

57-F-214C

W.P. 101-57

ANCASTER

By - PASS

- 1 -

WP 101-57

2 July 1957

BA 614

23-67-32

File # - 21

FOUNDATION INVESTIGATION FOR
THE PROPOSED RAILWAY UNDERPASS
ON THE ANCASTER BYPASS,
DISTRICT NO.4, ONTARIO.

LOCATION OF THE SITE AND SCOPE OF THE INVESTIGATION

This report covers the field investigation for the determination of the foundation conditions for the proposed railway underpass on the Ancaster Bypass, District 4, Ontario. The site plan is shown on enclosure no.1, together with the locations of the soil investigation boreholes.

DRILLING WORK AND SUBSOIL CONDITIONS

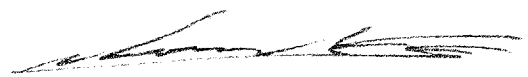
The drill arrived at the site on 23 May 1957, and the drilling of four holes and penetration tests was completed on 27 May 1957. In all four holes bedrock of Queenstone shale was encountered at depths varying between seven and thirteen feet, underlying loose sand and weathered shale.

RESULTS AND CONCLUSIONS

Engineering data sheets, showing the penetration profiles, form the enclosures given at the end of this report. Water level measurements taken after the completion of the job, indicate that the water table is between one and four feet below the surface.

There should be no foundation problems if the underpass structure is founded directly upon the shale bedrock which, in a sound condition, will give bearing capacities of up to twenty five tons per square foot. However, an inspection of the excavation should be made, to ensure that the layer of weathered shale overlying sound bedrock has been removed. This layer of weathered shale is about two feet thick.

Some drainage will probably be required during excavation, to take care of the water at the level encountered after completion of the boreholes.



