CERTIFIED TESTING SERVICES, INC.

GEOTECHNICAL ENGINEERING REPORT

BUILDING MODIFICATIONS
WOODBURY COUNTY LAW ENFORCEMENT CENTER
SIOUX CITY, IOWA

CTS PROJECT NO. G4933

This document was originally issued and sealed by James A. Bertsch, P.E., License No. 12121 on December 20, 2016.	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa. Signature: Name: James A. Bertsch, P.E. (date) License Number 12121 My license renewal date is December 31, 2018. Pages or sheets covered by this seal: This report contains 18 pages, including this page. CTS File Number G4933

Certified Testing Services, Inc.
419 W. 6th Street · P.O. Box 1193 · Sioux City, Iowa 51102 · Phone (712) 252-5132

December 20, 2016

Attn: Mr. Kenny Schmitz
Building Services Director
Woodbury County
620 Douglas Street, Room B07
Sioux City, Iowa 51101

RE: Geotechnical Exploration Services
Building Modification
Woodbury County Law Enforcement Center
Sioux City, Iowa
CTS Job No. G4933

Dear Mr. Schmitz:

Certified Testing Services, Inc. is pleased to transmit our Geotechnical Engineering Report for the referenced project. This report includes the results of field and laboratory testing, estimated settlement amounts, as well as groundwater information.

We appreciate the opportunity to perform this Geotechnical Study and look forward to continued participation during the design and construction phases of this project. If you have any questions pertaining to this report or if we may be of further service, please contact our office.

Respectfully submitted,
CERTIFIED TESTING SERVICES, INC.

Matthew R. Dailey, P.E. IA 19700
Staff Engineer

James A. Bertsch, P.E. IA 12121
Senior Geotechnical Engineer

MRD/JAB/jb

cc: CMBA Architects

GEOTECHNICAL ENGINEERING REPORT

BUILDING MODIFICATIONS
WOODBURY COUNTY LAW ENFORCEMENT CENTER
SIOUX CITY, IOWA

CTS PROJECT NO. G4933

PREPARED FOR

ATTN: MR. KENNY SCHMITZ
BUILDING SERVICES DIRECTOR
WOODBURY COUNTY
620 DOUGLAS STREET, ROOM B07
SIOUX CITY, IOWA 51101

DECEMBER 20, 2016

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PROJECT INFORMATION

Project Authorization

Certified Testing Services, Inc. has completed a subsurface exploration for the above referenced project. Our work was authorized by Mr. Kenny Schmitz, Building Services Director, for Woodbury County in an email on December 1, 2016. This work was performed in accordance with CTS Proposal 3886, dated September 7, 2016.

Project Description

Mr. Brent Koch, AIA for CMBA Architects presented preliminary project information through a request for proposal received by email on September 2, 2016. The request for proposal included project information, a modified copy of a Sheet S-1A that showed the proposed boring locations and a portion of Sheet S-1A that showed the proposed new column locations and column information. Mr. Schmitz provided additional information in an email on December 1, 2016. The email included a drawing titled, "First Floor Framing Plan" and a drawing titled, "Foundation Plan" that were both marked "Revised Soil Boring Locations". CTS understands that the project will consist of renovating a portion of the second floor to add modular jail cells, which will require the installation of additional columns in the southwest/western portion of the existing building. CTS understands that the top of the columns will be located 8 inches below the top of floor slab and the footings would be 12 inches thick. It is further understood that the columns will have loads of 39 kips

Purpose and Scope of Services

The purpose of this study was to explore the subsurface conditions at the site to determine if the existing material would be suitable for supporting the new column foundations. Our original scope of services included coring two locations in the basement area and two boring in the first floor area. However, based on the new boring information received in the email on December 1, 2016, the number of borings in the basement was reduced to one. It should be noted that hand auger refusal and sample refusal was encountered in the borings at depths ranging from 10 inches to 11 feet below the top of floor slab. The scope of work also included select laboratory testing and preparation of this geotechnical report. This report briefly outlines the testing procedures, presents available project information, describes the site and subsurface conditions and presents our opinion on the suitability of the subgrade material to support the new column loads and groundwater information.

The scope of services does not include an environmental assessment of the site.

