



Public Works

City Transit
263-8152

MEMORANDUM

Equipment Maintenance
Roadway Maintenance
Collection & Drainage
Building & Grounds
Engineering

To: Randy Hill, Public Works Director
FROM: Jim Edgmond, City Engineer
DATE: March 16, 2015
RE: Mulberry Ave. from Palms Drive to Houser Street Reconstruction Project

INTRODUCTION:

Mulberry Avenue from Palms Drive to Houser Street has been designated for reconstruction by the City. This project design work is designated to be given to a consultant to perform the design.

BACKGROUND:

The City has selected Shoemaker-Haaland in Coralville, Iowa to do the design and a fee for the design has been negotiated. Their fee proposal is attached to this memo. No federal funds are anticipated to be used to pay the project design fee. The planning estimate from Public Works for this project is \$2,000,000. The project corridor includes Mulberry Avenue from Palms Drive to and through the Houser Street Intersection. The project includes widening Mulberry, installing roadway embankment, storm sewer, sidewalks, curbs and gutters and coordinating with changing or replacing all utilities in the project corridor. This project is expected to be completed in the 2016-2017 construction seasons.

Award of Design Contract:

The total cost of the consultant's proposal is \$123,907.00 and this includes \$4,765.00 for reimbursable expenses. The proposal has been reviewed by Public Works staff and is recommended to the City Council for approval. Several items are excepted out as extra work that would need extra compensation. They are:

- If the project does not receive a 'cat ex' (categorical exclusion) on the environmental, cultural and archeological clearances the additional work needed to comply with these requirements would be extra work. The city anticipates this project will receive a cat ex exclusion.
- Traffic signals, plantings, lighting or signing design would be extra work for this contract. These items are not anticipated or will be designed by others. No extras are anticipated on these items.
- ROW acquisition and survey costs.
- Geotechnical investigation. We anticipate the project does not need this service.

RECOMMENDATION/RATIONALE:

I recommend city council approve this proposal from Shoemaker-Haaland in the amount of \$123,907.00. This figure includes two billable items that will be billed hourly with not-to-exceed amounts show in the proposal for Bidding Assistance and Project Management.

BACKUP INFORMATION:

1. Proposal dated March 13, 2015.



160 Holiday Road
Coralville, Iowa 52241
319.351.7150

March 13, 2015

Mr. Randy Hill
Public Works Director
City of Muscatine
Muscatine, Iowa 52761

Subject: Proposal for Design of Mulberry Avenue from Palms Drive to Houser Street

Dear Randy:

Shoemaker & Haaland is pleased to provide this proposal for design services for the Mulberry Avenue Reconstruction from Palms Drive to Houser Street. The project will include the reconstruction of Mulberry Street as a three lane urban roadway with two through lanes and a center left turn lane. Also included is an evaluation for a possible reconfiguration of the intersection of Mulberry Avenue and Houser.

Other design elements will include storm sewer with intakes; replacement of the existing roadway culvert north of Baton Rouge Rd; storm water retention for additional runoff caused by increased impervious area of the new paving, energy dissipation for the existing storm water outlet behind the 3417 Baton Rouge Road property, sidewalks, and sanitary sewer rehabilitation. The project will be designed incorporating the Complete Streets approach to the extent it is practical and within budget.

We anticipate providing legal survey work related to property and or easement acquisition. We have not included a cost for this work in our proposal at this time because a detailed construction limits and staging plan identifying the limits of disturbance in this corridor has not been completed. We would propose that the legal survey work related to acquisition of property rights be negotiated after the construction limits have been identified.

Once you have had a chance to review the attached scope we would like to set up a time to meet to discuss any questions, confirm our understanding of the scope and review the design parameters in more detail.

Sincerely,

SHOEMAKER & HAALAND PROFESSIONAL ENGINEERS

A handwritten signature in blue ink, appearing to read 'Adrian Holmes', with a long horizontal flourish extending to the right.

