

#

57-F-217C

W.P. # 714-56

Q. E. W.

SHOOKS

HILL

12A CENTRE STREET EAST

Avenue 5-3313

\*\*\*\*\*  
\*\*\*\*\*  
NO LONG DISTANCE CHARGE

BA 628  
52F217  
BOX 147 RICHMOND HILL

# SOIL INVESTIGATIONS & TESTING LTD.

RICHMOND HILL, ONTARIO

E. H. WILSON  
MANAGING DIRECTOR

July 31st 1957

Department of Highways,  
280 Davenport Road,  
Toronto, Ontario.

Attention: Mr. J. C. McAllister

Re: Diamond Drilling at Shook's Hill, Bridge #1,  
Queen Elizabeth Way, District 6, W.P. 714-56.

Dear Sir:

In accordance with your instructions we have completed the diamond drilling at the above noted site and the following data was obtained:

All eight boreholes were uniform. They showed an average of approximately 4' of overburden and then shale or limestone, which is usually encountered in this area.

Compression tests were made on the cores. The compressive strength for the limestone was 7700 lbs. per square inch and on the grey shale, which was dry, it was 3440 lbs. per square inch.

If any foundation of importance is contemplated we would recommend that the foundations be taken through to the parent rock and we also recommend that the geology of the area be reviewed.

Yours very truly,

SOIL INVESTIGATIONS & TESTING LTD.



E. H. Wilson

EHW/iw

# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 1

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: June 1st 1957

DATE COMPLETED: June 4th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Sandy loam & layers of flat rock (Moist)			
1'	2'	Drove 2" Split-tube sampler	13		
		Stiff grey silty clay & small stones (Moist)			
2'	3'	Drove 2" Split-tube sampler	17		
		Stiff grey silty clay & small stones (Moist)			
3'	4'	Drove 2" Split-tube sampler	45		

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

DRILLER FOREMAN

J. McDonald

# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 1 - WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
3'	4'	Hard grey silty clay & small stones (Moist)		1	
4'	5'	Drove 2" Split-tube sampler As sample #1	48		REFUSAL OF SPLIT TUBE AT 5'
5'	9'	Diamond drilled BX casing Hard greyish brown silty clay, layers of shale rock		2	FREE WATER AT 5'  DEPTH OF HOLE 5' DEPTH TO WATER 4'-6"
9'	20'	Diamond drilled BX casing Boulders & hard clay (4' recovery)		3	
20'	23'	Diamond drilled BX casing Clay seams in shale (2' recovery)			
23'	27'	Diamond drilled AX casing Shale (Full recovery)			
27'	31'	Diamond drilled AX casing (Lost core)			HOLE COMPLETED

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/1

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 2

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: May 29th 1957

DATE COMPLETED: May 31st 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Fine to coarse grey sand(Dry)			
1'	2'	Drove 2" Split-tube sampler	17		
		Stiff black sandy loam(Moist)			
2'	3'	Drove 2" Split-tube sampler	23		
		Very stiff grey clay (Moist)		1	
3'	4'	Drove 2" Split-tube sampler	48		
		Hard grey silty clay & small stones (Moist)			
4'	5'	Drove 2" Split-tube sampler	240		

HAMMERS:—(A) For Casing .....350.....lbs. with.....24.....inches—drop.....

(B) Sampling.....140.....lbs. with.....30.....inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 2 - WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
4'	5'	Hard grey silty clay. Bottom of tube - Clay shale & shale		2	REFUSAL OF SPLIT TUBE AT 7'-2"
5'	6'	Drove 2" Split-tube sampler Hard grey silty clay & small stones (Moist)	80		
6'	7'	Drove 2" Split-tube sampler Hard grey silty clay (Dry)	100		
7'	7'-2"	Drove 2" Split-tube sampler	100 for 2"		
7'-2"	8'	Chopped out with straight chopping bit - Hard grey silty clay & small seams of shale rock			
8'	14'	Diamond drilled through hard clay & boulder		3	
14'	15'	Layers of shale & hard grey clay. Wash - core sample		4	

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 3

ORDER NO.: SI-57/15

HOLE NO.: 2 - WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
15'	15'-6"	Clay & shale ground when core blocked			HOLE COMPLETED
15'-6"	18'	Diamond drilled - Shale with small clay seams (2' recovery)			
18'	23'-6"	Diamond drilled - Shale with small clay seams (3' recovery)			
23'-6"	27'-6"	Diamond drilled - Shale (Full recovery)			
27'-6"	32'	Diamond drilled - Shale (4' recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 3

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: June 27th 1957

DATE COMPLETED: July 3rd 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Drove Cross chopping bit			LOOSE FLAT ROCK WHICH STARTED AT 1' BELOW SURFACE CONTINUALLY FALLING IN HOLE
1'	5'	Diamond drilled BX casing			
1'	2'	Layers of flat rock			
2'	5'	Clay & small stones			
5'	10'	Diamond drilled BX casing			
		Limestone (1' recovery)			
10'	15'	Diamond drilled BX casing			
		Limestone (2'-6" recovery)			

HAMMERS:—(A) For Casing ...350...lbs. with ...24...inches—drop.....

