



AGENDA ITEM MEMORADUM

Item No. 17a

Municipal Service

Department

Don Prince

Department Director

COMMISSION MEETING DATE (*) - 7:00 PM	Deadline to Town Clerk
<input checked="" type="checkbox"/> Jan 24, 2012	Jan 13

*Subject to Change

- | | | | |
|---------------------------------------|---|--|---------------------------------------|
| <input type="checkbox"/> Presentation | <input type="checkbox"/> Reports | <input checked="" type="checkbox"/> Consent | <input type="checkbox"/> Ordinance |
| <input type="checkbox"/> Resolution | <input type="checkbox"/> Quasi-Judicial | <input type="checkbox"/> Old Business | <input type="checkbox"/> New Business |

SUBJECT TITLE: 19th Street Drainage Repair Project

EXPLANATION: In the early morning hours of November 1st Broward County received approximately (9) nine inches of rainfall and close to (13) thirteen inches over a three day period. Town Staff surveyed the Town streets for drainage issues and noticed that while most of the ponding on the streets in LBTS had begun to recede by 9:00am, 19th street still had a significant amount of water and it didn't appear to be receding thus warranting a closer look at the drainage system in that area.

The Town's Contractor (Tele Vac) was authorized to televise the drainage system and found that there were multiple collapses and blockages that prevented the stormwater to drain through the outfalls. Our conclusion is that the pipes are in such bad shape that it wouldn't be cost effective to do point repairs when the pipes had reached the end of their useful life.

Staff contacted (3) three vendors on the Continuing Services list for proposals to design a new drainage system for 19th street. We recommend awarding the design contract to Chen Moore and Associates as they have successfully designed several recent drainage projects and they have in-depth knowledge of the Town's infrastructure. Chen Moore also submitted the lowest proposal of \$30,134.

The project area includes the full length of 19th street, which is about 2000 linear feet. The construction costs could be as high as \$450,000 if we need to replace ALL of the existing drainage structures and pipe along 19th Street. But the drainage engineer is not expecting that all existing drainage will need to be replaced, which would reduce the restoration required (ie cost). A conservative estimate for the construction costs would be \$350,000-\$450,000.

This is an unanticipated project and one of the reasons we have contingency accounts and, when they occur, we may have to reprioritizes the order of planned projects. We will have a funding recommendation for this project and the impact that it may have on the schedule of other projects when we return to the Commission with a recommended contractor.

Financial Impact: The cost of the design will be paid from salary saving from the Project Manager position in the Capital Improvement Fund.

RECOMMENDATION: Authorize the Town Manager to execute the Work Authorization (**Exhibit 1**) from Chen Moore and Associates for \$30,134.

EXHIBIT: 1. Chen Moore and Associates Work Authorization for the design of the 19th Street Drainage Project

Reviewed by Town Attorney
 Yes No

Town Manager Initials BP

EXHIBIT A

19TH STREET STORMWATER IMPROVEMENTS **SCOPE OF SERVICES**

PROJECT BACKGROUND:

The stormwater improvements are necessary along 19th Street to provide additional flood protection to this very low lying area. The project area includes the full length of 19th Street to the west of US A1A, which includes approximately 2,000 linear feet of 50 feet wide public right of way. The flooding along 19th Street has been observed by Town staff during past rainfall events. The flooding issues along 19th Street are chiefly due to the low ground surface elevation relative to the groundwater table and tidal levels at the existing outfalls, which limits the infiltration of stormwater runoff into the ground surface and the flow of stormwater runoff via the existing outfalls. The flooding issues are further compounded by the poor condition of the existing drainage piping along 19th Street. According to recent television inspections by TeleVac South, portions of the existing drainage piping are cracked and partially collapsed, which restrict the flow of stormwater runoff to the existing outfalls and prolongs the flooding duration within the right of way areas. Stormwater improvements are necessary to reduce the extent of flooding during and after heavy rainfall events.

The proposed stormwater improvements for this project include the replacement of any existing damaged drainage piping to allow stormwater runoff to flow to the existing 2 outfalls. This project will also include the regrading of grass swale areas in the public right of way areas to provide additional storage volume for stormwater runoff. Due to the low ground surface elevation of 19th Street, the installation of exfiltration trench will not be a feasible option for stormwater improvements. The Town has requested a fee proposal from Chen Moore and Associates (CMA) to prepare the construction documents for the 19th Street Stormwater Improvements. CMA shall be responsible for providing engineering services for the proposed stormwater improvements according to the scope of services defined below.

