

MEMORANDUM

To: Mr. A. Stermac,
Principal Foundation Engineer,
Materials and Testing Division,
DOWNSVIEW, Ontario.

FROM: Mr. R. S. Pillar,
Sr. Project Design Engineer,
Road Design Division,
KINGSTON, Ontario.

DATE: May 27 1966.

OUR FILE REF.

IN REPLY TO

SUBJECT:

W.P. 251-60 - Jack Creek Structure - Highway #62, *Cont 257-60*
W.P. 67-58 - Bonnechere River Structure - Highway #62,
5.0 miles north of Highway #60.

Both these structures were investigated by your section approximately 5 years ago. In the intervening period we have managed to misplace our copies of the Foundation Reports. At your convenience could you supply me with two copies of each report.

R.S. Pillar

R. S. Pillar,
SR. PROJECT DESIGN ENGINEER.

RSP/mac

c.c. - S. J. Markiewicz

R. McCormick
As requested -

Reports sent June 7, 1966

Mr. A. M. Toye,
Bridge Engineer.

Materials & Research Section,
(Foundations Office).

Attention: Mr. J. B. Curtis,
Bridge Location Engr.

July 24, 1961.

REVIEW OF PRELIMINARY PLAN -

By: Foundations Office.

Re: W.P. 67-58,
Bonnechere River Bridge, (Approx. 4 Mi.
Hwy. #62 - District #10. N. of Killaloe)

We have reviewed the Preliminary Plan (Drawing No. D-4903-P) for the above noted structure and would like to make the following comment:-

The soil investigation has revealed the presence of a large number of boulders overlying bedrock. It was also established that the bearing capacity of the upper layer was such that spread footings could not have been considered and it was therefore recommended that the structure be founded on piles. Heavy steel 'H' piles were suggested. The designer has complied with the basic recommendation, but we believe that it would be more appropriate to use heavier steel 'H' piles such as BP 14 (73 lb./ft.). The possibility of buckling, bending and damaging the pile when it encounters boulders is decreased and the probability of reaching bedrock increased.

L. G. Soderman,
PRINCIPAL FOUNDATION ENGR.

Per:

AGS/MdeF

cc: Foundations Office
Gen. Files.

A. G. Stermac
(A. G. Stermac,
SUPERVISING FOUNDATION ENGR.)

OFFICE LOCATION -
DOWNSVIEW AVE.,
KEELE ST. - HIGHWAY 401
TORONTO, ONTARIO.



ONTARIO
DEPARTMENT OF HIGHWAYS

POSTAL ADDRESS -
DEPARTMENT OF HIGHWAYS
PARLIAMENT BUILDINGS,
TORONTO 5, ONTARIO.

Bridge Division,
July 21, 1961.

MEMORANDUM TO:

Mr. A. G. Stermac,
Foundation Office Engineer,
Department of Highways,
Room #107,
Downsview, Ontario.

RE: W.P. 67-58,
Hwy. #62 @ Bonnechere R.
@ Tramore Line "D",
District #10

Enclosed find one copy of the preliminary plan
for the above structure.

The designer appears to have complied with the
requirements of the foundation report but we would
appreciate any comments you wish to make.

JBC/eh
c.c. N. D. Smith

J.B. Curtis,
Bridge Location Engineer.

Henry:

Could I have the Report, please

July 24, 1961.

Tony

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

January 11, 1960.

FOUNDATION INVESTIGATION - D.H.C.

W.P. 67-58 -- W.J. F 59-114.

(Supplemental Borings)

Attention: Mr. H. McCombie.

Re: Bonnechere River Crossing - Hwy. 62,
County of Renfrew, Township of Magarty,
Lots 5 & 6, Con. XIII, 5 Miles North of
Hillsdale Station -- District No. 10.

In response to a request from your Mr. Bruce Davis, we have carried out an additional six sampled borings at the above proposed structure location. These borings were requested to be carried out on lines paralleling the centreline of the existing structure, offset distances of 30 feet Left and Right. The purpose of these borings was to determine whether or not a more economical structure could be designed at this location, rather than at the initially proposed location approximately 400 feet upstream of the existing structure.

Information on the subsoil conditions obtained in the supplemental boring program, is shown in detail, on the attached plan and profile. Information shown on this profile has been given to the Design Group in the preliminary form. The results of the additional borings show that the deposit of soft organic silt which occurred at the initially proposed location, does not occur in the vicinity of the existing bridge. On both lines investigated on offsets 30 feet Left and Right of the existing structure, the subsoil consists of a deposit of silt, sand, and boulders overlying bedrock. The relative density of this granular stratum is such that spread footings cannot be supported at a shallow depth in this layer.

