



City of Muscatine



AGENDA ITEM SUMMARY

City Council

DATE:
July 15, 2021

STAFF

Brian Stineman, Public Works Director

SUBJECT

Request to enter into a contract with Watersmith Engineering for an amount not to exceed \$33,200 for watershed study of the Lake Park Boulevard area.

EXECUTIVE SUMMARY

Street flooding has been a recurring issue in the 700 block of Lake Park Boulevard. Part of the acquisition of the former DOT facility on Lake Park Boulevard was to aid in alleviating or eliminating some of these flooding issues. This study will help us understand the root causes of the storm water issues and provide possible solutions to remedy them.

STAFF RECOMMENDATION

Staff recommends to approve and sign the contract with Watersmith Engineering for the Lake Park Watershed Study.

BACKGROUND/DISCUSSION

We have asked Watersmith Engineering to break their original proposal scope into a "menu" of options that can be selected as needed. The first aspect of this will be the overall watershed study. This study will investigate the hydraulic characteristics that are leading to flooding in the 700 block of Lake Park Boulevard. Several remediation options have been suggested by staff. The scope of this overall proposal will further investigate those options, determine their feasibility, and estimate an approximate cost to implement them. We requested the scope to be separated out so that we have the ability of studying each option on a case by case basis and potentially keep our cost down if we know that we do not want to pursue certain options.

CITY FINANCIAL IMPACT

The total cost of the complete assessment is not to exceed \$33,200. Funding for this project is available in the Collection & Drainage Budget.

ATTACHMENTS

Scope of Services and Contract

1029 Hershey Avenue
Muscatine, IA 52761
563.506.2673
brad@watersmithengineering.com

Pat Lynch P.E.
City Engineer
City of Muscatine
1459 Washington Street
Muscatine, IA 52761

July 9, 2021

Subject: Proposal for Engineering Services
 Lake Park Blvd Stormwater Improvements

Dear Mr. Lynch:

Thank you for the opportunity to offer our professional services for the Lake Park Blvd Stormwater Improvements project. The attached scope of work includes additional detail and the proposed schedule.

The proposed engineering services will be provided in consideration of the following fees:

Proposed Engineered Services (hourly, not to exceed)

| | |
|--|----------|
| • Hydrology/Hydraulic Calculations | \$8,000 |
| • Conceptual Design – Lake Park Blvd Ditch Improvements | \$2,200 |
| • Conceptual Design – Open Channel Cut-off | \$2,700 |
| • Conceptual Design – Stormwater Storage on DOT parcel | \$2,700 |
| • Final Design, Survey & Permits – Lake Park Blvd Ditch Improvements | \$17,600 |

| | |
|-------|----------------------------------|
| TOTAL | \$33,200 (hourly, not to exceed) |
|-------|----------------------------------|

Please let me know if you have any questions or need additional information regarding our proposed services. If this proposal is acceptable, please sign and date in the space provided below.

Sincerely,



Bradley W. Roeth P.E.
Owner/Senior Engineer
Watersmith Engineering

Pat Lynch P.E.
City Engineer
City of Muscatine

Attachments:

- Scope of Work – Lake Park Blvd Stormwater Improvements Project
- Watersmith Engineering Standard Terms and Conditions
- Watersmith Standard Hourly Rates and Fees

SCOPE OF SERVICES

Lake Park Blvd Stormwater Improvements Muscatine, Iowa

The project is the Lake Park Blvd Stormwater Improvements for the City of Muscatine (Client). Client intends to evaluate stormwater flows, capacity of existing stormwater conveyance system, and develop conceptual designs for three different improvements. All three improvements are intended to reduce flooding along Lake Park Boulevard northeast of the Mad Creek bridge. The project also includes final design and permitting for one of the three improvements, described below.

Engineering Services to be performed by Watersmith Engineering, in association with Martin & Whitacre, Engineers & Surveyors:

