



1459 Washington St.
Muscatine, IA 52761-5040
(563) 263-8933
Fax (563) 263-2127

Public Works

City Transit
263-8152

MEMORANDUM

Equipment Maintenance
Roadway Maintenance
Collection & Drainage
Building & Grounds
Engineering

To: Gregg Mandsager, City Administrator
CC: Fran Donelson, Secretary
FROM: Randy Hill, Public Works Director
DATE: July, 1, 2015
RE: Agreement for Professional Services – Mississippi Drive Corridor Project

INTRODUCTION:

The City of Muscatine is preparing to move forward on a reconstruction of Mississippi Drive from E. 2nd/Hwy 92 to the Carver Corner at Hershey/Grandview/Green Streets.

BACKGROUND:

For the past several years City staff has acknowledged the need to upgrade the roadway along Mississippi Drive. The asphalt surface has deteriorated significantly resulting in a very unpleasant drive. The State of Iowa owned Mississippi Drive until July 2014 at which time they transferred the jurisdiction of the road to the City of Muscatine. As a result of the Transfer of Jurisdiction (TJ) and accompanying financial payment, the City is poised to not only improve the surface to Mississippi Drive but make safety improvements for pedestrians and motorists, engage Blue Zones recommendations, increase parking, facilitate connectivity with the Central Business District, address outdated infrastructure and construct a thoroughfare that is a “signature” project for the community.

In April 2015 City staff requested proposals from more than 25 engineering firms. Those who chose to submit proposals were screened and eventually three businesses were interviewed. The interview panel consisted of City staff, a representative from Muscatine Power and Water and a representative from Canadian Pacific Railway. Two other “observers” from the Merrill Hotel and Convention Center team were present. The engineering firm of Bolton-Menk from Des Moines, Iowa was selected unanimously as the preferred design team for the Mississippi Drive Corridor Project.

**"I remember Muscatine for its sunsets. I have never seen any
on either side of the ocean that equaled them" — Mark Twain**

RECOMMENDATION/RATIONALE:

Bolton-Menk submitted a “Scope of Services” detailing the necessary information required for the reconstruction project. These include: Final Design/Plans & Specifications, Bidding, Permitting, Project Initiation and Management, Public Involvement and Stakeholder Input, Data Collection, Railroad and Utility Coordination, and review of other associated information such as the Streetscape Master Plan and Geotechnical analysis.

Total cost for the Basic Services is \$1,249,642.00. The Professional Services Agreement authorizes Preliminary Design tasks 1-9 included in the scope for \$585,491.00. Final Design tasks 10-12 will be authorized by a Notice To Proceed from the City of Muscatine to Bolton-Menk totalling \$664,151.00 at a later date once a cost sharing agreement is in place with the CP Railroad. Additional project partners may include, but are not necessarily limited to, the MPW and the Hotel.

City Staff recommends the Muscatine City Council enter into an agreement with Bolton-Menk for \$1,249,642.00 for the design of the Mississippi Drive Corridor Project. Preliminary design tasks will begin immediately, but final design tasks will be subject to the cost sharing agreement with the CP Railroad.

BACKUP INFORMATION:

1. Agreement for Professional Services – Mississippi Drive Corridor Reconstruction

**AGREEMENT FOR PROFESSIONAL SERVICES
MISSISSIPPI DRIVE CORRIDOR RECONSTRUCTION**

CITY OF MUSCATINE, IOWA

This Agreement, made this ____ day of July, 2015, by and between the City of Muscatine, hereinafter referred to as CLIENT, and Bolton & Menk, Inc., 1301 Locust, Suite E, Des Moines, IA 50309, hereinafter referred to as CONSULTANT.

WITNESS, whereas the CLIENT intends to employ professional services required in conjunction with the Mississippi Drive Reconstruction Project, and

WHEREAS, the CONSULTANT agrees to furnish the various professional services required by the CLIENT.

NOW, THEREFORE, in consideration of the mutual covenants and promises between the parties hereto, it is agreed:

SECTION I - CONSULTANT'S SERVICES

- A. The CONSULTANT agrees to perform the various Basic Services and Construction Phase Services in connection with the specific project as described in Section I.A and Section I.B. of Exhibit I.
- B. Upon mutual agreement of the parties hereto, Additional Services may be authorized as described in Section I.C. of Exhibit I.
- C. The CONSULTANT shall serve as the CLIENT'S professional engineering representative as described herein.

SECTION II - THE CLIENT'S RESPONSIBILITIES

- A. The CLIENT shall promptly compensate the CONSULTANT in accordance with Section III of this Agreement.
- B. The CLIENT shall place any and all previously acquired information in its custody at the disposal of the CONSULTANT for its use. Such information shall include but shall not be limited to boundary surveys, topographic surveys, preliminary sketch plan layouts, building plans, soil surveys, abstracts, deed descriptions, tile maps and layouts, aerial photos, utility agreements, environmental reviews, zoning limitation. The CONSULTANT may rely upon the accuracy and sufficiency of all such information in performing services unless otherwise instructed, in writing, by CLIENT.
- C. The CLIENT will guarantee access to and make all provisions for entry upon both public and private portions of the project and pertinent adjoining properties.
- D. The CLIENT will give prompt notice to the CONSULTANT whenever the CLIENT observes or otherwise becomes aware of any defect in the proposed project.
- E. The CLIENT shall designate a liaison person to act as the CLIENT'S representative with respect to services to be rendered under this Agreement. Said representative shall have the authority to transmit

instructions, receive instructions, receive information, interpret and define the CLIENT'S policies with respect to the project and CONSULTANT'S services.

- F. The CLIENT shall provide such legal, accounting, independent cost estimating and insurance counseling services as may be required for completion of contract documents and other CONSULTANT services not included in this Agreement.
- G. The CLIENT will hire, when requested by the CONSULTANT, an independent testing company to perform laboratory and material testing services, and soil investigations that can be justified for the proper design of the project. The CONSULTANT shall assist the CLIENT in selecting a testing company. Payment for testing services shall be made directly to the testing company by the CLIENT and is not part of this Agreement.
- H. The CLIENT shall give prompt and thorough consideration of all reports, sketches, estimates, drawings, specifications, proposals and other documents submitted to the CLIENT by the CONSULTANT, and shall inform the CONSULTANT of all decisions within a reasonable time so as not to delay the work.
- I. The CLIENT shall be responsible for issuing all legal notices, holding all required special meetings, receiving and acting upon protests, and fulfilling all requirements necessary in legal development of the projects as well as paying all costs incidental thereto.

SECTION III - COMPENSATION FOR SERVICES

A. SCHEDULE OF FEES

- 1. The following schedule of fees is based upon competent and responsible engineering and surveying services, and are the minimum rates, below which adequate professional standards cannot be maintained. It is, therefore, to the advantage of both the CONSULTANT and CLIENT that fees be commensurate with the service rendered.

Sr. Project Manager-Principal Engineer/Surveyor	\$120-150/Hour
Sr. Project Manager - Associate Engineer/Surveyor	\$100-150/Hour
Project Manager (incl. Landscape Architect)	\$100-145/Hour
Project/Design Engineer/Planner/Landscape Architect.....	\$60-135/Hour
Licensed Surveyor.....	\$70-135/Hour
Project Surveyor.....	\$60-100/Hour
Specialist (Nat. Resources, GIS, Traffic, Other)	\$70-120/Hour
Senior Technician (incl. Survey ¹).....	\$70-145/Hour
Technician (incl. Survey ¹).....	\$50-90/Hour
Administrative Support & Clerical.....	\$35-80/Hour
GPS/Robotic Survey Equipment	No Charge
AutoCAD/Computer Time	No Charge
Office Supplies.....	No Charge
Photo Copying/Reproduction.....	No Charge
Field Supplies/Survey Stakes & Equipment	No Charge
Mileage.....	No Charge

¹ No separate charges will be made for GPS or robotic total stations. The cost of this equipment is included in the rates for Survey Technician.