SCOPE OF SERVICES:

The following is a detailed breakdown of the above described scope of services which had been broken down into deliverable based tasks:

Task 1: Site Investigation

In order to complete the stormwater calculations and develop preliminary design plans, CMA will collect and review information related to the project area, which includes but is not limited to the following items:

1.1 Document Review

CMA will review all available surveys, atlases, design drawings, and/or record drawings for the existing utilities within the project area to determine the configuration of existing underground utilities and to avoid any conflicts with any proposed stormwater improvements. CMA shall contact the Sunshine State One Call Service to determine the existing utilities which are located in the project area. CMA will perform necessary site visits to the project area for verification purposes. The approximate location of all existing underground utilities will be incorporated into the preliminary design plans based on any available drawings. CMA shall complete this task within 30 calendar days from the issuance of a notice to proceed (NTP) by the TOWN.

1.2 Topographic Survey

CMA shall coordinate with a surveyor in order obtain the required topographic data for project areas. The limits of the survey shall include 19th Street to the west of State Road A1A, which is approximately 2,000 LF of 50' wide ROW. CMA shall retain a licensed land surveyor to complete the topographic survey as follows:

(a) Establish a control traverse and bench marks (North American Vertical Datum) at sufficient intervals to support the topographic survey to be utilized on the design plans.

(b) Locate all above ground features within the right-of-way of the existing roads according to the following schedule, including pavement, paved swales, sidewalks, fences, light poles, handrails, storm manholes, catch basins, electric boxes, handholes, curbs, valve boxes, sanitary sewer manholes, driveway types, edges and corners, trees, overhanging trees in the right-of-way, meter boxes, centerline and crown of the roads, irrigation systems, fire hydrants and valves, overhead utilities.

(c) Locate underground features of sanitary manholes, storm manholes, and catch basins. Measure the invert elevations of pipes and determine the pipe materials and size when possible.

(d) Tie in any subdivision corners, lot corners and plat corners which can be located along the right-of-way lines. This will not constitute a boundary or right-of-way survey as defined in the Minimum Technical Standards for Land Surveying and Mapping. Ownership and title searches are not included. Easements will be based on information obtained from record plats.

CMA shall review topographic data upon completion of the survey to all appropriate information was included within the topographic survey. CMA shall complete this task within 30 calendar days from the issuance of a notice to proceed (NTP) by the TOWN.

1.3 Subsurface Utility Verification

Since there are extensive existing utilities within the project area, the location of existing underground utilities is necessary to avoid conflict with any proposed stormwater improvements. CMA shall enter into an agreement with a local Subsurface Utility Engineering (SUE) firm to acquire the size, material, depth and horizontal location of existing underground utilities. This task includes the completion of 12 utility testholes within the project area to verify the configuration of the existing utilities. CMA shall complete this task within 15 calendar days from completion of Task 1.1 and Task 1.2.

Task 2: Progress Submittals

2.1 90% Design Submittal

CMA will prepare and submit required sets of design drawings to TOWN. These drawings will consist of the existing conditions, horizontal layout, profiles, and engineering details for review by the City. CMA will prepare and submit required sets of technical specifications to TOWN. CMA will utilize the 90% design plans to prepare a construction cost estimate. CMA will attend one review meeting with City staff to discuss comments after the 60% submittal. CMA shall complete this task within 30 calendar days from completion of Task 1.

2.2 Regulatory Permit Submittal

CMA will obtain, review, and complete permit applications and will prepared backup documentation required by the regulatory permitting agencies. CMA will be responsible for coordination with all regulatory agencies during the permitting process. CMA will then send applications to CMA for review, signature and check(s) for all permit and application fees. Regulatory agencies anticipated to be involved are as follows:

- South Florida Water Management District (SFWMD)
- Broward County Environmental Protection and Growth Management (BCEPGM)

CMA will revise applications, plans, and technical specifications as per comments from these regulatory agencies. CMA shall assemble permit application packages within 15 calendar days after the receipt of review comments from the TOWN on the 90% design submittal. The regulatory agencies typically complete their review within 30 calendar days after the permit submittal.

2.3 Final Design Submittal

CMA will utilize the 90% plan and specification review to prepare the bid set of construction documents. ENGINEER will produce required sets of design drawing and technical specifications for bidding. CMA shall complete this task within 15 calendar days after the receipt of review comments from the TOWN on the 90% design submittal.

Task 3: Construction Administration

3.1 Bidding Assistance

CMA will attend the Pre-Bid Meeting and will answer all questions and clarifications that are technical in nature. CMA will respond to all written questions requesting clarification of the technical documents for this project. CMA will review the bid results and make a recommendation for bid award. TOWN shall be responsible for bid advertisement, distribution of bid documents to interested bidders, processing all bid submittals, and verification that each bid submittal meets all Purchasing related requirements. CMA shall complete this task according to the schedule defined by the TOWN for the bidding process.