It is our recommendation that footing support be obtained by driving short, heavy steel 'H' pile sections to the underlying bedrock. The elevation of the bedrock at each of the boring locations is shown on the attached plan.

The approach embankment fills can be designed with standard 2:1 slopes. The upstream slopes of the approach fills should be protected with rip-rap.

If we can be of further assistance in connection with the design of the above structure, please do not hesitate to call our Office.

L. G. Soderman

LAG/MGP
Encl.

L. G. Soderman,
PRINCIPAL SOILS & FOUNDATIONS ENGINEER

cc: Messrs. A. M. Toye (2)
H. A. Tregaskes
B. C. Haasay
I. Campbell
C. H. Robertson
J. E. Crispier
A. Watt

Foundation Section.
Gen. Files.

APPENDIX I.

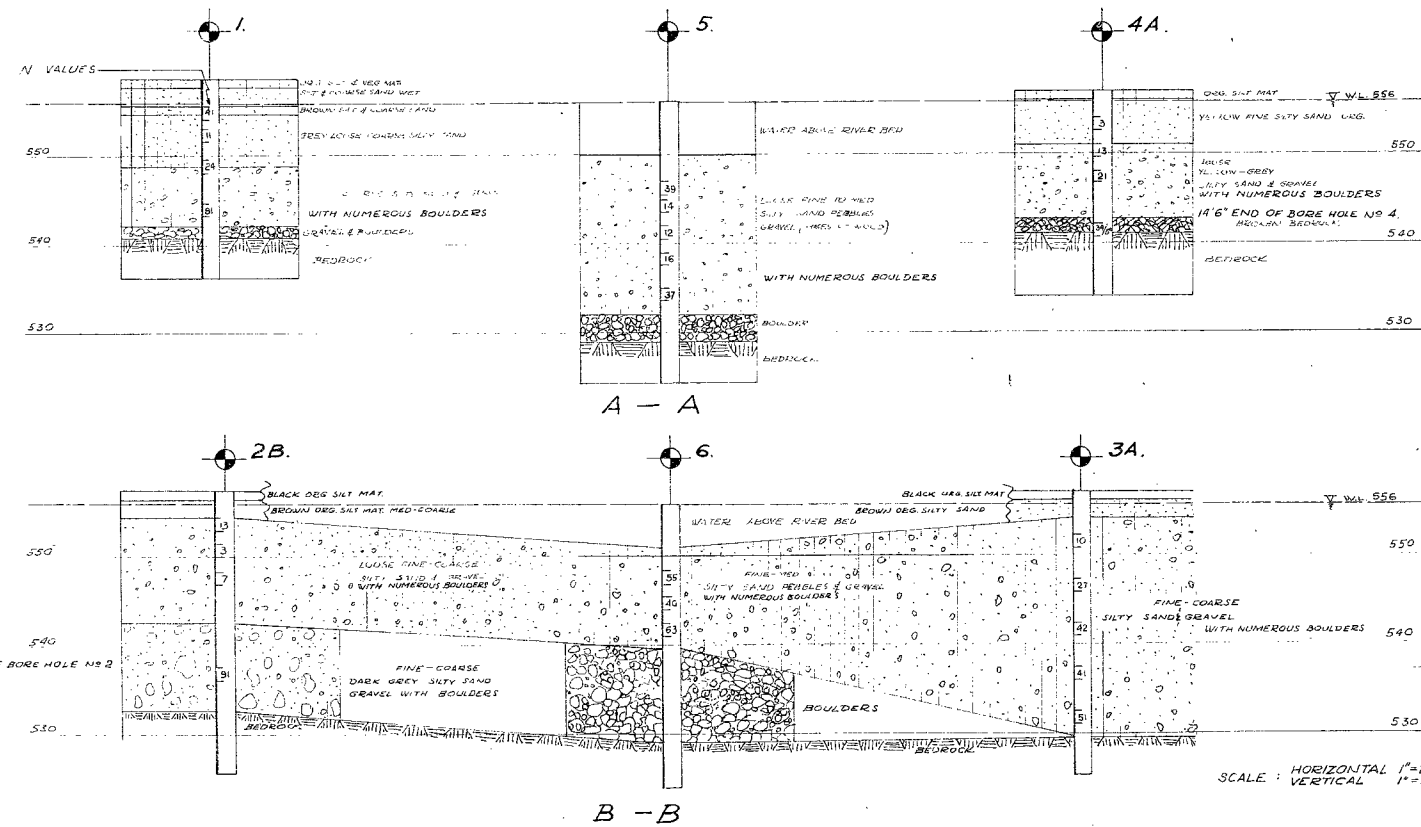
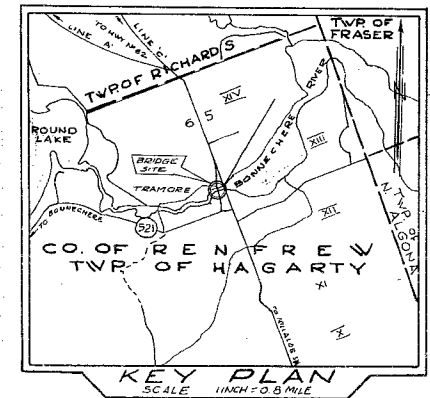
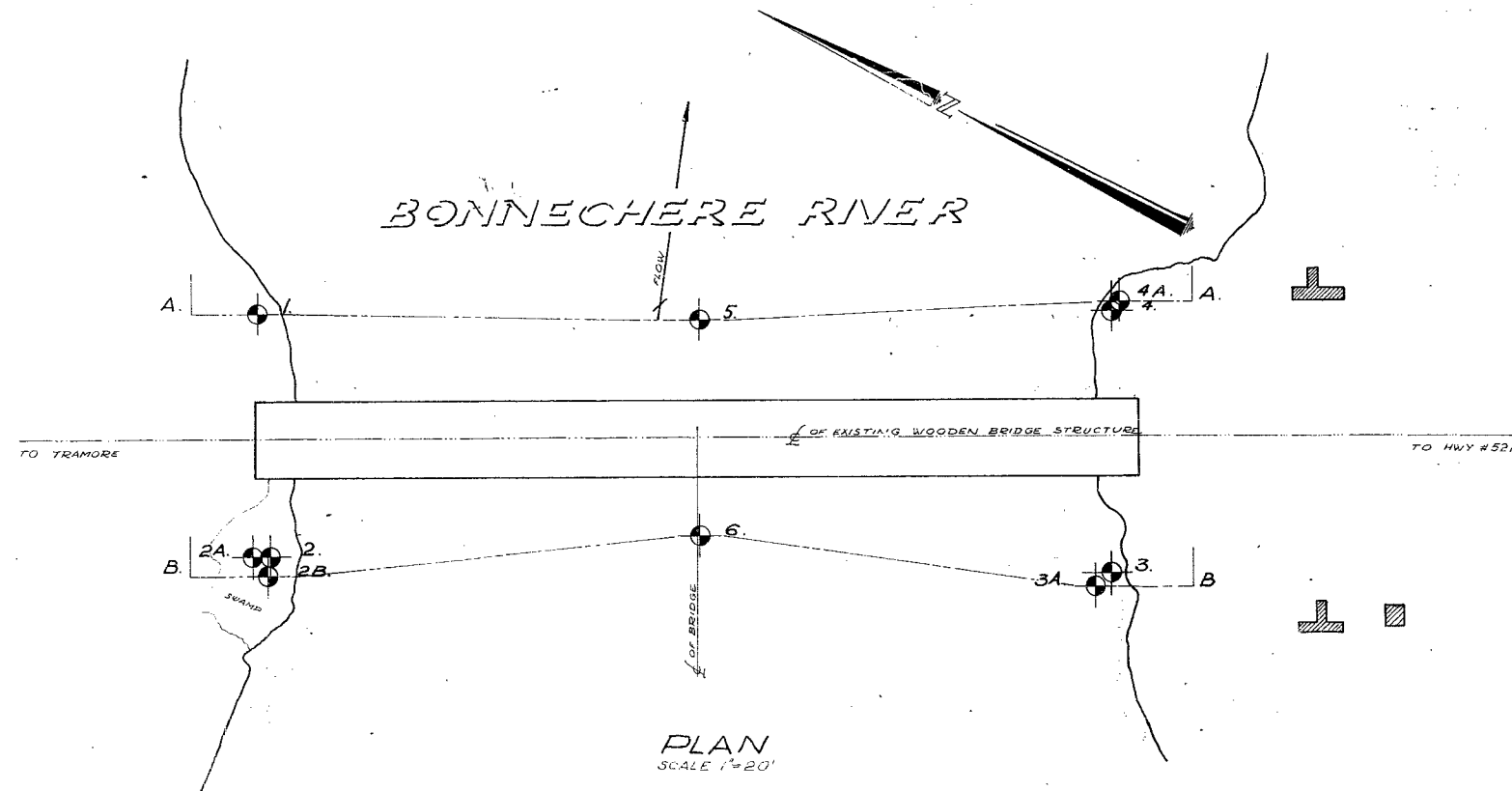
#59-F-114