Charges are based on hours spent at hourly rates in effect for the individuals performing the work. The hourly rates for principals, associates and members of the staff vary according to skill and experience.

These rates include an overhead factor that accounts for federal and state taxes and required benefits, as well as insurance, office expenses and profit. In addition, the overhead factor includes vehicle and personal expenses, stakes and supplies as noted above. Unusual expenses, such as large quantities of prints, outside professional assistance and other items of this general nature, will be billed out separately. Overtime shall not result in additional costs to the CLIENT, but shall be billed at normal hourly rates.

2. Total cost for the Basic Services, as itemized under Section I.A. of EXHIBIT I shall not exceed \$1,249,642.00 total fee. This agreement authorizes Preliminary Design tasks 1-9 as included in the scope. Final Design tasks 10-13 will be authorized by a notice to proceed from the CLIENT at a later date once a cost sharing agreement is in place with the project partners.
4. The payment to the CONSULTANT will be made by the CLIENT upon billing at intervals not more often than monthly.

SECTION IV - GENERAL

A. STANDARD OF CARE

Professional services provided under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the Consultant's profession currently practicing under similar conditions. No warranty, express or implied, is made.

B. CHANGE IN PROJECT SCOPE

In the event the CLIENT changes or is required to change the scope of the project from that described in Section I and/or the applicable addendum, and such changes require Additional Services by the CONSULTANT, the CONSULTANT shall be entitled to additional compensation at the applicable hourly rates. Changes requested by the CLIENT will be communicated to the CONSULTANT in writing. The CONSULTANT shall give written notice to the CLIENT of any Additional Services, prior to furnishing such additional services. The CLIENT may request an estimate of additional cost from the CONSULTANT, and upon receipt of the request, the CONSULTANT shall furnish such, prior to authorization of the changed scope of work.

C. LIMITATION OF LIABILITY

CONSULTANT shall indemnify, defend, and hold harmless CLIENT and its officials, agents and employees from any loss, claim, liability, and expense (including reasonable attorneys' fees and expenses of litigation) arising from, or based in the whole, or in any part, on any negligence act or omission by CONSULTANT'S employees, agents, or subconsultants. In no event shall CLIENT be liable to CONSULTANT for consequential, incidental, indirect, special, or punitive damages.

CLIENT shall indemnify, defend, and hold harmless CONSULTANT and its employees from any loss, claim, liability, and expense (including reasonable attorneys' fees and expenses of litigation)

arising from, or based in the whole, or in any part, on any negligence act or omission by CLIENT'S employees, agents, or consultants. In no event shall CONSULTANT be liable to CLIENT for consequential, incidental, indirect, special, or punitive damages.

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 entity shall have any claim against the CONSULTANT because of this Agreement or the performance or nonperformance of services hereunder. The CLIENT agrees to include a provision in all contracts with contractors and other entities involved in this project to carry out the intent of the paragraph.

D. INSURANCE

The CONSULTANT agrees to maintain, at the CONSULTANT'S expense, statutory worker's compensation coverage.

The CONSULTANT also agrees to maintain, at CONSULTANT'S expense, general liability insurance coverage insuring CONSULTANT against claims for bodily injury, death or property damage arising out of CONSULTANT'S general business activities (including automobile use). The liability insurance policy shall provide coverage for each occurrence in the minimum amount of \$1,000,000.

During the period of design and construction of the project, the CONSULTANT also agrees to maintain, at CONSULTANT'S expense, Professional Liability Insurance coverage insuring CONSULTANT against damages for legal liability arising from an error, omission or negligent act in the performance of professional services required by this agreement, providing that such coverage is reasonably available at commercially affordable premiums. For purposes of this agreement, "reasonably available" and "commercially affordable" shall mean that more than half of the design professionals practicing in this state in CONSULTANT'S discipline are able to obtain coverage. The professional liability insurance policy shall provide coverage for each occurrence in the amount of \$1,000,000 and annual aggregate of \$1,000,000 on a claims-made basis.

Upon request of CLIENT, CONSULTANT shall provide CLIENT with certificates of insurance, showing evidence of required coverages.

E. OPINIONS OR ESTIMATES OF CONSTRUCTION COST

Where provided by the CONSULTANT as part of Exhibit I or otherwise, opinions or estimates of construction cost will generally be based upon public construction cost information. Since the CONSULTANT has no control over the cost of labor, materials, competitive bidding process, weather conditions and other factors affecting the cost of construction, all cost estimates are opinions for general information of the CLIENT and the CONSULTANT does not warrant or guarantee the accuracy of construction cost opinions or estimates. The CLIENT acknowledges that costs for project financing should be based upon contracted construction costs with appropriate contingencies.

F. CONSTRUCTION SERVICES

It is agreed that the CONSULTANT and its representatives shall not be responsible for the means, methods, techniques, schedules or procedures of construction selected by the contractor or the safety precautions or programs incident to the work of the contractor.

G. USE OF ELECTRONIC/DIGITAL DATA

Because of the potential instability of electronic/digital data and susceptibility to unauthorized changes, copies of documents that may be relied upon by CLIENT are limited to the printed copies (also known as hard copies) that are signed or sealed by CONSULTANT. Except for electronic/digital data which is specifically identified as a project deliverable by this AGREEMENT or except as otherwise explicitly provided in this AGREEMENT, all electronic/digital data developed by the CONSULTANT as part of the PROJECT is acknowledged to be an internal working document for the CONSULTANT'S purposes solely and any such information provided to the CLIENT shall be on an "AS IS" basis strictly for the convenience of the CLIENT without any warranties of any kind. As such, the CLIENT is advised and acknowledges that use of such information may require substantial modification and independent verification by the CLIENT (or its designees). Provision of electronic/digital data, whether required by this Agreement or provided as a convenience to the Client, does not include any license of software or other systems necessary to read, use or reproduce the information. It is the responsibility of the CLIENT to verify compatibility with its system and long-term stability of media. CLIENT shall indemnify and hold harmless CONSULTANT and its Subconsultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting from third party use or any adaptation or distribution of electronic/digital data provided under this AGREEMENT, unless such third party use and adaptation or distribution is explicitly authorized by this AGREEMENT.

H. REUSE OF DOCUMENTS

Drawings and Specifications and all other documents (including electronic and digital versions of any documents) prepared or furnished by CONSULTANT pursuant to this AGREEMENT are instruments of service in respect to the Project and CONSULTANT shall retain an ownership interest therein. Upon payment of all fees owed to the CONSULTANT, the CLIENT shall acquire an ownership interest in all identified deliverables, including Plans and Specifications, for any reasonable use relative to the Project and the general operations of the CLIENT. CLIENT may make and disseminate copies for information and reference in connection with the use and maintenance of the Project by the CLIENT. However, such documents are not intended or represented to be suitable for reuse by CLIENT or others on extensions of the Project or on any other project and any reuse other than that specifically intended by this AGREEMENT will be at CLIENT'S sole risk and without liability or legal exposure to CONSULTANT.