Adrian Holmes, P.E., CFM

Enclosures (1)
15047

CONSULTANT AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 2015 by and between the City of Muscatine, a municipal corporation, hereinafter referred to as the CITY and Shoemaker & Haaland Professional Engineers, of Coralville, Iowa, hereinafter referred to as the CONSULTANT.

Whereas the City desires to contract with the Consultant to assist with the design of the **Mulberry Avenue from Palms Drive to Houser Street**. The project includes preliminary and final design services for Mulberry Street as described above and study for a possible reconfiguration of the intersection at Mulberry Avenue and Houser. This includes demolition/recycling of the existing roadway and constructing a new three lane urban section; tying into existing intersections at Baton Rouge Road and Palms Drive; new storm sewer with intakes; replacement of the existing roadway culvert north of Baton Rouge Rd; storm water retention for additional runoff caused by increased impervious area of the new paving, energy dissipation for the existing storm water outlet behind the 3417 Baton Rouge Rd property, sidewalks, and sanitary sewer rehabilitation.

NOW THEREFORE, it is agreed by and between the parties hereto that the City does now contract with the Consultant to provide services as set forth herein.

I. SCOPE OF SERVICES

Consultant agrees to perform the following services for the City, and to do so in a timely and satisfactory manner.

A. PROJECT MANAGEMENT SERVICES

1. **Project Startup and Construction Staging Meeting:** The CONSULTANT shall schedule and hold a project meeting to discuss and confirm the project scope including general and project specific items with concerned City Departments including Public Works, Power and Water, and Sewer departments and present the construction staging general plan.
2. **Coordination with Utilities:** The CONSULTANT shall schedule and hold a utility coordination meeting to discuss the project. The CONSULTANT shall follow up with utility issues and take into consideration the individual utility's concerns when developing the design plans.
3. **Property Owner Input:** The CITY shall meet with adjacent landowners for review of project. The CONSULTANT shall attend one neighborhood informational meeting arranged and held by the CITY to review the preliminary plans.
4. **Coordination with Sub Consultants:** There are currently no sub-consultants included in this contract. If, during the design process, it is determined that specialized services outside of the scope described herein are required, the CONSULTANT shall coordinate this work with a sub-consultant. The sub-

consultant shall be subject to approval of the CITY. Sub-consultant fees and fees for selection and coordination with sub-consultants are not included in this contract.

5. **Project Update Meetings:** The CONSULTANT shall attend monthly meetings with the CITY as required to review the project design and management issues.

B. CONCEPT STATEMENT

CITY and CONSULTANT shall jointly review and update if necessary "Concept Statement for Federal-Aid Project" and submit to the Iowa Department of Transportation if necessary.

C. PRELIMINARY PLANS AND FHWA ENVIRONMENTAL CONCURRENCE

1. CONSULTANT shall prepare preliminary design documentation to establish the limits of construction, right of way needs, and potential environmental impacts sufficient to begin the process of obtaining FHWA Environmental Concurrence.
 - a. **Review up to Two Alignments:** Review construction staging requirements including up to two roadway alignments for concurrence with Iowa DOT geometric requirements, Statewide Urban Design and Specifications (SUDAS), emergency and regular traffic accommodations during construction, storm water retention and drainage, property rights issues, utility accommodations and City goals including complete streets design.
 - b. **Typical Cross Section:** The CONSULTANT will prepare typical cross sections to illustrate the interrelationship of proposed improvements to nearby properties, project right of way, limits of disturbance, sidewalks, existing features and utilities, etc.
 - c. **Mulberry Drive / Houser Street Intersection:** The CONSULTANT will review intersection reconfiguration options considering the location of adjacent driveways.
 - d. **Storm Water Management:** The CONSULTANT will conduct a watershed analysis and evaluate hydrologic and hydraulic considerations to estimate pre and post construction storm water runoff rates, estimate retention requirements and pipe sizes required to carry design flows. Three storm water management concepts will be presented including a conventional storm water detention basin located on the vacant lots east of Mulberry and South of Baton Rouge, a detention basin on the unnamed stream north of Baton Rouge, and storm water infiltration structures in the Mulberry Street right of way.
 - e. **Storm Water Outfall Energy Dissipation and Channel Stabilization:** The CONSULTANT will review the existing conditions of the storm water outfall to the unnamed tributary to Mad Creek

behind the 3417 Baton Rouge Rd property. A preliminary concept for outfall energy dissipation and stream stabilization in the immediate vicinity of the outfall will be presented.