SITE AND SUBSURFACE CONDITIONS

Site Location and Description

The project site is the Woodbury County Law Enforcement Center located 407 7th Street in in Sioux City, Iowa. At the time of drilling, the surface at the boring locations was covered with 3¾-inch to 4¼-inch concrete slab.

Subsurface Conditions

The site subsurface conditions were explored with three soil borings hand augered or sampled to depths varying from 10 inches to 11 feet below the existing ground surface. It should be noted that hand auger refusal was met in debris at 5 feet in Boring B1, 10 feet in Boring B2 and 10 inches in Boring B3. The boring locations and depths were chosen by CMBA Architects personnel and basement boring locations was adjusted in the field by CTS personnel based on accessibility. The approximate locations of the borings are indicated on the "Boring Location Plans" included in the Appendix, which are modified copies of the drawings provide in the email on December 1, 2016.

The borings were advanced utilizing hand auger drilling methods and dynamic cone penetrometer testing. Soil samples were routinely obtained during the drilling process. Select soil samples were later tested in the laboratory to determine the materials properties for our evaluation. Drilling, soil sampling and the laboratory testing were accomplished generally in accordance with ASTM procedures.

The subsurface conditions below the surface material consisted of silty sand fill, lean clay with silt lumps and debris fill, silt fill, lean clay fill, and silty sand with concrete debris fill. It should be noted that the classifications of the materials encountered in the cone penetrometer tests is assumed based on hand auger refusal in rubble.

The boring logs included in the Appendix should be reviewed for specific information at the individual boring locations. These records include soil/rock descriptions, stratifications, cone penetration resistances, and locations of the samples and laboratory test data. The stratifications shown on the boring logs represent the conditions only at the actual boring locations. Variations may occur and should be expected at other locations across the site. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual. Water level information obtained during field operations are also shown on the boring logs. Samples that were not altered by laboratory testing will be retained for 30 days from the date of this report and then will be discarded.

Water Level Measurements

Free water was not encountered in the borings at the time of drilling. Water levels should be expected to fluctuate with changes in climatic conditions. The water level measurements presented in this report are the levels that were measured at the time of our field activities.

EVALUATION AND RECOMMENDATIONS

Geotechnical Discussion

Based on the fill material encountered in the borings, it is CTS's opinion that the existing fill material is not suitable to support the proposed columns. It would be CTS's opinion that helical piles would be suitable for support of the columns. Based on the existing building being constructed on piling, the original geotechnical report from the construction of the building should be supplied to the pile contractor to determine the depth of piles. It should also be noted that debris encountered in the borings may cause construction difficulty.

REPORT LIMITATIONS

The recommendations submitted are based on the available subsurface information obtained by CTS and design details furnished by Mr. Brent Koch, AIA of CMBA Architects and Mr. Kenny Schmitz of Woodbury County. If deviations from the subsurface conditions noted in this report are encountered during construction, CTS should be notified immediately to determine if changes in the foundation recommendations are required. If CTS is not retained to perform these functions, CTS will not be responsible for the impact of those conditions on the project.

