

DOCUMENT MICROFILMING IDENTIFICATION

GEOCRES No. 31G5-126

W.P. No. \_\_\_\_\_

CONT. No. \_\_\_\_\_

W. O. No. \_\_\_\_\_

STR. SITE No. \_\_\_\_\_

HWY. No. \_\_\_\_\_

LOCATION PROP CULVERT,  
MERIVALE RD., STA. 116+66,  
LOT 28, CON. 1, NEPEAN TWP.

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OVERSIZE DRAWINGS TO BE INCLUDED WITH THIS REPORT. NONE

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

BA 1413

31G5-126  
GEOCRES No.

JOHN D. PATERSON, B.Sc., P.ENG.

CONSULTING ENGINEERS & GEOLOGISTS  
OTTAWA, CANADAINSPECTION SERVICES  
LABORATORY TESTING  
APPRAISALS, RESEARCH  
SOIL INVESTIGATIONS

MEMBERS:

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818A BOYD AVE.  
TEL. PA 9-3722

February 8th, 1962.

Mr. J. L. Shearer, P. Eng.,  
Ottawa Suburban Roads Commission,  
279 Carling Ave.,  
Ottawa, Ontario.31G5-126  
GEOCRES No.

Dear Mr. Shearer,

At your request we have completed a soil investigation at a culvert site located on Lot 28, Con. 1, Nepean Township, Station 116 + 66, Merivale Road.

It is proposed to replace the existing 10' x 4' x 33' culvert by one 12' x 6' x 74' on a 30° skew to accommodate road widening.

The investigation consisted of driving cone probes to 30 feet at diagonally opposite sides of the existing culvert as shown on the Test Boring Plan and sampling Hole No. 1 to 25 feet.

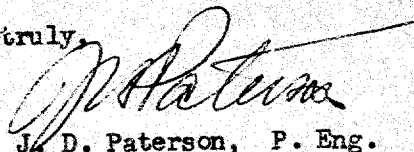
A series of five split spoon samples were taken at regular intervals between the elevation of the stream bed 58.5 and elevation 40.5. The standard penetration test was conducted on each of these samples.

The soil consists of a loose fine-grained sand from 4' to 7' and increases in density and coarseness with depth as shown in detail on the Soil Profile Sheets.

Because the loose sand is considered unsatisfactory material on which to place the culvert base, it is recommended that the culvert be increased to 12' x 8' x 74' in order that the culvert base can be placed on the medium dense sand at 11 feet and still provide suitable clearance for water flow at peak run-off periods.

The recommended safe soil loading for the medium dense, saturated sand is 1900 pounds per square foot.