- f. **Sanitary Sewer Rehabilitation:** The CITY will televise sanitary sewers, evaluate options for rehabilitation, and provide the CONSULTANT with a recommended design approach for sanitary sewer rehabilitation. CONSULTANT will incorporate sanitary sewer rehabilitation into the construction staging study.
 - g. **Geotechnical Investigation:** CONSULTANT shall review existing pavement condition and available pavement construction and repair records to evaluate need for subgrade repairs. It is the CITY's opinion that specialized geotechnical investigation is not warranted at this time. If, during the design process, it is determined that geotechnical services are required for structures, subgrade evaluation, or other conditions, the CONSULTANT shall coordinate this work with a sub-consultant as described in section I-A.4 of this contract.
 - h. **Limits of Disturbance:** The CONSULTANT will lay out design concepts on property and right of way maps to provide preliminary information on impacts to adjacent properties.
 - i. **Review Meeting:** The CONSULTANT shall arrange and attend a review meeting to present the proposed construction staging concepts and seek input from City Staff.
2. **Environmental Concurrence (Categorical Exclusion):** The CONSULTANT will work with the DOT Office of Location and Environment to secure Environmental Concurrence. For the purposes of this proposal it is assumed that this project will qualify for either a programmatic or individual Categorical Exclusion and that the project will not have a significant environmental impact. In accordance with the Iowa DOT Federal-aid Project Development Guide for Local Public Agencies, the CONSULTANT will complete the following tasks to complete the NEPA process and receive FHWA Environmental Concurrence. It is assumed that there will be no specialized environmental studies and no environmental sub-consultants will be required. If the DOT Office of Location and Environment requires specialized environmental studies, the CONSULTANT shall coordinate this work with a sub-consultant as described in section I-A.4 of this contract.
- a. **Section 4(f) (impacts to parks and recreation areas):** It is assumed that no parks will be impacted. The CONSULTANT will complete the Environmental Data Sheet form 517006 and submit it to the DOT.
 - b. **Threatened and Endangered Species:** The CONSULTANT will send a letter to the Iowa DNR requesting they review for species habitat in the project area. The CONSULTANT will complete the Determination of Effect for Threatened and Endangered Species for Local Public Agencies (DOE) form (Form 760005) and submit it to the DOT. It is assumed that there will be *No effect* and consultation with USFWS will not be required.

- c. **Cultural Resources:** It is assumed that this project will have minimal effect to historic properties and require less than 2 acres of easements. The CONSULTANT shall provide the Office of Location and Environment a map showing the area of potential effect and request that the Office of the State Archeologist (OSA) perform an archeological assessment. The OSA will provide the CITY a letter report of the findings, either recommending a survey or “no survey recommended.” If no survey is recommended, this letter assessment will document to SHPO that no historic properties will be affected. If a survey is recommended, the CONSULTANT shall coordinate this work with a sub-consultant as described in section I-A.4 of this contract.
 - d. **Section 404 Permit / Wetlands, Streams, and Aquatic Resources Evaluation:** It is assumed that all work for this project will be permitted under a Nationwide Permit (will not have significant impacts to waters of the U.S.) and that detailed wetland delineation and stream or wetland mitigation will not be required. The CONSULTANT will prepare a Joint Application Form for the CITY’s submittal to the U.S. Army Corps of Engineers (USACE) to obtain coverage under a Nationwide Permit. If the USACE requires wetland delineation, wetland mitigation, or stream mitigation, the CONSULTANT shall coordinate this work with a sub-consultant as described in section I-A.4 of this contract.
 - e. **Storm Water Permit:** The project will disturb more than 1 acre of ground. The CONSULTANT will prepare a Storm Water Pollution Prevention Plan (SWPPP) and complete the necessary application forms and public notices for coverage under the State’s NPDES general permit for storm water discharge associated with construction activities.
 - f. **Other Permits Not Required:** It is assumed that the DOT Office of Location and Environment will clear the following items and the CONSULTANT has not included fees for addressing these clearances:
 - i. The drainage area of the project site is less than 2 square miles therefore no DNR Floodplain Development Permit is required.
 - ii. The project will require less than 5 acres of farmland per mile and therefore no action needs to be taken under the Farmland Protection Policy Act.
 - iii. No hazardous materials are likely to be encountered.
 - iv. There will be no work on primary or interstate highways and no permit for work in a highway right of way will be required.
3. **Preliminary Design (Plan Submittal):** The CONSULTANT will prepare preliminary plans per Iowa Department of Transportation format. Plans and specifications shall be based on the "Standard Specifications for Highway and Bridge Construction", of the Iowa Department of Transportation, City Design Standards and SUDAS as applicable and shall include the following:
- a. **Topographic Survey:** The CONSULTANT shall prepare a topographic route survey base map showing the locations and dimensions of the existing site features. This survey shall augment the