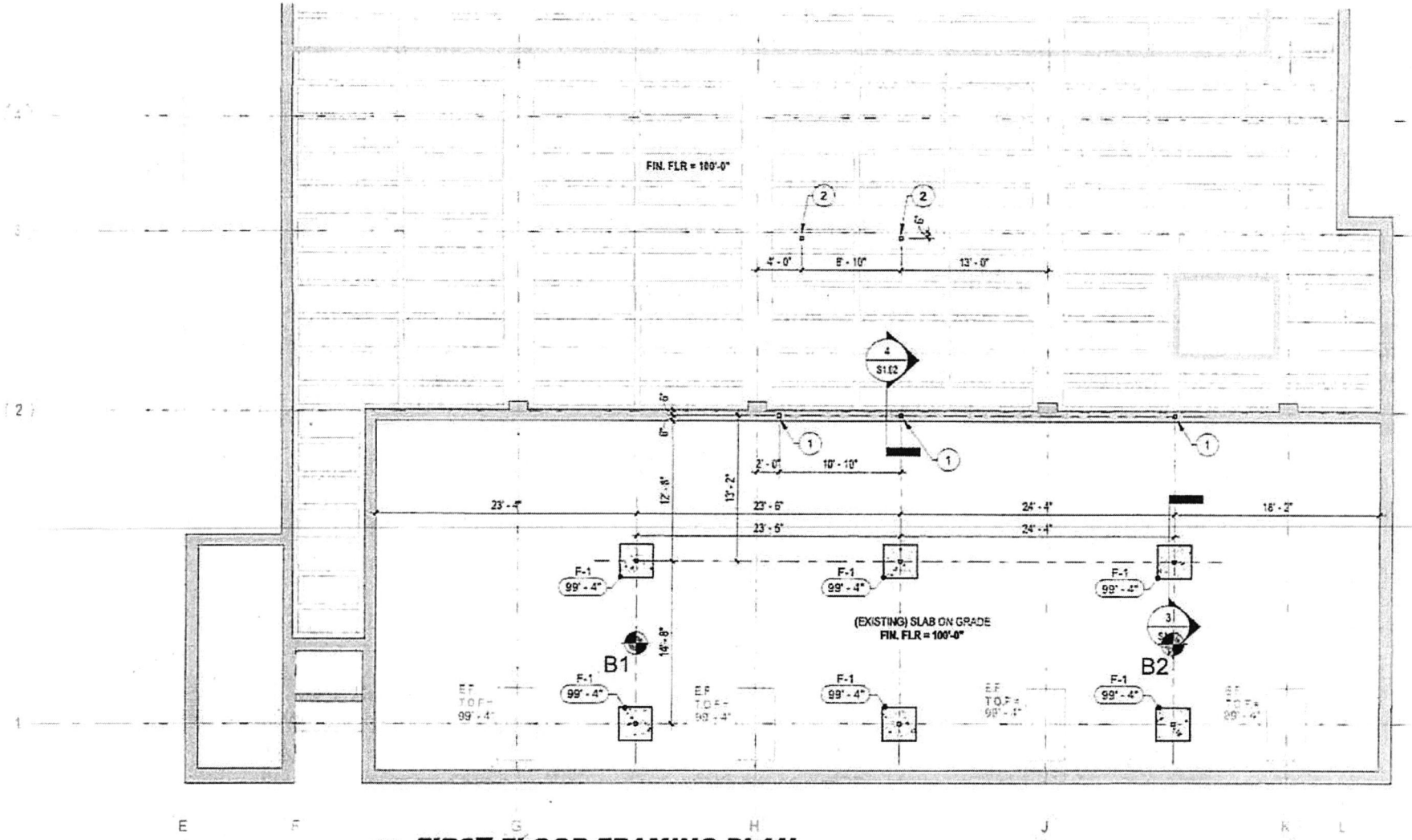
The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

This report has been prepared for the exclusive use of Woodbury County and their consultants for the specific application to the proposed Woodbury County Law Enforcement Center Modifications project in Sioux City, Iowa.

