

G.I.-30 SEPT. 1976

GEOCRES No. _____

DIST. 4 REGION _____

W.P. No. _____

CONT. No. _____

W. O. No. 93-11019

STR. SITE No. 30-43

HWY. No. 401

LOCATION Hwy 401 at Guelph line
underpass (Storm Sewer)

No of PAGES -

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OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. _____

REMARKS: _____

PLEASE TYPE

DATE 93 04 01

PAGE 1 OF 6

TO: A. MA
STRUCTURAL SECTION
SW REGION

FROM: P. PAYER
FOUNDATION DESIGN SECTION
NORTHVIEW

SUBJECT: STORM SEWER AT GUELPH LINE O'PASS
HWY. #401, DISTRICT 4, SITE 30-43
CONTRACT 93-07

THIS IS TO REPLY YOUR FAXGRAM OF 93 03 31 CONCERNING
THE ABOVE PROJECT.

ALTERNATIVE #1 NOT RECOMMENDED; MOVEMENT OF THE FOOTING
WILL BE SUBSTANTIAL

ALTERNATIVE #2 THE INDICATED SUPPORTING SYSTEM WILL NOT
PROVIDE 'AT REST' CONDITION.
ANY MOVEMENT OF THE FOUNDING SOIL WILL
CAUSE DAMAGE TO THE FOOTING.

COMMENTS a.) THE EDGE OF ANY EXCAVATION SHOULD NOT BE
CLOSER THAN 8m.

REFERENCE INFORMATION; LEONARDS; 'FOUNDATION
ENGINEERING', CHAPTER 6-10 (ATTACHED).

b.) THE CONTRACTOR SHOULD ASSESS THE PREVAILING
SUBSURFACE CONDITIONS

c.) THE STORMSEWER INSTALLATION PROPOSALS (DRAWINGS)
SHOULD BE SUBMITTED TO OUR OFFICE.

IN THE FUTURE PLEASE CONSULT THE FOUNDATION DESIGN
SECTION IN THE PLANNING STAGE!

memorandum



To: Alfred Ho
Head, Structural Section
Southwestern Region

Date: 1993 03 24

Attn: Ken Mossop

From: Foundation Design Section
Room 315, Central Bldg.
Downsview

Re: Storm Sewer at Guelph Line Underpass
Contract 93-07; Site 30-43
Highway 401, District 4, Burlington

In reference to your fax message dated 93 03 15, the following comments are submitted.

- 1) The information provided to us indicate that the existing pier footing is placed at El: 288.5 and the excavation for the storm sewer is expected to extend below El: 287.0 (ie. 1.5 m below the footing level). In addition, the clear distance between the edge of the footing and the proposed sewer line is only 1.8 m.
- 2) Based on the information available in this office, the subsoil stratigraphy at this site consists of dense gravelly sand with boulders underlain by dolomite bedrock at about El. 284.6 to El. 284.1. The groundwater level was not observed during the investigation for the existing bridge.
- 3) Considering the subsoil condition, depth of excavation below the footing and the close proximity of the pipe location, an open trench excavation is not recommended. However, if no dewatering is involved and the footing can be supported effectively to ensure the integrity of the existing footing, the proposed scheme may be executed.
- 4) In order to avoid construction difficulties and damage to the existing footing, slurry-type micro-tunnelling equipment may be used within the close proximity of the bridge. This scheme is not feasible if any carrier pipe is considered for the sewer line.

M. Vasavithasan
M. Vasavithasan, P. Eng.
Foundation Engineer

for

P. Payer, P. Eng.
Sr. Foundation Engineer

PP/MV/jb

METRIC

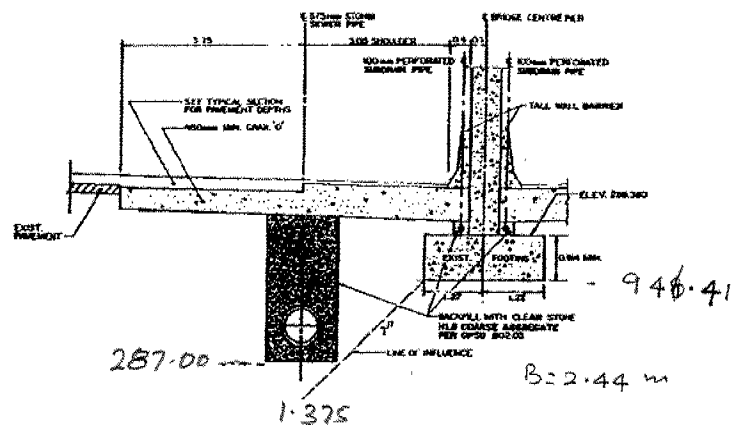
PLATE No

CONT No 92-07
WP No 452-89-00

MEDIAN SEWER DETAIL
AT GUELPH LINE STRUCTURE

DELCAN CONCRETE
PUMPING
SYSTEMS

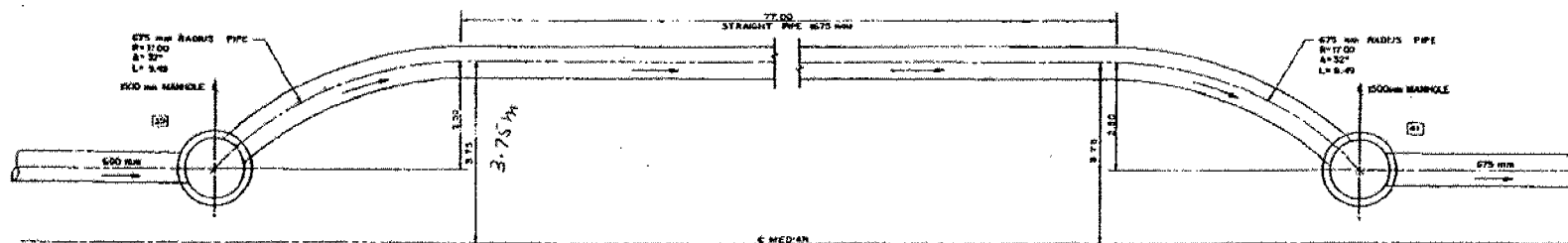
SHEET
89



Founding level = 288.46
Width of Footing B = 2.44 m.

TYPICAL SECTION
GUELPH LINE STRUCTURE

SCALE 1:50



MEDIAN SEWER DETAIL
STA. 14+255 TO STA. 14+350

WTS

SCALE
AS SHOWN