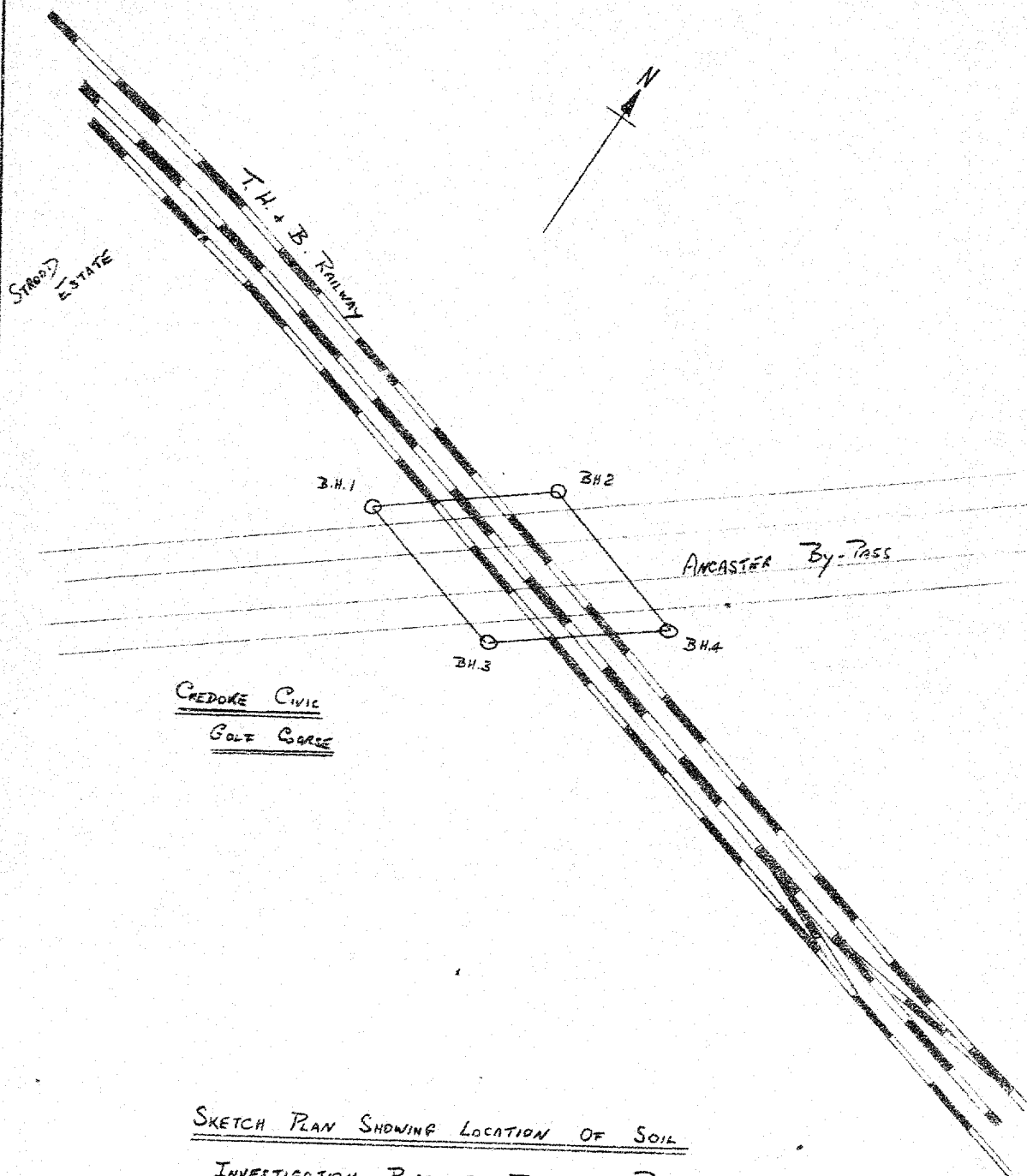
J.J. Schoustra

JJS/MD
In quadruplicate

Order No. S/500/T-745

Prep. By P.M.

Enclosure No. 1



SKETCH PLAN SHOWING LOCATION OF SOIL

INVESTIGATION BOREHOLES FOR THE PROPOSED

T.H. + B RAILWAY UNDERPASS ON THE ANCASTER

By-PASS ANCASTER ONTARIO

Order No.: S/500/T-745 RACEY, MACCALLUM AND ASSOCIATES
LIMITED

Hole Begun _____

Foundation Engineering Division

Driller _____

Hole Ended _____

Engineering Data Sheet for Borehole: 1

Helper _____

Job Name: Foundation Investigation For Railway Underpass

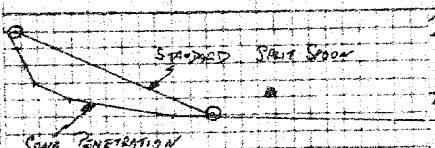
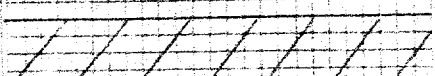
Job Located: Ancaster By-Pass Ontario

Checked by _____

Hole Located: See Enclosure No. 1

Hole Elevation: 324.5 Datum: M.S.L.

Day _____ Month _____ Year _____

DEPTH	EL	THICK- NESS	SYMBOL	DESCRIPTION	TAPULAR VALUES					SAMPLING METHOD
					Penetration Resistance					
					20	40	60	80	100	
0	324.5			Ground Surface						SS1
6	318.5			Brown medium sand with gravel						SS2
11	313.5			Weathered shale and limestone						
15	309.5			Red shale and limestone						

