specified on the Plans and shall conform to the latest version of the FDOT Standard Specifications – Workmanship and Materials Section 200- Rock Base.

All pipes shall be installed using Class C bedding, unless otherwise instructed or advised by the Department. Backfill shall be clean soil free of debris, organics, rocks, and deleterious material.

Payment for bedding will be made at the appropriate Contract Item Unit Price per Ton (TN) of rock base placed for bedding.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
285.3	Bedding	TN

C3.34 - SUPERPAVE ASPHALTIC CONCRETE, SP12.5

The Contractor shall furnish all materials, equipment, and labor for the required installation of asphalt material shown on the Plans, specified, and directed by the Engineer.

Items included in this Contract Item include, but are not limited to, the material, equipment and labor necessary to construct a superpave asphalt concrete pavement with the type of mixture specified on the Plans and shall conform to the latest version of the FDOT Standard Specifications – Workmanship and Materials Section 334 – Superpave Asphaltic Concrete.

Restoration of City Streets shall conform to the requirements of the City Standard Specifications for Workmanship and Materials Section 16 – Restoration of Street Pavements.

Payment for superpave asphaltic concrete, SP12.5 (2”) will be made at the appropriate Contract Item Unit Price per Ton (TN) of material placed.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
334	Superpave Asphaltic Concrete, SP12.5 (2”)	TN

C4.25 – STORMWATER INLETS, MANHOLES, AND JUNCTION BOXES

The Contractor shall furnish all materials and equipment, test, construct, install, reconstruct, and maintain the stormwater inlets, stormwater manholes and stormwater junction boxes as shown on the Plans, specified, and directed by the Engineer.

Stormwater inlets, manholes, and City Manholes shall conform to the City of Tampa Stormwater Details and Workmanship and Materials Section 425 – Stormwater Inlets, Manholes and Junctions Boxes and FDOT Index 200 – Manholes. Manhole frames and covers shall conform to the City of Tampa standards.

The work includes all testing, excavation, backfilling, limestone screenings, bedding, sheeting, shoring, bracing, dewatering, formwork, castings, brickwork, adjusting structures, removal of pavement, sidewalks, curb and curb gutter, concrete work and reinforcing, all inlet and outlet pipe, making all pipe

connections, setting pipe stubs and plugs for future connections, nonpermanent and special temporary pavement replacement, disposal of surplus excavated material, and protection of adjacent facilities, and all appurtenant work, complete and in place.

Not included in the work are additional earth excavation and additional select fill material which, if ordered or specified, will be included for payment under other Contract items.

The number of inlets, manholes, and junction boxes to be measured for payment will be the actual number of such structures installed in the work.

Payment for inlets, manholes, and junction boxes will be made at the appropriate Contract Item Unit Price per Each (EA).

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
425.1	Inlet, Grate Type E, <10' (FDOT)	EA
425.3	Stormwater manhole, J-7, <10' deep (4') (FDOT)	EA
425.5.2	Inlet, City of Tampa, Modified Type H Bottom	EA
425.2	Stormwater manhole, P-7, <10' deep (3.5") (FDOT)	EA
425.4	Inlet, City of Tampa, curb type 1, <10'	EA
425.7	Inlet, City of Tampa, curb type BR-1, <10'	EA
425.8	Inlet, City of Tampa, curb type T, <10'	EA

C4.3 – PIPE CULVERTS AND STORM SEWERS

Under the respective Contract Items for pipe culverts and storm sewers, the Contractor shall furnish all materials and equipment, construct, test, and maintain complete all pipe culverts and storm sewers as shown on the Plans, specified, and directed by the Engineer.

All pipe culverts and storm sewers, including fittings, shall be manufactured and installed in accordance with the City of Tampa Standard Specifications – Workmanship and Materials Section 430 – Pipe Culverts and Section 108- Dewatering.

The work includes all removal of sidewalks, driveways, curbs, curb and gutter, existing storm sewer systems, and permanent pavement; video inspection, excavation, short tunnels, backfill, sheeting, shoring, bracing, dewatering, pipe bedding, pipe fittings, pipe work, making all pipe connections, flared and mitered end sections, standard pipe cradles and encasements shown on the Plans, anchors, sealants, jackets and coupling bands, installation and removal of plugs and bulkheads, testing, special temporary and nonpermanent pavement replacement, protection, repair and replacement of utilities and house services, maintenance of traffic including maintaining access across driveways along the line of the work, protection, trimming and replacement of trees and shrubs, protection, repair and replacement of existing culverts and other storm sewerage facilities and all utilities, reconstruction or regrading of road shoulders and ditches, disposal of surplus excavated material, protection of existing structures, making joints in protective plastic lining between pipes and between pipes and manholes or structures and all other work incidental to the installation of all pipe culverts and storm sewers complete in place.

