

63-F-66

W.P. # 85-59-3

RET. WALL AT

LORNE BRUCE

DRIVE, TORONTO

Mr. B. F. Davis,
Bridge Design Engineer,
Bridge Division.

Foundation Section,
Rm. 107, Lab. Bldg.

Attn: Mr. W. McFarlane

May 11, 1964

Retaining Wall at Lorne Bruce Drive,
District No. 6, Toronto, Ontario.
W.J. 63-F-66 -- W.P. 85-59-3

Following is a summary of our recommendations made
as a result of our visit to the above site on Friday,
May 8, 1964:

All soft material (topsoil, muck, etc.) which overlies
the clayey silt crust should be removed and replaced with well-
compacted granular material. The footings may then be placed
within the latter. It would be advisable to lower the footing
elevation some two or three feet as this would reduce the
amount of granular fill required.

Our borings (Report #63-F-66) show that up to 5 ft. of
excavation may be required at some locations; however, other
locations will require much less than this. The exact extent
of excavation can only be obtained at the time of construction.

If you have any further queries, please contact this
Office.

KGS/MdeF

cc: Messrs. H. A. Tregaskes
H. D. McMillan
G. K. Hunter (2)
C. Fraser
T. J. Kovich

K. G. Selby
K. G. Selby,
SENIOR FOUNDATION ENGR.
For:
A. G. Stermac,
PRINCIPAL FOUNDATION ENGR.

Foundations Office
Gen. Files

98

Mr. G. K. Hunter,
Sr. Project Design Engr.,
Regional Design Office,
Toronto.

Attn: Mr. J. H. Blevins

Mr. A. G. Sterman,
Principal Foundation Engr.,
Foundation Section,
Materials & Research Division.

July 9, 1963

D.H.O. FOUNDATION INVESTIGATION --
C.K.R. Westerly to Jane Street,
Retaining Wall on North Side of
Lorne Bruce Dr., Dist. #2, Toronto.
W.J. 63-F-66 -- W.P. 85-59-3

As requested by you in your memo dated June 13, 1963, we have carried out five borings along the line of the above-mentioned proposed retaining wall. Subsoil was found to consist mainly of a deposit of clayey silt with a very stiff, desiccated upper crust, the lower portion having a firm to stiff consistency. The thickness of the desiccated crust is somewhat variable, but has an observed maximum and minimum thickness of 20 ft. and 10 ft., respectively, below the proposed footing elevations.

In view of these facts, we believe that the proposed wall footings may be designed with an allowable pressure of 2 tons per square foot. Due to the presence of the softer material below the crust, we believe that some settlement will take place under the proposed embankment fill adjacent to the wall. The magnitude of this settlement would be impossible to predict with any degree of accuracy, but we believe that the resultant differential settlements under the wall footing, would be very small.

Mr. G. K. Hunter,
Attn: Mr. J. H. Blevins.

- 2 -

July 9, 1963

We are enclosing for your information, Borelog
Sheets #1 - #5, inclusive.

If you have any further queries in connection
with this matter, please contact this Office.

KES/MdeP
Attach.

cc: Messrs. G. K. Hunter (2)
H. A. Tregaskes
H. D. McMillan
C. Fraser
T. J. Kovich

Foundations Office
Gen. Files

K. G. Selby,
SENIOR FOUNDATION ENGR.
For:
A. G. Stermac,
PRINCIPAL FOUNDATION ENGR.

JOB 63-F-66 LOCATION Sta. 274+45 (170' Lt.) Hwy. 401 ORIGINATED BY B.K.
W.P. 85-59-3 BORING DATE June 13, 1963. COMPILED BY B.K.
DATUM 453.5' BOREHOLE TYPE Auger CHECKED BY K.S.