APPENDIX

BORING LOCATION PLANS

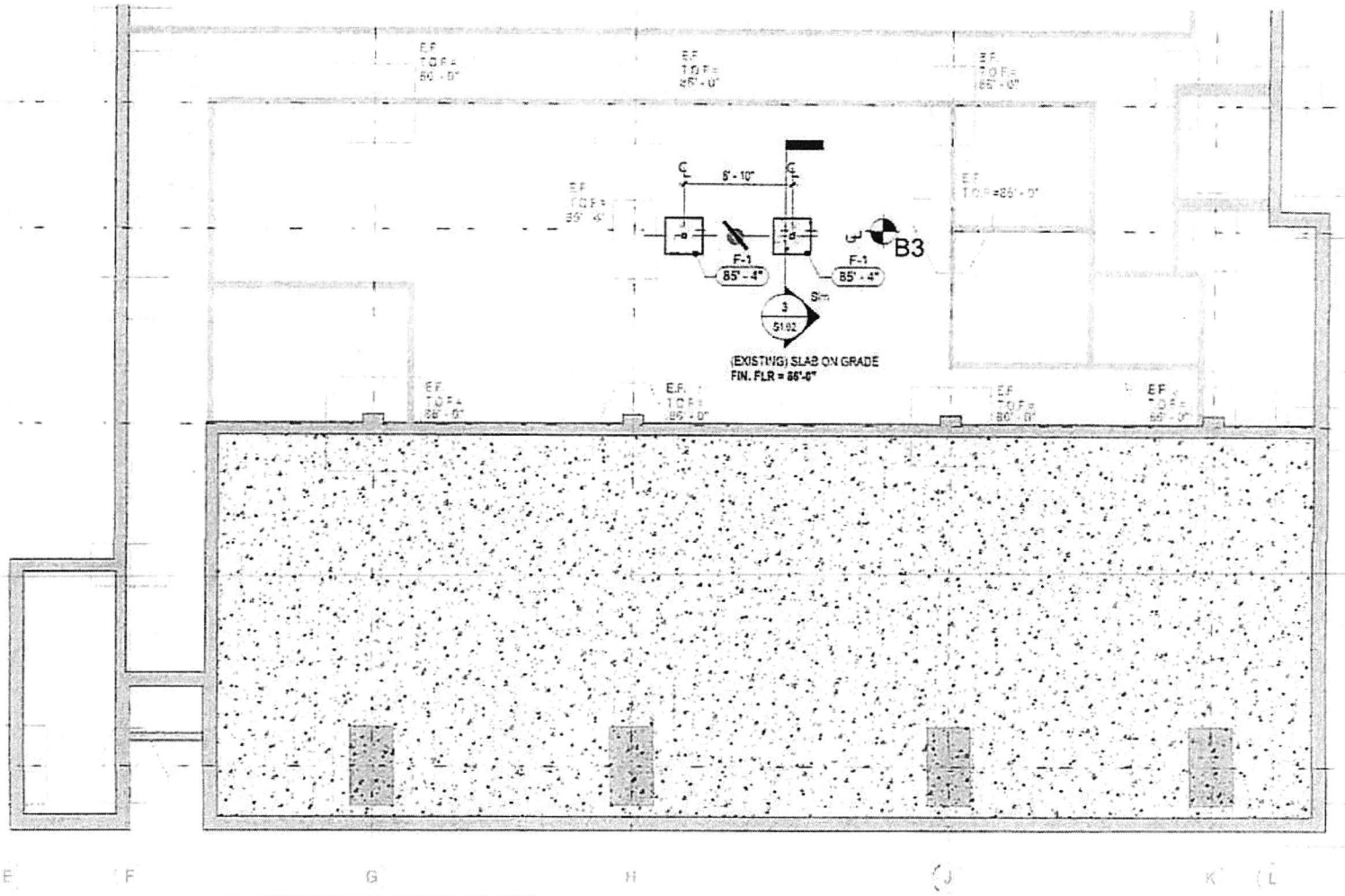
REVISED SOIL BORING LOCATIONS



2 FIRST FLOOR FRAMING PLAN

1/8" = 1'-0"

REVISED SOIL BORING LOCATIONS



1 FOUNDATION PLAN

1/8" = 1'-0"

BORING LOGS

LOG OF EXPLORATORY BORING

Job Number: G4933
Project: LEC Building Modification
Date Started: 12/13/16
Date Completed: 12/13/16

Boring No.: B-1
Boring Location: Sioux City, Iowa
Drill Type: Hand Auger
Ground Elev.:

Shelby Tube | Standard Split Spoon | Water Level ATD
Modified California | Grab Sample | Water Level After 7 Days

Depth in Feet	Graphic Log	Sample Type	SOIL DESCRIPTION	USCS	Blow Counts SPT (N) Blows/Foot	Moisture Content, %	Dry Density (PCF)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows per 1-3/4")
			3.75-Inch Concrete Layer											
			1-Inch Insulation Layer											
			FILL, Silty Sand, Grayish Yellow Brown, Moist			15								6
			FILL, Lean Clay with Silt Lumps and Debris, Dark Brown and Yellow Brown, Moist			14								58
5														25
														25
			END OF BORING AT 8 FEET DUE TO AUGER/SAMPLE REFUSAL IN DEBRIS FREE WATER WAS NOT ENCOUNTERED AT TIME OF DRILLING											44

LOG OF EXPLORATORY BORING

Job Number: G4933
Project: LEC Building Modification
Date Started: 12/13/16
Date Completed: 12/13/16

Boring No.: B-2
Boring Location: Sioux City, Iowa
Drill Type: Hand Auger
Ground Elev.:

Shelby Tube | Standard Split Spoon | Water Level ATD
Modified California | Grab Sample | Water Level After 7 Days

