



WOODARD & CURRAN TERMS & CONDITIONS

Exhibit A: WORK ORDER NUMBER 21 Green Infrastructure Design

This Work Order is issued pursuant to, and in accordance with the Standard Terms and Conditions between Woodard & Curran, Inc. and the City of Monmouth dated **December 15, 2014**, which are incorporated herein by this reference. Unless otherwise specified, all capitalized terms used in this Work Order shall have the same meaning as used in the Agreement. This Work Order will not be deemed valid and binding upon the Parties until both Engineer and Client have both signed below.

Project Understanding:

It is Woodard & Curran's understanding that the City of Monmouth, IL wishes to design of four (4) bioretention basins for the for the 3-acre Monmouth HS Parking Lot to reduce stormwater Nitrogen, Phosphorus and sediment loads.

To achieve the stated goals of the project we have developed the following a Scope of Services to take the project through Construction in accordance with the Green Infrastructure Grant Opportunities Program which awarded funds for this project.

Scope of Services:

Task 1.0 Subsurface Investigation

The subsurface investigation is necessary to determine site and substrate parameters. Soil test pits will be advanced to determine/confirm site soil suitability and assess need for reconditioning. Infiltration tests will also be conducted to confirm the infiltration capacity of the soils underlying the proposed bioretention basin locations.

Subtask 1.1 - Pre-Exploration Activities

Pre-exploration activities will include the following:

- Review available published surficial soils information for the site.
- Review available plans showing locations of known underground utilities.
- Develop a subsurface exploratory test pit program to accomplish project objectives.

Subtask 1.2 - Subsurface Test Pit Investigation

Soil test pits will be advanced as follows:

- A soil evaluator will be engaged to visit the site to locate the proposed test pits and mark the area for notification.
- The City Department of Public Works will provide a backhoe and operator to excavate the soil test pits.
- One (1) day of test pits will be conducted at the site including one (1) infiltration test at each proposed basin location. The test pits will be advanced to a depth approximately 10 feet below existing ground surface elevations; all test pits will be located within the parking lot only and will require the work area to be closed off during excavation.
- Subsurface investigations will disturb the existing parking lot pavement and may extend beyond the limits of each test pit. The test pits in pavement areas will be patched with "cold patch" asphalt. Note that these patches will be temporary and may settle over time. Test pits located within grassed areas will be restored to existing conditions with seed or sod.
- Soil texture will be analyzed to indicate soil matrix and seasonal high groundwater table.
- Infiltration tests will be evaluated for infiltration rate and all testing shall conform to state and local testing requirements.

A Soil Evaluation Report will be prepared to describe the general subsurface conditions at the proposed basin locations, and provide an opinion of subsurface conditions that may impact design and construction, including existing fill, or other unsuitable soils, and groundwater concerns. The Report will recommend solutions to any issues identified.

Task 1.0 Deliverable:

Soil Evaluation Report

Task 2.0 Topographic Survey

A topographic survey will be conducted within the project limits to establish an existing condition. Those parcels being identified on Monmouth's Assessor's database are as follows:

- Parcel ID 09-245-110-00



Specifically, the work will include.

- Run a level loop within the project limits for the main control of the survey and benchmarks.
- Conduct a ground level field survey for the project area to locate edge of pavement, tops and bottoms of curbs, guardrails, utilities, centerline of road, buildings, tree lines, fences, walls, signs, etc.
- Obtain inverts for drainage and sewer structures found in the area.
- Obtain plans of record for utilities located within the project limits to show on the retrofit plan. Underground utilities based on plans of record will be shown as approximate on the plan.
- Set Temporary Benchmarks within the project area for future construction. A minimum of 2 benchmarks will be set for the project.

The combined acreage to be surveyed for topography is approximately 3 acres of land and roadway.

An Existing Conditions Plan will be produced in AutoCAD Civil 3D 2018 and delivered in electronic file format along with pdf's and hard copies. Plans will be stamped by an Illinois Professional Land Surveyor. The Plan will be prepared at a scale of 1" = 20' with 1' contours. Data will be provided on the Illinois State Plane Coordinate System of NAD 1983 and vertically on NAVD 1988.

Task 2.0 Deliverable:

Existing Conditions Plan

Task 3.0 Hydraulic/Hydrologic Modeling

A detailed hydraulic/hydrologic analysis will be conducted for the four proposed bioretention basins to determine water volumes, flows, and water surface profiles and to confirm preliminary estimates. The intent of the analysis will be to establish the hydraulic design parameters for the project. These parameters will be used to establish the water quality volume to be treated and volume of runoff removed from the receiving system.

A HydroCAD model will be prepared for typical low flows, the bank full discharge, 5-year, 10-year, and 100-year discharges, and other flows essential to the engineering and design process. A pollutant load reduction calculation will also be prepared using EPA Region 5's Urban Runoff BMP Pollutant Load Reduction Worksheet to estimate the amount of pollutants that will be reduced for Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids (TSS) resulting from the project.