previously completed right of way pin search and preliminary roadway and driveway centerline elevation survey as agreed upon in our contract dated January 13, 2014 (purchase order #39980).

- b. **Existing Utility Information:** The CONSULTANT shall collect existing utility mapping by contacting private and public utility providers and performing a design locate through Iowa One Call. Investigatory excavation or other methods for exact location of utilities, if required, shall be by OWNER.
 - c. **Preliminary Plans:** The CONSULTANT shall prepare preliminary plans as indicated.
 - d. **Plan and Profile Sheets:** Plans based on Construction Staging and Alignment Study
 - e. **Roadway Plans:** Plans for removal and replacement of pavement with storm drainage. Plans showing new paving and the limits of pavement replacement along with improvements to the Houser intersection.
 - f. **Right of Way:** Plans showing the location of existing property and right of way lines, construction limits, and general extents of proposed right of way acquisitions and easements.
 - g. **Storm Sewer:** Plan view of proposed storm sewer improvements including location of storm water detention and/or other structural BMP's.
 - h. **Typical Section:** Typical roadway section showing interrelationship of roadway, walks, right of way, utilities, overhead lighting, and placement of utilities.
4. **City Review:** The CONSULTANT shall submit preliminary plans to the CITY for review and comment with a schedule for review such that project is not delayed.
 5. **Owner Comments:** Following review by the City Staff, CONSULTANT shall address CITY comments and edit plans accordingly.
 6. **Public Meeting:** The CITY shall set a time, advertise, and hold an open house on the preliminary plans for public comments. CONSULTANT shall attend the open house and document comments utilizing comment forms and work with CITY to develop recommendations to address comments.
 7. **Update Plans and DOT Submittal:** Based on recommendations from the public meeting and input from the CITY, the CONSULTANT shall modify the plans and submit to the DOT for Preliminary Plan Submittal.
 8. **Opinion of Cost:** Update Opinion of Project Cost from the Preliminary Plans based on Iowa Department of Transportation and CITY standard bid items and compare it to the cost indicated in the Project Budget Report. A discussion of the estimated cost versus the existing budget shall then occur between the CONSULTANT and the CITY.

F. RIGHT OF WAY AND LAND ACQUISITION PLATS

The CITY shall work with the Iowa DOT Right of Way office for appraisals and property acquisition negotiations. If necessary, the CONSULTANT will prepare survey plats and legal descriptions for temporary and permanent property acquisitions and easements. CONSULTANT will furnish copies of the survey plats, signed by a Licensed Land Surveyor, to the CITY to begin the property appraisal and acquisition process. The fee for plats and legal descriptions has not been included in this contract but will be negotiated at the appropriate time.