- A. Hydrology/Hydraulic calculations. Evaluate existing stormwater flows in the Lake Park Boulevard stormwater system and upstream drainage basin:
 1. Delineate watershed sub-basins based on LIDAR data from DNR and storm sewer data provided by City.
 2. Estimate basin characteristics for storm runoff calculations using NRCS Curve Number method.
 3. Calculate flowrates for three return periods (10-yr, 50-yr, 100-yr).
 4. Use approximate elevations based on LIDAR and City's GIS database for hydraulic control features (culverts, driveways, intake structures)
 5. Utilize calculations to develop and evaluate three proposed improvements.
 6. Summarize results and recommendations in a brief report.
- B. Develop conceptual plan for ditch improvements along south/east side Lake Park Boulevard, extending from Mad Creek outfall, across Summit Avenue, and extending approximately 300 feet from Mad Creek to end of project. Conceptual plan includes one overview drawing with plan and profile of ditch, culvert, and outfall; project summary sheet; and concept-level cost estimate.
- C. Develop conceptual plan for open channel excavation on HNI-Allsteel property. Proposed open channel would provide short-cut for stormwater to reach Mad Creek, alleviating flooding on Lake Park Blvd. Proposed open channel is approximately 750 feet and requires excavation of peninsula of high-ground between an existing channel and Mad Creek. The proposed open channel would also cross the Mad Creek Trail before reaching Mad Creek. Conceptual plan includes one overview drawing showing size of open channel, trail culvert, quantity of excavation, and conceptual design of diversion and outfall structures; project summary sheet; and concept-level cost estimate.
- D. Evaluate alternatives and develop conceptual plan for preferred stormwater storage feature on the back third of a former DOT parcel on Lake Park Blvd. Ideas for stormwater storage feature include meandering stream with overflow storage area, constructed wetland, and/or detention storage. Alternative evaluation involves evaluating site for feasibility of different options, and in conjunction with City staff selecting a preferred method (does not include detailed evaluation and cost estimates for three options); project data sheet; one overview drawing; and concept-level cost estimate.
- E. Final design, survey, and permitting for the ditch improvements along south/east side of Lake Park Boulevard.
 1. Survey of topographic, utility, and planimetric feature for project area from curb to ROW line.
 2. Develop final engineering drawings for construction, utilizing SUDAS standard specifications and standard Muscatine front-end documents.

3. Prepare engineer's estimate of construction cost.
4. Prepare permit application for DNR/USACE Joint Application for work in FEMA defined floodplain at Mad Creek outfall. Does not include no-rise certification for work in FEMA floodway. If no-rise certification is required, it is considered additional services.
5. Proposed project area is less than 1 acre and does not require NPDES construction permit.

Services and items provided by Client include:

- Provide information for existing stormwater infrastructure and observed flooding levels and dates for calibration of stormwater calculations.
- Attend progress meetings.
- Provide timely feedback and review for project submittals.
- Participate in evaluation of alternatives on DOT parcel.

The engineering services described above will be completed according to the following schedule:

- Hydrology/Hydraulic Calculations to be completed within 5 weeks of notice to proceed.
- Conceptual designs to be completed within 8 weeks of notice to proceed.
- Final designs and Permit Applications to be completed within 6 weeks of approved conceptual drawings.
- Permit reviews by government agencies are outside the control of Watersmith Engineering.

The following are items that are not included in the Scope of Services above. These items can be added (or other services that may not be specifically listed) as **Additional Services** to the agreement if directed:

- No-rise certification for Joint Application (floodplain) permit process.
- Soil borings or other subsurface exploration.
- Evaluation of additional options, alternatives, and/or conceptual designs.
- Final design of remaining conceptual design projects.
- Wetlands delineation, other environmental, historic, or archaeological studies.
- Additional meetings and public hearings.

Services will be charged to the Client at the attached Watersmith Engineering Standard Hourly Rates and Fees Schedule.

STANDARD OF CARE

In providing services under this Agreement, the Consultant shall perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances at the same time and in the same or similar locality. The Consultant makes no warranty, either express or implied, as to the professional services rendered under this Agreement.

INFORMATION PROVIDED BY OTHERS

The Client shall furnish, at the Client's expense, all information, requirements, reports, data, surveys and instructions required by this Agreement. The Consultant may use such information, requirements, reports, data, surveys and instructions in performing its services and is entitled to rely upon the accuracy and completeness thereof. The Consultant shall not be held responsible for any errors or omissions that may arise as a result of erroneous or incomplete information provided by the Client and/or the Client's consultants and contractors.

ESTIMATES OF PROBABLE CONSTRUCTION COST

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's estimates of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's estimate of probable construction cost.

PERMITS AND APPROVALS

The Consultant shall assist the Client in applying for those permits and approvals required by law for projects similar to the one for which the Consultant's services are being engaged. This assistance shall consist of completing and submitting forms to the appropriate regulatory agencies having jurisdiction over the construction documents and other services normally provided by the Consultant and included in the Scope of Services of this Agreement.

CHANGED CONDITIONS

If, during the term of this Agreement, circumstances or conditions that were not originally contemplated by or known to the Consultant are revealed, to the extent that they affect the scope of services, compensation, schedule, allocation of risks or other material terms of this Agreement, the Consultant may call for renegotiation of appropriate portions of this Agreement.

UNDERGROUND IMPROVEMENTS

The Client will furnish to the Consultant information identifying the type and location of existing underground improvements on the site. The Consultant is entitled to rely upon the accuracy and completeness of the information furnished to the Consultant.

JOBSITE SAFETY

Neither the professional activities of the Consultant, nor the presence of the Consultant or its employees and subconsultants at a construction/project site, shall impose any duty on the Consultant, nor relieve the General Contractor of its obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending and coordinating the Work in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies.

