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Public Works

City Transit
263-8152

MEMORANDUM

Equipment Maintenance
Roadway Maintenance
Collection & Drainage
Building & Grounds
Engineering

To: Mayor and City Council Members

CC: Gregg Mandsager, City Administrator

FROM: Brian Stineman, Public Works Director

DATE: November 23, 2016

RE: Request to Enter into Agreement with Barker Lemar Engineering Consultants and the Waste Commission of Scott County for a Landfill Feasibility Study

INTRODUCTION:

The purpose of this scope of services is to develop life-cycle cost analyses to evaluate the potential for collaborative solid waste management activities between the Waste Commission of Scott County and the City of Muscatine.

BACKGROUND:

The City owns the Muscatine County Sanitary Landfill (Muscatine Landfill) and the City of Muscatine Transfer Station (Transfer Station). The Waste Commission of Scott County owns and operates the Scott Area Landfill (SALF). Limited collaborative efforts between the two entities are already occurring. The Muscatine Landfill and the SALF are located in close proximity to each other and are in the same planning area but have different service areas. Due to the close proximity of the two landfills, the potential for expanding the collaborative relationship exists, primarily as it relates to solid waste disposal and recycling, however, other opportunities exist, which may be identified as mutually beneficial through an evaluation of solid waste management within the two service areas. The Muscatine Landfill is currently performing filling operations in Phase 4 and the available capacity of this area is anticipated to be out of space by approximately mid-2018. The City is developing a Master Plan for the potential construction of Phases 5 and 6 to establish additional disposal capacity. Construction of Phase 5 would need to be completed before the winter of 2017, as insufficient space for disposal prevents delaying construction until 2018. The Commission owns and operates the Scott Area Sanitary Landfill (SALF) which is located approximately 11 road miles from the Muscatine Landfill. Both the Commission and the City are interested in evaluating potential scenarios of solid waste disposal collaboration that reduce operational costs and environmental impacts, and increase solid waste management efficiencies. The results of these evaluations will provide the Commission and the City with the comprehensive analyses necessary to identify mutually beneficial solid waste management and recycling strategies to be considered for implementation.

RECOMMENDATION/RATIONALE:

It is the recommendation of the Public Works Department that council approve this scope of work and agreement with Barker Lemar Engineering Consultants so the results can be used to make informed decisions regarding the future of the Muscatine County Landfill before construction of a new cell or cells is necessary in 2017. The cost of this study will be split evenly between the Waste Commission of Scott County and the City of Muscatine. Funds for the Muscatine portion of the cost are available in the Landfill Budget.

BACKUP INFORMATION:

Scope of work supplied by Barker Lemar Engineering Consultants



September 28, 2016

Ms. Kathy Morris, Director
Waste Commission of Scott County
P.O. Box 563
Buffalo, Iowa 52728

Mr. Gregg Mandsager, City Administrator
City Hall
215 Sycamore Street
Muscatine, Iowa 52761

RE: Solid Waste Management Collaboration Analysis
Waste Commission of Scott County and City of Muscatine/Muscatine County Solid Waste Agency
Proposal No. 164454-Revised

Dear Kathy and Gregg:

BARKER LEMAR ENGINEERING CONSULTANTS (BARKER LEMAR) appreciates the opportunity to provide solid waste management analysis and planning services to the Waste Commission of Scott County (Commission) and the City of Muscatine/Muscatine County Solid Waste Agency (City). The purpose of this scope of services is to develop life-cycle cost analyses to evaluate the potential for collaborative solid waste management activities between the Commission and the City.

1.0 PROJECT UNDERSTANDING

The City owns the Muscatine County Sanitary Landfill (Muscatine Landfill) and the City of Muscatine Transfer Station (Transfer Station). The Commission owns and operates the Scott Area Landfill (SALF). Limited collaborative efforts between the two entities are already occurring. The Muscatine Landfill and the SALF are located in close proximity to each other and are in the same planning area but have different service areas. Due to the close proximity of the two landfills, the potential for expanding the collaborative relationship exists, primarily as it relates to solid waste disposal and recycling, however, other opportunities exist, which may be identified as mutually beneficial through an evaluation of solid waste management within the two service areas.

