Letter of Commitment - Version 1.0

Geotechnical Engineer

Planning, Property & Development Department – City of Winnipeg

Clara Hughes

Address or Legal Description of Project: Recreation Centre Folder # (Office Use Only): _____

I German Leal, as a member of the firm Stantec, recommend using the
registered professional name — name of firm

following skin friction values: 12 KPa and 10 KPa for the design of piles at the noted location.
ULS value — SLS value

(Additional Pile Design Letter provided)

I will visit the site to verify the above. If actual values differ from the assumed design values, I will advise the City and Structural Design Engineer accordingly.

Use of this certificate is conditional, approval must be granted by the City of Winnipeg prior to its use.

Signed: German Gal.

Dated: Feb/21/2014

Professional Seal & Signature

For more information, please contact:

Mr. Patrick McShane, Plan Examination Engineer
Development and Inspections Division
Plan Examination Branch
Mezzanine Level - Unit 83 - 30 Fort St - R3C 4X7
Email: pmcshane@winnipeg.ca
Phone: 204-986-7158
Fax: 204-986-3045

Winnipeg

June 5, 2013

Stantec Consulting Ltd.
905 Waverley Street
Winnipeg MB R3T 5P4
Tel: (204) 489-5900

February 21, 2014

1 X 1 Architecture Inc.
120 Fort Street, Suite 103
Winnipeg, MB
R3C 1C7

Attention: Travis Cooke

Travis,

Re: Clara Hughes Recreation Park – Canopy Pile Design Recommendations

It is our understanding that construction of a new canopy for the above-noted project will require the installation of six cast-in-place concrete friction piles. The structural engineer reported the piles will be lightly loaded with a reported factored load (ULS) of 40 kN per pile. Based upon a review of geotechnical investigations completed near the project site, the piles may be designed based upon a ULS shaft resistance of 12 kPa, and an SLS shaft resistance of 10 kPa. The SLS value is based on a maximum pile settlement of 10 mm. A Letter of Commitment for these design values is attached.

The shaft resistance value is applied to the pile circumference within the clay stratum. The contribution from end bearing should be ignored in pile capacity calculations. Piles located in unheated areas should have a minimum pile length of 7.6 m (25 feet) measured from final grade. To prevent frost jacking due to adfreeze forces, piles in unheated areas should be provided with full length steel reinforcement and have sonotube casings installed to a depth of 2.5 m (8 feet). The sonotubes should be coated with grease and wrapped in 6 mil poly sheeting. Shaft resistance should not be included in pile design within the depth of the sonotube.

It should be noted the project site, is situated on a large inside bend of the Red River. Inside bends on the Red River in Winnipeg typically contain alluvial soils, consisting primarily of silty clay, but with some silt and sand layers. The silt and sand layers are prone to groundwater seepage which can cause problems during cast-in-place pile installation. The owner must be prepared for the possibility of groundwater seepage in the pile holes, and consideration should be made to drilling a testhole prior to pile installation to verify soil and groundwater conditions.

Pile holes should be poured with concrete as soon as they are drilled to minimize any potential problems related to soil sloughing and groundwater seepage. It is strongly recommended that temporary steel sleeves and pumps be available in the event that groundwater seepage or

sloughing of the pile holes is encountered during pile installation. Groundwater, if encountered in the pile holes, should be removed prior to concrete placement. Pile inspection by qualified geotechnical personnel must be undertaken during foundation construction to confirm that the piles are constructed in accordance with the project specifications and the assumed design values for shaft resistance are valid. Please contact our office to confirm the schedule for pile installation.

It should be noted that we have not drilled any testholes at the project site, and the recommendations provided are based on our general experience of soil conditions in the area of the project site. Varying and potentially unfavourable subsurface conditions may be encountered during foundation installation, for which we assume no responsibility for unexpected construction difficulties or costs.

We appreciate the opportunity to assist you in this project. Please call me if you have any questions regarding this report.

Yours truly,

Aron Piamsalee, B.Sc., EIT
Project Manager, Geotechnical Engineering
Tel: (204) 928-4006
aron.piamsalee@stantec.com

German Leal, P. Eng.
Project Manager, Geotechnical Engineering
Tel: (204) 928-4005
german.leal@stantec.com

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301

PROVINCE OF MANITOBA
LEAL NINO
Member
32421
REGISTERED PROFESSIONAL ENGINEER