Depth in Feet	Graphic Log	Sample Type	SOIL DESCRIPTION	USCS	Blow Counts SPT (N) Blows/Foot	Moisture Content, %	Dry Density (PCF)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows per 1-3/4")
			3.75-Inch Concrete Layer											
			0.75-Inch Insulation Layer											
			FILL, Silt, Yellow Brown, Dry			6								58
5						11	89	33	4.50					
			FILL, Lean Clay, Dark Brown, Moist			15	96	56	4.50					
			(Debris Encountered)			15								25
10			END OF BORING AT 11 FEET DUE TO AUGER/SAMPLE REFUSAL IN DEBRIS FREE WATER WAS NOT ENCOUNTERED AT TIME OF DRILLING											44

LOG OF BORING G4933.GPJ CERTIFIED TESTING.GDT 12/19/16

SOIL CLASSIFICATION CHART AND GENERAL NOTES

LOG OF EXPLORATORY BORING

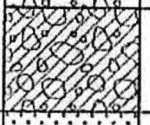
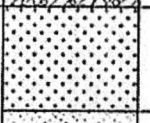
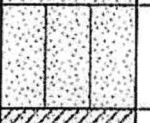
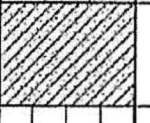
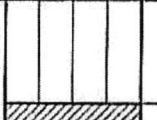
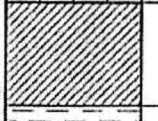
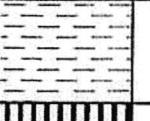
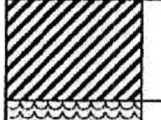
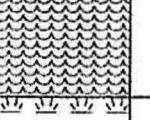
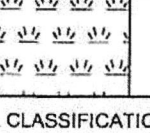
Job Number: G4933
Project: LEC Building Modification
Date Started: 12/13/16
Date Completed: 12/13/16

Boring No.: B-3
Boring Location: Sioux City, Iowa
Drill Type: Hand Auger
Ground Elev.:

Shelby Tube | Standard Split Spoon | Water Level ATD
Modified California | Grab Sample | Water Level After 7 Days

Depth in Feet	Graphic Log	Sample Type	SOIL DESCRIPTION	USCS	Blow Counts SPT (N) Blows/Foot	Moisture Content, %	Dry Density (PCF)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows per 1-3/4")
			4.25-Inch Concrete Layer											
			FILL, Silty Sand with Concrete Debris, Grayish Yellow Brown, Moist			15								17
			END OF BORING AT 10 INCHES DUE TO AUGER/SAMPLE REFUSAL IN CONCRETE DEBRIS FREE WATER WAS NOT ENCOUNTERED AT TIME OF DRILLING											

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		(LITTLE OR NO FINES)		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES		SM	SILTY SANDS, SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

GENERAL NOTES

SAMPLING SYMBOLS:

	STANDARD PENETRATION TEST – 1 3/8: I.D., 2" O.D.
	SHELBY THIN-WALLED TUBE – 3" O.D. UNDISTURBED SAMPLE
	GRAB SAMPLE
	ROCK CORE
	AUGER SAMPLE
	NO RECOVERY

WATER LEVEL MEASUREMENT SYMBOLS:

▽	WATER LEVEL AT TIME OF DRILLING
▼	WATER LEVEL AFTER 7 DAYS

CONSISTENCY OF FINE-GRAINED SOILS	
UNCONFINED COMPRESSIVE STRENGTH, QU, PSF	CONSISTENCY
< 500	VERY SOFT
500 - 1,000	SOFT
1,001 - 2,000	MEDIUM
2,001 - 4,000	STIFF
4,001 - 8,000	VERY STIFF
8,001 - 16,000	HARD
> 16,000	VERY HARD

RELATIVE DENSITY OF COARSE GRAINED SOILS	
N-BLOWS/FT.	RELATIVE DENSITY
0 - 3	VERY LOOSE
4 - 9	LOOSE
10 - 29	MEDIUM DENSE
30 - 49	DENSE
50 - 80	VERY DENSE
80 +	EXTREMELY DENSE

RELATIVE PROPORTIONS OF SAND AND GRAVEL	
DESCRIPTIVE TERM(S) (OF COMPONENTS ALSO PRESENT IN SAMPLE)	PERCENT OF DRY WEIGHT
WITH	15 - 29
MODIFIER	> 30

