

EXHIBIT A

CITY OF DANIA BEACH, FL

SCOPE OF PROFESSIONAL ENGINEERING SERVICES for Chen Moore and Associates

Proposal for drainage improvements for SW 30th Avenue

June 19, 2012

I. BACKGROUND

Chen Moore and Associates was selected by the City of Dania Beach to provide professional engineering services for its Neighborhood Improvement Program. The general scope of services includes the following:

- Stormwater Design;
- Street Lighting Layout and Design;
- Sidewalk Layout and Design;
- Traffic Calming Study and Design;
- Bidding Services;
- Construction Observation; and
- Public Awareness.

The City requested an engineering proposal from Chen Moore and Associates to address additional drainage at SW 30th Avenue as part of the SW 26th Terrace Stormwater Improvement Project. The original drainage system had a positive outfall towards the west to a lake on private property. The lake was filled for development therefore eliminating the positive drainage.

Under this proposal, Chen Moore and Associates (CMA) proposes to provide drainage analysis, design services, and permitting for the proposed drainage improvements according to the scope of services listed below.

II. SCOPE OF SERVICES

Task 1: Site Investigation

1.1 Survey Coordination

ENGINEER will examine any existing survey information or other available data to

determine existing drainage patterns and topography. ENGINEER shall coordinate additional survey for:

- SW 30th Avenue near the existing drainage system.

1.2 Utility Coordination

ENGINEER will coordinate with utility companies in which have facilities in the area to determine the existence of any above or below ground utilities which may have an effect on drainage design.

1.3 Permit Coordination

ENGINEER will determine and coordinate with the appropriate permitting agency and will have at least one coordination meeting with the appropriate agency. During the meeting, the general intent of the drainage improvements will be discussed and any special conditions that may be present will be determined.

Task 2: Drainage Calculations and Modeling

2.1 Drainage Model

ENGINEER shall develop a stormwater computer model (USEPA Storm Water Management Model (SWMM) or similar) of the existing stormwater system between SW 26th Terrace and FPL lake. The SWMM model will use a single event simulation model that is used for simulation of hydrologic and hydraulic conditions. This model will be used to evaluate single-event storms, such as the 10-year 24-hour storm event.

Design Tailwater for the design of the system shall be Mean High Tide of X.xx'. Minimum time of concentration of 10 minutes will be use.

2.2 Drainage Calculations

Using the model, drainage calculations will be used to determine pipe size required to improve the existing level-of-service. The analysis to be performed will examine post-development conditions that will result in a net decrease in maximum flood stage.

Task 3: Construction Documents Preparation

3.1 60% Drawings

ENGINEER will prepare and submit required sets of drawings to the CITY. These drawings will consist of existing conditions and 60% design for review by the CITY and Regulatory Agencies.

3.2 90% Drawings

ENGINEER will prepare and submit required sets of drawings to the CITY. These drawings will incorporate comments received at the 60% design review. Additionally, these drawings will incorporate all the details and information necessary for the completion of the project for a final review.

3.3 100% Drawings

ENGINEER shall prepare final construction documents, specifications, updated estimate of probable construction cost and bid table.

3.4 Cost Estimate

ENGINEER will provide a quantity list and cost estimate to the CITY at both 90% and 100% stage. ENGINEER will utilize the 90% design plans to produce a quantity list and cost estimate to the CITY at the 90% stage. ENGINEER will utilize the 100% design plans to produce a quantity list and cost estimate to provided to the CITY at the 100% stage.

3.5 Technical Specification Preparation

The ENGINEER will prepare and produce the required sets of technical specifications to the CITY at the 90% stage.

Task 4: Permitting

4.1 Coordination with Agencies

ENGINEER shall enter into contact with the Broward County Environmental Protection Department (EPD) and the Florida Department of Transportation (FDOT) to determine if existing permits can be modified to accommodate the project or if new permits are required.

4.2 Prepare Permit Applications

ENGINEER shall complete all necessary permit applications including Broward County, South Florida Water Management District and FDOT. ENGINEER will then send applications to City for review, signature(s) and check(s) for all permits and application fees.

4.3 Permit Revisions

ENGINEER shall receive all comments to the submitted permits from respective agencies and respond within 14 days.

Task 5: Reimbursables

5.1 Survey Coordination

The ENGINEER shall arrange and coordinate the efforts of licensed surveyor to prepare topographic survey.

- Establish several horizontal/vertical control points thorough out project limits. Elevations will be based on National Geodetic Vertical Datum of 1929. Survey will be tied to Florida State Plane Coordinates System, East Zone, North American Datum of 83/90.
- Obtain elevations at locations no more than 50 feet apart.
- Locate all aboveground features according to the following schedule, including: pavement, paved swales, sidewalks, fences, light poles, handrails, storm manholes, catch basins, electric boxes, hand holes, 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, fire hydrants and valves and overhead utilities. Utility locations will be based on surface evidence of underground utilizes such as valves, fire hydrants and manholes. The investigation for underground utilities will not extend to research at the City, Broward County, or utility companies and no underground exploration will be conducted.

Survey Limits:

- SW 30th Avenue, in the proximity of the existing stormwater crossing.

5.2 Prints & Copies

ENGINEER shall provide services, as necessary, to assist the CITY in the preparing plans, coordination or other requested tasks to facilitate successful completion of the Project. Costs incurred in providing these services shall be reimbursed.

III. OWNER PROVIDED SERVICES

- a. Provide all existing information and data available in electronic digital format.

IV. BASIS OF SCOPE

- a. This scope does not include permitting fees.
- b. Geotechnical investigation is excluded from this proposal.
- c. Construction services are excluded from this proposal.

V. FEE AND PAYMENT

The fee for the above scope of service would be billed at a lump sum according to the following breakdown. From the Notice to Proceed and receipt of all documents requested from the City, Chen Moore and Associates will deliver the following deliverables for the following lump sum fees within 60 Working Days.

Task	Description	Fee
1	Site Investigation	\$7,420
2	Drainage Calculations and Modeling	\$9,380
3	Construction Documents Preparation	\$8,620
4	Permitting	\$5,280
5	Reimbursables	\$5,700
	TOTAL	\$36,400

VI. DELIVERABLES

Deliverables are described in the Scope of Services. CMA retains the intellectual property rights of the documents. The OWNER can use the documents at any time in the future for information. The OWNER can not alter, revise and reuse the information contained in these documents for other projects without written permission from CMA.

**CHEN MOORE AND ASSOCIATES D/B/A CHEN AND ASSOCIATES CONSULTING ENGINEERS, INC.
(CONSULTANT)**



Authorized Signature

__Oscar R. Bello / Project Manager_____
Print Name/Title

__June 20, 2012_____
Date

CITY OF DANIA BEACH (CLIENT)

Authorized Signature

Print Name/Title

Date