Mr. A. M. Toye,
Bridge Engineer.
Materials & Research Section.

April 24, 1961.
D.H.O. Foundation Investigation
W.P. 208-60, W.J. 61-F-25.

Attention: Mr. S. McCombie.

Re: Boyne River and King's Highway #60,
(Approx. 13miles W. of Huntsville)
Twp. of Franklin, Dist. of Muskoka
District #11.

Due to the intended improvement of Hwy. #60, the part of the highway, where the Boyne River crosses the road, is moved approx. 42 feet to the right of the existing centre line. The chainage at this point is 224+24 for the new line.

In order to determine the soil properties and decide on the type of foundations, an investigation was carried out by this section. The field investigations have been confined to four sampled boreholes, supplemented by the same number of cone penetration holes. 5 feet of core was taken in each borehole.

The elevations as well as the locations (chainages)

cont'd. /2 ...

of the boreholes, are given on Drawing No. 61-F-25A, attached to this report (Appendix I).

The stratigraphy of the soil at the site was found to be quite uniform. The top 3 to 4 feet are formed by topsoil, underlain by loose to medium dense sandy silt, followed by sound light blue granite bedrock.

The ground water table was found very high due to the high water in the Boyne River. The high water also precluded the sinking of the boreholes at the indicated locations. The boreholes have been placed at the closest possible location to the indicated on the drawing, supplied by the Planning and Design section.

Because of the loose state of the sandy silt layer, spread footings have to be ruled out. It is therefore recommended that steel "H" or wooden end bearing piles driven down to bedrock, be used. The safe load per steel "H" pile should not surpass 40 tons, and that of a wood pile, 20 tons.

If the bridge is to be built in the summer when the ground is dry, the footing plates for formworks, can be placed on the exposed surface of the sandy silt layer. The maximum bearing loads should not exceed 0.5 tons/sq. ft.,

cont'd. /3 ...

provided the soil contains no organic matter and is not softened by standing or running water.

Problems due to water seeping into the excavations are likely to present some difficulty. Wooden cofferdams will have to be erected and pumping facilities employed.

REPORT PREPARED BY: R. J. Sakas
for W. Kulmatickas,
Project Fdn. Engineer

REPORT APPROVED BY: A. G. Stermac
A. G. Stermac,
Supervising Fdn. Engineer

Attach.
WK/tt
c.c. Messr. A. M. Toye (2)
H. A. Tregaskes
H. D. McMillan
G. F. Hunter
H. C. Dernier
T. J. Kovich
A. Watt
Foundations Office
General Files