I. CONFIDENTIALITY

CONSULTANT agrees to keep confidential and not to disclose to any person or entity, other than CONSULTANT'S employees and subconsultants any information obtained from CLIENT not previously in the public domain or not otherwise previously known to or generated by CONSULTANT. These provisions shall not apply to information in whatever form that comes into the public domain through no fault of CONSULTANT; or is furnished to CONSULTANT by a third party who is under no obligation to keep such information confidential; or is information for which

the CONSULTANT is required to provide by law or authority with proper jurisdiction; or is information upon which the CONSULTANT must rely for defense of any claim or legal action.

J. PERIOD OF AGREEMENT

This Agreement will remain in effect for the longer of a period of two years or such other explicitly identified completion period, after which time the Agreement may be extended upon mutual agreement of both parties.

K. PAYMENTS

If payment on any of the CONSULTANT'S invoices is not received within thirty days after date of the invoice, a service charge of two-third of one percent (0.67%) per month will be charged on any unpaid balance.

L. TERMINATION

This Agreement may be terminated by either party for any reason or for convenience by either party upon seven (7) days written notice.

In the event of termination, the CLIENT shall be obligated to the CONSULTANT for payment of amounts due and owing including payment for services performed or furnished to the date and time of termination, computed in accordance with Section III of this Agreement.

M. CONTINGENT FEE

The CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift or any other consideration, contingent upon or resulting from award or making of this Agreement.

N. NON-DISCRIMINATION

The provisions of any applicable law or ordinance relating to civil rights and discrimination shall be considered part of this Agreement as if fully set forth herein.

The CONSULTANT is an Equal Opportunity Employer and it is the policy of the CONSULTANT that all employees, persons seeking employment, subcontractors, subconsultants and vendors are treated without regard to their race, religion, sex, color, national origin, disability, age, sexual orientation, marital status, public assistance status or any other characteristic protected by federal, state or local law.

O. CONTROLLING LAW

This Agreement is to be governed by the law of the State of Minnesota.

P. DISPUTE RESOLUTION

CLIENT and CONSULTANT agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice of dispute prior to proceeding to formal dispute resolution or

exercising their rights under law. Any claims or disputes unresolved after good faith negotiations shall first be submitted to mediation by Minnesota General Rules of Practice 114 prior to exercising their rights of law.

Q. SURVIVAL

All obligations, representations and provisions made in or given in Section IV of this Agreement will survive the completion of all services of the CONSULTANT under this Agreement or the termination of this Agreement for any reason.

R. SEVERABILITY

Any provision or part of the Agreement held to be void or unenforceable under any law or regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon CLIENT and CONSULTANT, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

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SECTION V - SIGNATURES

THIS INSTRUMENT embodies the whole agreement of the parties, there being no promises, terms, conditions or obligation referring to the subject matter other than contained herein.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in their behalf.

CLIENT: City of Muscatine, Iowa

CONSULTANT: Bolton & Menk, Inc.

By: _____
Printed Name

By: Bradley C. DeWolf, P.E.
Printed Name

Signature: _____

Signature: _____

Title: _____

Title: President

Date: _____

Date: _____

And: _____
Printed Name

Signature: _____

Title: _____

Date: _____

EXHIBIT I

PROJECT RELATED SERVICES BY CONSULTANT

MISSISSIPPI DRIVE CORRIDOR RECONSTRUCTION CITY OF MUSCATINE, IOWA

DESCRIPTION OF PROPOSED PROJECT

The scope of services is based on the following project limits and assumed construction program:

The corridor improvements are the E. 2nd St/Mississippi Drive Corridor between the Norbert F Beckey Bridge and the intersection of Green Street with Grandview Avenue (Approximately 1.6 miles in total length)

- Complete reconstruction of the existing street and sidewalk surface. It is anticipated that the final streetscape plan may include narrowing the existing street width, increasing the sidewalk width, constructing “bumpouts” at intersections and providing decorative sidewalk treatment. This would also include roadway profile grade raise to allow Mississippi Drive to be able to remain open for certain Mississippi River flood events.
- Incorporate Complete Streets objectives in accordance with the City of Muscatine’s Complete Street Policy and the recommendations from the Blue Zones project.
- Complete reconstruction of the underground utilities (sanitary sewer, watermain and storm sewer)
- Possible reconstruction of traffic signals at key intersections depending on results of the traffic study and the proposed roadway widths.
- Provide streetscaping elements including: decorative walk, new trees and/or plantings with tree grates, decorative street lighting, special intersection treatments, decorative benches, trash receptacles, and planters, etc.
- Reconfigure Carver corner to improve vehicular and pedestrian safety
- Communicate with the Canadian Pacific Railway (RAILWAY) and to the extent that is enabled by RAILWAY, coordinate its proposed plans to raise the tracks that parallel the corridor, nominally 1 foot, with the corridor design.
- Promote sustainable design practices for the proposed corridor design

I.A. BASIC SERVICES

For purposes of this specific project, Basic Services to be provided by the CONSULTANT are as follows:

Task 1 – Project Initiation and Project Management

- A. The CONSULTANT will facilitate a project kick-off meeting with CLIENT Staff to accomplish the following:
 - Introduce CONSULTANT and CLIENT representatives and establish communication protocols
 - Review and confirm the scope of the project

- Review available information relative to the project
 - Review and discuss specific infrastructure issues and the CLIENT'S current design standards as they relate to the proposed improvements on this project
 - Review and verify project schedules
 - Conduct a field review of project area by CONSULTANT and CLIENT representatives
- B. Up to five (5) In-person meetings will be held with the CONSULTANT and the CLIENT after the initial kickoff meeting. These meetings will discuss findings, issues, schedule, and needs to keep the project progressing.
- C. The CONSULTANT will provide project and contract administration services throughout the duration of the project.
- D. The CONSULTANT will facilitate project communication throughout the duration of the project.

Task 2 – Review Previously Prepared Streetscape Master Plans and reports

- A. The CONSULTANT will complete an in depth review of the previously completed downtown and corridor master plans. The review will validate the plan's strengths, identify discrepancies and technical issues, and develop a road map that, along with public input and consensus building, will form the basis for preliminary design documentation. The includes several studies including the railroad grade raise study, the downtown study by the University of Iowa, and the Blue Zones Study.
- B. The CONSULTANT will prepare a report of the review with recommendations on the strengths and weaknesses of the design concepts, technical challenges in implementing the design concepts, and long term maintenance issues associated with the master plan.

Task 3 – Public Involvement and Stakeholder Input

- A. Stakeholder Informational Meetings and Communications
1. The CONSULTANT will organize and conduct stakeholder interviews to directly solicit input. It is anticipated that there will be up to five (5) stakeholder information meetings. One of the five (5) meetings shall be at the 60% final design stage as a final check prior to implementing design. These will include but are not limited to interviews with the following stakeholders:
 - a. Local Industry – HNI, Kent/GPC, Musco, Carver, etc.
 - b. Canadian Pacific Railway
 - c. Downtown Business Community Members
 - d. The Mayor's Community Improvement Action Team
 - e. Muscatine Power and Water
 - f. Merrell Hotel and Convention Center
 2. The CONSULTANT will assist the CLIENT in organizing a Stakeholders group to assist in project development. It is anticipated that the Stakeholders group will have representatives from the organizations listed in A.1 as well as a cross section of the community. It is assumed that stakeholder group shall meet regularly throughout the design process and serve as a design 'check-in' throughout the process and also to assist in public relations for the project.

