

June 28, 2022

City of Oskaloosa, IA
220 S Market St
Oskaloosa, Iowa 52577

Attn: Ms. Amy Miller
P: (641) 673-9431
E: amiller@oskaloosa.org

Re: Proposal for Geophysical Exploration Services
Recreation Center Pools – GPR Scanning
1521 Green St
Oskaloosa, Iowa
Terracon Project No. 08201059

Dear Ms. Miller:

We appreciate the opportunity to provide geophysical services for the above referenced project. This document provides our understanding of the project, our planned work scope, fee schedule and our Supplemental Change Order.

PROJECT INFORMATION

We understand the client has been constructing a recreational pool and a competition pool as part of the new Recreation Center in Oskaloosa, Iowa. Upon completion of the recreational pool, a leak test was performed. We understand that the pool failed this leak test. In addition, the competition pool has visible honeycombing on the concrete surface, and it is believed that concrete cover on rebar may be insufficient.

A non-destructive exploration has been requested to scan the floor and walls of both pools to help determine the concrete cover on reinforcing and identify areas of significant honeycombing within the concrete. We propose the use of Ground Penetrating Radar as an initial scan of the concrete.

Geophysical Exploration

Ground Penetrating Radar

Terracon will use a ground penetrating radar (GPR) system consisting of a 1600 MHz, or similar, made by Geophysical Survey Systems Inc. (GSSI) to perform a non-invasive geophysical survey. In general, GPR field collection follows that referenced in ASTM D6432, and more information on both the general method and collection procedures can be found in the standard

The Geophysical Survey would be conducted as follows:

- A grid scan method would be used consisting of on-site data collection on a predetermined line spacing. Several cost options have been provided as part of this proposal, and the client will determine which scope is appropriate for this project.

- Scanning would be performed in accessible areas only. **Obstructed areas will not be scanned.**
- Scanning would be performed using a 1600 MHz antenna or similar.
- Data will be collected on a consistent grid spacing on the entirety of the accessible areas of the pools. Additional data on a 6 inch grid spacing will be collected at locations with visible honeycombing.
- Photos will be taken to document field conditions.

The geophysical survey is anticipated to yield the following information:

- Contour maps depicting concrete cover throughout areas scanned.
- Approximate locations of significant honeycombing encountered in the GPR scans.

The geophysical survey is based on the following limitations:

- We understand the area to be scanned will be clear and free of surface debris or other obstructions.
- We assume that reinforcing steel is greater than 6-inches on-center. If narrower reinforcing is expected, please notify us so we can adjust our scanning techniques if necessary.
- Depth of penetration is dependent on the slab conditions. Typical penetration depth for a 1600 MHz antenna is about 12 inches, but actual depth of penetration will not be determined until on-site.

Our report would consist of a short letter describing the methods used and the results. Relevant GPR cross-sections, contour maps, and drawings will be provided as well.

If major revisions to the scope of services are required once the field survey has commenced, the client will be notified to discuss the issues and possible fee changes.

Site Access

We assume the areas to be investigated will be accessible to our personnel, who will be on foot and transporting equipment via a cart. In order to conduct our exploration of the project site, we must be granted access by the property owner. By acceptance of this proposal without information to the contrary, we consider that you have provided access to our exploration equipment for the conduct of our work consistent with the agreed work scope.

Safety

We are committed to the conduct of our work safely. Our field exploration work on this project will be conducted under the guidance of a site-specific safety plan that takes into account the information that we know about this site as it relates to safety and potential safety hazards.

Also, we are not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program. Our scope considers that standard Type D Personal Protection Equipment (PPE) is appropriate.

Schedule

We anticipate starting the work within about two to three weeks of a written authorization to proceed. Field work is expected to take one to two days, and a report will be submitted within two weeks of completion of the field work.

This work schedule is being provided at the time of the submittal and is subject to change. An updated work schedule will be provided upon receipt of a notice to proceed.

Compensation

Using our estimate of the work scope as outlined above, we have developed the following lump sum fee options for this project.

2 ft line spacing - \$10,500

5 ft line spacing - \$8,000

10 ft line spacing - \$5,000

Additional 6 inch by 6 inch grid at each honeycombed location - \$200/each

In the event that we encounter unanticipated conditions that would require variation in the work scopes as noted above, we will notify you of this variation, and we will send a supplemental proposal stating the modified work scope as well as its impact on our fee. We will not proceed without your authorization, as evidenced by your signature on the attached Agreement form.

Authorization

This proposal may be accepted by executing one original of the attached Supplemental Change Order and returning the executed copy including this proposal to Terracon. This agreement, including the limitations it contains, shall constitute the exclusive terms, conditions, and services to be performed for this project. Commencement of services by Terracon will be considered acceptance of this proposal and the attached Change Order.

Thank you for considering Terracon for your geophysical services. We look forward to assisting you on this project. If you have any questions regarding this proposal, please contact us.

Sincerely,
Terracon Consultants, Inc.

Rob Kramer

Rob Kramer
Project Geophysicist

Michael Neese

Michael Neese, P.E.
Senior Engineer

Attachment: Supplemental Change Order

SUPPLEMENT TO AGREEMENT FOR SERVICES**CHANGE TO
SCOPE OF SERVICES AND FEES**

This **SUPPLEMENT to AGREEMENT FOR SERVICES** to the original Agreement for Services (original Agreement dated 09/25/2019, Agreement reference number P08195239) is between City of Oskaloosa IA ("Client") and Terracon Consultants, Inc. ("Consultant") for additional or changed Services to be provided by Consultant for Client on the Project, as described in the Agreement for Services. This Supplement is incorporated into and part of the Agreement for Services.

- 1. Scope of Services.** The scope of the additional or changed Services are described in the Scope of Services section of the Consultant's Supplemental Proposal, unless Services are otherwise described below or in Exhibit B to this Supplement (which section or exhibit are incorporated into the Supplement).

See attached proposal 08201059.

- 2. Compensation.** Client shall pay compensation for the additional or changed Services performed at the fees stated in the Supplemental Proposal unless fees are otherwise stated below or in Exhibit C to this Supplement (which section or exhibit are incorporated into the Supplement).

See attached proposal 08201059.

All terms and conditions of the **Agreement for Services** shall continue in full force and effect. This Supplement is accepted and Consultant is authorized to proceed.

Consultant: **Terracon Consultants, Inc.**

Client: **City of Oskaloosa IA**

By: *Michael Neese* Date: **6/28/2022**

By: _____ Date: _____

Name/Title: **Michael C Neese / Senior Project Engineer**

Name/Title: **Amy Miller /**

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