GRAIN SIZE TERMINOLOGY	
MAJOR COMPONENT OF SAMPLE	SIZE RANGE
BOULDERS	OVER 12 IN. (300MM)
COBBLES	12 IN. TO 3 IN. (300 MM TO 75 MM)
GRAVEL	3 IN. TO #4 SIEVE (75MM TO 4.75MM)
SAND	#4 TO #200 SIEVE (4.75MM TO 0.075 MM)
SILT OR CLAY	PASSING #200 SIEVE (0.075MM)

RELATIVE PROPORTIONS OF FINES	
DESCRIPTIVE TERM(S) (OF COMPONENTS ALSO PRESENT IN SAMPLE)	PERCENT OF DRY WEIGHT
WITH	15 - 29
MODIFIER	> 30

Certified Testing Services, Inc.
419 W. 6th Street · P.O. Box 1193 · Sioux City, Iowa 51102 · Phone (712) 252-5132

January 6, 2017

Attn: Mr. Kenny Schmitz
Building Services Director
Woodbury County
620 Douglas Street, Room B07
Sioux City, Iowa 51101

RE: Additional Geotechnical Exploration Services
Building Modification
Woodbury County Law Enforcement Center
Sioux City, Iowa
CTS Proposal No. 3994

Dear Mr. Schmitz,

Introduction

Certified Testing Services, Inc. is pleased to submit this proposal to perform an additional geotechnical exploration for the above referenced project. This proposal presents our understanding of the furnished project information, scope of work, as well as schedule and fees.

Project Information

Mr. Bill Murphy of CMBA Architects presented additional information in a telephone conversation on January 6, 2017. CTS understands that the owner is going to cut a 4 feet square hole in the first floor area that would allow CTS to make several attempts at completing the borings to depths of 15 feet below the existing grade.

Scope of Work

Based on the above information and the information supplied previously, CTS proposes perform a boring in the removed area to a depth of 15 feet. CTS will make make as many attempts as possible within an 8 hour day. At the completion of the fieldwork, samples collected in the field will be transported to the laboratory and tested to determine select engineering properties that will be used in our analysis. The results of the fieldwork, laboratory testing, project information and other information will be evaluated by a professional engineer familiar with the soil conditions in the project area and presented in an addendum report.

Items that will be addressed in the addendum report include our understanding of the project information, topographic and subsurface information, review of geologic and subsurface information, review of field and laboratory test procedures, recommendations for type, design and construction of shallow foundations, to include bearing capacities and settlement estimates, discussion on alternate foundations, if required, and groundwater information.

The scope of services is based on the utilities being located by the owner, electrical service and water being provided by the owner and the boring locations being accessible to hand auger equipment. **CTS cannot be held responsible for utility lines that are cut that we are not made aware of their specific location.** Field and laboratory testing will be performed, where applicable, in accordance with ASTM procedures.

Cost

Based on the scope of work discussed above, CTS proposes to perform the work for hand auger soil test borings for a not to exceed amount $2,500.00, which will include three copies of the addendum report. It is further proposed to perform the work in

accordance with the attached CTS "General Conditions" which are incorporated into this proposal.

Our not to exceed price covers the activity required to present our findings in an addendum report form. Our not to exceed price includes up to one hour of engineering services for the review of applicable drawings and specifications, at our office, to determine their compliance with our addendum and original report. This proposal does not include the preparation of construction specifications, special conferences and other activities requested after submittal of our addendum report.

Schedule and Authorization

Based on our present schedule, we can commence the fieldwork within three to five working days after receiving written notice to proceed, if we are provided with access to the site and the concrete had been removed in the area of our work. CTS's written addendum report would be completed within five to seven working days of completion of the fieldwork.

CTS will proceed with the fieldwork based on the receipt of a signed copy of this proposal. To speed up the process a copy of the signature page may be faxed to (712) 252-0110 or e-mailed to jimbertsch@cableone.net would serve as written authorization. Please complete as many items as possible on the attached project data sheet and return with the signature page.

CTS appreciates the opportunity to submit this proposal and look forward to working with you on this project. If you should have any questions or need additional information, feel free to contact our office.

Sincerely,

CERTIFIED TESTING SERVICES, INC.