(B) Sampling ...140...lbs. with ...30...inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 3 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
15'	20'	Diamond drilled AX core barrel (3' recovery) Top- Limestone, Bottom- Shale			15' of BX casing sinking in hole Ran BX casing to 17'-6"
20'	22'	Diamond drilled AX core barrel. Shale (1'-3" recovery)			
22'	27'	Diamond drilled AX core barrel. Shale (4' recovery)			
27'	32'-6"	Diamond drilled AX core barrel (2'-6" recovery) Shale with clay seams in bottom 18"			
32'-6"	33'-6"	Diamond drilled AXT core barrel (1' recovery) Shale with clay seams			
					HOLE COMPLETED

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.

(B) Sampling 110 lbs. with 30 inches—drop.

### WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 4

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 4th 1957

DATE COMPLETED: July 8th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	4'	Diamond drilled BX casing			
		Sand & clay			
4'	10'	Diamond drilled BX casing			
		Limestone (1'-6" recovery)			
10'	15'	Diamond drilled BX casing			
		Limestone (1'-10" recovery)			
15'	22'	Diamond drilled BX casing			
		Shale with clay seams			
		(3'-6" recovery)			

HAMMERS:—(A) For Casing 350.....lbs. with 24.....inches—drop.....

(E) Sampling 140.....lbs. with 30.....inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 4 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
22'	27'-3"	Diamond drilled AX core			
		barrel. Shale (5' recovery)			
27'-3"	30'-3"	Diamond drilled AX core			
		barrel. Shale & limestone			
		(3' recovery)			
30'-3"	34'-6"	Diamond drilled AX core			
		barrel. Shale with clay			
		seams in bottom 1'			
		(3' recovery)			
34'-6"	37'-8"	Diamond drilled AX core			
		barrel. Shale with small			
		clay seams in bottom			
		(Full recovery)			
37'-8"	40'-10"	Diamond drilled AX core			
		barrel. Shale with small			
		clay seams in bottom			
		(About 1" of clay) (3' recovery)			

HOLE COMPLETED

HAMMERS:—(A) For Casing ..... 350 ..... lbs. with ..... 24 ..... inches—drop.....

(B) Sampling ..... 140 ..... lbs. with ..... 30 ..... inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 5

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 8th 1957

DATE COMPLETED: July 10th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	4'	Diamond drilled BX casing			
		Clay			
4'	10'	Diamond drilled BX casing			
		Limestone (1' recovery)			
10'	14'	Diamond drilled BX casing			
		Limestone (2'-2" recovery)			
14'	19'	Diamond drilled AX core			
		barrel. Shale with clay			
		seams			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 5 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
19'	22'	Diamond drilled AX core barrel. Shale with clay seams			HOLE COMPLETED
22'	22'-6"	Diamond drilled AX core barrel (Core blocked) Clay seams in shale			
22'-6"	25'-11"	Diamond drilled AX core barrel. Shale with clay seams from 25'-5" to 25'-11" (Full recovery)			
25'-11"	29'-1"	Diamond drilled AX core barrel. Shale (Full recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

DRILLER FOREMAN

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 6

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 13th 1957

DATE COMPLETED: July 15th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'-6"	Diamond drilled BX casing			
		Clay with small stones at			
	1'-6"				
1'-6"	4'	Diamond drilled BX casing			
		Grey silty clay			
4'	10'-6"	Diamond drilled BX casing			
		Limestone (1'-5" recovery)			
10'-6"	15'	Diamond drilled BX casing			
		Limestone (1'-6" recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION

PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 6 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
15'	18'-5"	Diamond drilled AX core barrel. Shale with clay seams (3' recovery)			HOLE COMPLETED
13'-5"	21'-7"	Diamond drilled AX core barrel. Shale with clay seams (2'-9" recovery)			

HAMMERS:—(A) For Casing .....350.....lbs. with.....24.....inches—drop.....

(B) Sampling.....140.....lbs. with.....30.....inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 7

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 11th 1957

DATE COMPLETED: July 12th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Sand & gravel (Fill)			
1'	2'	Drove 2" Split-tube sampler	15		
2'	3'	" " " " "	15		
1'	3'	Stiff greyish brown silty clay (Dry)			
3'	4'	Drove 2" Split-tube sampler	17		
		Stiff greyish brown silty clay (Dry)			
4'	5'	Drove 2" Split-tube sampler	60		

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 7 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
4'	5'	Hard greyish brown silty clay (Dry) Shale in bottom of tube		1	HOLE COMPLETED
5'	9'-6"	Diamond drilled BX casing Limestone (1' recovery)			
9'-6"	12'-6"	Diamond drilled BX casing Limestone (1' recovery)			
12'-6"	15'-6"	Diamond drilled AX core barrel. Limestone with layers of grey silty clay (2'-4" recovery)			
15'-6"	21'	Diamond drilled AX core barrel. Shale with clay seams (4' recovery)			
21'	24'-8"	Diamond drilled AX core barrel. Shale with small clay seams (3' recovery)			

HAMMERS:—(A) For Casing ...350...lbs. with...24...inches—drop.....

(B) Sampling...140...lbs. with...30...inches—drop.....

