

23-62-254

Mr. A. H. Foye,
Bridge Engineer,
Materials & Research Section,
(Foundations Office).

October 4, 1961.

D.E.O. FOUNDATION INVESTIGATION
REPORT.
W.J. 61-F-95 -- W.P. 280-60.

Attention: Mr. E. McElshie

Re: Palliser Creek & King's Highway #14, Line 'C',
(Approx. 1/2 Mile West of the Village of Foxboro,
Twp. of Sidney, Hastings County) District #2.

Attached, we are forwarding to you our report on
the subsoil conditions existing at the above structure location.

We believe the conclusions and recommendations
contained therein, should prove adequate for your future design
work.

If we can be of further assistance with respect to
this project, please feel free to contact our Office.

A. G. Stersac

A. G. Stersac,
PRINCIPAL FOUNDATION ENGINEER

cc/Heater
Attach.

cc: Heaters
A. H. Foye (2)
M. A. Tremblay
E. D. McMillan
J. Ford
A. A. Cash
J. E. Granger
T. J. Kovach
J. Roy
C. E. Saint
P. Norman
A. Watt
Foundations Office
Gen. Files.

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 2. FIELD PROCEDURES.
 3. SOIL CONDITIONS.
 4. RECOMMENDATIONS.
-

FOUNDATION INVESTIGATION

For

Falliser Creek & King's Highway #14, Line 'C'
(Approx. 1/2 Mile West of the Village of Foxboro,
Twp. of Sidney, Hastings County) District #8.
W.J. 61-P-95 -- R.P. 230-60

1. INTRODUCTION:

It is proposed to realign Hwy. #14 as shown on Drawing #61-P-95A. The proposed Line 'C' crosses Falliser's Creek between Sta. 275+00 and Sta. 279+00. Proposals include also, the diversion of Falliser's Creek. The new bridge will be located on this diversion.

An investigation was carried out by this Section to determine the subsoil conditions at the site of the proposed new bridge.

2. FIELD PROCEDURES:

Two boreholes and three dynamic cone penetration tests were carried out at the site. Rock core samples were taken in B.H. #1 and B.H. #3. Boreholes were located in the field by the field engineer. The locations and elevations of all boreholes are shown on Drawing #61-P-95A.

Ground water level was established in the boreholes to be approximately 6.0' below the ground surface at the time of the investigation.

3. SUBSOIL CONDITIONS:

Subsoil at the site consists of about 4' of topsoil followed by about 15.0' of medium stiff to stiff silty clay, followed by limestone bedrock. The upper two feet of the bedrock shows signs

3. SOIL CONDITIONS: (cont'd.) ...

of weathering. The average 'N' value of the silty clay deposit is about 10 blows per ft.

4. RECOMMENDATIONS:

Because of the estimated low bearing capacity of the silty clay subsoil, it is recommended that the structure be supported on short piles, and bearing on the bedrock. If the piles are placed below the lowest established water table, untreated timber piles with a design load of 20 tons per pile, may be used. If the piles are partly above the water table, they should be treated. Pile design should include provision for lateral thrust due to earth pressure behind the abutments. Dewatering should not prove to be a serious problem, because of the relative imperviousness of the subsoil.

Footing plates for formwork may be placed on the dry ground surface with the maximum load not exceeding 0.5 tons/sq.ft.

September 1961.

REPORT PREPARED BY:

Harold Widen
.....
H.W. Kulsticker,
PROJECT FOUNDATION ENGINEER

REPORT APPROVED BY:

M. Devata
.....
M. Devata,
SA. PROJECT FOUNDATION ENGR.

APPENDIX I.

W.P. 280-60

HOLE NO.	SAMP NO.	SAMPLE DEPTH (FEET)	MATERIAL DESCRIPTION	PENET'N RESIST. BLOWS FT.	MOIST. CONT. %	PLASTIC LIMIT %	LIQUID LIMIT %	SHEAR STRENGTH p.s.f.	UNIT WEIGHT p.c.f.	REMARKS
1	S1	5'-6.5'	Med. stiff silty clay.	9	25.2	-	-	-	-	
	S2	10'-11.5'	Stiff grey silty clay.	13	36.9	-	-	-	-	
	S3	15'-16.5'	Disintegrated Limestone mixed with clayey silt.	71	9.2	-	-	-	-	
	RC4	16.8'-21.8'	Bedrock-Limestone.	-	-	-	-	-	-	
2	Cone penetration only.									
3	S1	5'-6.5'	Stiff grey silty clay.	13	29.4	-	-	-	-	
	S2	10'-11.5'	Med. stiff silty clay.	9	13.7	-	-	-	-	
	S3	15'-16.5'	Stiff grey silty clay with fragments of limestone.	23	26.4	-	-	-	-	
	RC4	16.5'-18.5'	Bedrock-Limestone.	-	-	-	-	-	-	
4	Cone penetration only.									
			S denotes split spoon sample. RC " rock core "							

OFFICE REPORT ON SOIL EXPLORATION

DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS AND RESEARCH SECTION

W.P. 280-60 BORE HOLE NO. 1

JOB 61-F-95 STATION 276+16 (22' Rt.)