SOIL PROFILE			SAMPLES			ELEV SCALE	DYNAMIC PENETRATION RESISTANCE		LIQUID LIMIT ——— WL		BULK DENSITY	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT		BLOWS / FOOT	BLOWS / FOOT	PLASTIC LIMIT ——— WP	WATER CONTENT ——— W		
							SHEAR STRENGTH P.S.F.		WATER CONTENT %		P.C.F.	
									10 20 30			
453.5	Groundlevel											
0.0	Brown clayey silt occasional fine gravel.		1	SS	7	450						W.L. 449.2' 4.3
445.5			2	SS	22						138.2	
8.0			3	SS	10							
	Grey clayey silt. Very stiff to firm.		4	SS	3	440						
			5	SS	7							
			6	SS	5	430					124.8	
			7	SS	10							
420.5						420						
33.0	Grey dense to v. dense silty sand with gravel.		8	SS	>108						146.7	
417.5												
36.0	End of borehole.					410						

JOB 63-F-66 LOCATION Sta. 273+20 (170' Lt.) Hwy. 401 ORIGINATED BY B.K.
W.P. 85-59-3 BORING DATE June 13, 1963. COMPILED BY B.K.
DATUM 454.9' BOREHOLE TYPE Auger CHECKED BY K.S.

SOIL PROFILE			SAMPLES		ELEV SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT ——— % PLASTIC LIMIT ——— % WATER CONTENT ——— %			BULK DENSITY P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT PLOT	NUMBER	TYPE		SHEAR STRENGTH P.S.F.					w _p ——— w ——— w _L 10 — 20 — 30				
						400	800	1200	1600	2000					
454.9	Groundlevel														
0.0															
			1	SS	14										
			2	SS	25										
	Clayey silt.		3	SS	9										
	Very stiff to firm.		4	TW	P										
			5	TW	P										
			6	SS	P										
			7	TW	P										
30.5	Grey silt sand with gravel.		8	TW	P										
32.0	End of borehole.		9	SS	73										

W.L.
452.1'
2.8

124.8

126.2

132.1

CHECKED BY K.S.

W.L.
455.0
5.0

JOB 63-F-66LOCATION Sta. 270+20 (150' Lt.) Hwy. 401ORIGINATED BY B.K.W.P. 85-59-3BORING DATE June 14, 1963.COMPILED BY B.K.DATUM 469.8'BOREHOLE TYPE AugerCHECKED BY K.S.

SOIL PROFILE			SAMPLES			ELEV. SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT ——— WL PLASTIC LIMIT ——— WP WATER CONTENT ——— W			BULK DENSITY P.C.F.	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE	BLOWS / FOOT		SHEAR STRENGTH P.S.F.					WATER CONTENT %				
							400	800	1200	1600	2000	10	20	30		
469.8	Groundlevel					470										
0.0	Clayey silt. Very stiff to firm.		1	SS	8											
			2	SS	16											
			3	SS	32	460										
			4	SS	11											
			5	SS	7	450										
			6	TW	P											
			7	SS	23	440										
438.3						430										
31.5	End of borehole.															

W.L.

$$\frac{465.5'}{4.3}$$

128.8

130.2

JOB 63-F-66

LOCATION Sta. 268+20 (125' Lt.) Hwy. 401

ORIGINATED BY B.K.

W. P. 85-59-3

BORING DATE June 17, 1963.

COMPILED BY B.K.

DATUM 479.4'

BOREHOLE TYPE Auger

CHECKED BY K.S.

SOIL PROFILE		SAMPLES			ELEV SCALE	DYNAMIC PENETRATION RESISTANCE BLOWS / FOOT					LIQUID LIMIT ——— % PLASTIC LIMIT ——— % WATER CONTENT ——— % w _p ——— w ——— w _L			BULK DENSITY Y P C F	REMARKS
ELEV. DEPTH	DESCRIPTION	STRAT. PLOT	NUMBER	TYPE		400	800	1200	1600	2000	WATER CONTENT % 10 20 30				
479.4	Groundlevel				480										
0.0	Brown clayey silt.														
473.9			1	SS	21										
5.5															
	Clayey silt.		2	SS	53										
	Very stiff to firm.		3	SS	11										
			4	TW	P										
			5	TW	P										
			6	GS	-										
			7	GS	-										
435.9															
43.5	Silty sand with														
433.9	gravel, grey, dense.		8	SS	38										
45.5	End of borehole.														

W.L.
466.1118.1
115.3

+1.9

+1.7

+ 2.0

+ 2.0