G. CHECK PLANS (Plan Submittal)

Check Plans: The CONSULTANT shall prepare Check Plans per Iowa Department of Transportation format to include comments of the CITY and Iowa Department of Transportation from preliminary set and include the following:

- A. Detailed plan and profiles of proposed roadway improvements
 - B. Detailed plans of the Mulberry Avenue/Houser Street intersection
 - C. Detailed typical sections
 - D. Cross sections at 50 foot intervals and at driveways
 - E. Detailed demolition plans
 - F. Detailed limits of disturbance
 - G. Detailed right of way plans identifying existing property lines, construction easements and property acquisition areas
 - H. Detailed storm sewer plan and profiles
 - I. Detailed sanitary sewer rehabilitation plans
 - J. Detailed grading plans and adjustments
 - K. Detailed construction phasing plans
 - L. Detailed pavement marking plans
 - M. Detailed jointing and roadway alignment plans
 - N. Detailed item quantity sheet with different divisions for federal aid and non federal aid bid items identified
 - O. Detailed item tabulation sheets
 - P. Detailed storm water pollution prevention plan
 - Q. Detailed traffic control
 - R. Preparation of special details
 - S. Detailed alignment information and control information
 - T. Detailed Special Provisions where necessary
1. **City Review:** At the completion of the Check Plan Stage, the CONSULTANT shall submit plans to the CITY for review, have a Check Plan review meeting with the CITY, address any CITY comments on plans. The CONSULTANT shall submit plans to the CITY at least two weeks prior to the deadline for filing with the Iowa DOT to allow adequate time for review.
 2. **Public Meeting:** Prior to submitting plans to the Iowa DOT, the CITY shall set a time, advertise, and hold public information meeting so that

concerned stakeholders, residents, and neighbors can view and comment on plans. CONSULTANT shall attend the open house.

3. **Update Plans:** CONSULTANT shall discuss comments received from the stakeholders with the CITY and determine appropriate way to address and provide written responses to the concerns.
4. **Opinion of Cost:** Update Opinion of Project Cost from the Preliminary Plans based on Iowa Department of Transportation and CITY standard bid items and compare it to the cost indicated in the Project Budget Report. A discussion of the estimated cost versus budget shall then occur between the CONSULTANT and the CITY. Options shall be evaluated and recommendations shall be made to address any budget issues.
5. **Submit Check Plans:** CONSULTANT Shall Submit check plans to the Iowa DOT on schedule.

H. FINAL PLANS

1. **Iowa DOT Comments:** CONSULTANT shall review and address Iowa DOT and City comments to Check Plans and address comments in the Final Plans.
2. **Clarification:** CONSULTANT shall coordinate with Iowa DOT staff as necessary to get clarification on comments.
3. **City Review:** CONSULTANT shall submit Final Plans to City for comments with allowance for one week of review time within the project schedule. CONSULTANT shall address City comments and submit plans to Iowa DOT.
4. **IDOT Comments to Final Plans:** CONSULTANT shall Address Iowa DOT comments and resubmit plan documents as necessary.
5. **Project Certification:** The CONSULTANT shall sign the project cover sheet to certify the construction documents, in accordance with the Iowa Department of Transportation and State of Iowa Requirements.
6. **Opinion of Cost:** The CONSULTANT shall provide a Budget Review/Engineers Opinion of Construction Cost. The CONSULTANT shall refine the previous Opinion of Cost based on final quantity information. Sources of unit prices used shall be documented. Recommendations to address any budget issues will be requested by CITY. It is recognized that the CONSULTANT has no control over the contractor's means and methods of determining bid prices, the bidding climate and market conditions. Therefore the CONSULTANT cannot guarantee this cost opinion/estimate.
7. **Project Development Certification**
Prepare and submit project development certification to Iowa Department of Transportation to meet project timeline.

I. BID PERIOD ASSISTANCE

1. **Plan Clarification.** The CONSULTANT shall be available to discuss the project with the City's project representative and representatives of the Iowa Department of Transportation Contracts Office and to answer questions during the bid period.
2. **Preparation and Distribution of Addenda:** The CONSULTANT shall assist Iowa Department of Transportation to review contractor questions and assist with preparation of addenda as necessary to be issued by Iowa Department of Transportation, Contracts Office.