The work does not include rock excavation, manholes, junction chamber, surface restoration comprising lawn or permanent pavement replacement, additional earth excavation or additional selected fill material, short tunnels and driveway, sidewalk and curb and curb gutter replacement. When shown on the Plans or ordered, such work will be paid for under other appropriate Contract Items.

The quantity of storm sewer pipe, in linear feet, to be measured for payment shall be the actual length of new pipelines placed in the work, as shown, specified and directed. Pipelines will be measured along the centerline of the pipe.

Deductions in the measured length of storm sewers will be made for the width of all structures, including manholes and inlets, measured from the inside wall to the inside wall of the structure.

Payment for pipe culverts and storm sewers will be made at the appropriate Contract Item Unit Price per linear foot (LF) of pipe installed.

Payment for connection of pipe to existing stormwater structures will be made at the appropriate Contract Item Unit Price per Each (EA).

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
430.15	15" Round Stormwater pipe (RCP)	LF
430.1	18" Round Stormwater pipe (RCP)	LF
430.2	24" Round Stormwater pipe (RCP)	LF
430.30A	30" Round Stormwater pipe (RCP)	LF
430.60A	60" Round Stormwater pipe (RCP)	LF
430.4	12"x18" Elliptical Stormwater pipe (ERCP) (CLIV)	LF
430.5	14"x23" Elliptical Stormwater pipe (ERCP)	LF
430.6	19"x30" Elliptical Stormwater pipe (ERCP)	LF
430.11	19"x30" Mitered end section	EA
430.12A	Connect stormwater pipe to existing stormwater structure (0-24")	EA
430.12B	Connect stormwater pipe to existing stormwater structure (30-60")	EA

C5.20 – PERMANENT CURB AND GUTTER REPLACEMENT

The Contractor shall furnish all labor, equipment, and materials to construct and maintain all permanent concrete, bituminous, and granite curb or curb and gutter, and drop curb, removed or damaged by pipeline construction and appurtenant work as shown on the Plans, specified, and directed by the Engineer.

All concrete work under this series shall conform to the latest FDOT Standard Specifications – Workmanship and Materials Section 346 - Portland Cement Concrete (except 346.6.1).

The work includes all excavation, filling, shaping, grading, base material, compaction of stabilization subbase, and lawn replacement incidental to curb, or curb and gutter replacement, drop curb, and other appurtenant work complete in place.

The length of permanent curb and gutter replacement to be measured for payment will be the actual length of gutter placed in the work within payment limits for surface restoration shown on the Plans, or ordered by the Engineer.

Payment limits for permanent curb and gutter replacement along pipelines shall include removal and replacement of gutter incidental to construction of manholes and structures. All curb and gutter removed or damaged and requiring replacement outside payment limits will not be measured for payment and shall be replaced by the Contractor at his own expense.

Payment of permanent curb and gutter replacement will be made at the Contract Item Unit Price per Linear Foot (LF) of curb and gutter placed.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
520.110	Concrete curb and gutter, type F	LF
520.6	Concrete curb and gutter, type D	LF
520.8	Concrete drop curb	LF

C5.22 - PERMANENT SIDEWALK/DRIVE REPLACEMENT/CONCRETE FLUME & HEADWALL

The Contractor shall furnish all labor, equipment, and materials to replace and maintain all permanent sidewalks, driveways removed or damaged by pipeline construction, and appurtenant work as shown on the Plans, specified, and directed by the Engineer.

Permanent sidewalk/driveway replacement shall conform to the requirements of the City of Tampa Standard Specification for Workmanship and Materials Section 16 - Restoration of Street Pavements.

Reconstruction of concrete flumes and headwall concrete work under this series shall conform to the latest version of the FDOT Standard Specification – Workmanship and Materials Section 346 – Portland Cement Concrete.

The work includes all excavation, filling, shaping, grading, temporary limestone surface, base material, paved surface, architectural pavers, lawn replacement incidental to sidewalk/driveway, and other appurtenant work complete and in place.

The quantity of permanent sidewalk/driveway replacement to be measured for payment will be the actual area of permanent sidewalk/driveway surface placed in the work within payment limits and ordered by the Engineer.

Payment limits for permanent sidewalk/driveway replacement along pipelines shall include removal and replacement of sidewalk/driveway surface incidental to construction of manholes and structures. All sidewalk/driveway surface removed or damaged outside payment limits will not be measured for payment and shall be replaced by the Contractor at his own expense.

Where the existing sidewalk/driveway surface is a nonpermanent type consisting of shell, gravel, limerock, crushed stone, or other similar material, no payment will be allowed for replacement of permanent sidewalk/driveway surface. Replacement of surface for such nonpermanent sidewalk/driveway surfaces will be included in the various classified unit price Contract Items for pipelines or considered under the provisions for "Extra Work."