The Muscatine Landfill is currently performing filling operations in Phase 4 and the available capacity of this area is anticipated to be out of space by approximately mid-2018. The City is developing a Master Plan for the potential construction of Phases 5 and 6 to establish additional disposal capacity. Construction of Phase 5 would need to be completed before the winter of 2017, as insufficient space for disposal prevents delaying construction until 2018.

The Commission owns and operates the Scott Area Sanitary Landfill (SALF) which is located approximately 11 road miles from the Muscatine Landfill. Both the Commission and the City are interested in evaluating potential scenarios of solid waste disposal collaboration that reduce operational costs and environmental impacts, and increase solid waste management efficiencies. The results of these evaluations will provide the Commission and the City with the comprehensive analyses necessary to identify mutually beneficial solid waste management and recycling strategies to be considered for implementation.

BARKER LEMAR met with the Commission and the City on Friday, August 19th to discuss potential collaborative solid waste management scenarios and their potential impacts to be considered for evaluation. Below is a list of the scenarios that were discussed for potential evaluation during this meeting.

- A. Close the Muscatine Landfill after the completion of Phase 4 and then transfer waste to SALF;
- B. Close the Muscatine Landfill after the completion of Phase 6 and then transfer waste to SALF;
- C. Mothball remaining permitted airspace (at the completion of or near completion of filling operations in Phase 4) at the Muscatine Landfill for possible use at an undetermined future date, presumably when the SALF permitted disposal capacity is consumed. Additional permissible capacity at the Muscatine Landfill should be preliminarily identified and roughly quantified.
- D. Continue to operate the Transfer Station after closing or mothballing the Muscatine Landfill and transfer waste to the SALF.
- E. Close the Transfer Station and direct haul solid waste to the SALF.
- F. Direct and/or transfer recyclables managed by the City to the Scott Area Recycling Center (SARC).

Each of these scenarios has a variety of possible implementation and operational strategies that can be considered for evaluation. Based on the August 19th discussion and preliminary review of documents provided by the City, a proposed scope of services was developed and is described in Section 2.0.

2.0 SCOPE OF SERVICES

Based on the above information, BARKER LEMAR proposes the following scope of services:

- 1. Confirm scenarios for evaluation (as described herein) and review background data.
- 2. Develop comprehensive baseline life-cycle cost model.
- 3. Run life-cycle cost model for the identified scenarios.
- 4. Provide generalized evaluation of non-cost model scenarios.
- 5. Present preliminary findings of the life-cycle cost model output and generalized evaluations.
- 6. Prepare and present final report.

Each task is described below.

Task 1 – Confirm Scenarios for Evaluation and Obtain and Review Background Data

BARKER LEMAR staff will perform the following subtasks:

- a. Meet with the Commission and the City to confirm the scenarios to be evaluated as described herein and work to acquire and review the associated background data necessary for the evaluations. A significant amount of information has been requested of and received from the City thus far in the process. For the purposes of this scope of services, the following scenario evaluations and level of effort are proposed. Certain scenarios have been assigned a lower level general evaluation effort as, based on preliminary information, they appear as unlikely options

moving forward. Should changes to these scenario assignments appear necessary as the evaluations progress, the Commission and the City will be notified and provided information to decide if a lower-level scenario should be elevated to a life-cycle cost evaluation.

Scenarios for Life-Cycle Cost Evaluation:

- Close the Muscatine Landfill after the completion of Phase 4 and then transfer waste to SALF utilizing the existing Transfer Station (combination of Scenarios A and D from Section 1.0 Project Understanding).
- Close the Muscatine Landfill after the completion of Phase 6 and then transfer waste to SALF utilizing the existing Transfer Station (combination of Scenarios B and D from Section 1.0 Project Understanding).

General Evaluation (not subject to life-cycle cost evaluation):

- Mothball remaining permitted airspace at the Muscatine Landfill for possible use as a future disposal facility for the collaborating entities (Scenario C from Section 1.0 Project Understanding). Potentially permissible airspace on the Muscatine Landfill should be roughly quantified to understand the reciprocal disposal airspace potentially available.
 - Close the Transfer Station and direct haul solid waste to the SALF (Scenario E from Section 1.0 Project Understanding).
 - Direct and/or transfer recyclables managed by the City to the SARC (Scenario F from Section 1.0 Project Understanding).
- b. Review reports, budgets, spreadsheets, contracts, and other documents provided by the City to assist in the scenario development and understanding.