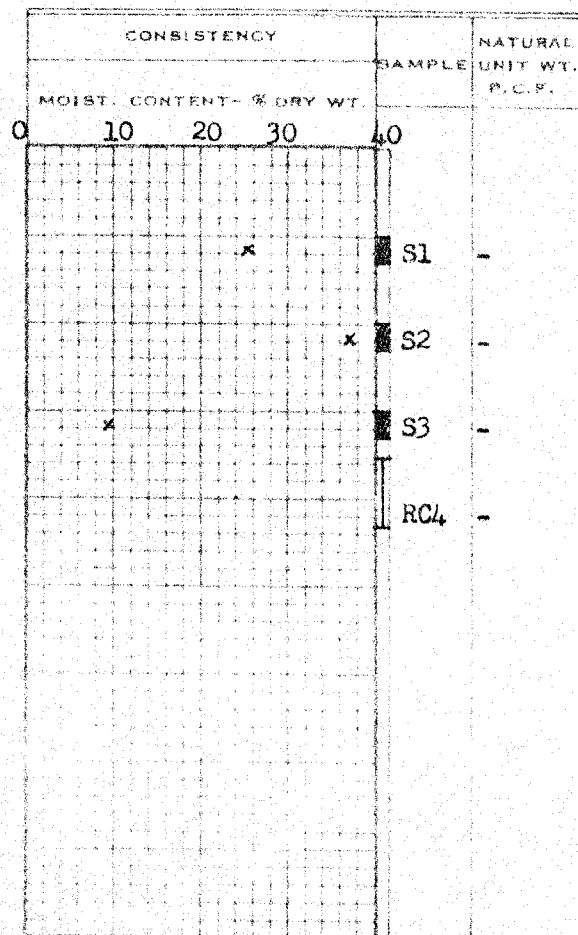
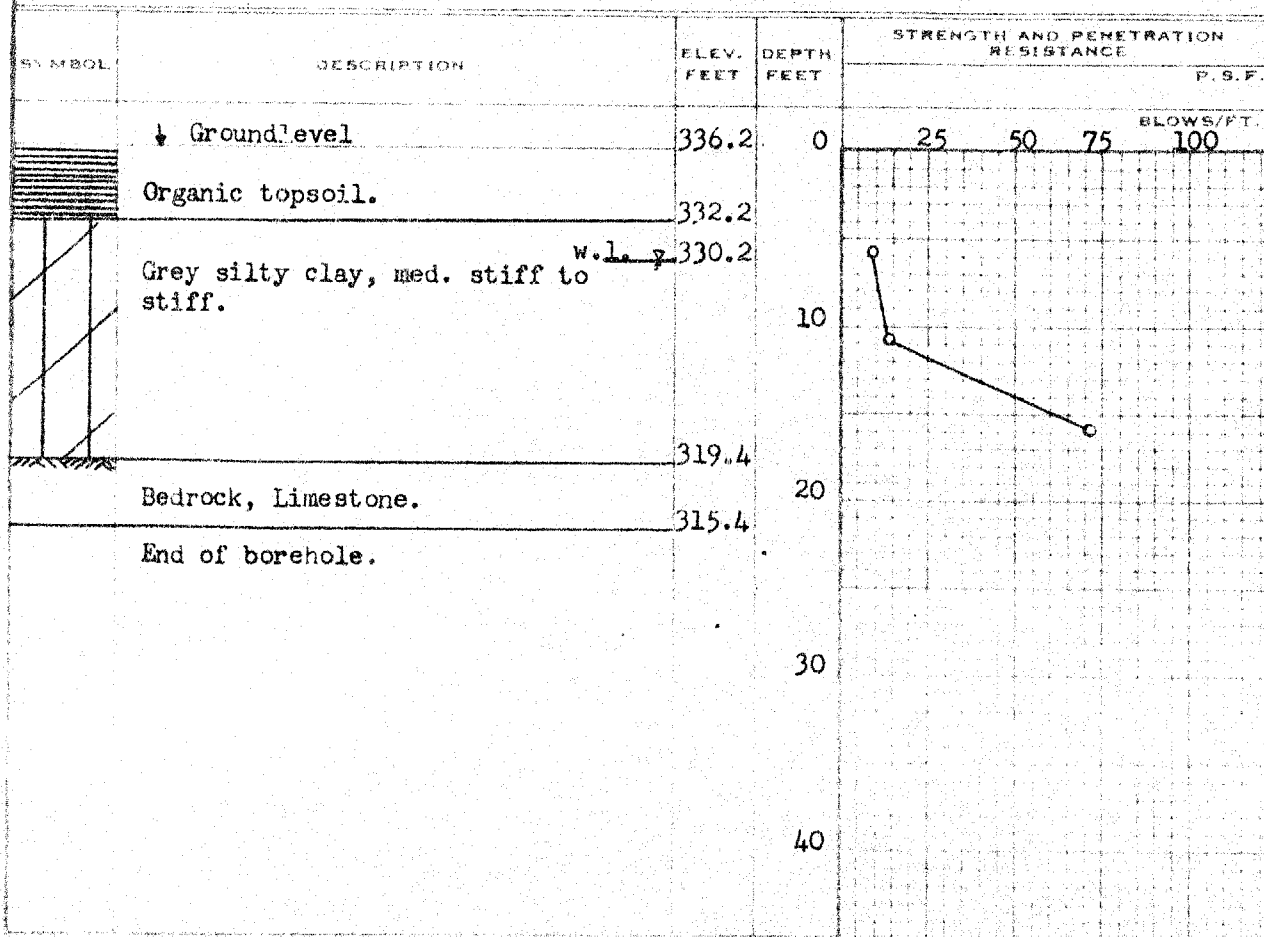
DATUM 336.2' COMPILED BY B.K.

BORING DATE Sept. 21/61. CHECKED BY W.W.K. & M.D.