3. The CONSULTANT will organize and conduct up to three public informational meetings and one City Council workshop session during the project development of the streetscape as follows:
 - a. Public Meeting 1 – The public informational meeting will begin early in the project development process in order to communicate to the community the general nature of the project and to gather information and ideas from the community. This will also set the group work for overall context of the project and will explore vehicular and pedestrian/bicycle traffic changes resulting from the corridor redesign. Blue Zones Project Representatives shall co-present at this meeting.
 - b. Public Meeting 2 – Input session for schematic design options. This is an opportunity for the community to react to the various design options and verify the design direction.
 - c. City Council Workshop Session – Lead Council workshop session to inform them of the progress of the project
 - d. Public Meeting 3 – Final presentation of streetscape plan with acceptance from community and Council.
 4. The CONSULTANT will provide project information to property and business owners throughout the development, design, bidding phases with informational brochures, newsletters (mail and email), and individual meetings. An internet website that incorporates social media will also be created and maintained for the project. This will then be developed into a project construction website as a resource for construction updates.
 5. In addition to the public informational meetings outlined above, the CONSULTANT will meet individually with each business or property owner along the corridor at their place of business up to two individual times to review the proposed streetscape and improvement plans and to discuss potential impacts to their property. The individual property meetings shall take place over two assigned days.
- B. Civil/Emergency Services Coordination Meeting: The CONSULTANT will organize and conduct a coordination meeting with representatives from the police department, sheriff's department, highway patrol, fire department, ambulance service, refuse/recycling providers, postal service and other service providers that may be impacted by the proposed improvements or construction activities. The purpose of this meeting is to identify and discuss any issues that need to be addressed in the project design or construction staging such that provisions are made to maintain adequate services during and after construction.
- C. Pre-Construction Informational Meeting: The CONSULTANT will organize and conduct a public informational meeting after the contract is awarded and before construction commences.
- D. 3D modeling of corridor: The CONSULTANT will develop dynamic 3D electronic models of key areas of the corridor. It is anticipated that there will be a total of three models developed.

Task 4 – Data Collection

- A. The CONSULTANT will collect supplemental topographic survey based on the existing Mississippi River Drive Corridor survey to complete the project area as described below:
1. East 2nd St intersection of Highway 92/Cypress Street to the intersection of Mulberry Ave.
 - a. Horizontal and vertical location of existing surface improvements
 - b. Horizontal and vertical location of CLIENT utilities – sanitary sewer, watermain and storm sewer
 - c. Locate the front of adjacent buildings and collect detailed horizontal and vertical measurements on building entrances and awnings/overhangs
 - d. Locate private utilities (natural gas, telephone, CATV, electric, etc) based on field marking or other information from utility owners
 2. Mulberry Ave. from the intersection of E 2nd St to the intersection of Mississippi Dr.
 - a. Horizontal and vertical location of existing surface improvements
 - b. Horizontal and vertical location of CLIENT utilities – sanitary sewer, watermain and storm sewer
 - c. Locate the front of adjacent buildings and collect detailed horizontal and vertical measurements on building entrances and awnings/overhangs
 - d. Locate private utilities (natural gas, telephone, CATV, electric, etc) based on field marking or other information from utility owners
 3. Mississippi Dr. from the intersection of Mulberry Ave. to the intersection of Green St.
 - a. Horizontal and vertical location of existing surface improvements
 - b. Horizontal and vertical location of CLIENT utilities – sanitary sewer, watermain and storm sewer
 - c. Locate the front of adjacent buildings and collect detailed horizontal and vertical measurements on building entrances and awnings/overhangs
 - d. Locate private utilities (natural gas, telephone, CATV, electric, etc) based on field marking or other information from utility owners
 4. Canadian Pacific Railway Corridor
 - a. Horizontal and vertical location of existing surface improvements within the Railway Corridor have been topographically surveyed by the RAILWAY and provided to CLIENT for use on this project.
 - b. Horizontal and vertical location of CLIENT and RAILWAY utilities – (sanitary sewer, watermain and storm sewer) have been topographically surveyed by the RAILWAY and provided to CLIENT for use on this project.
 - c. Information that is made available by RAILWAY.
 5. Riverside Park
 - a. Horizontal and vertical location of existing entrances to allow for proposed roadway tie-ins. This includes two vehicular entrances and two pedestrian entrances.
 6. The CONSULTANT will compile a photo and video record of the project areas.
 7. It is assumed that the CLIENT will provide snow clearing and removal if necessary for the topographic survey data collection.

B. The CONSULTANT will assist CLIENT with definition of a scope of work for the geotechnical exploration program including field investigations and soil laboratory analysis. The geotechnical services shall consist of two activities:

1. Soil borings and geotechnical laboratory testing related to the design and reconstruction of the Mississippi Drive roadway.

2. Data collection and preparation of a photograph index of the Papoose Creek tunnel/culvert system under the Mississippi Drive corridor. Downhole camera methods shall be used to assist in determining the condition of the historic drainage infrastructure; and the need for additional structural and material testing concerning the disposition of these structures as part of the Mississippi Drive Corridor Reconstruction.

Upon concurrence by the CLIENT on the recommended geotechnical exploration program, the CONSULTANT will assist the CLIENT in soliciting proposals from at least two qualified geotechnical firms. The CONSULTANT will assist the CLIENT in the selection of geotechnical companies to complete the work. It is assumed that the CLIENT will contract with Geotechnical Company directly.

C. The CONSULTANT will field review the project area, including enter and review the basements of buildings located on Mississippi Dr. /E. 2nd St. Building information that will be collected will include:

1. Basement wall/foundation construction and condition
2. Locations, dimensions and type of construction materials of abandoned coal chutes, utility vaults or other structures that may extend beyond the basement walls and under the sidewalks
3. Location, size and materials of existing utility services, active or abandoned, entering the building
4. Existing cracks or visible structural deficiencies in the basement walls
5. Review of existing building façade-sidewalk interface and the impacts that construction removal may have on the building face

The information will be collected using a combination of written notes, photos and videos, which will be compiled and indexed by building address for reference by the design team and during construction.

D. The CONSULTANT will assist CLIENT with definition of a scope of work for the CCTV video investigation of existing storm and sanitary sewers within the project limits. Upon concurrence by the CLIENT on the CCTV video investigation scope of work, the CONSULTANT will assist the CLIENT in soliciting proposals from at least two qualified CCTV video companies. The CONSULTANT will assist the CLIENT in the selection of the CCTV video company to complete the work. It is assumed that the CLIENT will contract with the CCTV video company directly.

E. The CONSULTANT will prepare a base plan showing the existing surface and subsurface conditions based on the information collected. The base plan will be prepared in a format compatible with the CADD which is proposed to be used for the various project elements.

Task 5 – Connectivity Study

A. Communication and Meetings

This will include communication with the City of Muscatine, as well as other potentially affected interests and jurisdictions, including IADOT, HNI Corporation (HNI), and downtown and corridor businesses. We will attend up to two of the currently proposed meetings to understand existing issues and proposed improvements and to present results.

Deliverables: Meeting notes

B. Traffic Data Collection

Vehicle turning movement counts and pedestrian counts at select intersections will be collected for use in evaluation. This data collection will be limited to the higher volume intersections that are directly impacted along and adjacent to the corridor and select intersections that will impact the evaluation results. The City will coordinate with the data collection of the following intersections with the local COG:

- E. 2nd St. at Hwy 92
- E. 2nd at Mulberry Ave
- E. 2nd at Oak St.
- E Mississippi Dr. at Cedar St
- E Mississippi Dr. at Sycamore St (peds only)
- E Mississippi Dr. at Iowa Ave.
- E. Mississippi Dr. at Chestnut St (peds only)
- Hershey Ave at Green St.

Additionally, it is proposed that daily traffic volume counts be collected at the currently signalized intersections as needed for the warrant analysis and to provide supplemental information for the road design. The consultant will designate desired times for data collection.