HAZARDOUS MATERIALS

As used in this Agreement, the term *hazardous materials* shall mean any substances, including without limitation asbestos, toxic or hazardous waste, PCBs, combustible gases and materials, petroleum or radioactive materials (as each of these is defined in applicable federal statutes) or any other substances under any conditions and in such quantities as would pose a substantial danger to persons or property exposed to such substances at or near the Project site. Both parties acknowledge that the Consultant's scope of services does not include any services related to the presence of any hazardous or toxic materials.

MEDIATION

In an effort to resolve any conflicts that arise during the design and construction of the Project or following the completion of the Project, the Client and the Consultant agree that all disputes between them arising out of or relating to this Agreement or the Project shall be submitted to nonbinding mediation.

LIMITATION OF LIABILITY

In recognition of the relative risks and benefits of the Project to both the Client and the Consultant, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of the Consultant and Consultants officers, directors, partners, employees, shareholders, owners and subconsultants for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, including attorneys' fees and costs and expert-witness fees and costs, so that the total aggregate liability of the Consultant and Consultants officers, directors, partners, employees, shareholders, owners and subconsultants shall not exceed \$10,000 or the Consultant's total fee for services rendered on this Project, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

CONSEQUENTIAL DAMAGES

Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the Client nor the Consultant, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the Project or to this Agreement. This mutual waiver of consequential damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation and any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty.

TERMINATION

Either party may terminate this Agreement for cause upon giving the other party not less than seven (7) calendar days written notice for any of the following reasons: Substantial failure by the other party to perform in accordance with the terms of this Agreement and through no fault of the terminating party; Assignment of this Agreement or transfer of the Project by either party to any other entity without the prior written consent of the other party; Suspension of the Project or the Consultant's services by the Client for more than ninety (90) calendar days; Material changes in the conditions under which this Agreement was entered into, the Scope of Services or the nature of the Project, and the failure of the parties to reach agreement on the compensation and schedule adjustments necessitated by such changes.

OWNERSHIP OF INSTRUMENTS OF SERVICE

The Consultant shall retain ownership of all reports, drawings, plans, specifications, electronic files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service. The Consultant shall retain all common law, statutory and other reserved rights, including, without limitation, all copyrights thereto.

THIRD-PARTY BENEFICIARIES

Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Client or the Consultant. The Consultant's services under this Agreement are being performed solely for the Client's benefit, and no other party or entity shall have any claim against the Consultant because of this Agreement or the performance or nonperformance of services hereunder.

BILLING AND PAYMENT TERMS

Invoices shall be submitted by the Consultant monthly and are due upon presentation and shall be considered past due if not paid within 30 calendar days of the due date.



1029 Hershey Avenue
Muscatine, IA 52761
563.506.2673

Watersmith Engineering Hourly Rates and Fees
Effective Jan. 1, 2021

| Classification | Hourly Rates |
|---|----------------------------|
| Senior Engineer | \$130/hour |
| Senior Designer | \$92/hour |
| Engineering Technician | \$63/hour |
| Administrative Assistant | \$38/hour |
| | |
| Mileage | Included with hourly rates |
| 3 rd Party Printing Expenses | At Cost |
| Courier Expenses | At Cost |
| Miscellaneous Expenses | At Cost |



Gary Whitacre, President
Matt Krause, Vice President
Seth Whitacre, Sec/Treas

Effective: January 1, 2021

CURRENT RATE SCHEDULE

| | |
|-----------------------------|-----------|
| Project Manager | \$185/hr. |
| Senior Engineer | \$185/hr. |
| Engineer II | \$159/hr. |
| Engineer I | \$138/hr. |
| Engineer In Training | \$101/hr. |
| Senior Land Surveyor | \$183/hr. |
| Land Surveyor II | \$159/hr. |
| Land Surveyor I | \$126/hr. |
| Land Surveyor In Training | \$101/hr. |
| Civil/Survey Technician V | \$126/hr. |
| Civil/Survey Technician IV | \$115/hr. |
| Civil/Survey Technician III | \$101/hr. |
| Civil/Survey Technician II | \$ 89/hr. |
| Civil/Survey Technician I | \$ 73/hr. |
| Clerical | \$ 77/hr. |

| | |
|---|-------------|
| Equipment – Usage / Additional Fees – (Added to Users Rate) | |
| Mileage | \$0.75/mile |
| Field Survey Kit | \$ 25/hr. |
| ATV Usage | \$ 50/hr. |
| Boat Usage · Single Beam | \$ 75/hr. |
| Scanner Usage | \$100/hr. |
| Drone Usage | \$100/hr. |

**These rates are subject to annual adjustment (on or about January 1)
and your contract will adjust accordingly.**

“M&WRATES2021”

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web site: <http://www.martin-whitacre.com>