

MEMORANDUM

70  
GEOCRE No:  
304-022

23-70-10

To: Mr. B. R. Davis,  
Bridge Engineer,  
Bridge Division,  
Admin. Bldg.

FROM: Foundation Section,  
Materials & Testing Division,  
Room 107, Lab. Bldg.

ATTENTION: Mr. F. I. Hewson,  
Sr. Bridge Liaison Engr.

DATE: October 15, 1968

OUR FILE REF:

IN REPLY TO

OCT 18 1968

SUBJECT:

REPORT ON RESULTS OF WELL SURVEY  
AND COMPLEMENTARY DATA  
PROPOSED CROSSING OF THE RE-ALIGNED  
WELLAND CANAL  
MAIN STREET EAST TUNNEL  
WELLAND -- ONTARIO  
W.J. 68-F-71-1 W.P. 240-66

Attached, please find two copies of the above mentioned report for your use. Should you require additional copies, please let us know and we will supply same.

At this state we have no comments to make. The matter dealt with in the report has been discussed on a number of occasions and a general agreement has been reached.

Copies of the report have also been sent to the tunnel designer who is presently studying the information. All questions arising will be dealt with at appropriate meetings of persons concerned, and conclusions communicated to all parties involved.

Should you have any queries, please feel free to contact this Office.

AGS/MdeF

Attach.

cc: Messrs. B. R. Davis (2)

H. A. Tregaskes

D. W. Farren

G. K. Hunter

H. Greenland

W. S. Melinyshyn

T. J. Kovich

B. A. Singh

Foundations Files

Gen. Files

*Afternoon*  
A. G. Stermac  
PRINCIPAL FOUNDATION ENGINEER

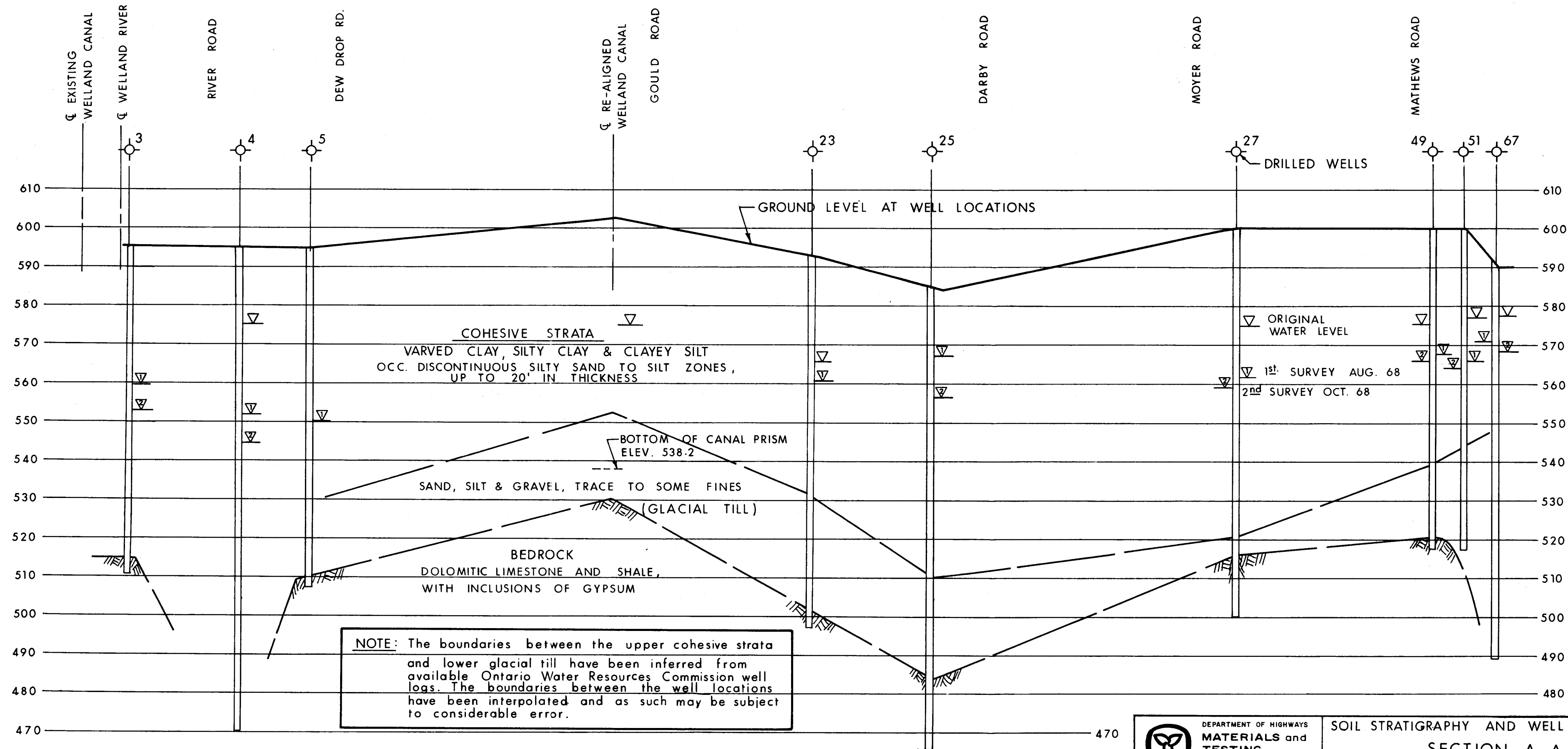
G. Tustin (S.L.S.A.) - (4)