Matthew R. Dailey, P.E.
Staff Engineer

James A. Bertsch, P.E.
Senior Geotechnical Engineer

MRD/JAB/jb

Attachment: Schedule of Services and Fees
Project Data Sheet
General Conditions

AGREED TO THIS_____DAY OF_____, 20_____

SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

FIRM: _____

SCHEDULE OF SERVICES AND FEES

Field Services	Unit	Unit Fees
Mobilization, Three Man Crew and Equipment	Lump Sum	$200.00
Hand Auger Drilling, Three Man Crew	Per Hour	200.00
Coring	Each	75.00
Standby	Hour	200.00
Lab Services		
Atterberg Limits	Each	$90.00
Moisture Content	Each	8.00
Dry Density	Each	10.00
Unconfined Compression	Each	15.00
Gradation Test	Each	90.00
Report		
Additional Reports	Each	$30.00
Senior Engineering Technician	Hour	64.00
Crew Chief	Hour	74.00
Staff Engineer	Hour	125.00
Senior Engineer	Hour	155.00

CERTIFIED TESTING SERVICES, INC
PROJECT DATA SHEET
SUBSURFACE EXPLORATION

1. Project Name: _____

2. Project Location: _____

3. Your Job Number _____ Purchase Order No.: _____

4. Project Manager: _____ Telephone No.: _____

5. Number and Distribution of Reports:

   Copies To: _____ Copies To: _____
   _____ _____
   _____ _____
   Attn: _____ Attn: _____

6. Invoicing Address:
   _____
   _____
   _____
   Attn: _____

GENERAL CONDITIONS
SUBSURFACE EXPLORATION SERVICES

SECTION 1: Scope of Work
CTS shall perform the services defined in the contract and shall invoice the client for those services at the fee schedule rates. Any cost estimates stated in this contract shall not be considered as a firm figure unless otherwise specifically stated in this contract. If unexpected site conditions are discovered, the scope of work may change, even as the work is in progress. CTS will provide these additional services at the contract fee schedule rate.

Rates for work beyond the scope of this contract and not covered by the contract fee schedule can be provided. CTS can perform additional work with verbal authorization, and will provide written confirmation of fees, if requested. All costs incurred because of delays in authorizing the additional work will be billed to the client.

Fee schedules are valid for one year following the date of the contract unless otherwise noted.

SECTION 2: Access to Sites
Unless otherwise agreed, the client will furnish CTS with right-of-access to the site in order to conduct the planned exploration.

While CTS will take all reasonable precautions to minimize any damage to the property, it is understood by the client that in the normal course of work some damage may occur, the restoration of which is not part of this agreement.

SECTION 3: Soil Boring Locations
The client will furnish CTS with a diagram indicating the location of the site. Test boring locations may also be indicated on the diagram. CTS reserves the right to deviate a reasonable distance from the boring locations specified unless this right is specifically revoked by the client in writing at the time the location diagram is supplied. CTS reserves the right to terminate this contract if conditions preventing drilling at the specified locations are encountered which were not made known to CTS prior to the date of this contract.

The accuracy and proximity of provided survey control will affect the accuracy of in situ test location and evaluation determinations. Unless otherwise noted, the accuracy of test locations and elevations will be commensurate only with pacing and approximate meas-urements or estimates.

SECTION 4: Utilities
In the performance of its work, CTS will take all reasonable precautions to avoid damage or injury to subterranean structures or utilities.

The client agrees to hold CTS harmless and indemnify CTS for any claims, payments or other liability, including costs and attorney fees incurred by CTS for any damages to subterranean structures which are not called to CTS's attention and correctly shown on plans furnished to CTS.

SECTION 5: Samples
CTS will retain all soil and rock samples for 30 days after submission of the report. Further storage or transfer of samples can be made at owner expense upon written request.

SECTION 6: Unanticipated Hazardous Materials
It shall be the duty of the owner or his representative to advise CTS of any known or suspected hazardous substances which are or may be related to the services provided; such hazardous substances including but not limited to products, materials, by-products, wastes or samples of the foregoing which CTS may be provided or obtain performing its services or which hazardous substances exist or may exist on or near any premises upon which work is to be performed by CTS's employees, agents or subcontractors.