WATER LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 8

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: June 24th 1957

DATE COMPLETED: June 26th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Drove 2" Split-tube sampler	10		
		Loam (Topsoil) (Dry)			
1'	2'	Drove 2" Split-tube sampler	10		
2'	3'	" " " " "	12		
1'	3'	Medium stiff grey silty clay			
		(Dry)			
3'	4'	Drove 2" Split-tube sampler	45		
		Hard grey silty clay with		1	
		pieces of shale (Dry)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION

PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 8 - WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
4'	5'	Drove 2" Split-tube sampler	40		REFUSAL OF SPLIT TUBE AT 5'
		Hard grey silty clay with			
		pieces of shale (Dry)			
5'	7'	Diamond drilled - Boulders &			
		hard clay (1' recovery)			
7'	10'	Diamond drilled - Boulders &			
		hard clay (1'-6" recovery)			
10'	13'-6"	Diamond drilled - Boulders &			
		hard clay (1'-6" recovery)			
13'-6"	15'	Diamond drilled - Boulders &			
		hard clay (1'-4" recovery)			
15'	19'	Diamond drilled - Boulders &			
		hard clay (1'-3" recovery)			
		(3" of shale in bottom)			

HAMMERS:—(A) For Casing ... 350 lbs. with 24 inches—drop.

(B) Sampling ... 140 lbs. with 30 inches—drop.

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION

PAGE: 3

ORDER NO.: SI-57/15

HOLE NO.: 8 - WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
19'	23'	Diamond drilled - Shale with clay seams (3' recovery)			HOLE COMPLETED
23'	27'	Diamond drilled - Shale with small clay seams (3'-6" recovery)			
27'	31'	Diamond drilled - Shale (Full recovery)			

HAMMERS:—(A) For Casing ..... 350 ..... lbs. with 24 ..... inches—drop.....

(B) Sampling..... 140 ..... lbs. with 30 ..... inches—drop.....

WATER LEVELS:—Depth of Hole..... Time..... Depth to Water.....

Depth of Hole..... Time..... Depth to Water.....

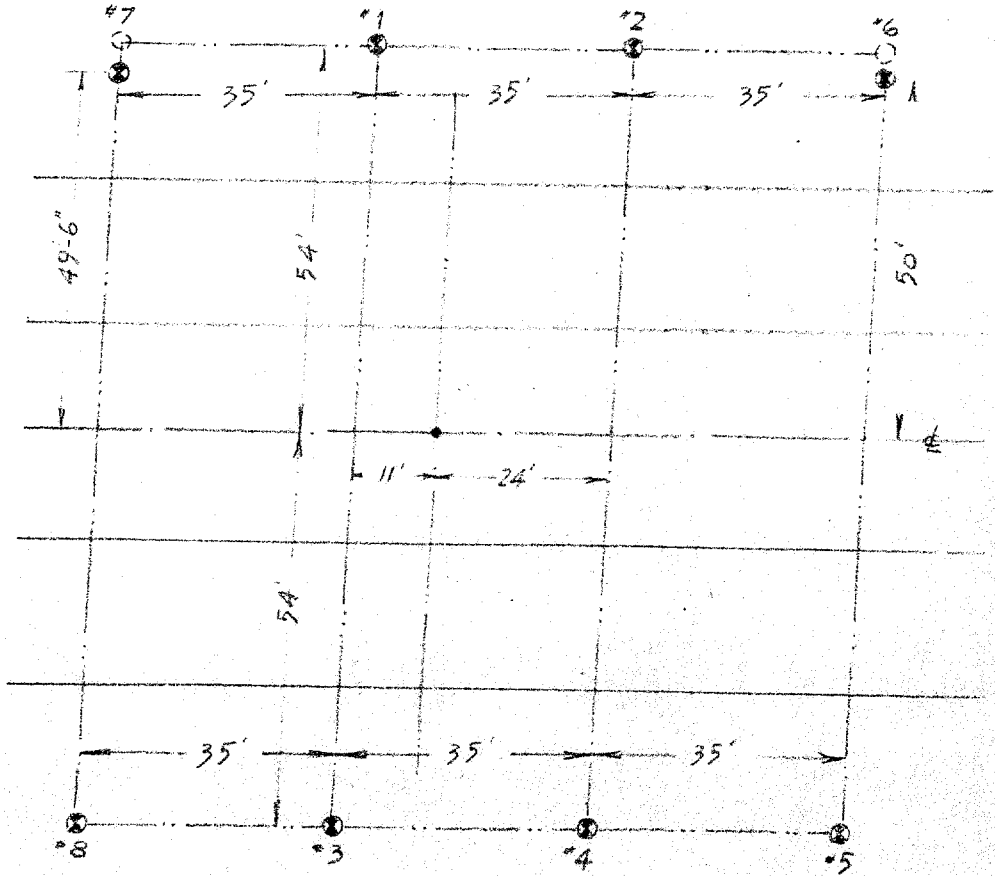
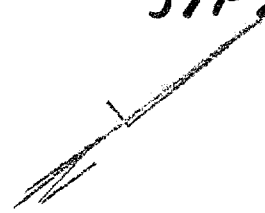
BORING STOPPED BY

DP LLER FOREMAN

J. McDonald

BA 628

57F217c



NOTE: BOREHOLE

\* 6 MOVED 4 FT SOUTH

\* 7 MOVED 4 FT 6 IN SOUTH

① BOREHOLE LOCATIONS

BRIDGE NR 1 AT  
SHOOKS HILL  
W.P. 714-56

PLAN E-3245-1

SOIL INVESTIGATIONS & TESTING  
RICHMOND HILL, ONT.