Hole Begun _____

Foundation Engineering Division

Hole Ended _____ Engineering Data Sheet for Borehole: 2

Helper

Job Name: Foundation Investigation For Railway Underpass

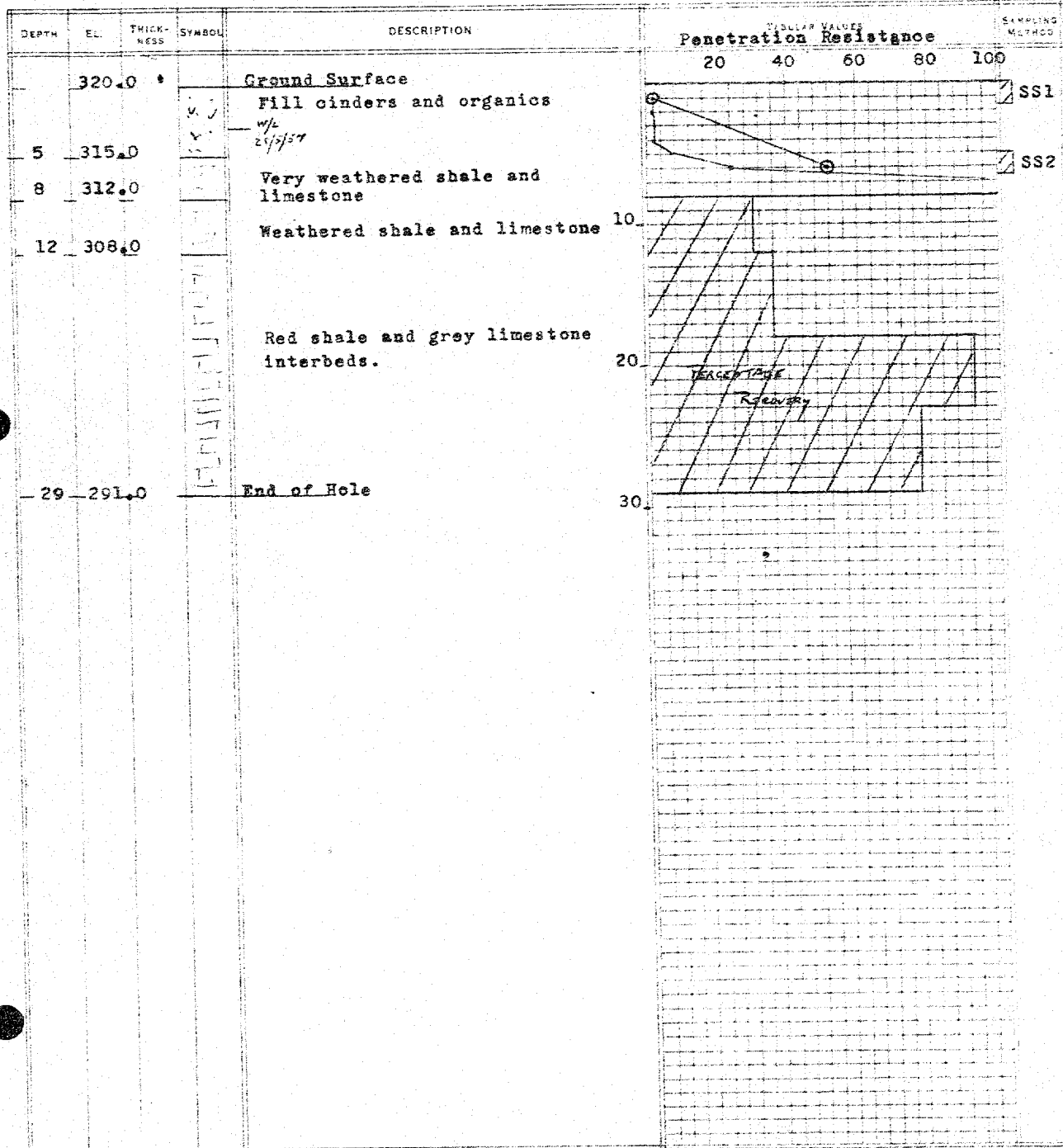
Job Located: Ancaster By-Pass Ontario

Checked by

Hole Located: See Enclosure No. 1

Hole Elevation: 320.0 Datum: M.S.L.