APPENDIX I

#61-F-25

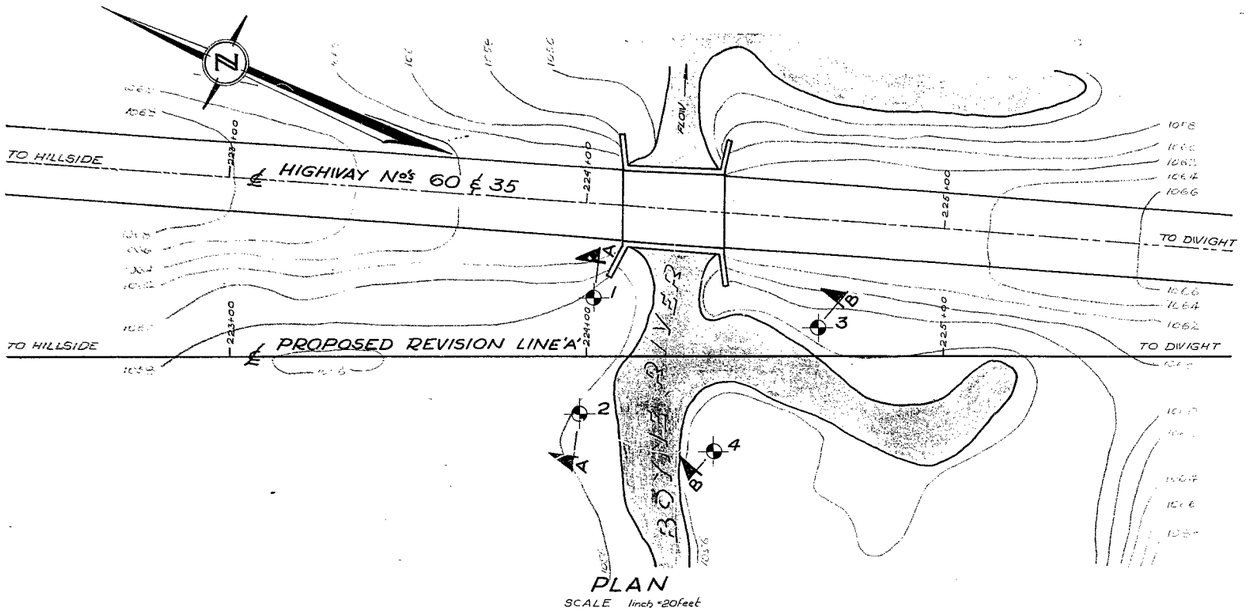
W.P. # 208-60

Hwy. #60 &

BOYNE RIVER

13 MILES W. OF

HUNTSVILLE

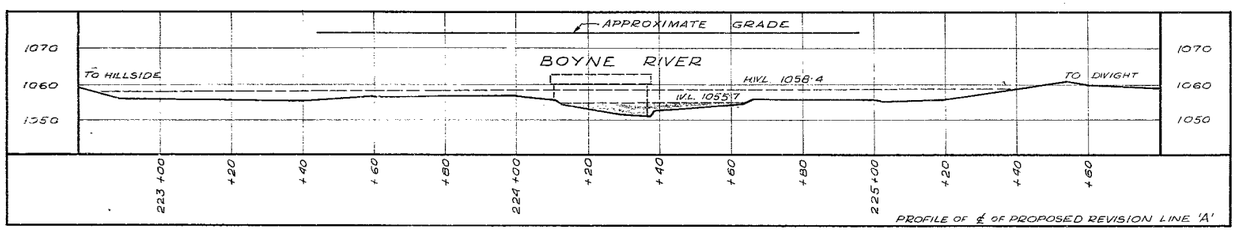


PLAN

SCALE 1inch =20feet

KEY PLAN

SCALE 1in. = 2 mi.



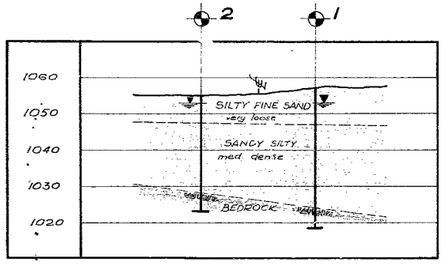
PROFILE

SCALE 1inch =20 feet

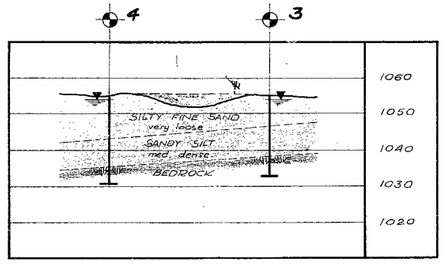
LEGEND

BORE AND PENETRATION HOLE

HOLE	ELEVATION	STATION	DISTANCE FROM ℄
1	1057·4	224+04	26·5' RT
2	1055·2	224+02·5	5·9·75'Rt
3	1055·7	224+66·5	30·5'RT
4	1055·3	224+40·0	66·0RT



A – A



B – B

REFERENCE PLAN E-3945-1

DEPARTMENT OF HIGHWAYS - ONTARIO

MATERIALS & RESEARCH SECTION

BOYNE RIVER & HWY 60 & 35 LINE 'A' REVISION

AT STATION 224+24

ORIGINATED W. KULMATICKAS	DISTRICT NO. 11	DATE 28 APR. 1961
DRAWN	W.P. NO. 208-60	JOB NO. 61-F-25.
CHECKED	SCALE 1inch =20feet	DRAWING NO. 61-F-25A.
APPROVED		