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 1 Diameter 2½"

Date June 1st - 4th 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
Sandy loam & layers of flat rock (Moist)			0'-0"	1'-0"		140 lb. Hammer 30" Drop
Stiff grey silty clay & small stones (Moist)			1'-0"	1'-0"	13	
As above			2'-0"	1'-0"	17	
Hard grey silty clay & small stones (Moist)		1	3'-0"	1'-0"	45	
As sample #1			4'-0"	1'-0"	48	
REFUSAL OF SPLIT TUBE SAMPLER AT 5'			5'-0"			FREE WATER AT 5'
Diamond drilled BX casing - Hard grey- ish brown silty clay, layers of shale rock		2	4'-0"			DEPTH OF HOLE 5'
			9'-0"			DEPTH TO WATER 4'-6"
Diamond drilled BX casing from 9' to 20'		3		9'-0"		
Boulders & hard clay (4' recovery)						
			18'-0"			

CONTINUED

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

┆ Water Sample

**SOIL INVESTIGATIONS & TESTING LTD.**E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, BRIDGE #1

Order No.

Client

CONTINUED

















Borehole No. 1

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
<u>" PAGE 2 "</u>			18'-0"			140 lb. Hammer 30" Drop
Diamond drilled BX casing from 9' to 20' Boulders & hard clay				2'-0"		
			20'-0"			
Diamond drilled BX casing - Clay seams in shale (2' recovery)				3'-0"		
			23'-0"			
Diamond drilled AX casing - Shale (Full recovery)				4'-0"		
			27'-0"			
Diamond drilled AX casing - Lost core				4'-0"		
			31'-0"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 2 Diameter 2½"

Date May 29th - 31st 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
Fine to coarse grey sand (Dry)			0'-0"	1'-0"		140 lb. Hammer 30" Drop
Stiff black sandy loam (Moist)			1'-0"	1'-0"	17	
Very stiff grey clay (Moist)		1	2'-0"	1'-0"	23	
Hard grey silty clay & small stones (Moist)			3'-0"	1'-0"	48	
Hard grey silty clay. Bottom of tube - Clay shale & shale		2	4'-0"	1'-0"	240	
Hard grey silty clay & small stones (Moist)			5'-0"	1'-0"	80	
Hard grey silty clay (Dry)			6'-0"	1'-0"	100	
As above			7'-0"	0'-2"	100	
REFUSAL OF SPLIT TUBE SAMPLER AT 7'-2"			7'-2"	0'-10"		
Chopped out with straight chopping bit - Hard grey silty clay & small seams of shale rock			8'-0"			
Diamond drilled through hard clay & boulder		3		6'-0"		
Layers of shale & hard grey clay. Wash - core sample		4	14'-0"	1'-0"		
			15'-0"			

CONTINUED

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample



## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, BRIDGE #1

Order No.

Client

CONTINUED

Borehole No. 2

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
<u>" PAGE 2 "</u>						
Clay & shale ground when core blocked	→		15'-0"	0'-6"		140 lb. Hammer 30" Drop
	→		15'-6"			
Diamond drilled - Shale with small clay seams (2' recovery)				2'-6"		
	→		18'-0"			
Diamond drilled - Shale with small clay seams (3' recovery)				5'-6"		
	→		23'-6"			
Diamond drilled - Shale (Full recovery)				4'-0"		
	→		27'-6"			
Diamond drilled - Shale (4' recovery)				4'-6"		
	→		32'-0"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

⊥ Water Sample

**SOIL INVESTIGATIONS & TESTING LTD.**E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-97/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 3

Diameter 2½"

Date June 27th - July 3rd 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
Drove Cross chopping bit			0'-0"	1'-0"		140 lb. Hammer 30" Drop
			1'-0"			
Diamond drilled BX casing				4'-0"		
Layers of flat rock from 1' to 2'						
Clay & small stones from 2' to 5'			5'-0"			
Diamond drilled BX casing				5'-0"		
Limestone (1' recovery)			10'-0"			Loose flat rock which started at 1' below surface continually falling in hole.
Diamond drilled BX casing				5'-0"		
Limestone (2'-6" recovery)			15'-0"			
Diamond drilled AX core barrel from 15' to 20'.				2'-0"		
Top - Limestone. Bottom - Shale. (3' recovery)			17'-0"			
CONTINUED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

⊥ Water Sample

LONG DISTANCE CHARGES ACCEPTED

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56 BRIDGE #1

C O N T I N U E D

Order No.

Client

Borehole No. 3

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
" PAGE 2 "			17'-0"			140 lb. Hammer 36" Drop
Diamond drilled AX core barrel from 15' to 20'.				3'-0"		
Top - Limestone. Bottom - Shale. (3' recovery)			20'-0"			
Diamond drilled AX core barrel Shale (1'-3" recovery)				2'-0"		
			22'-0"			
Diamond drilled AX core barrel Shale (4' recovery)				5'-0"		
			27'-0"			
Diamond drilled AX core barrel. Shale with clay seams in bottom 13" (2'-6" recovery)				5'-6"		
Diamond drilled AXT core barrel. Shale with clay seams (1' recovery)			32'-6"			15' of BX casing sinking in hole
			33'-6"	1'-0"		Ran BX casing to 17'-6".
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

┘ Water Sample

**SOIL INVESTIGATIONS & TESTING LTD.**E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 4 Diameter 2½"

Date July 4th - 8th 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
			0'-0"			140 lb. Hammer 30" Drop
Diamond drilled BX casing Sand & clay				4'-0"		
			4'-0"			
Diamond drilled BX casing Limestone (1'-6" recovery)				6'-0"		
			10'-0"			
Diamond drilled BX casing Limestone (1'-10" recovery)				5'-0"		
			15'-0"			
CONTINUED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

I Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56 Bridge #1

Order No.