Payment for permanent sidewalk/driveway replacement, reconstruction of headwall or flume will be made at the Contract Item Unit Price per Square Yard (SY) of sidewalk/driveway or concrete flume/headwall replaced, restored, or removed/replaced.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
522.1	Concrete sidewalk, 6" thick (3000 psi)	SY
522.2	Concrete sidewalk, 6" thick – driveways (3000 psi)	SY

C5.30 RIPRAP (RUBBLE)

The Contractor shall furnish all labor, materials, and equipment to install rubble riprap as shown on the Plans, specified, or as directed by the Engineer.

The work includes all excavation, backfilling, grading, compacting, restoration, geotextile fabric, select fill, dewatering, broken stone rubble, shaping, disposal of surplus excavated material, and all incidentals, complete and in place.

The riprap (rubble) shall conform to the requirements of the latest FDOT Standard Specifications- Workmanship and Materials Section 530 – Riprap (Rubble) and latest FDOT Standard Specifications – Workmanship and Materials Section 985 – Geotextile Fabrics and the details denoted on the Contract Plans.

Payment for rubble riprap shall be made at the appropriate Contract Item Unit Price per Cubic Yard (CY) of rubble riprap installed.

<u>Item</u>	<u>Description</u>	<u>Unit</u>
530	Riprap (Rubble)	CY

C5.50 – FENCING, ALUMINUM

The Contractor shall furnish all labor, equipment and materials to remove and reset aluminum fencing as shown on the Plans and as directed by the Engineer.

The work includes all labor, equipment, and materials necessary to remove and reset aluminum fencing, new 6’ wood or chain link fencing, gates to the dimensions, and limits, as indicated on the Plans.

Fencing, aluminum or wood shall conform to the requirements of the latest version of the FDOT Standard Specifications – Workmanship and Materials Section 550 – Chain Link Fencing and Wood fence Repair or Replacement.

Payment for fencing shall be made under the appropriate Contract Item Unit Price per Linear Feet (LF) reset.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
550.1	Remove and reset fence	LF

C9.00 - PVC PIPE (GREEN AWWA C900 DR-18 & C905 DR-25)

The Contractor shall furnish all materials and equipment, construct, test, and maintain complete all pipe sewers as shown on the Plans, specified, and directed by the Engineer.

The pipe sewers shall conform to the latest version of the City of Tampa– Workmanship and Materials Section 11 – PVC Pipe Gravity.

The work includes all related work and appurtenances required to locate existing sanitary sewer lines and make the connections as shown on the Plans to the proposed lines, maintaining existing sanitary sewer in operation, removal of existing abandoned or out-of-service pipes encountered during excavation, sidewalks, driveways, curbs, curb and gutter, and permanent pavement, excavation, saw cutting concrete and asphalt, short tunnels, backfill, sheeting, shoring, bracing, dewatering, pipe bedding, pipe fittings,

pipe work, making all pipe connections, locate wire, standard pipe cradles and encasements shown on the Plans, installation and removal of plugs and bulkheads, testing, special temporary and nonpermanent pavement replacement, nonpermanent sidewalk and driveway replacement, protection, repair and replacement of utilities and house services, protection, trimming and replacement of trees and shrubs, protection, repair and replacement of culverts and other storm water facilities, reconstruction or re-grading of road shoulders and ditches, disposal of surplus excavated material, protection of existing structures, removal and replacement of fence, clearing and grubbing, making joints between pipes and manholes or structures and all other work incidental to the installation of the sanitary sewer pipe complete in place.

The work does not include sheeting left in place, rock excavation, manholes, surface restoration comprising lawn or permanent pavement replacement, additional earth excavation or additional selected fill materials, driveways, sidewalk and curb or curb and gutter replacement and, when shown on the Plans or ordered, such work will be paid for under other appropriate Contract Items.

The quantity of sewer pipe, in linear feet, to be measured for payment shall be the actual length of new pipelines placed in the work, as shown, specified and directed by the Engineer. Depth of cut for sanitary sewers shall be measured from the original ground surface to the pipe invert. Pipelines will be measured along the centerline of the pipe.

The measured length for sanitary force mains will include all fittings and short tunnels with deductions for the laid length of valves.

Payment for sewer pipe will be made at the appropriate Contract Item Unit Price per Linear Foot (LF) of the respective pipe.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
900.1	8" Dia. PVC Pipe (C-900, DR-18)	LF
900.2	24" Dia. PVC Pipe (C-900, DR-18)	LF

C17.06 - SOLID WALL PVC PIPE HOUSE LATERAL AND SANITARY PVC

The Contractor shall furnish all materials and equipment, construct, test and maintain house laterals.

The pipe laterals shall conform to the latest version of the City of Tampa– Workmanship and Materials Section 11 – PVC Pipe Gravity.

The work includes all related work and appurtenances required to locate existing house connections and make the connections to the proposed lines, excavation, short tunnels, backfill, sheeting, shoring, bracing, dewatering, removal of sidewalks, driveways, curbs, curb and gutter and permanent pavement, pipe bedding, pipe, pipe fittings used to change in line or grade where directed by the Engineer, disposal of surplus excavated material, protection, repair and replacement of utilities, house services, trees and shrubs and other storm sewerage facilities, special temporary pavement, restoration and regrading of road shoulders and ditches and all other work incidental to the installation of pipe house laterals complete in place as shown on the Plans, specified, and directed by the Engineer.