2" DIA. SPLIT TUBE _____
 2" SHELBY TUBE _____
 2" SPLIT TUBE _____
 2" DIA. CONE _____
 2" SHELBY _____
 CASING _____

LEGEND

1/2 UNCONFINED COMPRESSION (Q_u) _____
 VANE TEST (C) AND SENSITIVITY (S) _____
 NATURAL MOISTURE AND LIQUIDITY INDEX _____
 LIQUID LIMIT _____
 PLASTIC LIMIT _____



DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS AND RESEARCH SECTION

W. P. 280-60 _____ BORE HOLE NO. 2 _____

JOB 61-F-95 STATION 275/97 (22' Lt.)

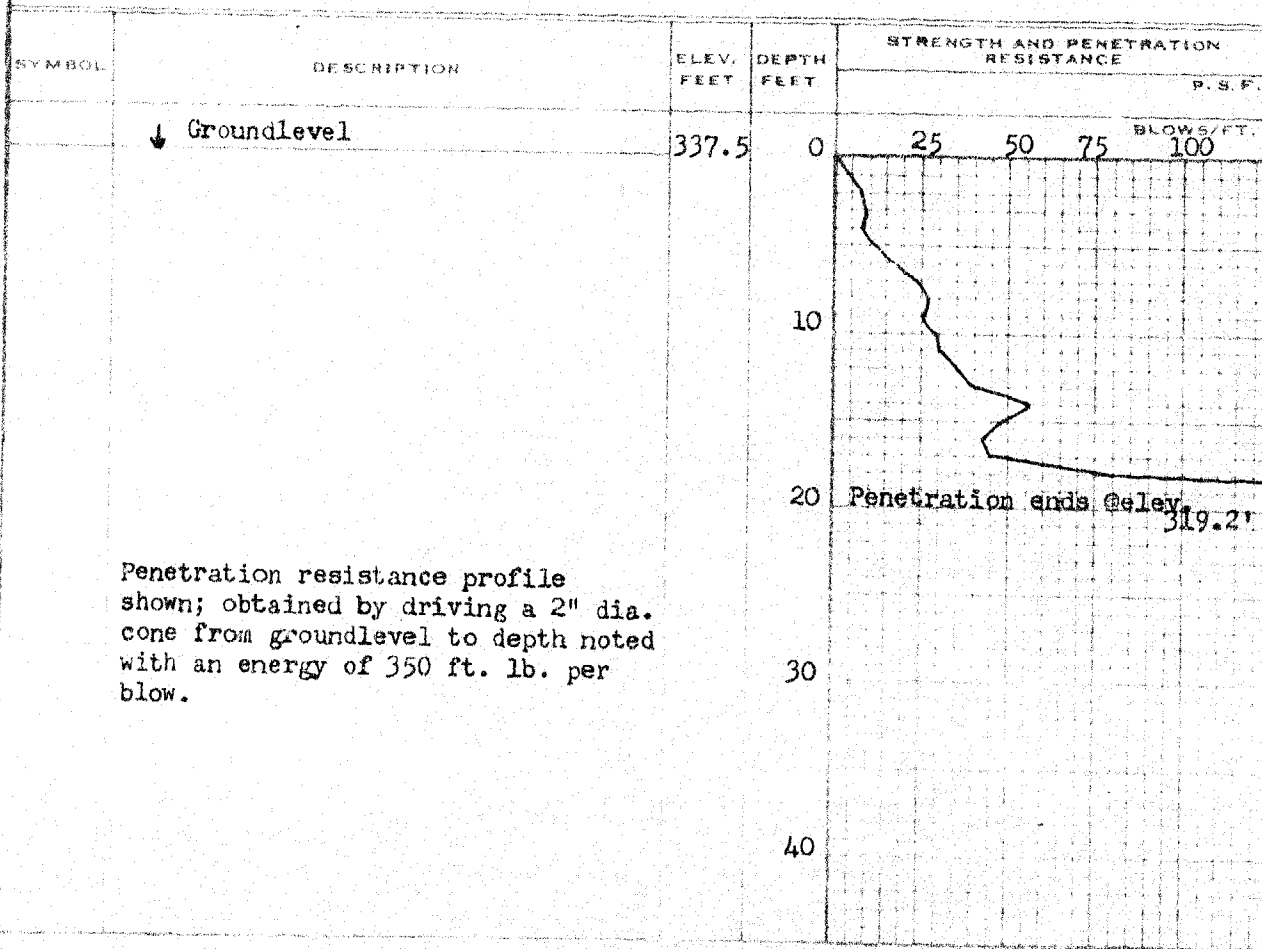
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BORING DATE Sept. 22/61. CHECKED BY W.W.K. & M.D.

2" DIA. SPLIT TUBE
2" SHELBY TUBE
2" SPLIT TUBE
2" DIA. CONE
2" SHELBY
CASING

LEGEND

1/2 UNCONFINED COMPRESSION (Qu)	0
VANE TEST (C) AND SENSITIVITY (S)	+3
NATURAL MOISTURE AND	
LIQUIDITY INDEX	LI
LIQUID LIMIT	X
PLASTIC LIMIT	



CONSISTENCY		NATURAL UNIT WT. P.C.P.
MOIST. CONTENT - % DRY WT.		

