

**WORK ORDER NO. \_\_\_\_\_**  
**ATTACHMENT "A"**  
**November 3, 2011**

**CITY OF GAHANNA**  
**FARMWOOD PLACE PILOT GREEN INFRASTRUCTURE PROJECT**

**SCOPE OF PROJECT**

The detailed scope of services provided herein addresses the preparation of concept site plans, preliminary engineering drawings, final engineering drawings, specifications, bidding documents, and construction phase services for a "green infrastructure" pilot project located along Farmwood Place.

**BASIC SERVICES**

URS shall provide professional engineering services to prepare construction drawings to be utilized by the City of Gahanna for the bidding and construction. URS's Basic Services shall consist of the tasks described below:

**CONCEPT DESIGN PHASE**

The Concept Design Phase will involve the initial project setup tasks and the preparation of up to three (3) concept site plans showing various "green infrastructure" techniques. A forecasted performance evaluation will be performed to determine the cost effectiveness of each technique. The techniques are anticipated to include lawn-strip bio-swales, curb extension swales, and porous pavement. The purpose of this phase is to develop a preferred conceptual layout through an interactive concept design review process with all stakeholders. The following tasks will be performed under this design phase:

1. Conduct a kick-off meeting to identify information needs, critical deadlines, and Owner concept drawings prepared to date.
2. Perform a field review of the project area to located suitable sites.
3. Procure and schedule the topographical survey sub-consultant. The survey scope will include the following:
  - a. Establish Horizontal (NAD83) and Vertical (NAVD88) control and set horizontal control (TRV PTS) and vertical control (BM's) for construction layout and future survey.
  - b. Perform a topographic survey of the R/W corridor including cross sections at a 50' interval.
  - c. Field locate existing underground utilities as marked by OUPS.
  - d. Field located trees and existing landscaping within the R/W.
4. Prepare a base map utilizing the topographical survey supplemented with available GIS information.
5. Prepare three (3) "green infrastructure plan concept plans.
6. Evaluate the effectiveness of the concept improvements as a basis of cost per storage volume.
7. Conduct a Concept Plan review meeting all stakeholders to discuss advantages, disadvantages, and cost-benefit of each concept.

**EXHIBIT A**

### PRELIMINARY ENGINEERING

The Preliminary Engineering phase will involve the preparation of preliminary engineering plans to a 50% level of completion. This phase will begin following Owner approval of the Concept Site Plans. The following tasks will be performed under this design phase:

1. Perform stormwater management calculations to finalize the size of the stormwater facility.
2. Prepare Preliminary Engineering Plans. The following plans are anticipated for this design phase:
  - a. Title Sheet
  - b. General Notes
  - c. Site Layout Plan
  - d. Site Grading and Drainage Plan
  - e. Site Utility Relocation/Protection Plan
  - f. Cross Sections/Details
3. Conduct an interim progress meeting.
4. Perform internal detailed design checks and technical review to meet URS Quality Management System requirements.
5. Submit Preliminary Engineering Plans for Owner review.
6. Review Owner comments and participate in an Owner review meeting to clarify or resolve all comments prior to proceeding with Final Engineering Plans.

### FINAL ENGINEERING

The Final Engineering phase will involve the preparation of Final Engineering plans to a 100% level of completion. The Final Engineering phase will begin following Owner approval of the Preliminary Engineering plans. The following is a list of tasks anticipated for this phase in preparation for permitting and bidding:

1. Prepare Final Engineering Plans. The following plans are anticipated for this design phase:
  - a. Title Sheet
  - b. General Notes
  - c. Sediment and Erosion Control Notes
  - d. Sediment and Erosion Control Plans
  - e. Sediment and Erosion Control Details
  - f. Site Layout Plan
  - g. Site Grading and Drainage Plan
  - h. Site Utility Relocation/Protection Plan
  - i. Cross Sections
  - j. Details
  - k. Site Restoration Plan
  - l. Phasing / Resident Access Plan
2. Conduct an interim progress meeting.
3. Prepare a construction cost estimate.
4. Perform internal detailed design checks and technical reviews to meet URS Quality Management System requirements.
5. Submit Final Engineering Plans and Specifications for Owner review.

## BIDDING AND CONSTRUCTION SERVICES (NOT INCLUDED IN THIS WORK ORDER)

### ADDITIONAL SERVICES

URS shall provide Additional Services for the Project, if authorized by the Owner in writing, and such shall be paid for by the Owner as provided for in this Agreement. Additional Services are any services not otherwise included in this Proposal or not customarily furnished in accordance with engineering services of the scope described herein.

### DELIVERABLES

1. Project Correspondence: Meeting Minutes, Memoranda, Tele-conference Records, etc.
2. Concept Design Plans: URS shall provide five (5) sets of three (3) conceptual site plans for review and discussion.
3. Order of magnitude cost estimates for the cost benefit evaluation.
4. Preliminary Engineering: URS shall provide two (2) full size and two (2) half size sets of the Preliminary Engineering Plans for review and discussion.
5. Final Engineering: URS shall provide two (2) full size and two (2) half size sets of the Final Engineering Plans for review and discussion.
6. Stormwater Management Calculations
7. Pre-Bid Cost Estimate
8. Electronic Files: Drawings and specifications will be provided in raw (AutoCAD or Word) and PDF format.

# SCHEDULE

URS can proceed with these services immediately upon receipt of a Notice to Proceed. The following schedule has been prepared utilizing a January 2, 2012 project commencement.

Task Name	Dec. 2011	Jan. 2012	Feb. 2012	Mar. 2012	April 2012	May 2012	June 2012	July 2012	Aug. 2012
Topographical Survey									
Concept Design									
Preliminary Engineering									
Final Engineering									
Bidding Assistance									
Construction Services									
Construction Close-out									

## FEES AND CHARGES

Basic Compensation for Basic Services shall be performed on a Time and Material basis.

Billing for Services provide by URS shall be based on an amount equal to the cumulative hours charged to the Project over the most recent billing period by each class of employees multiplied by the Hourly Billing Rates, as presented in Table A, for each applicable billing class, plus Reimbursable Expenses.

Hourly Rates include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, Consultant's Taxes, general and administrative overhead, non-project operating costs, and operating margin or profit.

Reimbursable Expenses, such as printing, travel, special consultants, computer media, progress plots, final plots, etc., shall be in addition to Basic Compensation and shall be billed at actual costs.

Basic Compensation and Reimbursable Expenses shall not exceed Twenty-Eight Thousand Dollars (\$28,000) without additional authorization from the Client.

### Design Fee Summary

Description	Subtotal
<b>Base Scope of Services</b>	
Project Management & Meetings	\$3,500
Topographic Survey	\$4,000
Plan Preparation – Concept Phase	\$6,000
Plan Preparation – Preliminary Engineering	\$6,000
Plan Preparation – Final Engineering	\$8,000
Bidding and Construction Services	\$
<b>Subtotal for Base Services</b>	
<b>Other Costs</b>	
Reimbursable Expenses	\$500
<b>TOTAL NOT-TO-EXCEED FEE</b>	<b>\$28,000</b>

TABLE A: BILLING RATES

<i>Employee Classification</i>	<i>Hourly Billing Rate</i>
Project Manager	\$ 206.15
Project Design Engineer	\$ 147.15
Construction Manager	\$ 114.15
Landscape Architect	\$ 97.50
CADD Technician	\$ 85.00
Clerical/Technical Support	\$ 65.00