The length of house lateral to be measured for payment will be the actual length of house lateral placed and shown on the Detail Sheets.

Payment for house lateral will be made at the Contract Item Unit Price per Each (EA) of house lateral and unit price per Linear Foot (LF) for PVC pipe.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
1706	6-Inch Diameter PVC Pipe House Lateral (SDR-35) (<30')	EA
1707	6" Dia. PVC Pipe (SDR-26)	LF
1708	8" Dia. PVC Pipe (SDR-26)	LF
1709	10" Dia. PVC Pipe (SDR-26)	LF

C46.60 - SOLID WALL (SDR-35) PVC CLEANOUT AND COVER

The Contractor shall furnish all materials and equipment, construct, test and maintain solid wall SDR-35 pipe cleanouts and covers.

The pipe cleanouts and covers shall conform to the latest version of the City of Tampa– Workmanship and Materials Section 30 – Miscellaneous Pipe & Fittings.

The work includes all excavation, backfill, sheeting, shoring, bracing, dewatering, removal of sidewalks, driveways, curbs, curb and gutter and permanent pavement, pipe bedding, pipe wye and adjacent pipe bend, plug and treated wood marker stake at the end of the house lateral, disposal of surplus excavated material, protection, repair and replacement of utilities, house services, trees and shrubs, and culverts and other storm sewerage facilities, and all other work incidental to the installation of cleanouts and covers complete in place as shown on the Plans, specified, and directed by the Engineer.

The number of cleanouts and covers to be measured for payment will be the actual number of cleanouts and covers installed in the work.

Payment for cleanouts and covers shall comprise the additional cost of each cleanout and cover over the cost of straight sewer pipe of equivalent length and diameter and will be made at the Contract Item Unit Price per Each (EA) cleanout and cover.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
4660	6-Inch Diameter PVC Cleanout and Cover	EA

C89.00 – SOD REPLACEMENT AND HYDROSEEDING

The Contractor shall furnish all labor, materials, equipment and services to replace and maintain all lawn areas removed or damaged by pipeline construction and installation of hydroseeding for new pond construction and appurtenant work as shown on the Plans, specified, and directed by the Engineer.

Sod replacement by St. Augustine (8901), Bahia sodding (8902) and Hydroseeding (8903) or equal shall conform to the requirements of the Workmanship and Materials Section 2930 – Sodding and Hydroseeding and FDOT Workmanship and Materials and Technical Specifications Section 570 – Turf.

Sod replacement along pipelines, sidewalks, curb and gutters, edge of pavements, house laterals, and around manholes and structures will be included for payment under this Contract Item.

The quantity of lawn area, in square yards, to be measured for payment will be the actual area of seeded or Bahia/St. Augustine sodded areas, within the payment limits for surface restoration shown on the

Plans. Payment limits for lawn replacement along pipelines shall include removal and replacement of lawn area incidental to construction of manholes and structures. All lawn area removed or damaged and requiring replacement outside payment limits will not be measured for payment; however, the type of replacement shall be determined as specified above, and shall be replaced by the Contractor at his own expense.

Payment for sod replacement will be made at the appropriate Contract Item Unit Price per Square Yard (SY) Unit. Payment for hydroseed will be made at the appropriate Contract Item Unit Price per Square Yard (SY).

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
8901	Sod – St. Augustine	SY
8902	Sod – Bahia	SY
8903	HydroSeeding	SY

C92.50 –ADA COMPLIANT RAMPS

The Contractor shall furnish all labor, equipment and materials to construct the ADA compliant ramps and appurtenant work as shown on the Contract Plans, specified, and directed by the Engineer.

The work includes all detectable warning surfaces and all appurtenant work complete in place. All ADA pedestrian ramps will comply with FDOT Index 304, 2015 Design.

The quantity of ADA compliant ramps measured for payment will be the number of each as shown on the Contract Plans, or as specified and directed by the Engineer.

Payment for ADA compliant ramps will be made at the Contract Item Unit Price for Each (EA) of the pedestrian ramps placed.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9250	ADA Compliant Ramps	EA

General – Water main work and offsets including Stormwater Ductile Iron Forcemain

The Contractor shall receive and accept the compensation provided in the Proposal and the Agreement as full payment for furnishing all materials and all labor, tools and equipment, for performing all operations necessary to complete the work under the Agreement, and also in full payment for all loss or damages arising from the nature of the work, or from any discrepancy between the actual quantities of work and quantities herein estimated by the Engineer, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the Department.

It is the intent of these contract documents that any cost for which compensation is not directly provided by a bid item shall be prorated and included in the bid item for which they are required. Failure of the Contractor to follow this procedure shall be basis for rejection of his bid.