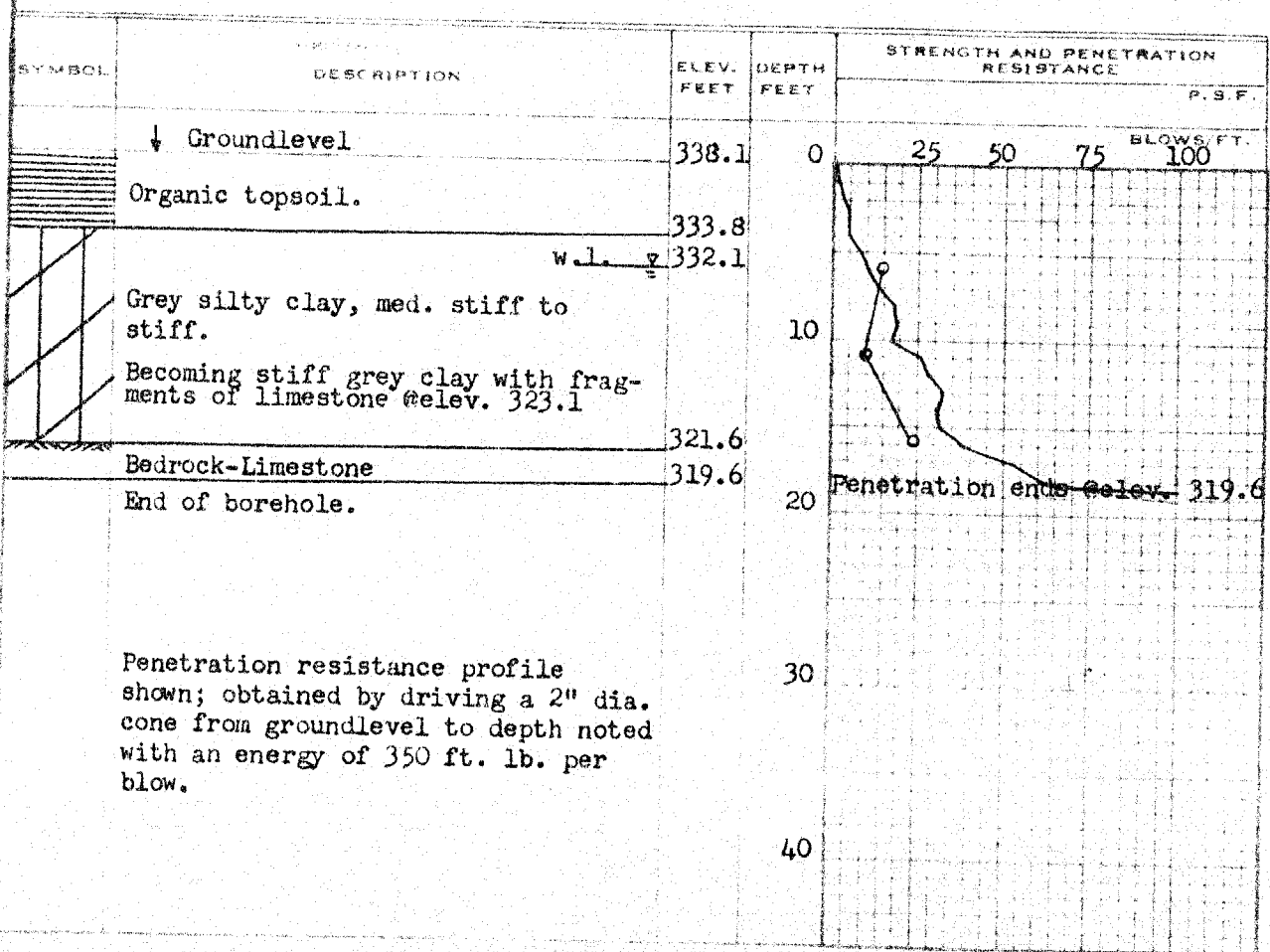
DEPARTMENT OF HIGHWAYS - ONTARIO
MATERIALS AND RESEARCH SECTION

W.P. 280-60 BORE HOLE NO. 3
JOB 61-F-95 STATION 275+52 (22' Lt.)
DATUM 338.1' COMPILED BY B.K.
BORING DATE Sept. 22/61. CHECKED BY W.W.K. & M.D.

2" DIA. SPLIT TUBE
2" SHELBY TUBE
2" SPLIT TUBE
2" DIA. CONE
2" SHELBY
CASING

LEGEND

1/2 UNCONFINED COMPRESSION (Qu) -----	O
VANE TEST (C) AND SENSITIVITY (S) -----	+3
NATURAL MOISTURE AND	
LIQUIDITY INDEX -----	L
LIQUID LIMIT -----	X
PLASTIC LIMIT -----	



CONSISTENCY		SAMPLE	NATURAL UNIT WT P.C.F.			
MOIST. CONTENT - % DRY WT.						
0	10	20	30	40		
					S1	-
					S2	-
					S3	-
					RC4	-

W.P. 280-60 BORE HOLE NO. 4
JOB 61-F-95 STATION 275+72 (22' Rt.)
DATUM 338.0' COMPILED BY B.K.
BORING DATE Sept. 22/61. CHECKED BY W.W.K. & M.D.

2" DIA. SPLIT TUBE
2" SHELBY TUBE
2" SPLIT TUBE
2" DIA. CONE
2" SHELBY
CASING

1/2 UNCONFINED COMPRESSION (Qu) -----	0
VANE TEST (C) AND SENSITIVITY (S) -----	+s
NATURAL MOISTURE AND	
LIQUIDITY INDEX -----	X
LIQUID LIMIT -----	
PLASTIC LIMIT -----	

SYMBOL	DESCRIPTION	ELEV. FEET	DEPTH FEET	STRENGTH AND PENETRATION RESISTANCE	
				P.S.F.	
	↓ Groundlevel	338.0	0		
Penetration resistance profile shown; obtained by driving a 2" dia. cone from groundlevel to depth noted with an energy of 350 ft. lb. per blow.				Penetration ends @elev. 322.1'	

[illegible]

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,
December 21, 1961.

MEMORANDUM TO:

Mr. A. G. Stermac,
Principal Foundation Eng.,
Department of Highways,
Room 107, Lab. Bldg.,
DOWNSVIEW, Ontario.