J. DELIVERABLES

1. **PRELIMINARY DESIGN PLANS:** Provide drawings showing construction staging, typical cross section(s), storm water management concept, storm water outfall energy dissipation concept, stream stabilization at outfall, and limits of disturbance. Prepare Preliminary Plans and related documentation as required by the Iowa Department of Transportation and provide three sets to the owner three weeks prior for review.
1. **CHECK PLANS:** Prepare Check Plans and related documentation as required by the Iowa Department of Transportation and provide three sets to the owner with two weeks built into the project schedule for owner review.
3. **FINAL PLANS:** Prepare Final Plans and related documentation as required by the Iowa Department of Transportation and provide three sets to the owner with one week built into the project schedule for owner review.

K. ADDITIONAL SERVICES

It is the understanding of the CONSULTANT that the following work will be provided by the CITY or by other contract or by an amendment to this Agreement.

1. **Project Construction Administration/Observation Phase:** If directed by the City, the Consultant shall provide on site construction observation, testing and documentation. A scope and fee for these services will be provided upon request.
2. **Sub-consultants:** No sub-consultants are anticipated and no fees for sub-consultants are included in this contract. If directed by the CITY, environmental, geotechnical, and archeological services as required for the project and as recommended by the CONSULTANT or DOT will be provided by sub-consultants under contract by the CONSULTANT. The CONSULTANT will coordinate the work of the sub-consultants. A scope and fee for these services will be provided upon request.
3. **Other Out of Scope Improvements**

- Roadway improvements or temporary vehicular access off of project site
- Detailed design of Mulberry Ave / Bonnie Drive intersection improvements
- Anything other than geometry and driveway reconfiguration changes at Mulberry / Houser intersection
- Traffic signals
- Plantings
- Lighting
- Other environmental services as discussed in section C.2 of this proposal
- Other work not specifically mentioned in this scope of services

II. TIME OF COMPLETION

The CONSULTANT shall establish a detailed design and bidding time schedule with dates once Notice to Proceed is received. The schedule shall be prepared in close cooperation with the City and following the Iowa Department of Transportation Critical Path Schedule which will permit a bid letting by the Iowa Department of Transportation. For the purposes of this proposal, it is assumed that the project will follow either a DOT Type 1 (*Approximate 9 months to letting*, Programmatic Categorical Exclusion, No Right-of-Way Needs) or Type 2 (*Approximate 16 months to letting*, Programmatic or Individual Categorical Exclusion, Minor Right-of-Way Needs) schedule according to DOT Instructional Memorandum 3.002. Approximate schedules for each of these scenarios are presented in Appendix A.

III. TERMS AND CONDITIONS

Work shall be done in accordance with the attached standard Terms and Conditions.

IV. COMPENSATION FOR SERVICES

Compensation for the services outlined above shall not exceed the total amount of \$119,142 plus reimbursable expenses estimated at \$4,765 with estimated fees as follows.

Project Management (Hourly Not to Exceed)	\$12,305
Topographic Survey, Data Collection, Base Mapping	17,515
Preliminary Design	33,380
Check Plans	26,140
Final Plans	25,494
Bidding Period Assistance (Hourly Not to Exceed)	4,308
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Total Fee	\$119,142
Estimated reimbursable expenses	\$4,765
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Total	\$123,907

FOR THE CITY

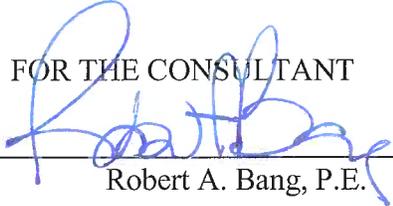
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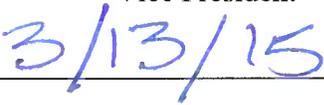
Date: _____

ATTEST: _____

FOR THE CONSULTANT

By:  _____
Robert A. Bang, P.E.

Title: _____
Vice President

Date:  _____