Deliverables: Traffic Counts

C. Existing Capacity and Service Analysis

The traffic volumes collected will be input into a traffic model of the corridor with the existing lanes and traffic control. This evaluation will be completed with the program Synchro/SimTraffic using Highway Capacity Manual procedures. This tool will be able to present two-dimensional traffic simulations. Measures of Effectiveness (MOEs) to be evaluated are average travel speeds, queues, travel times, delay and level of service. This will provide a baseline of existing operations.

Deliverables: Synchro/SimTraffic Existing Corridor Model, Measures of Effectiveness Evaluation

D. Safety Analysis

A safety analysis of the corridor will be completed with the current configuration and the potential conversion configuration. This safety analysis includes a 3-year crash history and evaluation of crash patterns to assist in the lane needs and safety improvement recommendations.

Deliverables: Crash Evaluation

E. Options Capacity and Service Analysis

The corridor will be revised with the proposed lane conversions. This includes development of peak hour volumes redistributed to the revised network as needed. The corridor will be evaluated against the baseline with the same MOE's and acceptable service level limits. The traffic model will be used to understand the impacts to traffic and determine the optimal lane configuration of the corridor and each intersection within the study limits to maintain acceptable service levels. The proposed lane layout and traffic control from the analysis will be coordinated with the concept and preliminary design tasks. Effort will also be completed to look at alternative intersection types and treatments, including signals, roundabouts, and restricted movements.

Deliverables: Redistributed Traffic Volumes, Synchro/SimTraffic Proposed Configuration Corridor Model, Measures of Effectiveness Evaluation

F. Pedestrian Analysis

The pedestrian access routes will be identified and the pedestrian traffic counts will be used to develop a plan for the pedestrian access along and adjacent to the corridor. This includes identifying appropriate street and rail crossing locations, pedestrian access routes, and potential improvements to provide enhancements for pedestrian safety and movements. This also includes evaluation of the pedestrian crossing locations as far as service levels and crossing safety of the roadway and railroad.

Deliverables: Pedestrian Routes and Crossing Analysis

G. Traffic Signal Evaluation

A traffic signal warrant analysis will be completed for the following intersections:

- E. 2nd St. at Hwy 92
- E. 2nd at Mulberry Ave
- E. 2nd at Oak St.
- E Mississippi Dr. at Cedar St
- E Mississippi Dr. at Iowa Ave.
- Hershey Ave at Green St.

This will be used to determine if a signal is warranted based on traffic volumes and/or crash rates. This analysis will require development of 24-hour intersection approach traffic counts based off of collected existing and forecasted data. This data will be coordinated with the data collection efforts of Task B.

Deliverables: Signal Warrant Analysis

H. Summary Report

Provide a summary of the evaluation process and conclusions. This will include both a draft electronic report for review by the City and a final electronic and two hardcopy reports to be incorporated with the preliminary engineering report.

Deliverables: Study Report

Task 6 – Geotechnical Investigation and Analysis Coordination

The CONSULTANT will coordinate with the geotechnical engineering firm contracted to complete geotechnical field and laboratory investigation, including review of field boring logs and assignment of laboratory testing so that the geotechnical data provided to CONSULTANT is suitable for analysis and development of design recommendations. The geotechnical analysis to be completed by CONSULTANT may include items related to roadway pavement subgrade stabilization, roadway settlements due to placement of new fill, temporary shoring, groundwater impacts on proposed construction, and culvert/sewer construction. The geotechnical analysis results and recommendations will be documented in draft and final versions of a geotechnical report. This task will include effort to incorporate geotechnical analysis results and recommendations into roadway, drainage, watermain, sanitary sewer, and embankment design elements. Identification of and recommendations for the need of temporary shoring and dewatering facilities is included in Task 9.A.

- A. Coordination of Geotechnical Consultant for Drilling: The CONSULTANT will provide Geotechnical Consultant with coordinates for the locations of borings before the drilling work and will coordinate with the Geotechnical Subconsultant during drilling regarding adjustments to the boring locations and sampling procedures so that the completed work provides sufficient geotechnical data for use by CONSULTANT.
- B. Assignment and Coordination of Laboratory Testing: The CONSULTANT will review the preliminary results of the drilling and sampling program as it proceeds and will modify the program to gather additional data, as necessary. CONSULTANT will assign, coordinate and perform quality control check of the laboratory testing program and assign additional testing as needed. Assignment of laboratory testing will involve preparation of simplified boring log diagrams to determine the appropriate amount and distribution of laboratory tests along the project alignment.
- C. Review Boring Logs and Laboratory Testing Data. The CONSULTANT will review the typed boring logs and laboratory test data. Assume approximately 24 borings ranging in depth from 10 to 60 feet.
- D. Development of Soil Design Parameters. The CONSULTANT will develop soil design parameters for use in numerical analyses.
- E. Geotechnical Analyses for Roadway. The CONSULTANT will perform geotechnical analyses for evaluation of the following considerations:
 - Evaluation of subgrade stabilization alternatives as needed.
 - Settlement analyses to assess the magnitude and time-rate of the anticipated settlement of the foundation soils under the weight of the new roadway fills.
 - Pavement Section Design
- F. Preparation of Geotechnical Report. The CONSULTANT will prepare a draft geotechnical report summarizing results of field exploration and laboratory testing programs, boring logs, lab test data, subgrade evaluations, settlement analyses and pavement section design.

Deliverables:

Draft Geotechnical Report: submitted electronically in PDF format

Final Geotechnical Report: submitted electronically in PDF format

Task 7 – Railroad Coordination

- A. The CONSULTANT will facilitate coordination efforts with the Canadian Pacific Railway (CP). Efforts will include coordinating the Mississippi Drive reconstruction project design with the CP's intention to raise its Ottumwa Subdivision main line nominally 1 foot along the project corridor. Efforts also include coordinating with CP on the construction schedule of the two adjacent projects and a potential quiet zone through the corridor. The CONSULTANT assumes up to one (1) combined project site visit and in-person meeting, three (3) separate in-person meetings, and up to eight (8) separate conference calls with the CP (which includes one separate call with the Federal Railroad Administration) will be needed to coordinate the proposed improvements for both projects. In-person meetings are assumed to be conducted in Muscatine, IA.

Task 8 – Utility Coordination

- A. During the field data collection phase, the CONSULTANT will complete an Iowa One Call to identify the utilities in the corridor. The CONSULTANT will organize up to two (2) in-person utility coordination meetings with affected utilities to review the proposed construction and identify conflicts and required relocation. Utility coordination will be discussed again at the preconstruction meeting. Additionally, the CONSULTANT will prepare for and conduct up to three (3) conference calls with affected utilities.
- B. The CONSULTANT will prepare public and private utility tabulations, existing conditions mapping, and project public utility removal plans for inclusion in the construction documents. Station and location of all existing public and private utilities will be tabulated and anticipated impacts between each of the utilities and the proposed improvements will be summarized. An Existing Utility Tabulation will be prepared and included in the construction plan set.