Task 2 – Develop Comprehensive Base Life-Cycle Cost Model

BARKER LEMAR will work with the Commission and the City to develop a comprehensive baseline life-cycle cost model that centers on current Transfer Station operations. The purpose of this life-cycle cost model is to identify the long-term costs associated with managing solid wastes for the City through the operation of the Transfer Station. The Transfer Station is proposed as the base of the life-cycle model as it is anticipated to be the most likely operation to remain functionally similar to the current solid waste management operations.

The comprehensive baseline life-cycle cost model will be developed in Excel and will incorporate known costs (i.e., labor, transportation, disposal management, utilities, capital expenses, etc.) and revenues (i.e., MSW tipping fees and fees for appliances, electronic wastes, and tires) for the Transfer Station operations and will project estimated figures through the end of the current projected remaining capacity of Phase 6 (approximately 17-years). This life-cycle cost model will be developed such that a variety of solid waste management strategies (i.e., selection of alternative MSW disposal facility, change to recycling management strategies, etc.) and their associated costs, and other inputs (i.e., expense and revenue variables, modifications to recycling programs, etc.) can be manipulated to evaluate their potential financial impact. The following is an example simplified illustration of the anticipated model structure.

The comprehensive baseline life-cycle cost model will be constructed to:

- Simulate activities and costs associated with current solid waste management practices with waste directed from the Transfer Station to the Muscatine Landfill.
- Model operational cost impacts due to potential operational improvements (i.e., maximizing trailer weights and transportation efficiencies, etc.).
- Manipulate solid waste management practices to select the SALF as the disposal site by eliminating appropriate Muscatine Landfill operational costs and replace them with the SALF gate rate along with adjusting Transfer Station operational costs to account for increased hauling operations.
- Identify and project likely long-term Muscatine Landfill environmental compliance activities and associated costs (i.e., Administrative Order obligations, groundwater remedies, closure and post closure costs, etc. that will remain even if the Muscatine Landfill closes).

It should be emphasized that the above description is a simplified illustration of the baseline life-cycle model as various other costs associated with Muscatine Landfill modifications are required prior to closure. Additional operational and environmental compliances costs, as well as potential additional revenues (i.e., increased tipping fees assessed, increased accepted tonnages, recyclable profit sharing agreements, etc.), may be scenarios that the Commission and/or the City desires that the base life-cycle model evaluate. Therefore, BARKER LEMAR is proposing the development of a baseline life-cycle cost model that can accommodate a variety of inputs and perform numerous data manipulations in order to provide desired analysis capabilities.

BARKER LEMAR staff will perform the following subtasks:

- a. Further review existing budgets, historical expenses, anticipated upcoming capital expenses, financial assurance requirements, anticipated upcoming compliance costs, and existing contracts for filling out the life-cycle cost model to more closely simulate the existing operational scenario.
- b. Develop a spreadsheet based life-cycle cost model centered around the Transfer Station with solid waste disposal and recycling operations as ancillary operations.
- c. Build into the model necessary change accommodations to evaluate the impacts of closing the Muscatine Landfill after completion of different phases, transferring waste to the SALF, and other potential cost affecting aspects of collaboration.

Task 3 – Run Life-Cycle Cost Model for Identified Scenarios

BARKER LEMAR staff will perform the following subtasks:

- a. Perform a life-cycle cost model evaluation for the costs associated with transferring waste from the Transfer Station to SALF. The purpose of this life-cycle cost model evaluation is to project the potential costs for transferring the waste for disposal at the SALF compared to the Muscatine Landfill. If the strategy of transferring the waste to SALF is not mutually beneficial financially and or operationally, it may not be practical to continue with completing additional life-cycle cost model evaluations. At the completion of this life-cycle cost model evaluation, BARKER LEMAR will present the findings to the Commission and the City to determine if the additional life-cycle cost models warrant completion. This model is anticipated to require the following at a minimum:

- Review of City hauling contractual costs and obligations;
 - Identification of current solid waste transportation efficiencies; and
 - Impact to equipment requirements and operational costs associated with transferring waste from the Transfer Station directly to SALF.
- b. Run the life-cycle cost model for the combination of Scenarios A and D from Section 1.0 Project Understanding – close the Muscatine Landfill after the completion of Phase 4 and then transfer waste to SALF utilizing the existing Transfer Station. This model is anticipated to require the following at a minimum:
- Ongoing leachate management needs and estimated costs at Muscatine Landfill;
 - Evaluation of interior slopes of Phases 1 and 2, and CAD based volume estimates and estimated costs to establish compliant slope grades at Muscatine Landfill;
 - Review of City landfill operation contractual costs and obligations;
 - Impact to cell construction schedule at SALF; and
 - Impact on financial assurance obligations for the Commission and the City.
- c. Run the life-cycle cost model for the combination of Scenarios B and D from Section 1.0 Project Understanding – close the Muscatine Landfill after the completion of Phase 6 and then transfer waste to SALF utilizing the existing Transfer Station. This model run is anticipated to require the following at a minimum:
- Estimate construction and closure costs of Phases 5 and 6 at Muscatine Landfill;
 - Estimate costs to reconstruct maintenance building at Muscatine Landfill;
 - Impact to cell construction schedule at SALF; and
 - Impact on financial assurance obligations for the Commission and the City.

Task 4 – Prepare Generalized Evaluations of Non-Cost Model Scenarios

Generalized evaluations will consist of identification and discussion of the pros and cons of the scenario along with reasoning for not pursuing a detailed life-cycle cost evaluation of the scenario. BARKER LEMAR staff will perform the following subtasks:

- a. Evaluate Scenario C from Section 1.0 Project Understanding – Mothball remaining airspace at the Muscatine Landfill for possible use as a future disposal facility for the collaborating entities. This evaluation is anticipated to require the following at a minimum:
- Review of regulatory allowances for idling a permit and cover requirements during the interim.
 - Discuss with the DNR specific requirements they may have for this scenario.
 - Development of rough base and final grades for potential future waste disposal areas at the Muscatine Landfill to estimate potential future disposal capacity.

- b. Evaluate Scenario E from Section 1.0 Project Understanding – Close the Transfer Station and direct haul solid waste to the SALF. This evaluation is anticipated to require the following at a minimum:
 - o Review methodologies used in the 1991 study performed to identify the construction and operation of the Muscatine Transfer Station.
 - o Review existing residential vehicle collection routes.
 - o Estimate increased number of miles solid waste collection vehicles may have to make per trip to SALF as compared to using the Transfer Station.
 - o Review impact to citizens who currently transport their own waste to the transfer station or individual loads not collected by municipal or commercial hauls for a variety of reasons.
- c. Evaluate Scenario F from Section 1.0 Project Understanding – Direct and/or transfer recyclables managed by the City to the SARC. This evaluation is anticipated to require the following at a minimum:
 - o Review existing City recycling service contracts.
 - o Identify current recyclable material management practices after collection.
 - o Review potential opportunities for revenue sharing if recyclables were delivered to the SARC.

Task 5 – Present Preliminary Findings of the Life-Cycle Cost Model Output and Generalized Evaluations

BARKER LEMAR staff will perform the following subtasks:

- a. Develop a PowerPoint presentation and summary memo of findings for discussion purposes.
- b. Meet with the Commission and the City to present the preliminary findings and determine if modifications to the evaluations need to be performed to revise the life-cycle cost analyses or generalized evaluations.

Task 6 – Prepare and Present Final Report

BARKER LEMAR staff will perform the following subtasks:

- a. Prepare a draft-final report to the Commission and the City for review and comment.
- b. Incorporate comments received into a final report that provides a comprehensive review of the findings of this project and prepare a PowerPoint presentation of the findings. A total of five (5) copies of the final report will be provided.
- c. Present the final report to the Commission and the City at a project meeting.

3.0 LIMITATIONS

Services not set forth in the scope of services are excluded from the scope of BARKER LEMAR'S services and BARKER LEMAR assumes no responsibility to perform such services and no liability associated with the non-performance of such services.



4.0 SCHEDULE

BARKER LEMAR anticipates completing the project within 70 days of receipt of written notice to proceed.

5.0 COMPENSATION

The estimated compensation for the proposed scope of services is shown in Table 1 and is valid for 60 days following the date of this proposal. BARKER LEMAR invoices will be submitted monthly and will reflect the time and expenses incurred during the invoice period.