W.P. #67-58

HWY. #62 &

BONNECHERE

RIVER REV'N



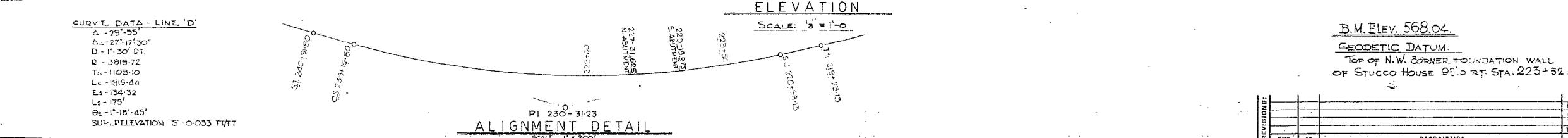
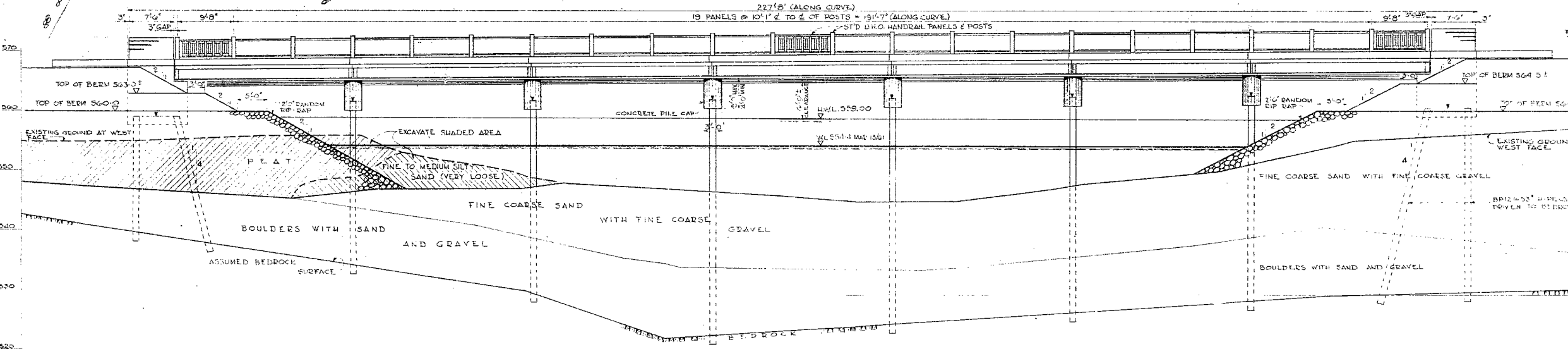
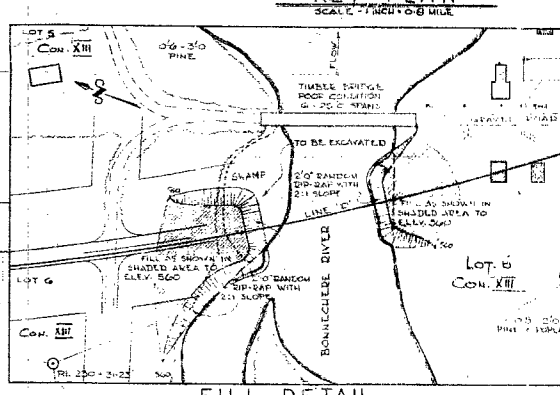
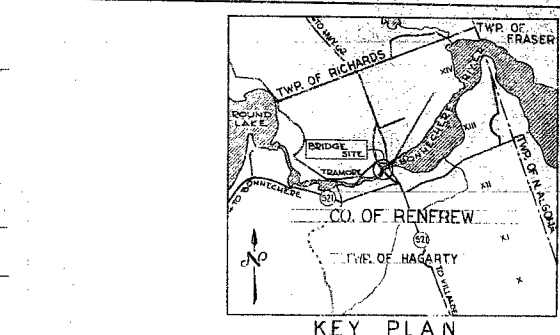
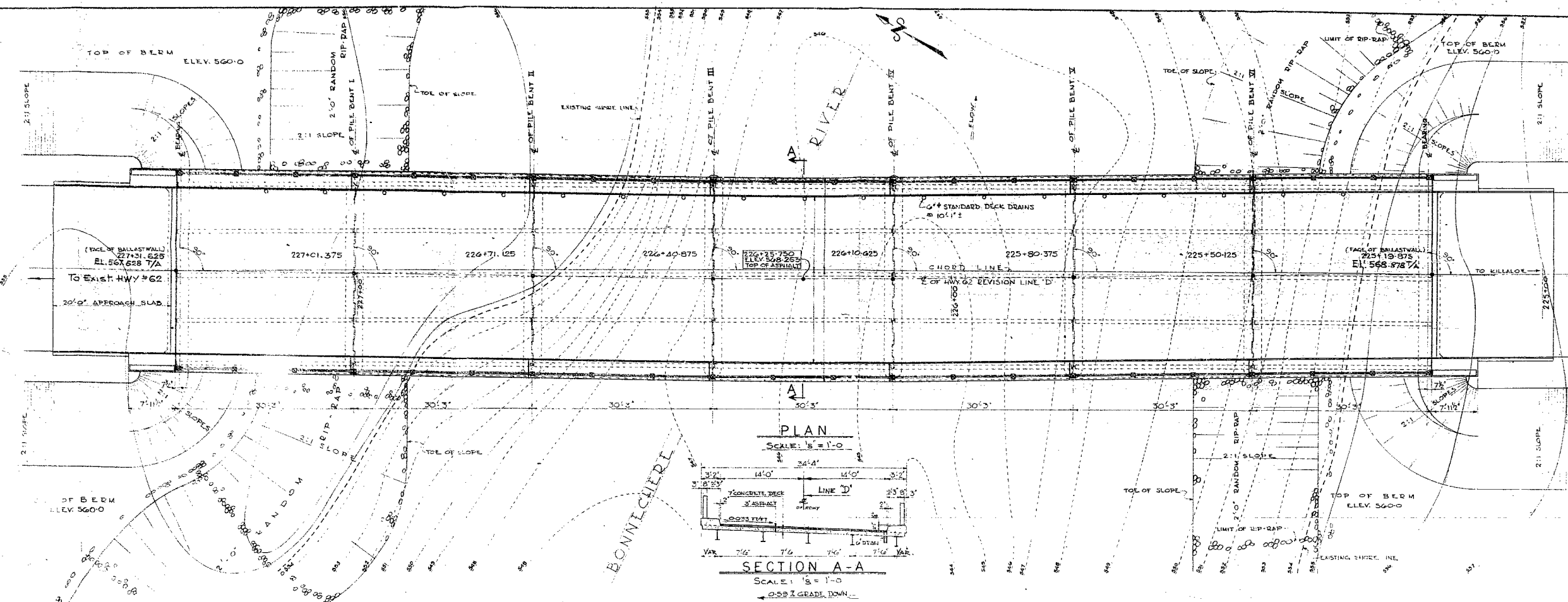
LEGEND

