

LUMP SUM WORK ORDER NO. 5

In accordance with the Agreement for Professional Services between **City of Gahanna, Ohio** ("Client"), and **URS Corporation – Ohio** ("URS"), an **Ohio** corporation, dated **July 25, 2006**, this Work Order describes the Services, Schedule, and Payment Conditions for URS Services on the Project known as:

Stormwater Study – Sycamore Run (Phase 2)

Client Authorized

Representative: Terrance A. Emery, Service Director
Address: Service Department, 200 South Hamilton Road
Gahanna, Ohio 43230
Telephone No.: 614-342-4000

URS Authorized

Representative: Gregory A. Otey, Vice President
Address: 277 West Nationwide Blvd
Columbus, OH 43215
Telephone No.: 614-464-4500

SERVICES. The Services shall be described in Attachment **A** to this Work Order.

SCHEDULE. The Estimated Schedule shall be set forth in Attachment **A** to this Work Order. Because of the uncertainties inherent in the Services, Schedules are estimated and are subject to revision unless otherwise specifically described herein.

PAYMENT AND EQUITABLE ADJUSTMENTS. This is a lump sum Work Order. URS lump sum compensation and provisions for progress and final payments are specified in Attachment **A** to this Work Order. Payment of **\$ 0** is due upon signature of this Work Order and will be applied against the final invoice for this Work Order. URS shall give Client prompt written notice of unanticipated conditions or conditions which are materially different from those anticipated by URS at the time the lump sum compensation was agreed upon. If Client wishes URS to proceed, URS lump sum compensation shall be subject to equitable adjustment for such conditions.

TERMS AND CONDITIONS. The terms and conditions of the Agreement referenced above shall apply to this Work Order, except as expressly modified herein.

ACCEPTANCE of the terms of this Work Order is acknowledged by the following signatures of the Authorized Representatives.

CITY OF GAHANNA

Signature

Typed Name/Title

Date of Signature

URS CORPORATION – OHIO

Signature

Gregory A. Otey, Vice President
Typed Name/Title

Date of Signature

Attachment A
To Work Order No. 5
City of Gahanna - Storm Water Study: Sycamore Run (Phase 2)

SCOPE OF WORK

Sycamore Run has experienced flooding problems in Gahanna for many years. URS completed a study of the lower reaches of Sycamore Run in 2007. The study included approximately 250 acres (Foxboro sub-basin) out of the total 970 acre water shed. As a result of this study, the Foxboro detention basin outlet control structure was modified to optimize the storage capacity available in the basin, and a new storm sewer was installed on Worman Drive to relieve some localized flooding issues. An additional recommendation of this study was to extend the model and investigations to include the remainder (720 acres) of the drainage basin.

URS proposes the following Scope of Work to evaluate the remaining 720 acres of upper reaches of the Sycamore Run watershed:

TASK 1 – PROJECT ADMINISTRATION & KICKOFF MEETING

Upon authorization to proceed, a Project Kickoff Meeting will be held in conjunction with the City's Stormwater Committee. The meeting will cover technical and administrative project issues, as well as Public Involvement.

URS will include all key team members covering each major project element. An agenda will be prepared by URS and will be submitted for review by the City that will, at a minimum, contain the following items for discussion:

- Introduction of Team Members
- Review Project Scope, Schedule and Key Issues
- Develop a List of Key Information Requirements from the City
- Review Problem Areas and High Priority Areas
- Discuss Proposed Deliverables
- Develop Communication Protocols
- Discuss need for Public Participation / Public Involvement

URS will prepare detailed minutes highlighting decisions and action items. These minutes will be submitted to the City promptly after the meeting for review and approval.

This task also includes Project Administration, which includes communications with the City staff, project set-up, reviewing and approving invoices, monitoring budgets and schedules, performing quality control and quality assurances, and maintenance of project files.