Client

CONTINUED

Borehole No. 4

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
" PAGE 2 "			15'-0"			140 lb. Hammer 30" Drop
Diamond drilled BX casing Shale with clay seams (3'-6" recovery)				7'-0"		
			22'-0"			
Diamond drilled AX core barrel Shale (5' recovery)				5'-3"		
			27'-3"			
Diamond drilled AX core barrel Shale & limestone (3' recovery)				3'-0"		
			30'-3"			
<u>CONTINUED</u>						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

⊥ Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56 Bridge #1

Order No.

Client

CONTINUED

Borehole No. 4

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
<u>" PAGE 3 "</u>			30'-3"			140 lb. Hammer 30" Drop
Diamond drilled AX core barrel Shale with clay seams in bottom 1' (3' recovery)				4'-3"		
			34'-6"			
Diamond drilled AX core barrel Shale with small clay seams in bottom (Full recovery)				3'-2"		
			37'-8"			
Diamond drilled AX core barrel Shale with small clay seams in bottom (about 1" of clay) (3' recovery)				3'-2"		
			40'-10"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample

**SOIL INVESTIGATIONS & TESTING LTD.**E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 5 Diameter 2½"

Date July 8th - 10th 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
			0'-0"			140 lb. Hammer 30" Drop
Diamond drilled BX casing. Clay				4'-0"		
			4'-0"			
Diamond drilled BX casing Limestone (1' recovery)				6'-0"		
			10'-0"			
Diamond drilled BX casing Limestone (2'-2" recovery)				4'-0"		
			14'-0"			
CONTINUED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

┆ Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, Bridge #1

CONTINUED

Order No.

Client

Borehole No. 5 Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
" PAGE 2 "			14'-0"			140 lb. Hammer 30" Drop
Diamond drilled AX core barrel Shale with clay seams				5'-0"		
			19'-0"			
Diamond drilled AX core barrel Shale with clay seams				3'-0"		
Diamond drilled AX core barrel (Core blocked) Clay seams in shale			22'-0"	0'-6"		
			22'-6"			
				2'-11"		
Diamond drilled AX core barrel Shale with clay seams from 25'-5" to 25'-11" (Full recovery)			25'-5"	0'-6"		
			25'-11"			
				3'-2"		
Diamond drilled AX core barrel Shale (Full recovery)			29'-1"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample



## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 6

Diameter 2½"

Date July 13th - 15th 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
Diamond drilled BX casing. Clay with small stones at 1'-6"			0'-0"	1'-6"		140 lb. Hammer 30" Drop
Diamond drilled BX casing Grey silty clay			1'-6"	2'-6"		
Diamond drilled BX casing. Limestone (1'-5" recovery)			4'-0"	6'-6"		
Diamond drilled BX casing. Limestone (1'-6" recovery)			10'-6"	4'-6"		
			15'-0"			
CONTINUED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample

**SOIL INVESTIGATIONS & TESTING LTD.**E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56 Bridge #1

Order No.

Client

CONTINUED



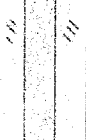

Borehole No. 6

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
" PAGE 2 "			15'-0"			140 lb. Hammer 30" Drop
Diamond drilled AX core barrel Shale with clay seams (3' recovery)				3'-5"		
			18'-5"			
Diamond drilled AX core barrel Shale with clay seams (2'-9" recovery)				3'-2"		
			21'-7"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

┆ Water Sample

**SOIL INVESTIGATIONS & TESTING LTD.****E. H. WILSON**  
**GENERAL MANAGER**

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. SI-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 7 Diameter 2 $\frac{1}{2}$ "

Date July 11th - 12th 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
Sand & gravel (Fill)			0'-0"	1'-0"		140 lb. Hammer 30" Drop
Stiff greyish brown silty clay (Dry)			1'-0"	1'-0"	15	
As above			2'-0"	1'-0"	15	
" "			3'-0"	1'-0"	17	
Hard greyish brown silty clay (Dry) Shale in bottom of tube		I	4'-0"	1'-0"	60	
			5'-0"			
Diamond drilled BX casing. Limestone (1' recovery)				4'-6"		
			9'-6"			
Diamond drilled BX casing. Limestone (1' recovery)				3'-0"		
			12'-6"			
Diamond drilled AX core barrel Limestone with layers of grey silty clay (2'-4" recovery)				3'-0"		
			15'-6"			
CONTINUED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56 Bridge #1

CONTINUED

Order No.