BORE & PENETRATION HOLE

NOTE

THE BOUNDARIES BETWEEN TOWNSHIPS HAVE BEEN LITTA
BUSHED ONLY AT BORE HOLE LOCATIONS. BETWEEN BORE
HOLES THE BOUNDARIES ARE ASSUMED FROM GEOMAT
EVIDENCE AND MAY BE SUBJECT TO CONSIDERABLE VARIATION

DEPARTMENT OF HIGHWAYS - ONTARIO			
MATERIALS & RESEARCH SECTION			
BONNECHERE RIVER CROSSING			
SHOWING POSITIONS & ELEVATIONS OF HOLES			
HWY 62 PROP	DISTRICT 10	COUNTY RENFREW	
TOWNSHIP HAGARTY	LOI 5 & 6	CON. XIII	
LOCATION 5 MILES NORTH OF KILLALOE STATION			
DRAWN BY J. J. J. J.	CHECKED BY	W. 67-58	
DATE 6 JAN 1960	APPROVED BY	DRAWING NO.	
SCALE AS SHOWN		F-59-114 A.	



REVISIONS

NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			
6			
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10			

DEPARTMENT OF HIGHWAYS-ONTARIO
BRIDGE OFFICE - TORONTO

BONNECHERE RIVER BRIDGE
APPROX. 4 MILES NORTH OF KILLALOE

THE KING'S HIGHWAY NO. 42 REV'D LINE 'D' DIST. NO. 10
CO. DENTREW
TWP. HAGARTY LOT 6 CON. XIII

- PRELIMINARY -

APPROVED

BRIDGE ENGINEER		DESIGN ENGINEER	
DESIGN	A.P.	CHECK	N.M.
DRAWING	J.H.I.	CHECK	N.M.
TRACING		CHECK	
DATE	July 1961	DATE	July 1961

REFERENCE PLANS
S. 3943-1
G.I.F. 31A
F. 3791-5
BA 256A

DRAWING NUMBER
D-4903-P