The prices stated in the Bid Proposal include all costs and expenses for taxes, labor, equipment, commissions, transportation charges and expenses, patent fees and royalties, labor for handling material during inspection together with any and all other costs and expenses for performing and completing the work as shown on the plans and specified herein. The basis of payment for any item at the unit price shown in the Proposal shall be in accordance with the description of that item in this Section.

No separate payment will be made for the following items, the cost of such work shall be included in the applicable contract pay items of work, including separate mobilization/ demobilization charges for compliance with FDEP or any other agency:

1. Separate mobilization charges for each work order except as noted;
2. Clearing and grubbing;
3. Excavation, including necessary pavement/slab removal;
4. Shoring and sheeting as required by OSHA trench excavation safety standards unless specifically provided for in a pay item;
5. Dewatering and proper disposal of all water unless specifically provided for in a pay item;
6. Backfill and proper compaction, including suitable fill;
7. Grading;
8. Replacement or restoration of paved or unpaved roadways, grass and shrubbery plots outside of established pay limits;
9. Temporary facilities and controls during construction such as water/sanitary facilities, traffic control, informational signs and environmental protection, unless specifically provided for in a pay item;
10. Providing and maintaining silt barriers for drainage structures and silt fences for the duration of the project;
11. Removing and legally disposing of waste material due to construction, including but not limited to valve boxes that need to be removed from abandoned water mains;
12. Cleanup and restoring the job site to its original condition, which includes but is not necessarily limited to restoring the ground surface to its original grade;
13. Testing and placing system in operation, including re-mobilization for FDEP testing;
14. Any material and equipment required to be installed and used for the tests;
15. Maintaining the existing quality of service during construction, including flushing mains that are cleared but not put into service after the bac-T tests are complete;
16. Repair of sanitary sewer house laterals that were properly marked (see Specific Provision SP-31)

17. Repair of water services damaged during construction;
18. Adjusting new or existing water meter boxes to grade which are affected by construction;
19. Appurtenant work as required for a complete and operable system;
20. Coordination with all Federal, State and Local agencies and utilities;
21. Cutting of existing or new pipe for purposes of abandonment or installation of new pipe, valves or fittings;
22. Tree trimming as required by the City of Tampa Parks Department or any other agency unless specifically provided for as a contract item;
23. Verification of pipe elevation as stated in Section 8 of the General Provisions
24. Repair of private irrigation systems damaged during construction;
25. Furnishing and installing suitable temporary fences, as directed by the Engineer, to adequately secure areas protected by a permanent fence when that permanent fence must be removed. The temporary fence shall remain in place until the permanent fence is replaced;
26. Furnishing and installing all HDPE MJ adapters, HDPE flanged adapters, HDPE electrofusion tapping tees, electrofusion corporation saddles or HDPE electrofusion couplings;
27. Maintaining red-line drawings of changes to construction plans, to be submitted for FDEP clearance;
28. Furnishing record drawings based on the redline drawings in AutoCAD 2015 or higher and one set of drawings on paper. The City will provide the AutoCAD plans used for the design. **Final Payment will not be made for work orders until As-built drawings are received.**
29. Furnishing and installing polyethylene encasement per City of Tampa Water Standard Detail 2.05(which can be found on-line) for all buried ductile iron pipe, all fittings and tapping sleeves.

The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Proposal or Contract Pay Items, he shall include the cost for that work in some other applicable bid item, so that his proposal for the project does reflect his total price for completing the work in its entirety.

The Contractor may be authorized to receive payment after each work order is complete, approved, accepted, and administratively processed by the City.

The quantities for payment under this Agreement shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the City, in accordance with the applicable method of measurement therefore contained herein. A representative of the Contractor shall witness all field measurements.

All work shall be in accordance with the Technical Specifications herein and Standard Details (located at the Water Department City's website). All materials shall be in accordance with the Material Specifications herein.

C21.0 Ductile Iron and PVC Pipe, Fittings, Tap

The Contractor shall provide all labor, equipment, and materials to furnish and install the full-port tap, ductile iron pipe or PVC pipe, plugs, caps, bends, sleeves, reducers, tees, crosses, and offsets.

Furnishing and installation a full-port tap. The tapping sleeve installation shall include:

1. Excavating the trench;

2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing the tapping sleeve;
4. Pressure testing the tapping sleeve and valve;
5. Making the full port tap, up to and including 42";
6. Furnishing and installing mechanical joint tapping sleeves for size on size pipe taps or as directed by the engineer;
7. Furnishing, installing and sealing the tapping sleeve with blue polyethylene encasement of not less than 8 mils thick;

Furnishing and/or installing ductile iron or PVC pipe, plugs, caps, bends, sleeves, reducers, tees, crosses, and offsets shall include, but may not be limited to:

1. Furnishing all construction layouts
2. Field locating all utilities to confirm horizontal and vertical location in areas of possible conflict;
3. Furnishing all labor equipment and materials to excavate the trench;
4. Maintaining the trench which shall include dewatering and sheeting and bracing as required by OSHA or as directed by the Engineer standards unless specifically provided for in a pay item;
5. Cleaning dirt and foreign material from within pipe and bell;
6. Beveling field-cut joints and pipe shorts;
7. Furnishing and installing EPDM gaskets for all DIP and PVCP;
8. Furnishing and installing Department approved pipe and any pipe shorts as part of the pipeline;
9. Furnishing and installing Department approved pipe in casing pipe when shown on the plans;
10. Installing push-on joint restraint gaskets for DIP as shown on the plans or as directed by the Engineer (furnishing push-on restraint gaskets will be compensated under appropriate pay items);
11. Furnishing and installing blue for polyethylene encasement per standard detail 2.05 (City of Tampa Water Dept. website);
12. Furnishing and installing 2, 4, 6, 8, 12, and 16-inch nominal diameter PVC pipe or 4, 6, 8, 12, 16, 20, 24, 30, 36, 42, or 48-inch nominal diameter ductile iron pipe at various depths;
13. Furnishing and installing 2-inch PVC fittings when necessary at various depths;
14. Furnishing and installing on all PVC pipe and fittings, a continuous double run of 14-gauge wire attached to the top of the pipe with duct tape. The wire shall be looped around each bell. There shall be no dead ends and the locator wire shall be brought into a separate curb stop box at every valve box;
15. Cleaning up and removing excess water main pipe and appurtenances;
16. Pressure testing the water main and stormwater forcemain pipe;
17. Furnishing and installing temporary pipe short's valves and bends for full port flushing;
18. Furnishing and installing valve location protection devices per Standard Detail 3.05 whenever needed to keep valve locations visible;
19. Disinfecting the water main pipe and bacteriological testing;
20. Furnish and apply paint for any above ground or aerial crossing pipe and appurtenances. Paint to be high-grade enamel, OSHA blue for potable water or purple for reclaim water as directed by the Engineer;
21. Backfilling and compacting the trench;
22. Cleaning up and restoring the job site which shall include re-grading the terrain; and
23. Removing and legally disposing all waste materials.

Cover over pipe shall be defined as the vertical distance from the top of the pipe to the surface grade above the main. Trench depth shall be defined as the vertical distance from the bottom of the barrel of the pipe to

the surface grade above the main.

Payment for connecting new water mains to existing water mains will be made utilizing the contract unit price for installing the fittings, polywrap, or valves used in the connection.

The cost to hydrostatically test and disinfect the ductile iron or PVC water mains shall be prorated and included in the pipeline construction unit prices. The prorated cost should include, but may not be limited to furnishing and installing all:

- 1) Material;
- 2) Labor;
- 3) Necessary pumps;
- 4) Recorder charts;
- 5) Gages (300PSIG limit, oil filled);
- 6) Chemicals;
- 7) Temporary valves;
- 8) Temporary plugs;
- 9) Sample taps, (including installation of brass dry main plugs after tap removal);
- 10) Blow off assemblies (including removal after disinfection is complete);
- 11) Dry main plugs;

necessary to pressure test and disinfect various sizes and depths of ductile iron pipe or PVC pipe. Furthermore, no extra compensation shall be paid to the Contractor for:

1. Furnishing and installing brass, dry main plugs at the locations of all removed sample taps, or
2. Removing existing "end of line" or blow-off valves after the pipeline has been disinfected and prior to connecting the newly installed pipeline to the existing water main.

All temporary materials or materials not remaining in the ground after the completion of the disinfection and pressure testing shall remain the property of the Contractor.

The ductile iron pipe, fittings, bends shall conform to the City of Tampa– Workmanship and Materials Section 30 – Miscellaneous Pipe & Fittings.

Payment for shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2103	F&I - 8" D.I.P., tap, bends and restraints (all inclusive) (water)	EA
2103.12	F&I- 12" D.I.P., tap, bends and restraints (all inclusive) (water)	EA
2106	F&I- 10" D.I.P., bends, offsets, sleeves or reducers w DIP, CIP or PVCP (stormwater)	LF

C22.00 Furnish and Install HDPE Pipe by Horizontal Directional Drilling

The Contractor shall provide all labor, equipment, and materials to furnish and install the HDPE pipe using horizontal directional drilling (HDD) as a work method. The furnishing and installation of the HDPE pipe shall include, but may not be limited to:

1. Furnish and install construction layout by a registered professional land surveyor;

2. Field locating all utilities, except existing water lines not shown properly on the plans, to confirm horizontal and vertical location in areas of possible conflict;
3. Excavating the access pits;
4. Maintaining the pits which shall include dewatering and sheeting and bracing as required by OSHA or as directed by the Engineer;
5. Joining pipe sections by butt fusion or by furnishing and installing an appropriately sized HDPE electrofusion coupling;
6. Pigging, cleaning or flushing the line to remove dirt, debris if directed by the engineer;
7. Furnishing and installing temporary valve, pipe shorts and bends to accomplish full port flushing of mains;
8. Furnishing and installing Department approved pipe and any pipe shorts as part of the pipeline;
9. Furnishing and installing 4, 6, 8, 10, 12, and 14-inch nominal diameter HDPE pipe and 2-inch HDPE tubing at various depths by horizontal directional drilling;
10. Furnishing and installing on all HDPE pipe and tubing, two continuous 10 gauge wires along the top of the pipe. There shall be no dead ends and each locator wire shall be routed into a curb stop box at every valve box. Connections between wire ends shall be made using an approved connection as shown in the standard details;
11. Furnishing and installing 10 gauge tracer wire on Ductile Iron Water Mains 16" and greater;
12. Removing excess water main pipe and appurtenances;
13. Pressure testing the water main pipe;
14. Disinfecting the water main pipe;
15. Furnishing and installing push-on and mechanical joint restrainers on existing pipe as shown on the plans or as directed by the Engineer;
16. Backfilling and compacting the trenches or pits including re-grading the terrain;
17. Cleaning up and restoring the job site which shall include re-grading the terrain; and
18. Removing and legally disposing of all waste materials.

Cover over pipe shall be defined as the vertical distance from the top of the pipe to the surface grade above the main. Trench depth shall be defined as the vertical distance from the bottom of the barrel of the pipe to the surface grade above the main.

Payment for connecting new water mains to existing water mains will be made utilizing the contract unit price for installing the tapping sleeves, restraints, fittings or valves used in the connection.

The cost to hydrostatically test and disinfect the HDPE water mains shall be prorated and included in the HDPE pipeline construction unit prices. The prorated cost should include, but may not be limited to furnishing and installing all:

- 1) Material
- 2) Labor
- 3) Necessary pumps
- 4) Recorder charts
- 5) Gages (200 PSIG limit, oil filled)
- 6) Chemicals
- 7) Temporary valves
- 8) Temporary plugs
- 9) Sample Taps, (including furnishing and installation of brass dry main plugs in HDPE electrofusion corporation saddles after sample tap removal)

- 10) Blow off assemblies (including removal after disinfection is complete)
- 11) Dry main plugs installed in HDPE electrofusion corporation saddles.

necessary to pressure test and disinfect various sizes and depths of HDPE pipe. Furthermore, no extra compensation shall be paid to the Contractor for:

1. Furnishing and installing brass, dry main plugs in HDPE electrofusion corporation saddles at the locations of all removed sample taps, or
2. Removing existing "end of line" or blow off valves after the pipeline has been disinfected and prior to connecting the newly installed pipeline to the existing water main.

All temporary materials or materials not remaining in the ground after the completion of the disinfection and pressure testing shall remain the property of the Contractor.

The pipe quantities to be paid for under this section shall be based on the size and the horizontal distance in linear feet of HDPE pipe measured along the top centerline of the pipe in place complete and acceptable to the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2200	F&I - 2" HDPE tubing w/HDPE transition adapters at various depths offset	EA

C60.00 Valves

The Contractor shall provide all labor, equipment and materials to completely furnish and install 6-inch through 8-inch gate valves, including all accessories and incidentals. The valve installation shall include, but may not be limited to:

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnish and install a gate valve in a mainline of DIP, CIP or PVC with a valve box or a tapping valve on a tapping sleeve with a valve box;
4. Furnish and install a gate valve on HDPE along with all associated HDPE mechanical joint adapters and appurtenances;
5. Furnish and install an air release valve in a mainline of DIP, CIP or PVC with a valve box or a tapping valve on a tapping sleeve with a valve box;
6. Backfilling and compacting the trench;
7. Furnishing, forming and pouring a 6-inch thick concrete pad around each valve box installed in non-paved areas;
8. Furnishing paint and painting valve cover;
9. Furnishing and installing or forming and pouring concrete support blocks under valves installed on PVC and HDPE pipeline;
10. Cleaning up and restoring the job site which shall include re-grading the terrain; and
11. Removing and legally disposing of all waste materials.

Payment shall be made for the number of each size valve and valve box installed and incorporated into the piping system complete, working and operating to the satisfaction of the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
6004	Furnish and install 10" gate or tapping valve and box on DIP, CIP or PVC	EA
6005	Furnish and install 10" air release valve and box on DIP, CIP or PVC	EA

C61.0 **Line Stops**

The Contractor shall furnish all labor, equipment, tools and materials to install line stops on existing water mains.