TASK 2 - REVIEW OF EXISTING INFORMATION

The following information will be collected and reviewed by URS:

- Review record drawings of storm sewers, stormwater structures and detention basins provided by the City.
- Review runoff calculations, tributary areas and sizing calculations for existing storm sewers and detention basins.
- Review service request logs and relevant complaint logs.
- Review all previous studies that have been completed for this area.
- Interview staff to gain better understanding of flooding conditions and problem areas.

TASK 3 - PUBLIC MEETINGS

It is anticipated that two (2) Community Meetings will be held during the project. The first meeting will be held during the initial stages of the project and the second meeting will be held towards the end of the project to present study results. The meetings will be held in an accessible public location close to the project site at a time that is convenient for the public. The time and date of the meetings will be determined by the City, and URS will provide the technical support and Exhibits that may be necessary for each meeting.

TASK 4 - SURVEYING AND FIELD INVESTIGATION

URS will conduct field surveys to determine pipe and ditch slopes, structure locations and bridge openings, invert elevations and other key information needed to characterize Sycamore Run within the study area and verify the feasibility of potential stormwater improvement projects. All data will be collected in State Plane Coordinates for later incorporation into the City's GIS system.

Also, field cross sections of Sycamore Run will be surveyed where needed to supplement GIS information and will be used in the modeling analysis.

TASK 5 - IDENTIFICATION OF STORMWATER PROBLEM LOCATIONS

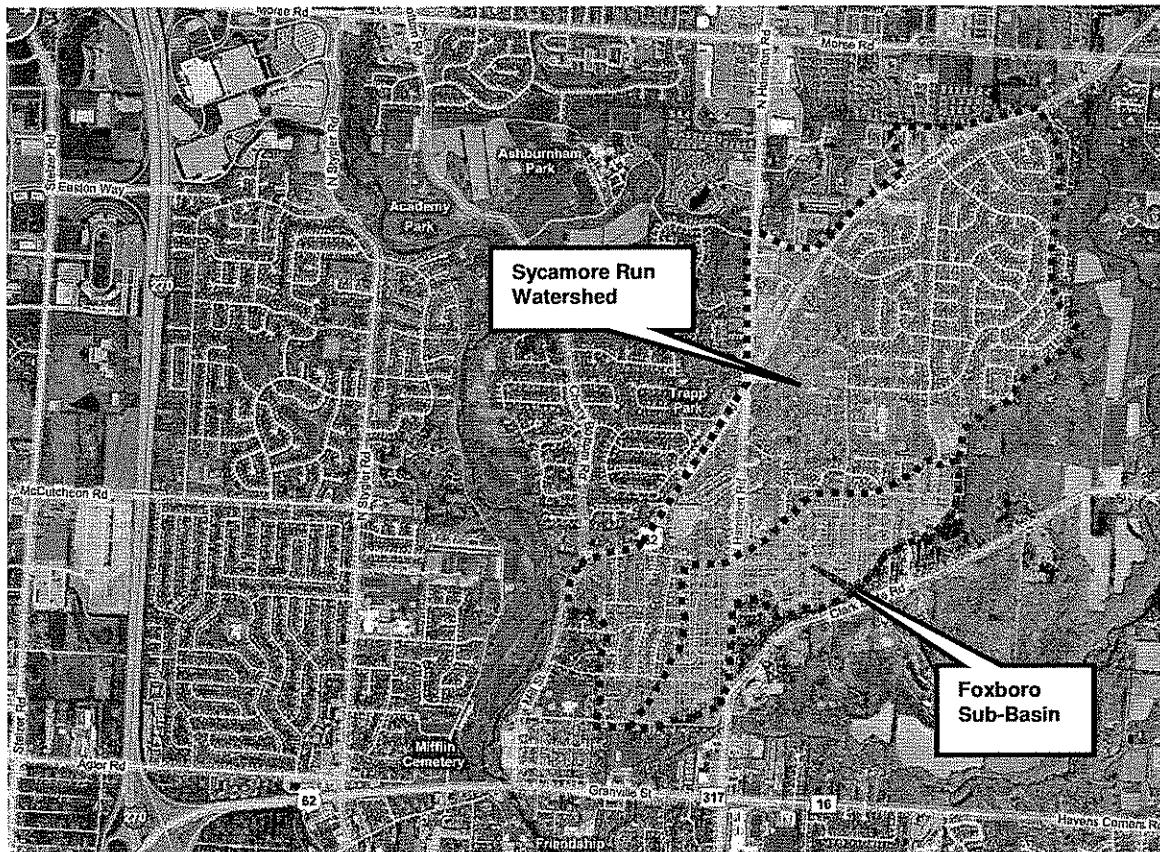
Based on interviews with City staff and other information collected and reviewed, URS proposes to graphically identify (color coded maps) areas of street, yard and structure flooding within the study area which are defined as "significant stormwater problems." We also propose to:

- Interview local residents in the field and at public meetings to determine the extent of the flooding and other stormwater problems.

- Develop a listing of homes impacted by flooding problems and a list of problems known to exist at these homes.
- Review the locations of street and yard flooding, debris accumulation and other recurring service requests. Review the need for clearing, grubbing, re-grading and erosion control on drainage ditches.
- Photograph problem areas and document problems encountered.

TASK 6 - MODEL EXISTING STORM WATER SYSTEM

- URS will model the remaining 720+ acres of the Sycamore Run watershed to determine under what conditions (e.g., return period, rainfall amount, intensity, etc.) surcharge develops and flooding occurs.



The model will graphically depict the head and volume of surcharging so that hydraulic grade lines (HGLs) and flood elevations may be determined. URS will develop tabular and graphic

data and all other data needed to facilitate City of Gahanna's review of model output. To accomplish this work, URS will use the USEPA StormWater Management Model (SWMM), to simulate the hydrologic and hydraulic response within the study area to specific rainfall events (i.e., 2-, 5-, 10-, 25-, and 100-year storms).

We also plan to use HECRAS for model verification of Sycamore Run water surface elevations.

The SWMM model will contain sufficient detail to realistically simulate the actual behavior of the system and will be easily updatable. URS will calibrate the model using observed high water marks and flood extension during historical events. URS will also use information collected from residents' interviews and customer complaints for model verification. The model will then be used as a tool to evaluate the various alternatives developed to mitigate the flooding problems identified in Task 5.

TASK 7 - ALTERNATIVE DEVELOPMENT AND EVALUATION

URS proposes to work very closely with the City to develop concepts and alternatives for the proposed improvements. We will meet with City staff at the beginning of the alternative evaluation process to define what improvements may be needed for such improvements.

We will evaluate the following items as part of the alternative evaluation process:

- Capital Costs
- Easement / Land Acquisition Requirements
- Maintenance
- Environmental Impacts
- Public Acceptance

Based on criteria that will be agreed upon with the City, URS will develop a recommended List of Capital Improvement Projects that would be ranked in order of priority. Project ranking criteria and final rankings would be developed in cooperation with City staff.

TASK 8 - COST ESTIMATES

URS will prepare an opinion of probable construction and project cost for each stormwater project proposed as an outcome of this study. Estimates for real estate acquisition will be based on public information as available through various web-based property acquisition sites.

TASK 9 - REPORT PREPARATION

URS will prepare a Draft Engineering Report that summarizes the results of the Sycamore Run – Phase 2 investigations. The report will include a discussion of improvements to existing stormwater conveyance systems, possible new detention basins, existing detention basin modifications, possible new storm sewer conduits and stormwater structures, and possible erosion control improvements.

The Draft Engineering Report will be presented to City staff for review and comment. URS will meet with City staff to discuss their comments.

The City's comments will be incorporated into the Final Report and three (3) copies of the Engineering Report will be provided to the City, along with a CD of the report.

SCHEDULE

URS proposes to complete this study within five (5) months after Notice to Proceed is issued.

FEE

The lump sum fee for completing the work as outlined in Tasks 1 through 9 shall be Forty-Two Thousand Five Hundred Dollars (\$42,500). URS shall submit monthly invoices based on the estimated percentage complete for the project.