

**Master Planning Committee
of
University of Alaska Fairbanks**

MEMORANDUM

DATE: May 23, 2008
TO: Steve Jones, Chancellor
FROM: Deb Horner MPC Vice-Chair
RE: MPC Recommendation 08-05 – Frozen Pile Study

UAF Professor and Alaska University Transportation Center Associate Director Leroy Hulsey requests permission to establish a test site on campus to evaluate lateral load response to piles in different seasons. This research project is funded by the Department of Transportation. The test site criteria is described in the attached email from Professor Hulsey. Three sites have been identified: (1) near the intersection of Farmers Loop and Alumni Drive (behind the UAF sign); (2) off the dirt road to the UAF Farm; (3) Bunnell Park. Testing will occur in the summer, in December, and in late winter, commencing this summer, for the next two years. The piles will remain in the ground after the study is completed. An Arctic icehouse may be necessary for the site work.

At its May 8, 2008, meeting, by majority vote the MPC approved the following recommendation:

The Master Planning Committee endorses and has no objection to the frozen pile study proposed by Leroy Hulsey. The MPC has reservations about Site 1 and recommends that Sites 2 and 3 or other alternative locations (e.g., area by Old UPark or area around the Farm Buildings) be given highest priority.

Thank you for considering this recommendation.

DH

Attachment (as stated)

☒ Approved

☐ Denied



Steve Jones, UAF Chancellor

5-28-08

Date

----- Original Message -----

Subject: Request for test site for frozen pile study
Date: Wed, 16 Apr 2008 17:41:42 -0800
From: J. Leroy Hulsey <ffjlh@uaf.edu>
To: 'C. Marc Wohlford, PE' <cwohlford@fs.uaf.edu>

Mark:

Here is my official request a site on the University campus to test the lateral load response to piles at different seasons. For example, we plan to install three round steel pipe-reinforced concrete piles. Two piles will be used to test lateral response to a given lateral load and the other is a reaction pile. This research is funded by DOT and the purpose is to evaluate how lateral pile stiffness changes with the time of year. For example, we know that frozen ground resists more load than non-frozen soils. This is important in that it affects the earthquake response of our structures during an earthquake. Our test site criteria follows:

- 1) We need a test site where the permafrost 20-ft or deeper below ground. Discontinuous permafrost is OK but it should be below the pile tip (20-ft deep).
- 2) The site footprint should be a space approximately 30-ft x 60-ft (see the attached plan view)
- 3) There to be three piles (2 for testing and a middle reaction pile). Piles are spaced 10-ft apart. The piles are to be approximately 20-ft deep and will stick up above ground about 5-ft. See the attached elevation view.
- 4) The piles are to be tested periodically over a two-year period beginning this summer.

I know in meeting with you over the past several months that we have talked about several different possible sites. At the end of the test period, we plan to place a lateral failure load on each of the two smaller piles. Failure should be near ground line. It may be possible to cut these piles off at ground line and use them for some type of foundation support once our work is complete. Please review my request and if you want me to present to the planning board, I will be happy to accommodate. In any event, I am requesting a test site so that we may meet the requirements of the grant.

If I can clarify or help answer questions, please contact me at your convenience.

Cell: 460-8993

Leroy

J. Leroy Hulsey

Professor & Associate Director of AUTC

Department of Civil & Environmental Engineering

University of Alaska Fairbanks

Fairbanks, AK 99775

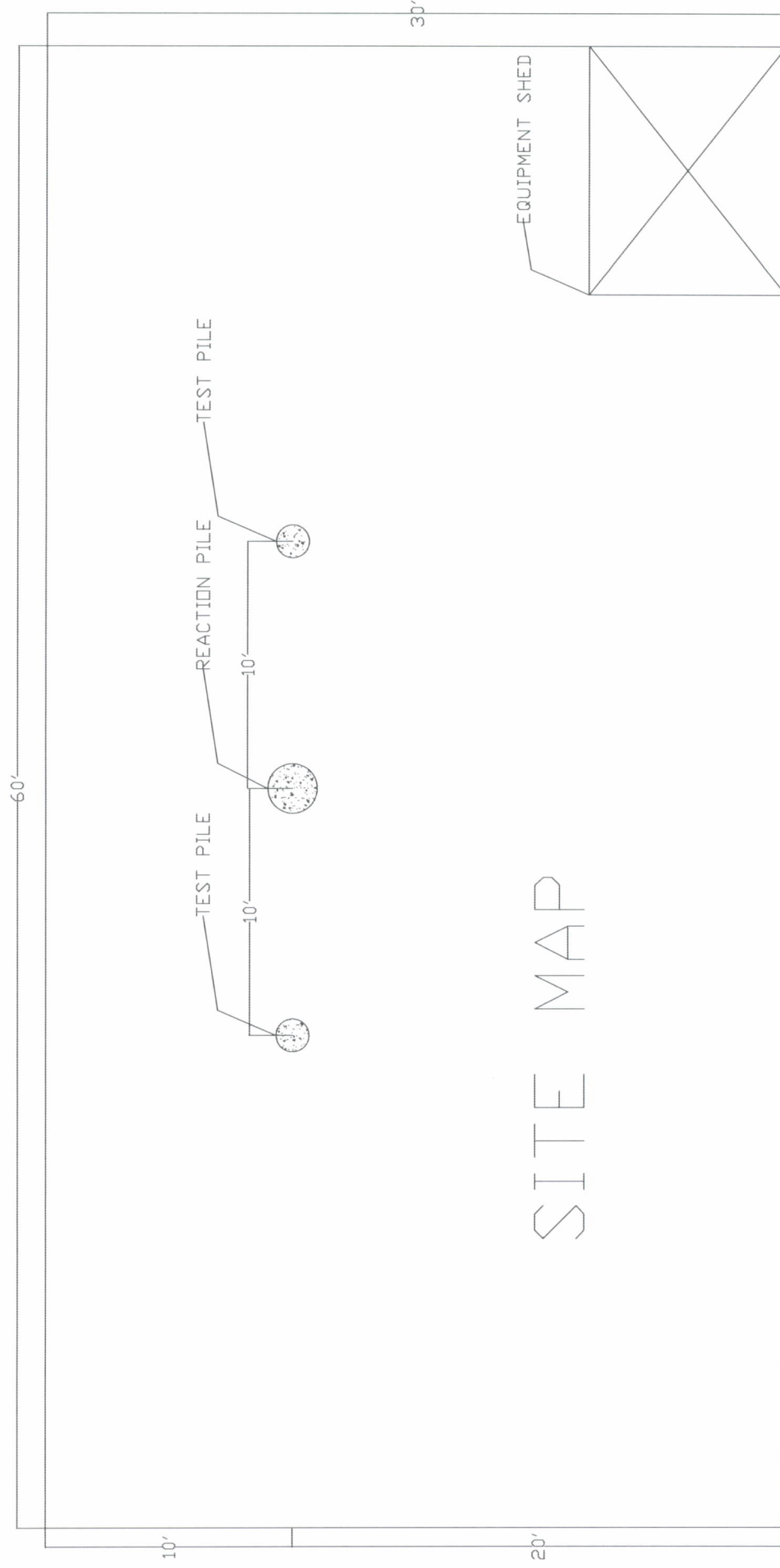
(907) 474-7816

FAX: (907) 474-6030

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- UAF Facilities Services -

PLAIN VIEW



SITE MAP

ELEVATION VIEW