Task 9 – Preliminary Engineering Report

- A. The CONSULTANT will prepare a preliminary engineering report documenting the following infrastructure elements:
 - 1. Streetscaping – Incorporate streetscaping elements from previous tasks for Mississippi Drive reconstruction segment, between the Norbert F. Beckey Bridge and the intersection of Green Street with Grandview Avenue.
 - 2. Pedestrian Connectivity/Walkability improvements and public spaces for art/displays.
 - 3. Street and Surface – Alternative pavement designs, roadway geometric design criteria, curb and sidewalk grades, Americans with Disabilities Act (ADA) compliance, way-finding recommendations, abandonment of vaults under sidewalk areas.
 - 4. Flood Protection – Present roadway profile revisions to the corridor that improve on the Mississippi River flooding characteristics of the existing within the project's design criteria and constraints.
 - 5. Storm Sewer – Watershed drainage and storm sewer analysis will be conducted to identify recommended storm sewer capacity upgrades and replacements of existing storm drainage infrastructure. Storm sewers are assumed to be separated from sanitary sewers throughout the project area. The existing Papoose Creek Tunnel will be addressed in accordance with the findings of Task 4.B.2.
 - 6. Sanitary Sewer - Identify, analyze, and review current needs for sanitary sewer. Present recommendations for reuse, rehabilitation and replacement options for mainline sewer and service lines based on a summary of findings from the CCTV video review (see additional

- services). Identify which sanitary sewer will be reused, rehabilitated, or replaced. The CONSULTANT will locate and inspect sanitary sewer manholes designated for rehabilitation and document findings. A surface anomaly review will be performed to look for areas of distress along the sewer alignment. Review information supplied by the City for the sanitary sewer: age of piping, size and material of piping, break history of piping, history of surcharging of sewers, and other known deficiencies
7. Watermain – Coordinate with Muscatine Power and Water for watermain plans to be completed by Muscatine Power and Water. These Muscatine Power and Water construction documents shall be included in the final plan set.
 8. Other Utilities – Identification of other utility conflicts, such as power, gas and telecom infrastructure, which will require coordination with third parties and private entities.
 9. Permitting – Identify required local, state and Federal permits, approvals and environmental clearances for the proposed improvements.
 10. Street Lighting – Determine new street lighting options for Mississippi Drive based on discussions amongst the landscape architect, CLIENT, and Muscatine Power and Water. A lighting photometric analysis for the corridor will be completed to evaluate the preferred alternatives for pole spacing, pole/fixture height, and fixture type (MH, HPS or LED). This analysis will be used to develop the preliminary design.
 11. Traffic Signals – It is assumed that existing signals will be replaced to meet the needs of the ADA accessibility guidelines and emulate the preferred streetscape design. Recommendations will be presented on new traffic signal systems.
 12. Traffic Analysis – Evaluate alternatives for the street layout and streetscaping that will accommodate all users, including vehicles, bicycles, pedestrians, and transit. This shall include provisions for complete streets, traffic calming, and provisions for alternate alignments for the Carver Corner.
 13. Parking Analysis – Evaluate alternatives for the street layout and streetscaping that will maximize the on-street parking within the project area and reduce the need for parking on the riverfront. This element will address alternatives for riverfront parking and access roads.
 14. Right-of-Way – Identify additional easement and right-of-way needs throughout the corridor.
 15. Retaining Walls – Identify potential retaining wall locations and provide recommendations on retaining wall types and aesthetic treatments.
 16. Railroad Design – Design elements related to the railroad, including improved vehicular and pedestrian crossing geometrics, potential quiet zones concepts, active or passive railroad grade-crossing signals, and railroad grade-crossing surface design are assumed to be the responsibility of the RAILWAY. Conceptual railroad design recommendations from the RAILWAY will be included in the preliminary engineering report.
 17. Private Owners – Document residential and business design considerations, in particular the HNI campus.
- B. The preliminary engineering report will include the following:
1. Project introduction and background
 2. Existing conditions within project area
 3. Deficiencies and needs within the various infrastructure elements
 4. Alternative design considerations for addressing the existing deficiencies by infrastructure element
 5. Design criteria for applicable infrastructure elements
 6. Description of up to three (3) alternative conceptual designs:

- a. Brief narrative
 - b. Schematic plan view drawings of recommended street, utility and streetscaping improvements utilizing an existing aerial photography background
 - c. Photo-realistic renderings from varying angles and vantage points
 - d. Pavement recommendations and schematic typical sections with dimensions
 - e. Easements and right-of-way required
 - f. Construction staging and traffic control considerations
 - g. Other special design and construction considerations
7. Summary and detailed breakdown of preliminary cost estimate for each alternative conceptual design
 8. Project funding alternatives and considerations
 9. Proposed construction schedule
 10. Conclusions and recommendations identifying a preferred conceptual design
- C. The CONSULTANT will meet with the CLIENT to review a draft copy of the preliminary engineering report. If required, changes will be made to the report based on the one round of CLIENT'S and peer's review comments. This effort will include comment resolution documentation to be submitted to the CLIENT. Copies of the final draft of the report will be submitted to the CLIENT.
- D. The CONSULTANT will present the preliminary engineering report to the City Council.

Task 10 – Final Design and Plan and Specification Preparation

The CONSULTANT will perform final design and prepare construction plans and specifications for the approved design concept for Mississippi Drive reconstruction segment in the existing and proposed public right-of-way, between the Norbert F. Beckey Bridge and the intersection of Green Street with Grandview Avenue. The final design will utilize the compatible CADD software suite of design programs. Unless as otherwise specified, the plan set formatting will follow current Iowa DOT standards.

- A. Streetscape Elements: The CONSULTANT will prepare comprehensive streetscape plans and specifications incorporating streetscaping elements from Task 2. Detailed construction plans and details shall be developed for the following:
1. Special aesthetic pavement plan and specifications for sidewalks, roadway, and intersections that may include pavers and/or imprinted and/or colored pavements
 2. Landscaping plans and details including planter locations, plant type and size
 3. Streetscape amenities plan and details are assumed to include bench and litter receptacles, planter urns, bicycle racks, and way-finding signage
 4. Special details assumed to include landscaping planter design, custom signage, public art spaces/pedestals, and imprinted and colored roadway pavement and sidewalks
 5. Fencing design and details between street and railroad
- B. Street and Surface Improvements: The CONSULTANT will generate the detailed design for the street and surface improvements. The CONSULTANT will incorporate roadway profile flood protection revisions included in the approved preliminary engineering report into the final designs. The CONSULTANT will provide the pavement determination for the mainline and side road pavements. This task includes the preparation of the following construction plans:
1. Removal plans and tabulations

2. Roadway typical sections and details
 3. Roadway plan and profile sheets (1"=20' scale full-size) calling-out plan dimensions, street improvements, centerline/curb profiles, spot elevations and grades on sidewalks
 4. Survey control and alignment geometry sheets
 5. Intersection geometrics and staking sheets (1"=20' scale full-size) at all sideroad locations and driveway connections. Includes return profiles and jointing details.
 6. ADA-compliant curb ramp detail sheets (1"=10' scale full-size) at all pedestrian crossings of street and railroad, showing spot elevations and grades
 7. Special construction details, including riverfront parking and access road modifications, building entrance details, and, as necessary, abandonment of existing coal chutes and utility vaults under the sidewalk
 8. Roadway cross section sheets (1"=5' vertical scale full-size) drawn and sheeted at 50 ft. spacing from beginning of project to Pine Street, 25 ft. spacing from Pine Street and Oak Street, 50 spacing from Oak Street to IA 92, and at all driveways and sideroads. No utilities will be shown on cross section, but instead will be shown on respective utility plans. Construction staging lines will be shown on cross sections, but separate construction staged cross sections will not be provided.
 9. Earthwork tabulations sheets
- C. Sanitary Sewer and Watermain Coordination: The CONSULTANT will complete the detailed design for sanitary sewer and coordinate watermain improvements with Muscatine Power and Water. Maintenance of sanitary sewer service and water service (domestic and fire protection) will be considered and incorporated into the design. This task includes preparation of the following plans:
1. Removal plans and tabulations
 2. Plan and profile sheets (1"=20' scale full-size) for sanitary sewer improvements
 3. Construction and special structure details
 4. Inclusion of the watermain plans created by Muscatine Power and Water.
- D. Storm Water/Drainage/Erosion Control: The CONSULTANT will complete the final designs of storm water and sewer improvements and pavement subdrains that are included in the approved preliminary engineering report. The CONSULTANT will also design temporary and permanent erosion control measures and prepare a Storm Water Pollution Prevention Plan (SWPPP) for the project. This task includes preparation of the following plans:
1. Removal plans and tabulations
 2. Plan and profile sheets (1"=20' scale full-size) for storm sewer improvements and permanent erosion control measures.
 3. Construction details for storm sewer elements, low-impact design elements and storm water management features (coordinate with streetscape elements as required)
 4. Storm Water Pollution Prevention Plan (SWPPP) narrative, plan sheet, and details
- E. Lighting, Signing and Striping: The CONSULTANT will coordinate the detailed design for the lighting with Muscatine Power and Water based on the preliminary engineering report. The consultant will complete signing and striping. The lighting plan will be completed by Muscatine PW and will include location of poles, conduit, wiring, and source of power, cabinets, and other information necessary to bid and construct the systems. The signing and striping plan will follow the requirements in the 2009 Manual on Uniform Traffic Control Devices. This task includes preparation of the following plans:

F. Traffic Signals: For the purposes of this Agreement, it is assumed that the existing traffic signals in the corridor will be replaced. The CONSULTANT will perform the following tasks:

1. Provide new signal plans and/or revisions for the following intersections as needed based on the traffic analysis and preliminary design:

- 2nd St. at Hwy 92
- E. 2nd at Mulberry Ave
- E. 2nd at Oak St.
- E Mississippi Dr. at Cedar St
- E Mississippi Dr. at Iowa Ave.
- Hershey Ave at Green St.

Signal plans will be in State plan format, coordinate correct, and will contain necessary design information including (but not limited to) the following: quantity tabulation, signature block, abbreviations, symbols, details (standard & special), intersection layout(s) and wiring diagram(s), source of power, advance warning flashers, mast arm signing and pavement markings, interconnect, utility plans sheets and "For Information Only" signal plans.

2. Provide signal interconnect plans between the signals as needed

3. Coordinate design of any new sources of power required with the appropriate power companies. This includes acquiring an estimate from the power company for any work needed.

4. Railway active grade-crossing signals may require replacement, design, and interconnect with traffic signals, in order to operate in conjunction with traffic signals. Design of railway active grade-crossing signals is not included in this scope.

G. Construction Staging and Traffic Control: The CONSULTANT will develop a suggested construction staging plan that manages effective movement of vehicular, bicycle, and pedestrian traffic while maintaining efficient construction progress throughout construction. The intent will be to work with the property owners during this phase to minimize closure of their business entrances, with individual coordination meetings included under Task 3.A.5. The impacts to parking will also be addressed in the construction staging plans. Staging plans will address traffic control needs for each stage of construction and include typical Iowa DOT quantities and bid items for temporary traffic control items. This task includes preparation of the following plans:

1. Construction Staging and Traffic Control Notes
2. Construction Staging and Traffic Control Plans (1"=20' scale full-size) to include temporary traffic control signing, striping, devices, and way-finding needs.
3. Traffic Control Typical Sections
4. Construction Staging Details for construction of drainage and other utility elements
5. Special Events Tabulation
6. Bid Proposal Details – that may include Identification of Sites, Working Days, Liquidated Damages and as determined necessary by CONSULTANT

H. General Plan Production: The CONSULTANT will assemble the plan sheets described in previous tasks. This task includes preparation of other general sheets such as:

1. Title Sheet
2. Location and Project Key Maps
3. Quantity Tabulations Sheets

4. Statement of Estimated Quantities
 5. Estimate and Reference information
 6. Miscellaneous Tabulations and Details
- I. Project Manual: The CONSULTANT will prepare a project manual for the project, including:
1. General Information for Bidders: Advertisement for Bids, Instructions to Bidders, Special Bidding requirements/provisions
 2. General Conditions and Supplementary Conditions
 3. Information to be submitted with bid: Proposal, Bid Bond, Information requested from Bidder, etc.
 4. Agreement, Performance Bond and Payment Bond forms
 5. General Conditions
 6. Technical Specifications
 7. Reference Information: Geotechnical Investigation, other applicable information
- J. Final Engineer's Estimate: The CONSULTANT will prepare an engineer's estimate with breakdowns provided for the various construction elements and funding sources (if required).
- K. CLIENT Review: Plans will be reviewed with the CLIENT at the 30% (with 80% of staging done), 60% (with 95% of staging done), and 95% complete stages. The project manual will be reviewed with the CLIENT at the 95% complete stage. A statement of estimated quantities and estimated construction cost will be prepared by the CONSULTANT at 60% and 95% complete stages. If required, changes will be made to the contract documents based on the CLIENT's review and comments. It is assumed that easement and right-of-way design will commence at the 60% complete stage of plan set production. The final contract documents will be presented to the CLIENT for approval.

Task 11 – Permitting

The CONSULTANT will act as the city's authorized agent on coordinating and obtaining required permits, approvals and environmental clearances on behalf of the city for the Mississippi Drive Corridor Reconstruction activities. The following permitting activities have been identified:

- A. National Flood Insurance Program (NFIP) Flood Plain Development Permit. The CONSULTANT will coordinate with the City of Muscatine's Flood Plain Manager for compliance with the city's floodplain management ordinance. Any required coordination with the Iowa Department of Natural Resources (IDNR) flood plain staff will also be completed.
- B. Section 401. The CONSULTANT will coordinate the Section 401 Water Quality certification application with the IDNR. The includes signoff by the designer that the work has been complete.
- C. Section 404. The CONSULTANT will coordinate the Section 404 Dredge or Fill Placement Into Waters of the United State including Wetlands permit application with the US Army Corps of Engineers.
- D. Section 408. The CONSULTANT will coordinate the Section 408 Alteration to Completed Structures approval with the US Army Corps of Engineers.
- E. Application for NPDES Permit and Supporting Materials with construction contractor as co-permittee.

Task 12 – Bidding Phase

- A. The CONSULTANT will assist the CLIENT in the preparation of advertisement for bids and submittal to the local newspaper and other required publications; secure affidavits of publication
- B. The CONSULTANT will Post advertisement for bids on the CONSULTANT's website.
- C. Upon request by prospective bidders, subcontractors or suppliers, the CONSULTANT will distribute copies of the contract/bidding documents – hard copy, electronic documents or both. A nominal fee may be charged for bidding documents.
- D. The CONSULTANT will maintain and update plan holders list throughout bidding period.
- E. The CONSULTANT will address questions from prospective bidders, subcontractors and suppliers, and prepare and issue addenda as required.
- F. If requested by the CLIENT, the CONSULTANT will conduct a pre-bid meeting for prospective bidders, subcontractors or suppliers.
- G. The CONSULTANT will assist the CLIENT with the public opening and reading of the bids.
- H. The CONSULTANT will review bids and prepare bid tabulation and abstract of all bid items.
- I. The CONSULTANT will conduct pre-award conference with the low bidder and significant subcontractors and perform other research to investigation capabilities and qualifications of the low bidder.
- J. The CONSULTANT will assist the CLIENT in preparing recommendation for CLIENT Council regarding the award of the bid. The CONSULTANT will attend CLIENT Council meeting to answer any questions regarding the recommendation.
- K. Railway coordination is not included in the bidding phase, as it may require separate agreement with RAILWAY.