If during the course of providing services CTS observes or suspects the existence of unanticipated hazardous materials, CTS may at its option terminate further work on the project and notify client of the condition. Services will be resumed only after a renegotiation of scope of services and fees. In the event that such renegotiation cannot occur to the satisfaction of CTS, CTS may at its option terminate this contract.

SECTION 7: Reports and Invoices
CTS will furnish three (3) copies of the report to the client. Additional copies will be furnished at the rate specified in the fee schedule.

CTS will submit invoices to the client monthly and a final bill upon completion of services. Payment is due upon presentation of invoice and is past due thirty (30) days from the invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½%) per month, but not exceeding a maximum rate allowed by law, on past due accounts.

SECTION 8: Ownership of Documents
All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by CTS as instruments of service, shall remain the property of CTS, unless there are other contractual agreements.

SECTION 9: Confidentiality
CTS shall hold confidential all businesses or technical information obtained from the client or its affiliates or generated in the performance of services under this agreement and identified in writing by the client as "confidential". CTS shall not disclose such information without the client's consent except to the extent required for 1) Performance of services under this agreement; 2) Compliance with professional standards of conduct for preservation of public safety, health, and welfare; 3) Compliance with any court order or other governmental directive and/or 4) Protection of CTS against claims or liabilities arising from performance or services under this agreement. CTS obligations hereunder shall not apply to information in the public domain or lawfully acquired on a non-confidential basis from others.

SECTION 10: Standard of Care
Services performed by CTS under this Agreement will be conducted in the manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty, express or implied, is made or intended by the proposal for consulting services or by furnishing oral or written reports of the findings made.

The client recognizes that the subsurface conditions may vary from those encountered at the location where borings, surveys or explorations are made by CTS and that the data, interpretations and recommendations of CTS are based solely upon the data available to CTS. CTS will be responsible for those data, interpretations, and recommendations, but shall not be responsible for the interpretation by others of the information developed.

SECTION 11: Subpoenas
The client is responsible, after notification, for payment of time charges and expenses resulting from our required response to subpoenas issued by any party in conjunction with our work. Charges are based on fee schedules in effect at the time the subpoena is served.

SECTION 12: Limitation of Liability
The client agrees to limit CTS's liability to the owner and all construction contractors and subcontractors on the project arising from CTS's professional acts, errors, or omissions, such that the total aggregate liability of CTS to all those named shall not exceed $50,000 or CTS's total fee for the services rendered on this project, whichever is greater. The owner further agrees to require of the contractor and his subcontractors an identical limitation of CTS's liability for damages suffered by the contractor or subcontractor arising from CTS's professional acts, errors, or omissions. Neither the contractor nor any of his subcontractors assumes any liability for damages to others which may arise on account of CTS's professional acts, errors or omissions.

SECTION 13: Insurance and Indemnity
CTS represents that it and its staff are protected by worker's compensation insurance and that CTS has such coverage under public liability and property damage insurance policies which CTS deems to be adequate. It is the policy of CTS to require certificates of insurance from all consultants or subcontractors employed by CTS. Certificates for all such policies of insurance will be provided to client upon request in writing. Within the limits and conditions of such insurance, CTS agrees to indemnify and save client harmless from and against any loss, damage, injury or liability arising from any negligent acts of CTS or its employees. CTS shall not be responsible for any loss, damage or liability beyond the amounts, limits and conditions of such insurance. CTS shall not be responsible for any loss, damage or liability arising from any acts by a client, its agents, staff or other consultants employed by others.

CTS's compensation hereunder is not commensurate with the potential risk of injury or loss that may be caused by exposures to pollution, hazardous waste or toxic or other dangerous substances or conditions. Accordingly, except as expressly provided in this contract, the client waves any claim against CTS and agrees to indemnify and save CTS, its agents, and its employees harmless from any claim, liability or defense cost for injury or loss sustained by any party from such exposures allegedly arising out of or related to CTS's performance of services hereunder.

SECTION 14: Termination
This Agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, CTS shall be paid for services performed to the termination notice date plus reasonable termination expenses. Expenses or termination or suspension shall include all direct costs of CTS required to complete analysis and records necessary to complete its files and may also include a report on the services performed to the date of notice of termination or suspension.

SECTION 15: Precedence
These Standards, Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding CTS's services.

Certified Testing Services, Inc.
419 W. 6th Street
P.O. Box 1193
Sioux City, Iowa 51102