H. Q. Golder & Assoc. Ltd.

Gibb, Albery, Pullerits & Dickson

R. G. Tanner, Executive Engr. -

(H. G. Acres Ltd.)



SCALE HORIZ. 1" = 1000'  
VERT. 1" = 20'

SEE DWG. NO. 68-F-71B



DATE Oct. 15, 1968

SOIL STRATIGRAPHY AND WELL WATER LEVELS  
SECTION A-A

W.P. 240-66

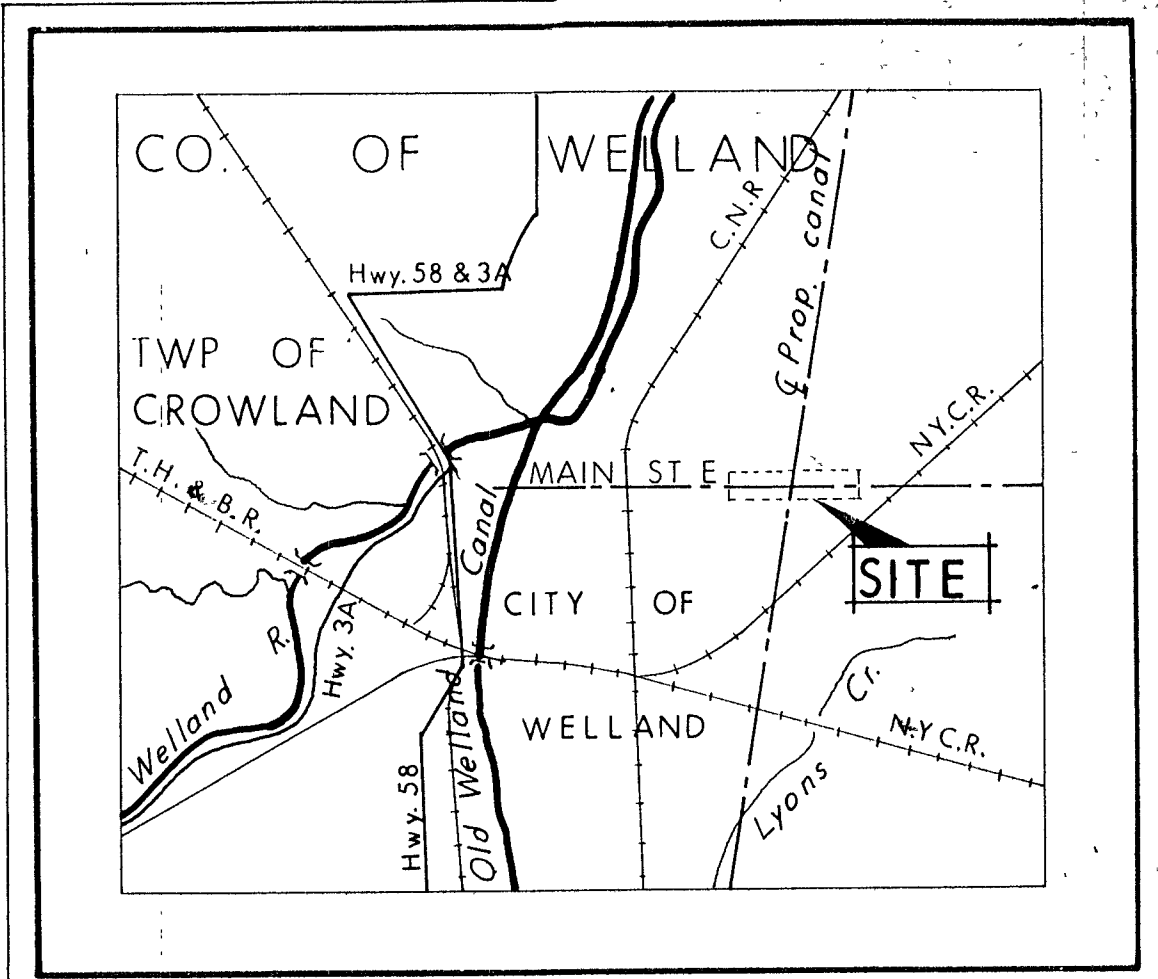
DIST. 4

JOB 68-F-71

APPROVED

*[Signature]*

FIG. NO. 1



KEY PLAN  
SCALE IN MILES

- LEGEND
- 16 Wells - Domestic (S.L.S.A.)
  - 570 --- Contours - Piezometric Groundwater elevation within lower glacial till stratum and bedrock during maximum dewatering at Proposed Welland Canal Tunnel.
  - 600 --- Contours - Existing ground level elevations

Theoretical circle of influence for a 4ft. drawdown.

- Notes -
1. Piezometric ground level in glacial till and bedrock - elev. 576.0 (Prior to Dewatering)
  2. Theoretical zero drawdown at approx. 3.3 miles from intersection of Main Street East and centre-line of relocated Canal
  3. Gravity relief well system "A" for permanent roadway approach cuts see Dwg. 3 - 6 of Golder Report.

PRINT RECORD		
NO	FOR	DATE

REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS - ONTARIO MATERIALS & TESTING DIVISION - FOUNDATION SECTION			
PROPOSED RE-ALIGNMENT OF WELLAND CANAL (MAIN STREET EAST TUNNEL)			
CO. WELLAND TWP. CROWLAND		DIST. NO. 4	
GROUNDWATER DRAWDOWN CONTOURS DUE TO DEWATERING SYSTEM			
SUBM'D M.D.	CHECKED /	WP. NO. 240-66	M & T. DRAWING NO.
DRAWN A.N.	CHECKED /	JOB NO. 68-F-71-8	68-F-71A
DATE AUG. 13 / 1968	SITE NO.	BRIDGE DRAWING NO.	
APPROVED <i>A. J. Thomas</i>	PRINCIPAL FOUNDATION ENGINEER	CONT. NO.	