Task 3.0 Deliverable:

Hydraulic/Hydrologic Modeling Report

Task 4.0 Design Engineering and Drawings

The siting and installation of four bioretention basins will disturb less than one (1) acre of land; therefore, an NPDES permit will not likely be required.

Engineering will be performed, and design drawings will be developed to for review and approval by the City of Monmouth. The Drawings are anticipated to include.

- Cover Sheet
- General Notes, Legend and Index
- Existing Conditions Plan
- Plan and profile view of proposed improvements
- Proposed typical section(s)
- Proposed details of major project components

An Engineer's Opinion of Probable Construction Cost will be prepared for the proposed project.

One meeting with the City staff will be conducted to review the preliminary design plans and construction cost estimate.

Task 4.0 Deliverables:

- One set of Drawings & Engineers Opinion of Probable Construction Cost.
- Meeting agenda, sign-in sheet and minutes

Task 5.0 Development of O&M Plan

Development of an O&M Plan will be completed by the City.



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Task 6.0 Construction Documents

Working closely with the project team to provide appropriate documentation at a sufficient level of detail to support construction, the Consultant will prepare civil/site construction drawings and technical specifications required for the project. The work under this task will advance the design drawings under Task 4.0 to provide the supplemental detail necessary to support construction.

Task 7.0 Reporting

Reporting will be done by the City.

Anticipated Schedule:

The following schedule is broken out by task and by the quarter in which the work is anticipated to be completed:

Quarters:

Q2: April-June 2021

Q3: July-September 2021

Q4: October-December 2021

Q1: January-March 2022

Task Schedule

ID	Task	Responsible Entity	Q2	Q3	Q4	Q1
1	Subsurface Investigation	Sub-Contractor	X	X		
2	Topographic Survey	Sub-Contractor	X	X		
3	Hydraulic/Hydrologic Modeling	Consultant		X		
4	Design Engineering and Drawings	Consultant		X		
5	Development of O&M Plan	Monmouth		X		
6	Construction Documents	Consultant			X	
7	Reporting	Monmouth	X	X	X	X
	Construction (Not included)	Contractor			X	X

The following schedule of deliverables is consistent with the schedule approved by the awarding grant agency. This schedule is dependent on agency and Owner review timelines and may be adjusted accordingly with the mutual agreement of Woodard & Curran, the City, and the Grant agency.

Deliverables Schedule:

PROJECT COORDINATION

1. Project Coordination March 31, 2023

BEST MANAGEMENT PRACTICE (BMP) IMPLEMENTATION

2. BMP Documentation Form (Part 1) and Design September 30, 2021
 O&M Plan September 30, 2021
 Sign Design September 30, 2021
 Landowner Agreement September 30, 2021
 BMP Implementation Start Deadline August 30, 2022
 Complete Implementation of BMPs December 31, 2022
 BMP Documentation Form (Part 2) w/Invoices and Photo Documentation January 15, 2023

PROJECT REPORT

3. Draft Project Report November 30, 2022
 Final Project Report January 15, 2023

OTHER DIRECTED ACTIVITIES

Periodic Performance and Financial Reports Quarterly as stipulated



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Assumptions and Clarifications

- Proposed schedule assumes Notice to Proceed (NTP) will be issued to Woodard & Curran no later than June 25, 2021.
- Our design fee does not include culvert, stream, or railroad crossings.
- All work will be on City owned land. Our fee does not include creating permanent or temporary easement documentation or assisting in the coordination for obtaining any easements.
- The site is located outside of FEMA FIRM Map 100-year flood plain.
- There are no wetland impacts required and thus no wetland permitting required to complete the work.
- Our proposal does not include producing design documents for distribution to bidders. Although, we can provide this service at an additional fee.
- Transportation Engineering services including traffic counts or studies are not included.
- Environmental Impact Studies (EIS) are not included.
- Income Surveys are not included.
- Construction administration services are not included but can be performed under a separate Work Order.

Compensation:

For all Services duly rendered herein, Client will pay Engineer as described herein. The services to be provided pursuant to this Work Order shall be provided on a lump sum basis, billed monthly on a percent complete basis in a total amount of: Forty Seven Thousand and Seven Hundred Dollars, (\$47,700).

The project total fee will not be exceeded without prior written authorization.

The compensation for services performed by the ENGINEER by Phase are provided below

Task 1.0 – Subsurface Investigation	\$6,500
Task 2.0 – Topographic Survey	\$6,700
Task 3.0 – Hydraulic/Hydrologic Modeling	\$10,500
Task 4.0 – Design Engineering and Drawings	\$17,500
Task 5.0 – Development of O&M Plan	N/A
Task 6.0 – Construction Documents	\$6,500
Task 7.0 – Reporting	N/A
Project Total Fee — Lump Sum	\$47,700

Designated Project Representative

Client: Lew Steinbrecher

Engineer: Jennifer Anders

Effective date: As of _____

In WITNESS WHEREOF, the under signed wave caused this Work Order to be duly executed by their authorized representatives as forth below.

City of Monmouth, Illinois

Woodard & Curran, Inc.

By _____

By Jennifer Anders

Title _____

Title Vice-President, M&I SBU