Ken: Dec 27, 1961
Alg

RE: W.P. 280-60
Hwy. No. 14 @ Palliser Ck.
on the Foxboro By-Pass
District No. 8

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.

We have used steel "H" piles in lieu of the
recommended timber piles due to the fact that they
can be purchased at next to scrap value because of
the short lengths required.

A handwritten signature in ink, appearing to read 'J. B. Curtis'.

JBC/ea
cc. D. Smith

J. B. Curtis,
Bridge Location Engineer.

As recommended.

Blk

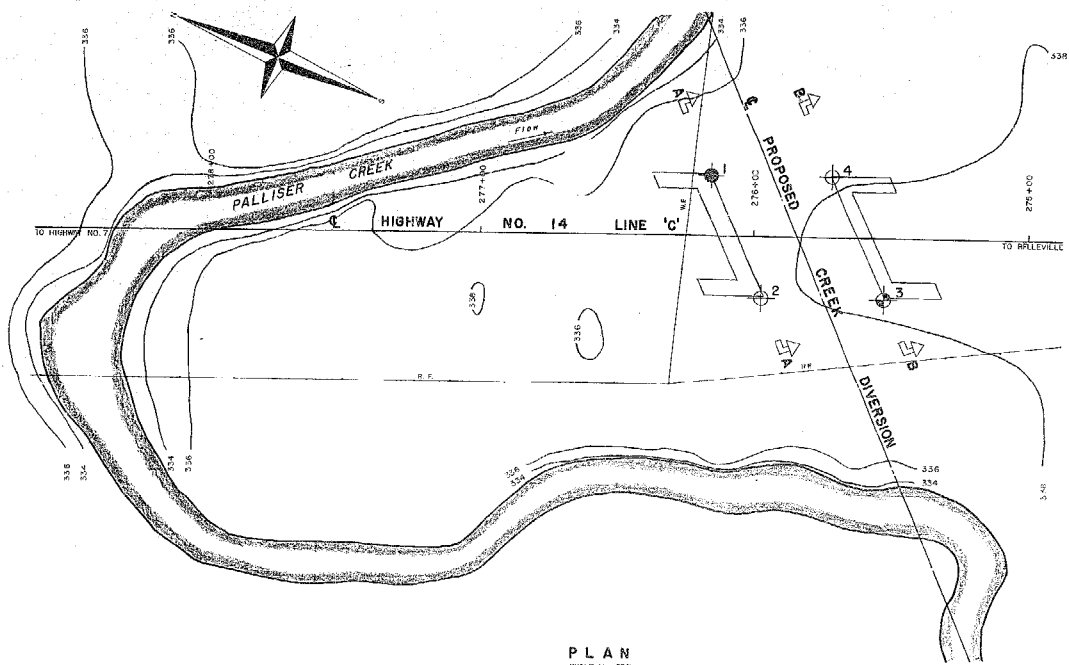
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W.P. # 280-60

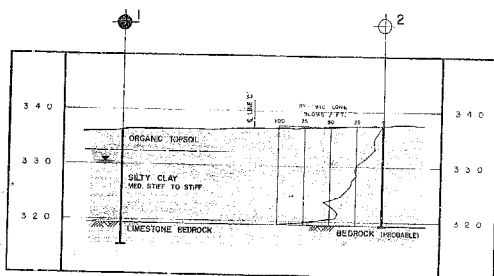
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PALLISER

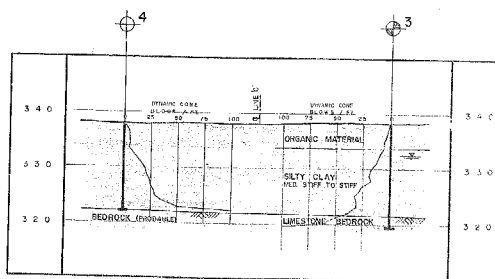
CREEK



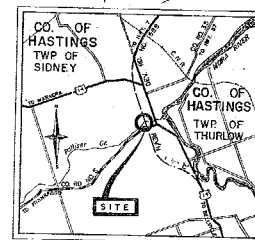
PLAN
SCALE 1 in = 30 ft



A - A
SCALE 1 in = 10 ft



B - B
SCALE 1 in = 10 ft



KEY PLAN
SCALE 1 inch = 1 mile

LEGEND

- BORE HOLE
- PENETRATION HOLE
- BORE & PENETRATION HOLE
- WATER LEVEL established at time of field investigation, SEPT. 22, 1961

HOLE	ELEVATION	STATION	OFFSET
1	335.2	276+18	22' RT.
2	337.5	275+87	22' LT.
3	338.1	275+52	22' LT.
4	338.0	275+72	22' RT.

3383.00
45013.00
214.00

NOTE

THE BOUNDARIES BETWEEN SOIL STRATA HAVE BEEN ESTABLISHED ONLY AT BORE HOLE LOCATIONS. BETWEEN BORE HOLES THE BOUNDARIES ARE ASSUMED FROM GEOLOGICAL EVIDENCE AND MAY BE SUBJECT TO CONSIDERABLE ERROR.

