

#61-F-19

McCUBBIN

BRIDGE EXT.

Cty. BR. #59

cc: Foundations Office 28-2
Materials and Research Section.

March 24, 1961.

**C. C. Parker & Associates,
Consulting Engineers,
795 Main Street West,
Hamilton, Ontario.**

Attention: Mr. E. C. Gamm.

**Re: Ext'n. to McCubbin Bridge (County Bridge #59),
County of Middlesex, Ontario,
District #2, (W.J. 61-F-19).**

Dear Sir:-

A detailed engineering study was carried out by H. G. Gelder & Associates, at the existing Middlesex County Bridge #59 (McCubbin Bridge), East William Twp., Ontario, where horizontal and vertical movements of the West abutment have taken place. From the results of the study, it was suggested that the most practical method of preventing further movement of the bridge is to remove the approach fill to the present West abutment for a distance of 60 ft. and lengthen the span of the bridge by the same amount.

In order to determine the type of foundation for this additional span, a sub-soil investigation was carried out at the above mentioned location by the Foundation Sub-section.

Two sampled boreholes were put down to depths of 40 ft. and 65 ft. at the location of the proposed west pier and West abutment, respectively. It was found that the proposed pier and abutment locations are underlain by 10 ft. of clayey fill, followed by a deep deposit of over-consolidated very stiff to hard clay.

Based on the above findings, it is our recommendation that the proposed West pier and West abutment be founded on spread footings using a net footing pressure not in excess of 4000 p.s.f.

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The footings should be located as follows:-

West Pier Elev. 113.0' or below.

West Abutment Elev. 115.5' or below.

Note:- All elevations mentioned above were determined with respect to the top of concrete at face of existing West abutment as Elev. 124.75'.

Settlement upon application of the footing pressure should be small and well within tolerable limits.

The construction of the bridge foundation, if designed in accordance with the above recommendations, should present no major difficulties.

If we can be of further assistance in this matter, please contact our Office.

Yours very truly,

L. G. Goderman,
PRINCIPAL FOUNDATION ENGR.

Per:

M. Devata
(M. Devata,
PROJECT FOUNDATION ENGR.)

PD/MdF

cc: Messrs. K. L. Kleinsteinber (2)
H. A. Tregaskes
H. D. McMillan
A. Gater
W. L. Fraser
J. Roy

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