**TABLE 1
ESTIMATED COMPENSATION**

Task	Estimated Compensation	
	Subtask	Task
Task 1 – Confirm Scenarios and Review Data		\$ 4,395
a. Project meeting (1 BLEC staff person)	\$ 3,065	
b. Review reports, budgets, contracts, and other documents	\$ 1,330	
Task 2 – Develop Comprehensive Life-Cycle Cost Model		\$ 10,880
a. Further document review and questions to City staff regarding financials	\$ 1,470	
b. Spreadsheet based life-cycle cost base model development	\$ 7,805	
c. Incorporation of change accommodations into the model	\$ 1,605	
Task 3 – Run Life-Cycle Cost Model for Identified Scenarios		\$ 3,370
a. Life-cycle cost model for transferring waste to SALF	\$ 850	
b. Combined Scenarios A and D (see Task 3.a. for specifics)	\$ 1,315	
c. Combined Scenarios B and D (see Task 3.b. for specifics)	\$ 1,205	
Task 4 – Prepare Generalized Evaluations of Non-Cost Model Scenarios		\$ 2,665
a. Scenario C (see Task 4.a. for specifics)	\$ 1,825	
b. Scenario E (see Task 4.b. for specifics)	\$ 460	
c. Scenario F (see Task 4.c. for specifics)	\$ 380	
Task 5 – Present Preliminary Findings		\$ 3,415
a. Develop PowerPoint presentation and summary memo	\$ 1,455	
b. Project meeting (2 BLEC staff persons)	\$ 1,960	
Task 6 – Prepare and Present Final Report		\$ 9,100
a. Prepare draft final report for Commission and City review	\$ 5,920	
b. Incorporate Commission and City comments and prepare final report	\$ 570	
c. Prepare PowerPoint presentation	\$ 520	
d. Project meeting to present final report (2 BLEC staff persons)	\$ 2,090	
Projected Total		\$ 33,825



6.0 CONDITIONS

Items to be provided by the Commission include the proposed FYE-2015 budget and the proposed equipment replacement schedule/budget. We have enclosed our Terms and Conditions that should be considered part of this proposal.

CONFIRMATION OF NOTICE TO PROCEED

Proposal No. 164454-Revised

The above proposal and attached Terms and Conditions are understood and accepted.

BARKER LEMAR ENGINEERING CONSULTANTS (BARKER LEMAR) agrees to perform and complete the following Services for the Clients at their facilities in Scott and Muscatine Counties Iowa.

The scope of services is described as a solid waste collaboration analysis and will include other technical and/or administrative services as outlined in this proposal.

BARKER LEMAR agrees to perform the above scope of services for a total estimated compensation of \$33,825. The Clients will be invoiced for the time and expenses incurred during the invoice period. The Clients will be responsible for determining cost allocation and inform Barker Lemar of the agreed cost allocation at the time of providing Confirmation of Notice to Proceed. The compensation for the proposed scope of services is valid for 60 days following the date of this proposal.

If this proposal meets with your approval, sign two originals of this Confirmation of Notice to Proceed, retain one original for Client files, and return one original or copy via email, fax to 515.256.0572, or U.S. mail to BARKER LEMAR Engineering Consultants, 1801 Industrial Circle, West Des Moines, IA 50265.

If you have questions regarding any of the information above, please contact one of the authorized signers below at 515.256.8814, or 800.707.4248.

FOR BARKER LEMAR ENGINEERING CONSULTANTS



Jeff Phillips
Project Manager
Date: 9/28/2016

Waste Commission of Scott County

Ms. Kathy Morris
Director
Date: _____

City of Muscatine/Muscatine County Solid Waste Agency



Timothy C. Buelow, P.E.
Principal Engineer
Date: 9/28/2016

Mr. Gregg Mandsager
City Administrator
Date: _____

Copies: Addressee (2)
File

TERMS AND CONDITIONS

PAYMENT TERMS

Payment is due upon receipt of our invoice. If payment is not received within 30 days from the invoice date, Client agrees to pay a finance charge on the principal amount of the past due account of 1 ½% per month. If 1 ½% per month exceeds the maximum allowed by law; the charge shall automatically be reduced to the maximum legally allowable. In the event the Client requests termination of the services prior to completion, a termination charge in an amount not to exceed 30% of all charges incurred through the date services are stopped plus any shutdown costs may, at the discretion of Barker, Lemar & Associates, Inc., be made. If during the execution of the services, Barker, Lemar & Associates, Inc., is required to stop operations as a result of changes in the scope of services such as requested by the Client or requirements of third parties, additional charges will be applicable. Client is responsible for all cost of the collection of unpaid accounts, including reasonable attorney fees.