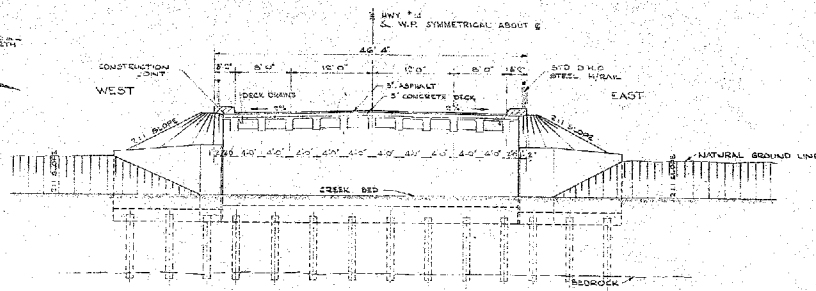
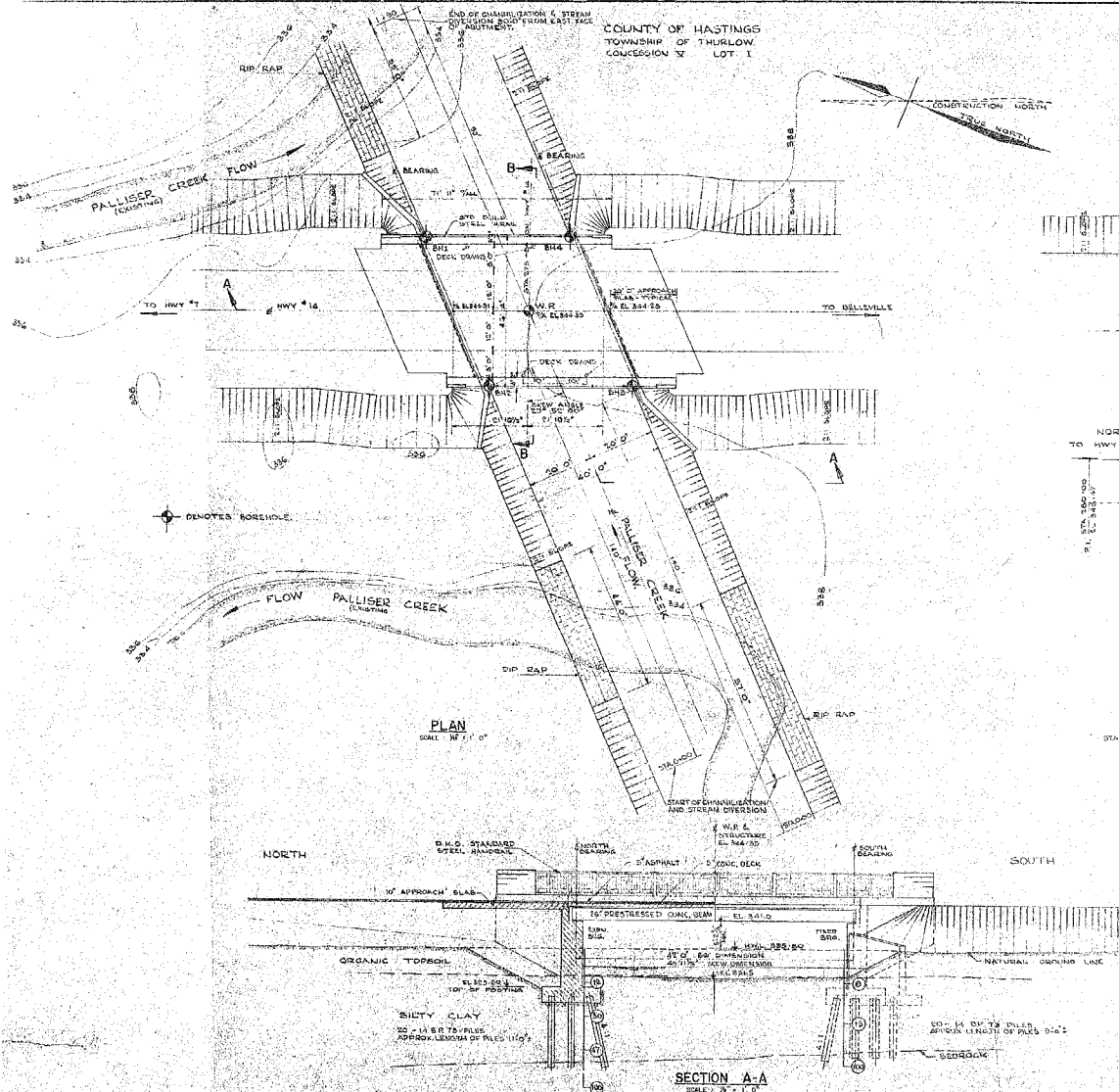
DEPARTMENT OF HIGHWAYS - ONTARIO MATERIALS & RESEARCH SECTION

PALLISER CREEK DIVERSION AND HIGHWAY NO. 14 REVISION LINE 'C'

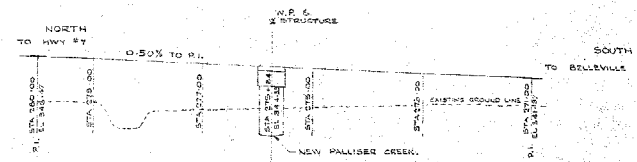
ORIGINATED BY: K. M. L. (1961)	DISTRICT NO. 8	DATE: 17 OCT 1961
DESIGNED BY: D. B. (1961)	W.P. NO. 280-80	JOB NO. 61-F-95
CHECKED BY: [Signature]	SCALE	DRAWING NO.
APPROVED BY: [Signature]	AS SHOWN	61-F-95A

REF. NO. C-4013-1

COUNTY OF HASTINGS
TOWNSHIP OF THURLOW
CONCESSION V LOT 1



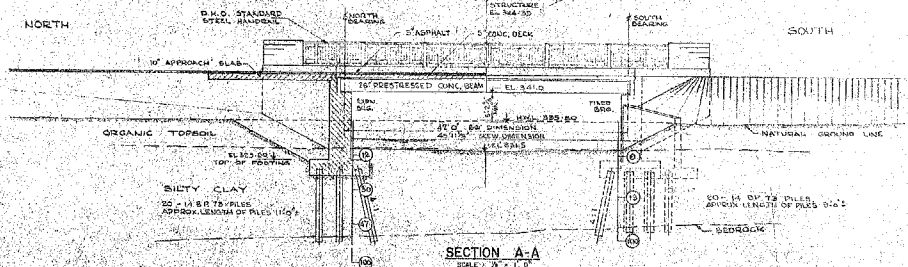
SECTION B-B
SCALE: 1" = 10'