Day Month Year



Order No.: S/500/T-745 RACEY, MACCALLUM AND ASSOCIATES

LIMITED

Order

Hole Begun _____

Foundation Engineering Division

Hole Ended _____

Engineering Data Sheet for Borehole: 3

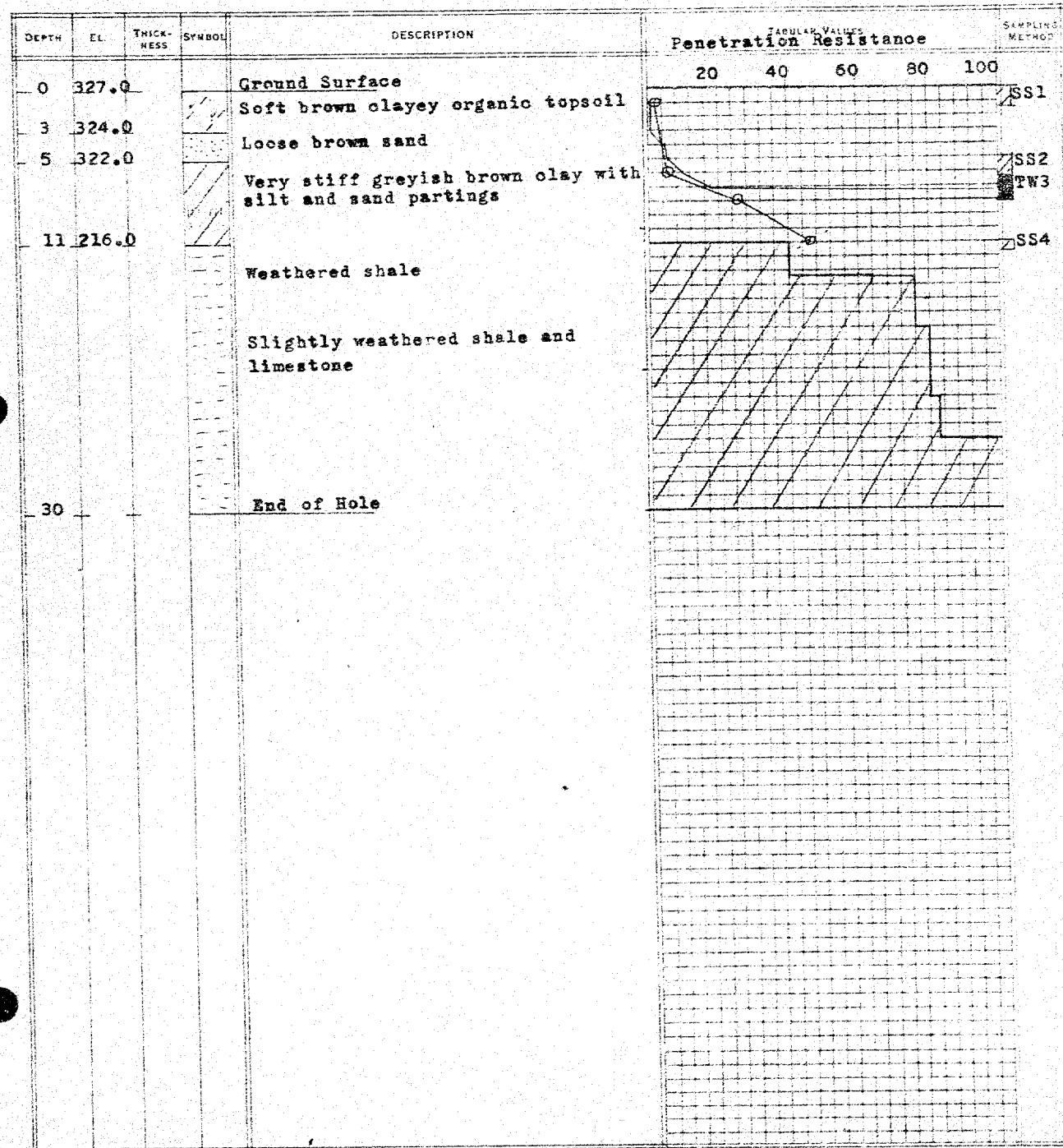
Helper

Job Name: Foundation Investigation For Railway UnderpassJob Located: Ancaster By-Pass Ontario

Checked by _____

Hole Located: See Enclosure No. 1Hole Elevation: 327.0 Datum: M.S.L.

Day _____ Month _____ Year _____



Order No.: S/500/T-745 **RACEY, MACCALLUM AND ASSOCIATES**

LIMITED

Driller

Hole Begun

Foundation Engineering Division

Hole Ended

Engineering Data Sheet for Borehole: 4

Helper

Job Name: Foundation Investigation For Railway UnderpassJob Located: Ancaster By-pass OntarioHole Located: See Enclosure No. 1Hole Elevation: 325.4 Datum: M.S.L.

P.M.

Checked by

Day Month Year

DEPTH	EL.	THICK- NESS	SYMBOL	DESCRIPTION	TABULAR VALUES					SAMPLING METHOD
					Penetration Resistance					
0	325.4			Ground Surface	20	40	60	80	100	SS1
				Black dirt fill cinders and organics						
4	321.4			Medium dense brown sandy clay with some gravel & weathered shale						SS2
8	317.4			Slightly weathered red shale and limestone interbeds						SS3
16	309.4			End of Hole						