INSURANCE

Barker, Lemar & Associates, Inc. maintains Workers' Compensation and Employers Liability Insurance in conformance with applicable state law. In addition, we maintain Commercial General Liability Insurance with combined Single Bodily Injury and property damage limits of \$1,000,000 and Automobile Liability Insurance with combined Single Bodily Injury and property damage limits of \$1,000,000. A certificate of insurance can be supplied evidencing such coverage, which contains a clause providing that 10 days written notice be given prior to cancellation. Cost of the above coverage is included in our quoted fees. If additional coverage or increased limits of liability are required, Barker, Lemar & Associates, Inc. will endeavor to obtain the requested insurance and charge separately for costs associated with additional coverage or increased limits.

LIMITATION OF LIABILITY

In recognition of the relative risks and benefits of the Project to both the Client and Barker, Lemar & Associates, Inc., the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of Barker, Lemar & Associates, Inc. and Barker, Lemar & Associates, Inc.'s officers, directors, partners, employees, shareholders, owners and sub consultants for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, including attorney's fees and costs and expert-witness fees and costs, so that the total aggregate liability of Barker, Lemar & Associates, Inc. and Barker, Lemar & Associates, Inc.'s officers, directors, partners, employees, shareholders, owners and sub consultants shall not exceed the applicable insurance coverage available at the time of settlement or judgment. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

Client agrees that Barker, Lemar & Associates, Inc.'s liability for any damage on account of any error, omission, or other professional negligence by Barker, Lemar & Associates, Inc. will be limited to a sum not to exceed \$50,000 or the amount presently due Barker, Lemar & Associates, Inc. for services rendered hereunder, whichever is greater.

Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the Client nor Barker, Lemar & Associates, Inc., their respective officers, directors, partners, employees, contractor or sub consultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the Project or to this Agreement. The mutual waiver of consequential damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation and any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both the Client and Barker, Lemar & Associates, Inc. shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and sub contracts with others involved in this project. Barker, Lemar & Associates, Inc. is not liable for consequential damages.

Barker, Lemar & Associates, Inc. shall not be responsible for any acts or omissions of the Contractor, any sub contractor, any entity performing any portions of the Work or any agents or employees of any of them. Barker, Lemar & Associates, Inc. does not guarantee the performance of the Contractor and shall not be responsible for the Contractor's failure to perform its Work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

POLLUTION CLAIMS

Client hereby understands and agrees that Barker, Lemar & Associates, Inc. has not created nor contributed to the creation or existence of any or all types of hazardous or toxic wastes, materials, chemical compounds, or substances, or any other type of environmental hazard or pollution, whether latent or patent, at Client's premises, or in connection with or related to this project with respect to which Barker, Lemar & Associates, Inc. has been retained to provide professional engineering services. Barker, Lemar & Associates, Inc.'s total liability to Client resulting from any release or threatened release of any hazardous waste, substance, pollutant or contaminant, whether or not directly or indirectly generated by Barker, Lemar & Associates, Inc.'s performance of the work hereunder (including any injury to persons or property or death resulting there from), shall not exceed the amount due Barker, Lemar and Associates, Inc. for services rendered hereunder. This limitation applies to all liabilities, including indemnification liabilities, whether based on contract, tort (including negligence), and strict liability or otherwise. This limitation of liability does not in any way limit or affect Client's obligations to indemnify and hold Barker, Lemar & Associates, Inc., its owners, officers, directors, and employees harmless. This limitation of liability shall not apply to the extent it is held that the loss or damage arose from Barker, Lemar & Associates, Inc.'s gross negligence or intentional misconduct. In addition, Client agrees to limit Barker, Lemar & Associates, Inc.'s liability to the same extent that Client's liability is limited pursuant to its contract with its client (if one exists).