The line stop installation shall include but is not limited to:

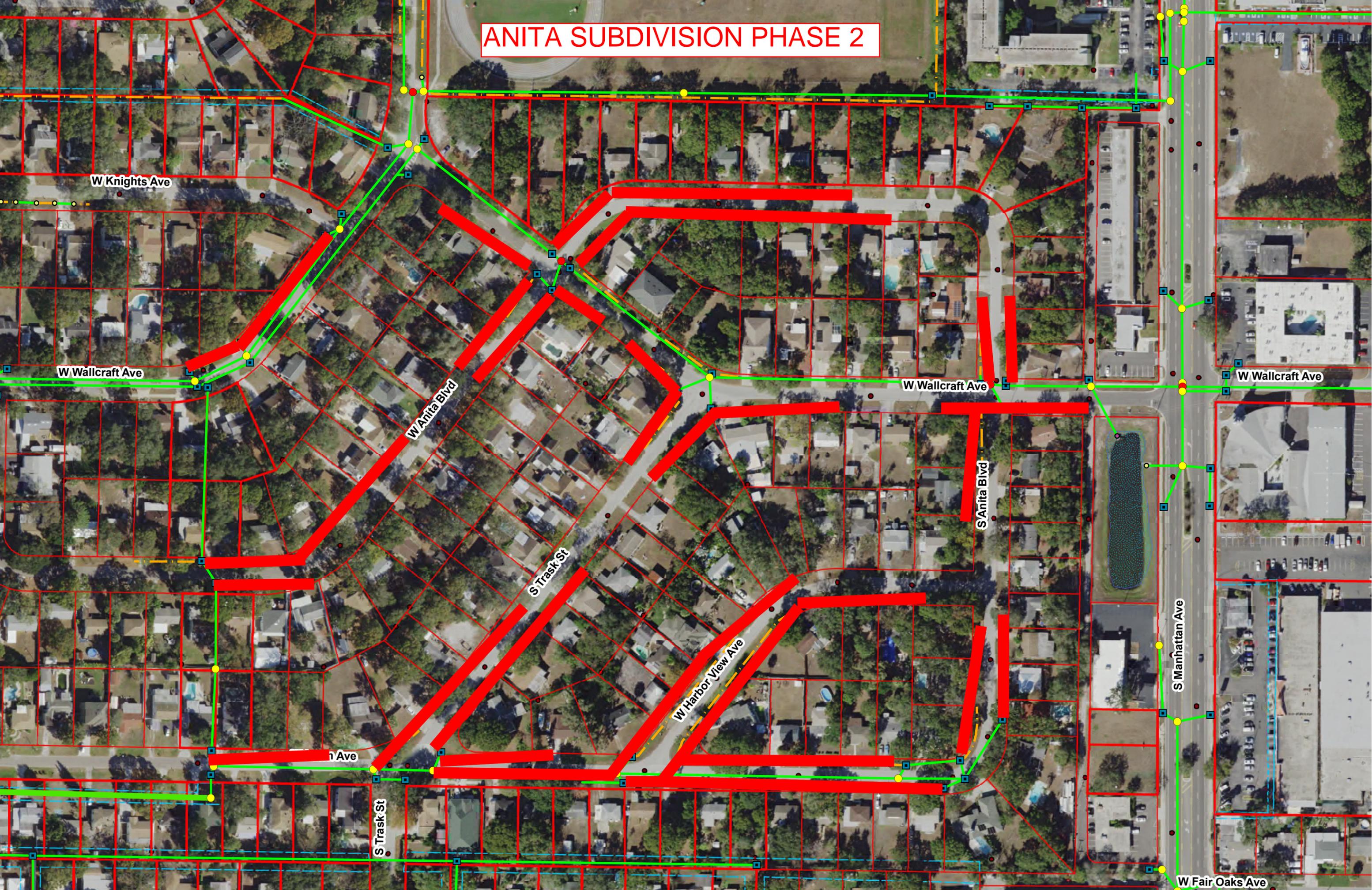
1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing the line stop;
4. Furnishing and installing polywrap on line stop appurtenances remaining on the pipe after the line stop is removed;
5. Furnishing and installing reverse dead-man restraint with split wedge action restraints as shown in Standard 2.10A.
6. Compacting soil in trench around dead-man and line stop to a minimum 90% modified proctor density;
7. Excavating the trench to remove line stop;
8. Backfilling and compacting the trench;
9. Cleaning up and restoring the job site which shall include re-grading the terrain; and
10. Removing and legally disposing of all waste materials.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
6104	F&I 8" Line Stop on Existing Water Main	EA

Payment for reverse dead-man restraints shall be paid for under the appropriate items for split wedge action restraints and poured concrete thrust blocking. Restoration items shall be paid for under the appropriate item as needed.

ANITA SUBDIVISION PHASE 2



W Knights Ave

W Wallcraft Ave

W Anita Blvd

S Trask St

W Harbor View Ave

W Wallcraft Ave

S Anita Blvd

S Manhattan Ave

W Fair Oaks Ave



Future Pump Station Location (not part of this project)

Maximum 5° Force Main Joint Deflection

Total Force Main Length = Approx. 3,085 ft

Tie Into Existing Stormwater System

Legend

 Proposed 10" DIP Force Main

City of Tampa
Stormwater Engineering
Copeland Park Force Main



DAVID E. WEST POND REGRADING AND STORMWATER IMPROVEMENTS