PROFILE AT CROWN OF FINISHED PAVEMENT HWY #14
SCALE: HORIZONTAL: 1" = 100' VERTICAL: 1" = 10'

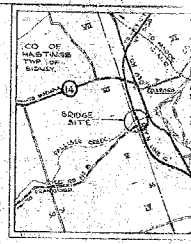


PROFILE AT C/L OF NEW PALLISER CREEK
SCALE: HORIZONTAL: 1" = 100' VERTICAL: 1" = 10'



SECTION A-A
SCALE: 1" = 10'

(67) DRAUGHTS: BLOWN/FT.

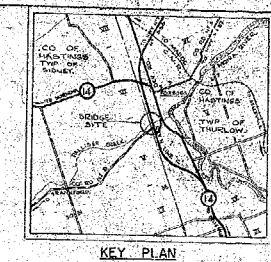
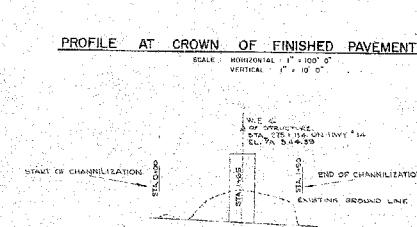
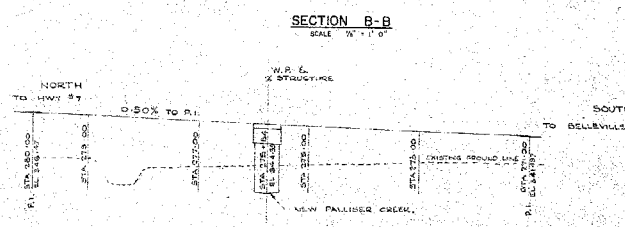
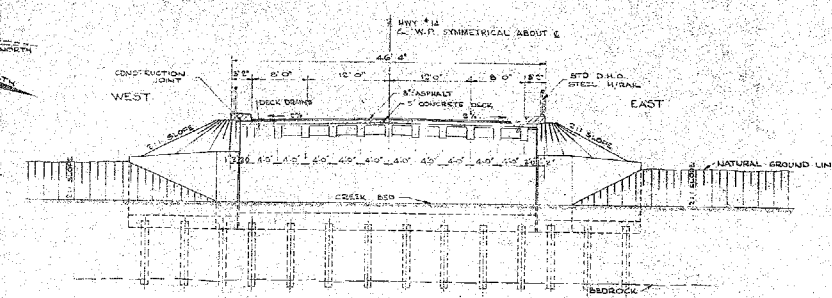
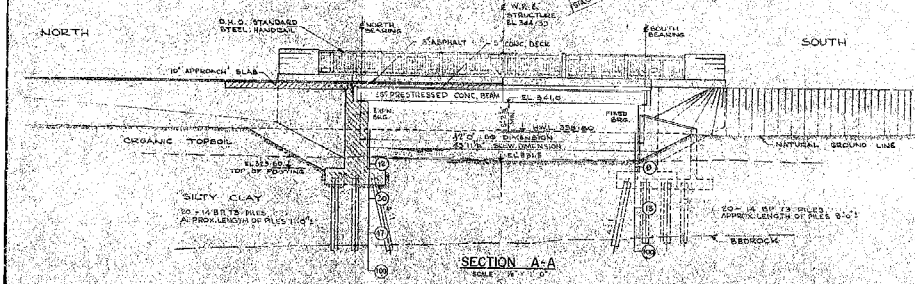
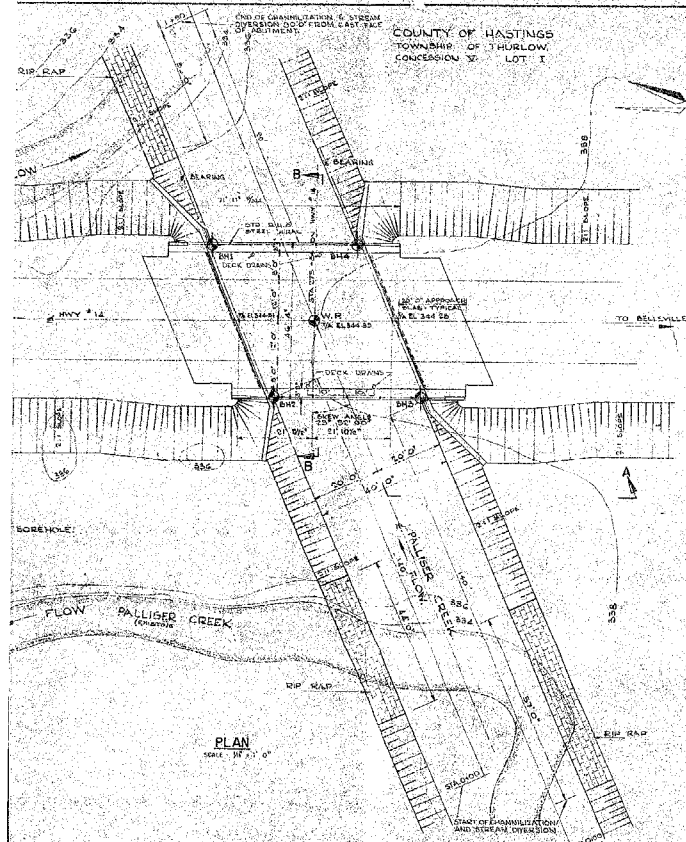