Client

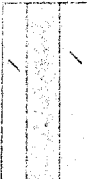



Borehole No. 7

Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
" PAGE 2 "			15'-6"			140 lb. Hammer 30" Drop
Diamond drilled AX core barrel Shale with clay seams (4' recovery)				5'-6"		
			21'-0"			
Diamond drilled AX core barrel Shale with small clay seams (3' recovery)				3'-8"		
			24'-8"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

┆ Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

Order No. S1-57/15

Client DEPARTMENT OF HIGHWAYS

Borehole No. 8

Diameter 2 1/2"

Date June 24th - 26th 1957

Borehole Location Refer to plot plan

Elevation Refer to plot plan

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
Loam (Topsoil) (Dry)			0'-0"	1'-0"	10	140 lb. Hammer 30" Drop
Medium stiff grey silty clay (Dry)			1'-0"	1'-0"	10	
As above			2'-0"	1'-0"	12	
Hard grey silty clay with pieces of shale (Dry)		1	3'-0"	1'-0"	45	
As sample #1			4'-0"	1'-0"	40	
REFUSAL OF SPLIT TUBE SAMPLER AT 5'			5'-0"			
Diamond drilled - Boulders & hard clay (1' recovery)				2'-0"		
			7'-0"			
Diamond drilled - Boulders & hard clay (1'-6" recovery)				3'-0"		
			10'-0"			
Diamond drilled - Boulders & hard clay (1'-6" recovery)				3'-6"		
			13'-6"			
Diamond drilled - Boulders & hard clay (1'-4" recovery)				1'-6"		
			15'-0"			
CONTINUED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

1 Water Sample

## SOIL INVESTIGATIONS &amp; TESTING LTD.

E. H. WILSON  
GENERAL MANAGER

Job Name WP 714.56 BRIDGE #1

Order No.

CONTINUED







Client

Borehole No. 8 Diameter

Date

Borehole Location

Elevation

Description	Legend	SAMPLE	Depth	Thickness	Split Tube Blows	Depth To Water Below Ground Level
" PAGE 2 "			15'-0"			140 lb. Hammer 30" Drop
Diamond drilled - Boulders & hard clay (3" of shale in bottom) (1'-3" recovery)				4'-0"		
			19'-0"			
Diamond drilled - Shale with clay seams (3' recovery)				4'-0"		
			23'-0"			
Diamond drilled - Shale with small clay seams (3'-6" recovery)				4'-0"		
			27'-0"			
Diamond drilled - Shale (Full recovery)				4'-0"		
			31'-0"			
HOLE COMPLETED						

Scale 1" = 2'-0"

● Disturbed Sample ■ Undisturbed Sample

└ Water Sample

12A CENTRE STREET EAST

Avenue 5-3313  
NO LONG DISTANCE CHARGE

BOX 747 RICHMOND HILL

## SOIL INVESTIGATIONS & TESTING LTD.

RICHMOND HILL, ONTARIO

E. H. WILSON  
MANAGING DIRECTOR

July 31st 1957

Department of Highways,  
280 Davenport Road,  
Toronto, Ontario.

Attention: Mr. J. C. McAllister

Re: Diamond Drilling at Shook's Hill, Bridge #1,  
Queen Elizabeth Way, District 6, W.P. 714-56.

Dear Sir:

In accordance with your instructions we have completed the diamond drilling at the above noted site and the following data was obtained:

All eight boreholes were uniform. They showed an average of approximately 4' of overburden and then shale or limestone, which is usually encountered in this area.

Compression tests were made on the cores. The compressive strength for the limestone was 7700 lbs. per square inch and on the grey shale, which was dry, it was 3440 lbs. per square inch.

If any foundation of importance is contemplated we would recommend that the foundations be taken through to the parent rock and we also recommend that the geology of the area be reviewed.

Yours very truly,

SOIL INVESTIGATIONS & TESTING LTD.



E. H. Wilson

EHW/iw

# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 1

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED ..... OF ..... CASING.

FEET USED ..... OF ..... DRIVE PIPE.

DATE STARTED: June 1st 1957

DATE COMPLETED: June 4th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Sandy loam & layers of flat rock (Moist)			
1'	2'	Drove 2" Split-tube sampler Stiff grey silty clay & small stones (Moist)	13		
2'	3'	Drove 2" Split-tube sampler Stiff grey silty clay & small stones (Moist)	17		
3'	4'	Drove 2" Split-tube sampler	45		

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

DRILLER FOREMAN

J. McDonald



# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 1 - Bridge #1  
WP 714-56

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
3'	4'	Hard grey silty clay & small stones (Moist)		1	
4'	5'	Drove 2" Split-tube sampler As sample #1	48		REFUSAL OF SPLIT TUBE AT 5'
5'	9'	Diamond drilled BX casing Hard greyish brown silty clay. layers of shale rock		2	FREE WATER AT 5' DEPTH OF HOLE 5' DEPTH TO WATER 4'-6"
9'	20'	Diamond drilled BX casing Boulders & hard clay (4' recovery)		3	
20'	23'	Diamond drilled BX casing Clay seams in shale (2' recovery)			
23'	27'	Diamond drilled AX casing Shale (Full recovery)			HOLE COMPLETED
27'	31'	Diamond drilled AX casing (Lost core)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