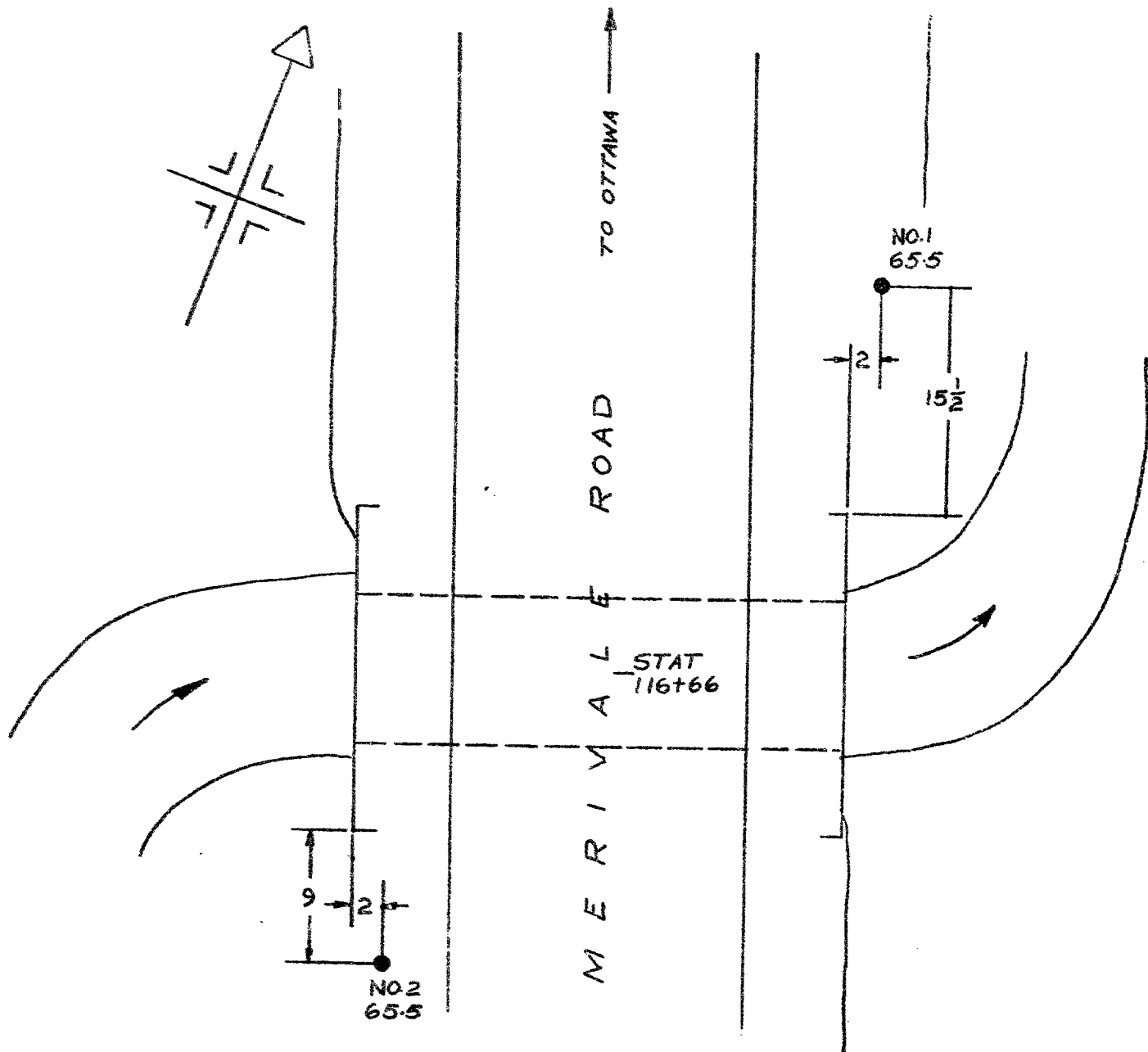
Yours truly,



J. D. Paterson, P. Eng.

Report No. S243-62.

JDP/PMC.



TEST BORING PLAN  
 PROPOSED CULVERT  
 LOT 28 CON.1  
 NEPEAN TOWNSHIP  
 MERIVALE ROAD

SCALE 1" = 10' JAN 1962

JOHN D. PATTERSON  
CONSULTING ENGINEERS  
OTTAWA CANADA

SOIL PROFILE AND LABORATORY TESTS

Location: Lot 28, Con. 1, Nepean Township,  
Merivale Road.

Elevation (Zero Depth): Shoulder Surface = 55.5.  
Remarks: Cone Probe and Test Boring.

Sheet No:  
1 of 2

Borings by: F. E. Johnston Drilling Co. Date: Jan. 17 & 18, 1962.

Hole No: 1

Blows per Foot	Soil Description	Samples		U/c T/m'	N	Depth in Feet	Elev.	Moisture Content Per Cent.				
								30	40	50	60	70
Cone	Ground Surface					0	55.5					
92	Gravel 1											
66	Weathered Clayey	HY	1			2						
7	Silt and Sand											
4	4	HY	2			4						
3	Weathered silty Sand with											
7	organic inclusions.					6						
4	7											
13	Loose, grey,	SS	3		5	8						
23	fine-grained Sand.											
24		SS	4		5	10	55.5					
16	11											
32						12						
28												
22						14						
30	Medium dense, grey, lime-	SS	5		11							
38	grained Sand.					16						
44												
36						18						
39		SS	6		25							
34						20	45.5					
36	21											
41						22						
39	Dense, grey, medium- to											
41	coarse-grained Sand.	SS	7		48	24						
37												
38						26						
48												
35						28						
28												

Streambed at 8'.

JOHN D. PATERSON  
CONSULTING ENGINEERS  
OTTAWA CANADA

# SOIL PROFILE AND LABORATORY TESTS

Location: Lot 28, Con. 1, Nepean Township,  
Merivale Road.

Elevation (Zero Depth): Shoulder Surface - 64.5.  
Remarks: Cone Probe only.

Sheet No:  
2 of 2

Borings by: F.E. Johnston Drilling Co., Ltd. Date: Jan. 18, 1962.

Bole No:  
2

Blows per Foot	Soil Description	Samples	U's 2/3'	H	Depth in Feet	Elev.	Moisture Content				
							30	40	50	60	70
Cone	Ground Surface										
300	Gravel 1.5				0	64.5					
85	Weathered clayey silt and sand.				2						
10					4						
6					6						
5					8						
10	5.5										
14	Loose, fine-grained Sand.										
14											
17	8										
16	Medium dense, fine-grained Sand.										
17					10	55.5					
17					12						
19					14						
18					16						
34					18						
34	Dense, medium to coarse-grained Sand.				20	65.5					
28					22						
30					24						
26					26						
33					28						
30					30						
32											
28											
27											
35											
31	30										
22											
27											
					30	65.5					

NOTE:  
All data interpretation  
based on data from pen  
test and associated  
bore hole.