I.B HOURLY RATE SERVICES

The following services shall be provided at the CONSULTANT's standard hourly rate and a fee estimate shall be developed and mutually agreed upon prior to commencement of work:

- A. Construction Staking: The CONSULTANT will perform construction staking for the project, furnish necessary equipment and supplies to establish grade and line as necessary for the Contractor's guidance in construction of the project and in accordance with the contract documents
- B. Construction Closeout and Record Drawings:
 - 1. The CONSULTANT will conduct an inspection of the project in the company of the CLIENT and the Contractor for conformance with contract documents.
 - 2. The CONSULTANT will develop an itemization of construction issues to be corrected or resolved (punchlist).
 - 3. The CONSULTANT will monitor the completion of the punchlist items an itemization of construction issues to be corrected or resolved.
 - 4. The CONSULTANT will conduct a final inspection of the project in the company of the CLIENT and the Contractor to verify that the punchlist items have been addressed to the satisfaction of the CLIENT.

5. The CONSULTANT will prepare a final pay estimate and submit to the Contractor for review and approval.
6. The CONSULTANT will secure all required documentation required from the Contractor for final payment.
7. The CONSULTANT will prepare record drawings reflecting constructed conditions from information observed by the CONSULTANT or supplied by others and furnish one reproducible copy and one electronic copy of the plans to the CLIENT within 90 days of the end of the construction.

C. REMONUMENTATION. Replacing lost or obliterated government survey corners or property corners along the project route.

I.C. ADDITIONAL SERVICES – NOT IN CONTRACT BUT CAN BE PROVIDED

Engineering services performed other than those authorized under Section I.A and I.B shall be considered not part of the Basic Services or Construction Phase Services and may be authorized by the CLIENT as Additional Services. Additional Services consist of those services that are not generally considered to be Basic Services or Construction Phase Services or are not definable prior to the commencement of the project or vary depending on the technique, procedures or schedule of the project contractor. Additional services may consist of the following:

- A. Construction Observation: The CONSULTANT will provide one full-time and one part-time on-site representative during the construction of the project. Services consist of the following:
1. Attend preconstruction conference
 2. Attend weekly construction progress meetings and prepare minutes
 3. Schedule and coordinate construction staking
 4. In coordination with the geotechnical and materials testing company, schedule and coordinate materials testing and maintain reports and documentation of testing performed and associated results
 5. Assist the project engineer with the preparation, review and approval of partial pay requests
 6. Meet with affected property owners, as required, to answer specific questions or to address construction or design related concerns. Resident project representative will be the primary contact person for property owners for addressing construction related concerns and issues.
 7. Serve as engineer's liaison with contractor, working principally through contractor's superintendent and assist in understanding the intent of the Contract Documents
 8. Assist project engineer in serving as CLIENT's liaison with contractor
 9. Assist in obtaining additional details or information from the CLIENT, when required for proper execution of the work
 10. Review of Work, Rejection of Defective Work, Inspections and Tests
 11. Report to project engineer when clarifications and interpretations of the Contract Documents are needed and transmit to contractor clarifications and interpretations as issued by project engineer
 12. Modifications: Consider and evaluate contractor's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to project engineer. Transmit to contractor decisions as issued by project engineer.

13. Maintain Construction Records, including construction correspondence; construction diary; record and documentation of quantities; record of measurements, ties, sketches or other documentation of buried construction items and underground utilities; photographic and video record during construction; materials testing reports and documentation
14. Records library – the resident project representative will work with the project engineer to establish and maintain a library of the records
15. On-site construction representative services do not constitute acceptance or approval of the Contractor's work nor do they relieve any part of the contractor's responsibility under the construction documents.
16. Coordination with RAILWAY.

B. Construction Administration:

1. The CONSULTANT will develop a scope of work for construction materials testing and documentation for the project and solicit proposals from at least two qualified geotechnical firms for the materials testing services. Assist the CLIENT in the selection of geotechnical engineering company to complete the work. It is assumed that the client will contract with geotechnical engineering firm directly.
2. The CONSULTANT will prepare required contract documents, with the assistance of the CLIENT'S attorney and staff, after award of contract.
3. The CONSULTANT will convene and preside over the preconstruction conference to be attended by the CLIENT, contractors and any affected utility companies.
4. The CONSULTANT will provide supervision and support to resident project representatives.
5. The CONSULTANT will convene and preside over weekly construction scheduling meetings and business owners meetings during the construction.
6. The CONSULTANT will prepare change orders and written directives.
7. The CONSULTANT will review, for conformance with design concept only, any shop drawings required to be furnished by the Contractor.
8. The CONSULTANT will review any material lists, suppliers lists or other submittals required to be furnished by the Contractor.
9. The CONSULTANT will make visits to the site at intervals appropriate for the various stages of construction, observe the progress and quality of the executed work of the contractors, and determine, in general, if such work is proceeding in accordance with the contract documents.
10. The CONSULTANT will meet with affected property owners and business owners as required to answer specific questions or to address construction or design related concerns.
11. The CONSULTANT will obtain additional information or clarifications from the CLIENT when required for the proper execution of the work.
12. The CONSULTANT and its representatives will not be responsible for the means, methods,

techniques, sequences or procedures of construction selected by the contractor or the safety precautions or programs incident to the work of the contractor.

13. The CONSULTANT will review and make a recommendation on the Contractor's request for partial payments. Such review will be based upon the CONSULTANT'S on-site observations and such written documentation as may be available to the CONSULTANT at the time of review. Such review will not include verification of unit price contract quantities by physical measurement of individual work items.

- C. STRUCTURAL ENGINEERING DESIGN. Any structural engineering design associated with cast-in-place retaining walls, temporary shoring, and the abandonment of existing vaults under existing sidewalks and/or adjacent to building foundations.
- D. ADDITIONAL PROPERTY OR RIGHT OF WAY ACQUISITION SERVICES. Includes additional property or right of way acquisition services beyond those included in the Basic Services, including: Preparation of easement agreements, preparation of right-of-way plats, assistance with eminent domain proceedings, court preparation and testimony.
- E. PAPOOSE CREEK TUNNEL. Additional structural and material evaluations on the condition of the existing Papoose Creek drainage system including Permit Required Confined Space investigations. Design services for any subsequently determined modification or reconstruction of the Papoose Creek drainage system infrastructure.
- F. GEOTECHNICAL AND MATERIAL TESTING SERVICES. Geotechnical services and material testing services, including borings, other subsurface investigations, and material testing for quality control.
- G. EXTERNAL STABILITY CHECK OF RETAINING WALLS. Geotechnical analyses for external stability of the proposed MSE wall replacement between Mississippi Drive and the Canadian Pacific Railway including global stability, sliding, overturning, and bearing capacity. Settlement analyses of the proposed MSE walls. It is assumed that 3 design sections for external stability and 3 design sections for settlement would need to be developed to complete this task.
- H. ENVIRONMENTAL SERVICES. Environmental services associated with asbestos investigations and mitigation, hazardous materials leaks and contaminated soils.
- I. Project Funding and Assessments
- J. All other services not specifically identified in Section I.A. or I.B.
- K. RAILWAY SIGNAL PRELIMINARY ENGINEERING AND FINAL ENGINEERING. Engineering of signals may require separate agreement with RAILWAY.
- L. RAILROAD CROSSING PLANS AND DETAILS within the CP right-of-way. Design of vehicular and pedestrian railroad grade crossings including quiet zone crossing requirements.
- M. Internal inspection of the existing sanitary sewers using CCTV technology.