DRILLER FOREMAN

J. McDonald

# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 2

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: May 29th 1957

DATE COMPLETED: May 31st 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Fine to coarse grey sand(Dry)			
1'	2'	Drove 2" Split-tube sampler	17		
		Stiff black sandy loam(Moist)			
2'	3'	Drove 2" Split-tube sampler	23		
		Very stiff grey clay (Moist)		1	
3'	4'	Drove 2" Split-tube sampler	48		
		Hard grey silty clay & small stones (Moist)			
4'	5'	Drove 2" Split-tube sampler	240		

HAMMERS—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

DRILLER FOREMAN

J. McDonald

# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 2 - Bridge #1  
WP 714-56

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
4'	5'	Hard grey silty clay. Bottom of tube - Clay shale & shale		2	REFUSAL OF SPLIT TUBE SAMPLER AT 7'-2"
5'	6'	Drove 2" Split-tube sampler Hard grey silty clay & small stones (Moist)	80		
6'	7'	Drove 2" Split-tube sampler Hard grey silty clay (Dry)	100		
7'	7'-2"	Drove 2" Split-tube sampler	100 for 2"		
7'-2"	8'	Chopped out with straight chopping bit - Hard grey silty clay & small seams of shale rock			
8'	14'	Diamond drilled through hard clay & boulder		3	
14'	15'	Layers of shale & hard grey clay. Wash - core sample		4	

HAMMERS:—(A) For Casing ..... 350 ..... lbs. with ..... 24 ..... inches—drop.....

(B) Sampling ..... 140 ..... lbs. with ..... 30 ..... inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

DRILLER FOREMAN

J. McDonald

# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 3

ORDER NO.: SI-57/15

HOLE NO.: 2 - Bridge #1  
WP 714-56

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
15'	15'-6"	Clay & Shale ground when core blocked			HOLE COMPLETED
15'-6"	18'	Diamond drilled - Shale with small clay seams (2' recovery)			
18'	23'-6"	Diamond drilled - Shale with small clay seams (3' recovery)			
23'-6"	27'-6"	Diamond drilled - Shale (Full recovery)			
27'-6"	32'	Diamond drilled - Shale (4' recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: S1-57/1

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 3

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: June 27th 1957

DATE COMPLETED: July 3rd 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Drove Cross chopping bit			LOOSE FLAT ROCK WHICH STARTED AT 1' BELOW SURFACE CONTINUALLY FALLING IN HOLE
1'	5'	Diamond drilled BX casing			
1'	2'	Layers of flat rock			
2'	5'	Clay & small stones			
5'	10'	Diamond drilled BX casing			
		Limestone (1' recovery)			
10'	15'	Diamond drilled BX casing			
		Limestone (2'-6" recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: S1-57/15  
HOLE NO.: 3 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
15'	20'	Diamond drilled AX core barrel (3' recovery) Top- Limestone, Bottom- Shale			
20'	22'	Diamond drilled AX core barrel, Shale (1'-3" recovery)			
22'	27'	Diamond drilled AX core barrel, Shale (4' recovery)			
27'	32'-6"	Diamond drilled AX core barrel (2'-6" recovery) Shale with clay seams in bottom 18"			15' of BX casing sinking in hole Ran BX casing to 17'-6"
32'-6"	33'-6"	Diamond drilled AXT core barrel (1' recovery) Shale with clay seams			HOLE COMPLETED

HAMMERS:—(A) For Casing 350.....lbs. with 24.....inches—drop.....

(B) Sampling 140.....lbs. with 30.....inches—drop.....

### WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: S1-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 4

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 4th 1957

DATE COMPLETED: July 8th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	4'	Diamond drilled BX casing			
		Sand & clay			
4'	10'	Diamond drilled BX casing			
		Limestone (1'-6" recovery)			
10'	15'	Diamond drilled BX casing			
		Limestone (1'-10" recovery)			
15'	22'	Diamond drilled BX casing			
		Shale with clay seams			
		(3'-6" recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 110 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION

PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 4 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
22'	27'-3"	Diamond drilled AX core barrel. Shale (5' recovery)			
27'-3"	30'-3"	Diamond drilled AX core barrel. Shale & limestone (3' recovery)			
30'-3"	34'-6"	Diamond drilled AX core barrel. Shale with clay seams in bottom 1' (3' recovery)			
34'-6"	37'-8"	Diamond drilled AX core barrel. Shale with small clay seams in bottom (Full recovery)			
37'-8"	40'-10"	Diamond drilled AX core barrel. Shale with small clay seams in bottom (About 1" of clay) (3' recovery)			

HOLE COMPLETED

HAMMERS:—(A) For Casing ..... 350 ..... lbs. with ..... 24 ..... inches—drop.....

(B) Sampling ..... 140 ..... lbs. with ..... 30 ..... inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 5

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 8th 1957

DATE COMPLETED: July 10th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	4'	Diamond drilled BX casing			
		Clay			
4'	10'	Diamond drilled BX casing			
		Limestone (1' recovery)			
10'	14'	Diamond drilled BX casing			
		Limestone (2'-2" recovery)			
14'	19'	Diamond drilled AX core			
		barrel. Shale with clay			
		seams			

HAMMERS:—(A) For Casing .....350.....lbs. with 24.....inches—drop.....