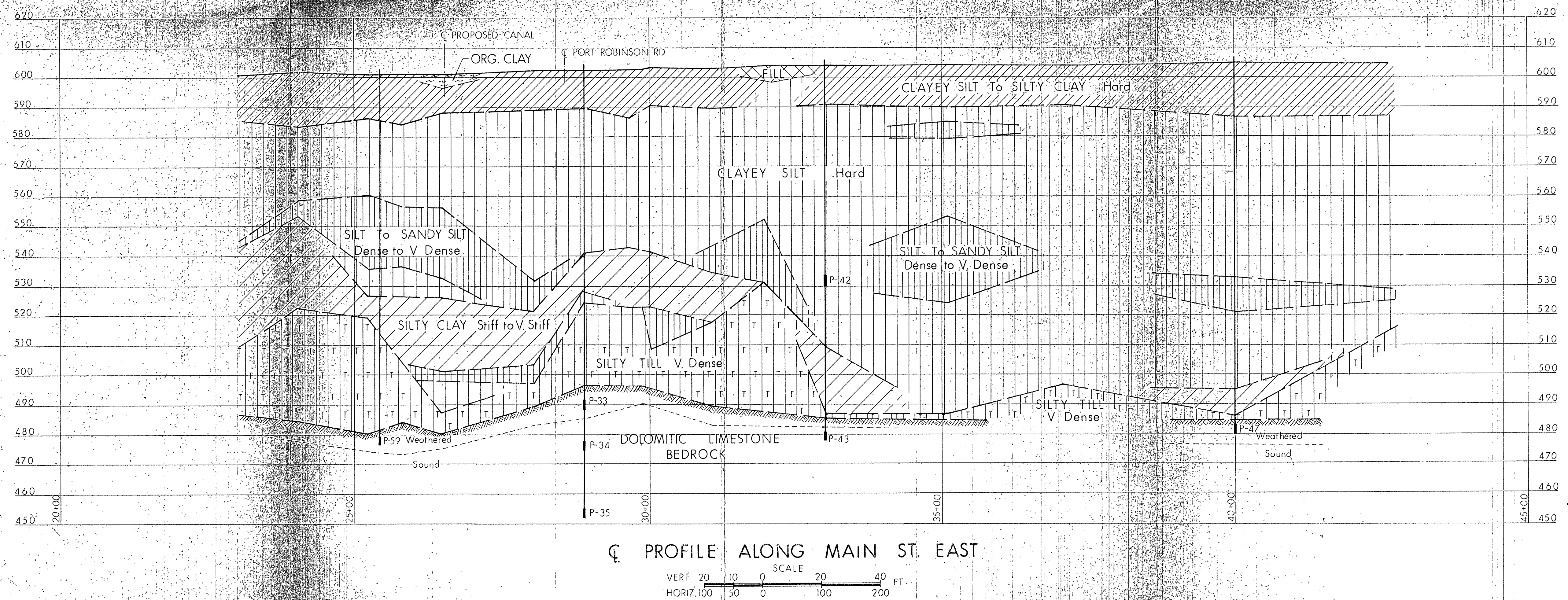
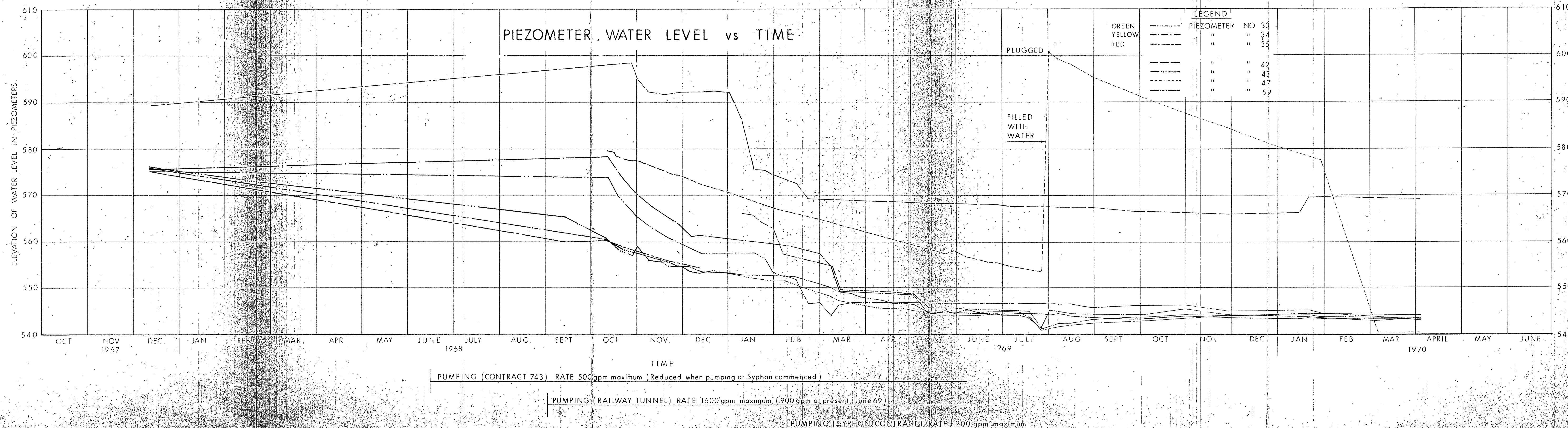
PLAN  
1000 500 0 1000 2000 FT











NOTE

The boundaries between soil strata have been established only at Bore Hole locations. Between Bore Holes the boundaries are assumed from geological evidence and may be subject to considerable error.

REVISIONS	DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS - ONTARIO			
MATERIALS & TESTING DIVISION - FOUNDATION SECTION			
PROPOSED			
RE-ALIGNMENT OF WELAND CANAL			
(MAIN STREET EAST TUNNEL)			
PIEZOMETER LOCATIONS IN SUB-SOIL & WATER LEVELS vs TIME PLOT			
SUBMD.	S.W.	CHECKED	WP. NO. 240-66
DRAWN	S.O.	CHECKED	JOB NO. 68-F-71-1
DATE	10 DEC. 1968	SITE NO.	BRIDGE DRAWING NO.
APPROVED	PRINCIPAL FOUNDATION ENGINEER		CONT. NO.