

# CITY OF ALEXANDRIA

## SUMMARY OF SPECIFICATIONS FOR ENGINEERING IMPLEMENTATION PLAN AND FLOOD MITIGATION SCOPE OF SERVICES

May 2, 2012 DRAFT

### PROJECT DESCRIPTION:

This scope of work shall include general engineering and design of the Waterfront area, including flood mitigation. The design of parks and public space improvements shall be performed by others; however the work included in this scope shall be coordinated with and compatible with the park and open space design and consistent with the illustrative drawings in the Small Area Plan to the extent feasible.

The consultant shall incorporate the park concepts and layouts provided by a Park Design Team (to be selected by separate solicitation) into the Implementation Plan as described below.

Specifically, the Scope of Services shall include:

- (a) Waterfront Small Area Plan Engineering Implementation Plan - The first phase of Waterfront Small Area Plan implementation is the preparation of a preliminary design and engineering plan (to 15% design) for Waterfront infrastructure and other capital investments in the public realm included in the Waterfront Small Area Plan. Initial focus will be in The Strand area from King to Duke Street.
- (b) Design and Engineering for Flood Mitigation – Design and engineering of the King Street/Strand Flood Mitigation project, located in the unit block of King Street and adjacent portions of The Strand and Union Street, and design and engineering of a flood mitigation system to be integrated into the landscape between Duke Street and Queen Street. The flood mitigation system shall be as generally depicted in the City of Alexandria Potomac River Flood Mitigation Study, prepared by URS Corporation, dated July 2010, as modified in the Small Area Plan. The conceptual design of the flood mitigation elements will be coordinated with or included in the preliminary design and engineering plan described in (a).

### DESIGN CONSIDERATIONS:

Key Issues and Challenges:

Following is a summary of some of the major issues and goals of this design effort:

- Construction of the proposed improvements as part of this plan shall not have a negative impact on any adjacent properties.
- Effective Public Involvement/Outreach Program - A key purpose of this project is to mitigate nuisance flooding in the City's Waterfront. The Consultant will evaluate comments received from the public meetings held as part of this project as well as participate in additional community meetings throughout the design process.
- Business Impacts – Impacts to the businesses and entrances located within the Waterfront Plan Area shall be limited to the extent possible.

- Impacts to National Park Service Settlement Agreements – There exists established settlement agreements with the National Park Service related to work in City Parks along the waterfront that may have an impact on design.
- Alternative Funding Sources – The project will maintain such status that should State and/or Federal Funding become available, the project will be in a position to seek that funding for the project.
- Impacts to the Environment – The design of this project will be sensitive to the natural environment and Resource Protection Area. The design will comply with any and all may require permitting requirements.
- Impacts on Vehicular and Pedestrian Circulation – The project shall avoid the creation of unintended barriers that impede vehicular and pedestrian circulation in a manner that could exacerbate congestion or intermodal conflicts.
- Impacts on Visual/Historic Character – The project shall avoid the creation of unintended barriers that impede access to view corridors and that negatively impact the unique and historic character of buildings or the waterfront and surrounding Old Town area in general.

### **ENGINEERING SCOPE OF WORK:**

The Consultant will provide the grading, roadway and utility design, and construction engineering services as defined in this phased work plan. In general, the services required will follow the following phases:

- Phase I - Project Data Collection
- Phase II - Concept Design Services
- Phase III - Design Services for Flood Mitigation

The technical approach to each of these phases follows.

#### **Phase I - Project Data Collection:**

During this task the Consultant will perform field surveys and mapping necessary for the development of concept level design. This phase will also include review of existing flood mitigation studies and the **Waterfront Small Area Plan**.

#### **Phase II – Concept Design Services:**

Concept Plan (15% Design):

Based on an understanding of the City’s desires regarding the project, the Consultant will develop concepts of the proposed improvements in the project area. This will be performed in consultation and coordination with the Park Design Team. These concept-level plans will include:

- Grading for proposed streets, parks, pathways and flood mitigation elements.
- Preliminary design for roadway grade at the intersections of King Street and Union Street and King Street and Strand Street to minimize the impact of nuisance flooding.
- Approximate location of required utilities and infrastructure. Concept designs for the storm water pump stations. Develop concept designs for the bulkhead replacements.
- Identify the approximate limits of construction so that impacts to adjacent properties can be evaluated.
- Develop a critical path phasing plan to identify necessary order of construction where relevant.
- Evaluate permitting requirements necessary for construction of proposed improvements. Develop concept level design and construction cost estimates for each element of the Concept Plan.

**Nuisance Flooding/King-Union-Strand Final Design:**

Based on an approved concept for the re-grading of the sections of King Street, Union Street and Strand Street to minimize nuisance flooding, this Phase will also involve developing construction plans and specifications for this design element, to be consistent with the Concept Plan. This design will take into account the historic nature of adjacent properties and ensure that no adverse flooding or drainage impacts are created on other properties.

**Phase III –Design Services for Flood Mitigation:**

The purpose of this phase is to further develop the flood mitigation design based on the approved Concept Plan. The design will be completed to the development of final construction plans and specifications suitable for bidding. Detailed requirements for this phase of work will be developed upon completion of the Concept Plan.

**Project Schedule:**

Summer/Fall 2012:	Data Collection
Fall/Winter 2012/2013:	Design development/Coordination with Park Design Team
Winter 2012/2013:	Community meeting to present draft 15% plan
Spring 2013:	Community meeting to present revised 15% plan
Summer 2013:	Final completion of 15% plan
Summer/Fall 2013:	Final Design of King/Union/Strand Nuisance Flood Mitigation