DOCUMENTS

Barker, Lemar & Associates, Inc.'s liability to Owner for any computer programs, software products, or related data furnished hereunder is limited solely to the correction of residual errors, minor maintenance, or update(s) as agreed. Barker, Lemar & Associates, Inc. makes no warranties of any kind, including any implied warranty of merchantability or of fitness for any particular purpose, or against infringement, with respect to computer programs, software products, related data, technical information, or technical assistance provided by Barker, Lemar & Associates, Inc. under this Agreement. In no event shall Barker, Lemar & Associates, Inc., its officers, agents, or employees be liable under or in connection with this Agreement under any theory of tort, contract, strict liability, negligence, or other legal or equitable theory for incidental or consequential damages relating to any computer programs, software products, or related data furnished hereunder.

STANDARD OF CARE

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

RIGHT-OF-ENTRY

Unless otherwise agreed, Client will furnish right-of-entry on the property for Barker, Lemar & Associates Inc. to make the planned borings, surveys, tests, and/or explorations. Barker, Lemar & Associates Inc. will take reasonable precautions to limit damage to the property caused by our operations, but we have not included in our fee the cost of restoration of damage that may result. If Client desires Barker, Lemar & Associates Inc. to restore the property to its former condition, we will accomplish this, to the extent reasonably possible, and add the cost to the proposed fee.

SITE VISITS

Barker, Lemar & Associates, Inc. shall visit the site at intervals appropriate to the stage of construction, or as otherwise agreed to in writing by the Client and Barker, Lemar & Associates, Inc., in order to observe the progress and quality of the Work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of Barker, Lemar & Associates, Inc.'s work but rather are to allow the Consultant to become generally familiar with the Work in progress and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. Based on this general observation, Barker, Lemar & Associates, Inc. shall keep the Client informed about the progress of the Work and shall advise the Client about observed deficiencies in the Work.

If the Client desires more extensive project observation or full-time project representation, the Client shall request that such services be provided by Barker, Lemar & Associates, Inc. as Additional Services in accordance with the terms of this Agreement.

Barker, Lemar & Associates, Inc. shall not supervise, direct or have control over the Contractor's work nor have any responsibility for the construction means, methods, techniques, sequences or procedures selected neither by the Contractor nor for the Contractor's safety precautions or programs in connection with the Work. These rights and responsibilities are solely those of the Contractor in accordance with the Contract Documents.

SAMPLING OR TESTING OF LOCATION

The fees do not include costs associated with surveying of the site or the accurate horizontal and vertical locations of tests, unless otherwise specifically agreed to by the parties. Field test or boring locations described in Barker, Lemar & Associates, Inc.'s report contemplated by these Terms and Conditions or shown on sketches are based on specific information furnished by others or estimates made in the field by our technicians. Such dimensions, depths, or elevations should be considered as approximations unless otherwise stated in the reports contemplated by these Terms and Conditions.

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

SAMPLE DISPOSAL AGREEMENT

Unless otherwise requested, test specimens or samples will be disposed of immediately upon completion of tests unless otherwise regulatory required. Upon written request, Barker, Lemar & Associates, Inc. will retain test specimens or drilling samples for mutually acceptable storage charge and period of time.

DAMAGE TO EXISTING MAN-MADE OBJECTS

It shall be the responsibility of the Client or his duly authorized representative to disclose the presence and accurate location of all hidden or obscure man-made objects and underground utilities relative to field tests or boring locations. Barker, Lemar & Associates, Inc.'s field personnel are trained to recognize clearly identifiable stakes or markings in the field and without special written instruction to initiate field testing drilling and/or sampling within a reasonable distance of each designated location. If Barker, Lemar & Associates, Inc. is cautioned, advised, or given data in writing that reveal the presence or potential presence of underground or over ground obstructions, such as utilities, Barker, Lemar & Associates, Inc. will give special instructions to its field personnel. As evidenced by Client's acceptance of this proposal, Client agrees to indemnify and save harmless from all claims, suits, losses, personal injuries, death, and property liability resulting from unusual subsurface conditions or damages to subsurface structures, including utility lines, owned by Client or third parties, occurring in the performance of the proposed services, whose presence and, exact locations were not revealed to Barker, Lemar, & Associates, Inc. in writing, and to reimburse Barker, Lemar & Associates, Inc. for expenses in connection with any such claims or suits, including reasonable attorney fees.