(B) Sampling.....140.....lbs. with 30.....inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15  
HOLE NO.: 5 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
19'	22'	Diamond drilled AX core barrel. Shale with clay seams			HOLE COMPLETED
22'	22'-6"	Diamond drilled AX core barrel (Core blocked)			
		Clay seams in shale			
22'-6"	25'-11"	Diamond drilled AX core barrel. Shale with clay seams from 25'-5" to 25'-11"			
		(Full recovery)			
25'-11"	29'-1"	Diamond drilled AX core barrel. Shale			
		(Full recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/1

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 6

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 13th 1957

DATE COMPLETED: July 15th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'-6"	Diamond drilled BX casing			
		Clay with small stones at			
	1'-6"				
1'-6"	4'	Diamond drilled BX casing			
		Grey silty clay			
4'	10'-6"	Diamond drilled BX casing			
		Limestone (1'-5" recovery)			
10'-6"	15'	Diamond drilled BX casing			
		Limestone (1'-6" recovery)			

HAMMERS:—(A) For Casing 350.....lbs. with 24.....inches—drop.....

(B) Sampling 140.....lbs. with 30.....inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 6 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
15'	18'-5"	Diamond drilled AX core barrel. Shale with clay seams (3' recovery)			HOLE COMPLETED
18'-5"	21'-7"	Diamond drilled AX core barrel. Shale with clay seams (2'-9" recovery)			

HAMMERS:—(A) For Casing ..... 350 lbs. with 21 inches—drop.....

(B) Sampling..... 140 lbs. with 30 inches—drop.....

WATER  
LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 7

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: July 11th 1957

DATE COMPLETED: July 12th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Sand & gravel (Fill)			
1'	2'	Drove 2" Split-tube sampler	15		
2'	3'	" " " " "	15		
1'	3'	Stiff greyish brown silty clay (Dry)			
3'	4'	Drove 2" Split-tube sampler	17		
		Stiff greyish brown silty clay (Dry)			
4'	5'	Drove 2" Split-tube sampler	60		

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION

PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 7 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
4'	5'	Hard greyish brown silty clay (Dry) Shale in bottom of tube		1	
5'	9'-6"	Diamond drilled BX casing Limestone (1' recovery)			
9'-6"	12'-6"	Diamond drilled BX casing Limestone (1' recovery)			
12'-6"	15'-6"	Diamond drilled AX core barrel. Limestone with layers of grey silty clay (2'-4" recovery)			
15'-6"	21'	Diamond drilled AX core barrel. Shale with clay seams (4' recovery)			
21'	24'-8"	Diamond drilled AX core barrel. Shale with small clay seams (3' recovery)			HOLE COMPLETED

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

## TEST BORINGS DATA SHEET

FILE NO.:

ORDER NO.: SI-57/15

CLIENT: DEPARTMENT OF HIGHWAYS

HOLE NO.: 8

NAME OF JOB: WP 714-56, SHOOK'S HILL, BRIDGE #1, QUEEN ELIZABETH WAY

HOLE LOCATION: Refer to plot plan

ELEVATION OF SURFACE: Refer to plot plan

FEET USED.....OF.....CASING.

FEET USED.....OF.....DRIVE PIPE.

DATE STARTED: June 24th 1957

DATE COMPLETED: June 26th 1957

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
0'-0"	1'	Drove 2" Split-tube sampler Loam (Topsoil) (Dry)	10		
1'	2'	Drove 2" Split-tube sampler	10		
2'	3'	" " " " "	12		
1'	3'	Medium stiff grey silty clay (Dry)			
3'	4'	Drove 2" Split-tube sampler	45		
		Hard grey silty clay with pieces of shale (Dry)		1	

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION

PAGE: 2

ORDER NO.: SI-57/15

HOLE NO.: 8 WP 714-56

Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
4'	5'	Drove 2" Split-tube sampler	40		REFUSAL OF SPLIT TUBE SAMPLER AT 5'
		Hard grey silty clay with pieces of shale (Dry)			
5'	7'	Diamond drilled - Boulders & hard clay (1' recovery)			
7'	10'	Diamond drilled - Boulders & hard clay (1'-6" recovery)			
10'	13'-6"	Diamond drilled - Boulders & hard clay (1'-6" recovery)			
13'-6"	15'	Diamond drilled - Boulders & hard clay (1'-4" recovery)			
15'	19'	Diamond drilled - Boulders & hard clay (1'-3" recovery)			
		(3" of shale in bottom)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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# SOIL INVESTIGATIONS AND TESTING LTD.

FILE NO.

## TEST BORINGS DATA SHEET

CONTINUATION  
PAGE: 3

ORDER NO.: SI-57/15  
HOLE NO.: 8 WP 714-56  
Bridge #1

DEPTH		CLASSIFICATION OF SOILS	No. of Blows Per Ft.	Sample Numbers Taken	REMARKS
From	To				
19'	23'	Diamond drilled - Shale with clay seams (3' recovery)			HOLE COMPLETED
23'	27'	Diamond drilled - Shale with small clay seams (3'-6" recovery)			
27'	31'	Diamond drilled - Shale (Full recovery)			

HAMMERS:—(A) For Casing 350 lbs. with 24 inches—drop.....

(B) Sampling 140 lbs. with 30 inches—drop.....

WATER

LEVELS:—Depth of Hole.....Time.....Depth to Water.....

Depth of Hole.....Time.....Depth to Water.....

BORING STOPPED BY

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