3.2 Document Review

CMA will review shop drawings submitted by the contractor prior to commencement of construction and respond to Requests For Information (RFI) from the contractor during construction operations with an estimated duration of 4 months. As necessary, CMA shall prepare any documentation required to clarify issues included within a RFI from the contractor. CMA will review all pay applications from the contractor to verify the accuracy of their progress.

3.3 Construction Oversight

CMA will prepare for and attend one preconstruction meeting with the contractor, City staff, and other project stakeholders upon issuance of a notice to proceed. TOWN shall be responsible for daily inspection of the construction operations. CMA shall assist the TOWN with the administration and inspection of the project during the construction phase on an as requested by TOWN staff.

CMA will be available to conduct periodic site inspections of the work during construction operations throughout the construction duration. The budget for this task was developed based on the assumption of 16 total inspection hours over the estimated construction duration of 4 months. Any construction inspection services required in excess of this amount will be billed at the hourly rate. CMA will meet with TOWN staff to prepare a punch list. CMA will walk the site with the contractor to go over the punch list until completion for final acceptance. CMA will certify the project at completion to the TOWN staff and jurisdictional agencies.

Task 4: Reimbursable Expenses

4.1 Document Reproduction

CMA shall provide all document reproduction required for each project deliverable to the TOWN and regulatory agencies as defined within the scope. All printing costs for deliverable will be reimbursed by the TOWN at cost. A budget of \$250 for document reproduction was estimated for this task.

SCOPE ASSUMPTIONS:

- TOWN will provide television inspection reports for all existing drainage piping along 19th Street.
- TOWN will provide timely responses to information included within each deliverable.
- TOWN will provide all required permit fees.
- TOWN will provide the standard front end contract documents to CMA to incorporate into the bid documents.
- TOWN shall be responsible for bid advertisement, distribution of bid documents to interested bidders, processing all bid submittals, and verification that each bid submittal meets all Purchasing related requirements.
- TOWN shall be responsible for daily inspection of the construction operations.

Exhibit B

Hourly Compensation Rates

Category	Unit Rate
Town Engineer	\$ 159.14
Firm Principal	\$ 223.85
Professional Engineer	\$ 143.22
Senior Construction Inspector	\$ 143.22
Senior Engineer	\$ 97.60
Associate Engineer	\$ 85.93
Construction Inspector	\$ 85.93
Clerical	\$ 50.92

Exhibit C

Work Authorization Schedule

Task	Task Duration	Completion Date
Task 1.1 – Document Review	30 days	30 days after NTP
Task 1.2 – Topographic Survey	30 days	30 days after NTP
Task 1.3 – Subsurface Utility Verification	15 days	15 days after NTP
Task 2.1 – 90% Design Submittal	30 days	30 days after Task 1
Task 2.2 – Regulatory Permit Submittal	30 days	30 days after Task 2.1
Task 2.3 – Final Design Submittal	15 days	15 days after Task 2.2
Task 3.1 – Bidding Assistance	TBD	TBD
Task 3.2 – Document Review	120 days	120 days after Contractor NTP
Task 3.4 – Construction Oversight	120 days	120 days after Contractor NTP
Task 4 – Reimbursable Expenses	N/A	N/A

**EXHIBIT D
19TH STREET STORMWATER IMPROVEMENTS
STAFF TIME ESTIMATE**

NO.	DESCRIPTION	ESTIMATE								
1.0	SITE INVESTIGATION									
1.1	DOCUMENT REVIEW			2	12		2		16	\$1,565
1.2	TOPOGRAPHIC SURVEY	\$12,000			2		2		4	\$12,340
1.3	SUBSURFACE UTILITY VERIFICATION	\$4,200			2				2	\$4,390
	TOTAL - TASK 1									\$18,294
2.0	PROGRESS SUBMITTALS									
2.1	90% DESIGN SUBMITTAL			4	16		24		44	\$3,872
2.2	REGULATORY PERMIT SUBMITTAL			4	12		4		20	\$1,993
2.3	FINAL DESIGN SUBMITTAL			4	8		12		24	\$2,214
	TOTAL - TASK 2									\$8,080
3.0	CONSTRUCTION ADMINISTRATION									
3.1	BIDDING ASSISTANCE			4	4				8	\$935
3.2	DOCUMENT REVIEW			4	4				8	\$935
3.3	CONSTRUCTION OVERSIGHT			4	4		8		16	\$1,639
	TOTAL - TASK 5									\$3,510
4.0	REIMBURSABLE EXPENSES									
4.1	DOCUMENT REPRODUCTION	\$250							0	\$250
	TOTAL - TASK 6									\$250
	TOTAL HOURS		0	0	2	16	0	4	0	22
	TOTAL FEE ESTIMATE									\$38,134
	Hourly Rates (FY 2009)		\$217.33	\$154.50	\$139.05	\$94.76	\$83.43	\$75.00	\$88.00	