DISPOSAL

Barker, Lemar & Associates, Inc. is not, and has no authority to act as, a handler, generator, operator, treated, storer, transporter or disposer of hazardous waste, substances, pollutants or contaminants found or identified at the site. Barker, Lemar & Associates, Inc. shall have no responsibility for the transportation, storage, treatment or disposition of contaminated or potentially contaminated waste materials of any kind, which are directly or indirectly generated from Barker, Lemar & Associates, Inc.'s performance of the work in accordance with these Terms and Conditions. Client shall be responsible for the disposal of any such waste materials.

SAFETY

Should Barker, Lemar & Associates, Inc. provide periodic observations or monitoring services at the job site during construction, Client agrees that in accordance with generally-accepted construction practices, the contractor will be solely and completely responsible for working conditions on the job site, including safety of all persons and property during the performance of the work and compliance with OSHA regulations, and that these requirements will apply continuously and not be limited to normal working hours. Any monitoring of the contractor's procedures conducted by Barker, Lemar & Associates, Inc. is not intended to include review of the adequacy of the contractor's safety measures in, on, adjacent to, or near the construction site.

CONSTRUCTION COST OPINIONS

Opinions of probable cost for the facilities considered and designed under this Agreement are prepared by Barker, Lemar & Associates, Inc. through exercise of its experience and judgment in applying presently available cost data, but it is recognized that Barker, Lemar & Associates, Inc. has no control over costs of labor and materials, or over the construction contractor's methods of determining prices, or over competitive bidding procedures, market conditions, and unknown field conditions so that Barker, Lemar & Associates, Inc. cannot and does not guarantee that proposals, bids, or the project construction costs will not vary from Barker, Lemar & Associates, Inc.'s opinion of probable construction costs.

OWNERSHIP OF DOCUMENTS

All documents, including, but not limited to, drawings, specifications, reports, boring logs, field notes, laboratory test data, calculations, and estimates, prepared by Barker, Lemar & Associates, Inc., are instruments of service pursuant to these Terms and Conditions and shall be the sole property of Barker, Lemar & Associates, Inc. Client agrees that all documents of any nature furnished to Client or Client's agents or designees, if not paid for, will be returned to Barker, Lemar & Associates Inc. upon demand and will not be used by Client for any purpose whatsoever. Client further agrees that under no circumstances shall any documents produced by Barker, Lemar & Associates Inc., pursuant to these Terms and Conditions, be used at any location or for any project not expressly provided for in these Terms and Conditions without the written permission of Barker, Lemar & Associates, Inc. At the request and expense of Client, Barker, Lemar & Associates, Inc. will provide Client with copies of documents created in the performance of the work for a period not exceeding five years following submission of the report contemplated by these Terms and Conditions.

SUCCESSORS AND ASSIGNS

All of the terms, conditions, and provisions hereof shall inure to the benefit of and are binding upon the parties hereto and their respective successors and assigns, provided, however, that no assignment of this Agreement shall be made without written consent of the parties of this Agreement.

SEVERABILITY

If any provision of this Agreement is declared invalid, illegal, or incapable of being enforced by any court of competent jurisdiction, all of the remaining provisions of this Agreement shall nevertheless continue in full force and effect, and no provision shall be deemed dependent upon any other provision unless so expressed herein.

WAIVER

Barker, Lemar & Associates, Inc.'s waiver of any term, condition, or breach of any term, condition, covenant, shall not constitute a waiver of any other term, condition, or covenant, or the breach thereof.

GOVERNING LAW

These Terms and Conditions shall be governed in all respects by the laws of the State of Iowa. Any litigation to be filed by either party to the contract shall be filed in Polk County, Iowa District Court or Federal Court for the Southern District of Iowa.

ENTIRE AGREEMENT

This Agreement, and its attachments, contains the entire understanding between Owner and Barker, Lemar & Associates, Inc. relating to professional engineering services. Any prior or contemporaneous agreements, promises, negotiations, or representations not expressly set forth herein are of no effect. Subsequent modifications or amendments to this Agreement shall be in writing and signed by the parties to this Agreement.