KEY PLAN

GENERAL NOTES

1. CONCRETE WORK ON THIS STRUCTURE SHALL NOT BE COMMENCED UNTIL INSTRUMENTS TO THE CONTRAST HAVE BEEN ERECTED & CHECKED BY THE SURVEY ENGINEER.
2. STRUCTURE TO BE BUILT IN ACCORDANCE WITH D.H.O. DESIGN & THIS OFFICIAL PROVISIONS, EXTRA COPIES OF WHICH MAY BE OBTAINED FROM THE DISTRICT ENGINEER'S OFFICE.
3. ALL CONCRETE SHALL BE 3000 P.S.I. AT 28 DAYS. AN ADVISORY SUPPLIED BY THE CONTRACTOR IS TO BE ADDED TO THE CONCRETE AS SPECIFIED BY THE MATERIALS & RESEARCH SECTION OF THE D.H.O.
4. ALL ENDS OF CORNERS TO HAVE 1" CHAMFER.
5. CONSTRUCTION JOINTS ADDITIONAL TO THOSE INDICATED ON THE DRAWINGS TO BE APPROVED BY THE ENGINEER.
6. COVER TO REINFORCEMENT SHALL BE 3" TO WALLS & FOOTINGS IN CONTACT WITH SOIL & WATER; 2" OTHER WALLS & FLOORS UNLESS OTHERWISE NOTED.
7. THE COMPLETE SOIL INVESTIGATION REPORT BA197 MAY BE OBTAINED AT THE BRIDGE OFFICE, DEPT. OF HIGHWAYS, ONTARIO. THIS REPORT DOES NOT GUARANTEE THE ACCURACY OF THE REPORT NOR THE ASSUMED VERSION SHOWN ON THESE PLANS.
8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BRIDGE DECK TO THE CORRECT ELEVATION. NOT A TOLERANCE OF PLUS OR MINUS IN INCH. IF THEY ARE CAST AND LIFT TOO HIGH THEY SHALL BE RUSH HANDLED DOWN BY THE GENERAL CONTRACTOR. IF THEY ARE CAST TOO LOW THE GENERAL CONTRACTOR SHALL PROVIDE FULL BEARING TO BRING THEM UP TO THE CORRECT ELEVATION. THE USE OF GROUT IS PROHIBITED.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE FINAL DECK ELEVATION CONFORMS WITH THE ELEVATION SHOWN.
10. NO CONCRETE IS TO BE PLACED ABOVE BRIDGE DECK ELEVATION UNLESS SPECIFIED OTHERWISE.
11. WELDRING SHALL CONFORM TO THE LATEST C.I.A. SPECIFICATION FOR WELDRING OF BRIDGES AND SHALL BE DONE BY A WELDER QUALIFIED UNDER THE SUPERVISION OF THE LATEST C.I.A. SPECIFICATION WELDER D-4979-A FOR FURTHER STRUCTURAL STEEL MOVES.

E.D. 6166		DWG. NO.	
PROCTOR & REDFERN			
CONSULTING ENGINEERS			
TORONTO			
DEPARTMENT OF HIGHWAYS, ONTARIO			
BRIDGE OFFICE, TORONTO			
PALLISER CREEK BRIDGE			
FOXBORO BY-PASS			
THE KING'S HIGHWAY NO. 14			
CO. HASTINGS			
TWP. THURLOW			
LOT 1			
CON.			
GENERAL ARRANGEMENT			
APPROVED:			
DEC 18			
DESIGNED BY: D.E.D.			
CHECKED BY: A.E.H.			
DRAWN BY: J.C.D.			
SCALE: 1" = 10'			
D-4979-A			



- GENERAL NOTES**
1. CONCRETE WORK ON THIS STRUCTURE SHALL NOT BE COMMENCED UNTIL MEASUREMENTS TO THE CENTER POINTS HAVE BEEN OBTAINED, & INSPECTED BY THE DISTRICT ENGINEER.
 2. STRUCTURE TO BE BUILT IN ACCORDANCE WITH D.H.O. FORMS & THIS SPECIAL PROVISIONS EXTRA COPIES OF WHICH MAY BE OBTAINED FROM THE DISTRICT ENGINEER.
 3. ALL CONCRETE SHALL BE 3000 P.S.I. AT 28 DAYS. AN ADVANTAGE SUPPLIED BY THE CONTRACTOR IS TO BE ADDED TO THE FURNISHMENT AS SPECIFIED BY THE MATERIALS & RESEARCH SECTION OF THE D.H.O.
 4. ALL EXPOSED CONCRETE TO HAVE A FINISH.
 5. CONSTRUCTION JOINTS ADDITIONAL TO THOSE INDICATED IN THE DRAWINGS TO BE APPROVED BY THE ENGINEER.
 6. COVER TO REINFORCEMENT SHALL BE 3" TO WALLS & FOOTINGS IN CONTACT WITH SOIL & WATER, 2" OTHER WALLS & SLABS, UNLESS OTHERWISE NOTED.
 7. THE COMPLETE SOIL INVESTIGATION REPORT DATED MAY 1967 EXAMINED AT THE BRIDGE OFFICE, DEPT. OF HIGHWAYS, TORONTO. THE DISTRICT DOES NOT GUARANTEE THE ACCURACY OF THE REPORT NOR THE ADEQUACY THEREON SHOWN ON THESE PLANS.
 8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BRIDGE DECK TO BEAT LEVEL TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF PLUS OR MINUS 1/2" INCH. IF THEY ARE CAST AND CURED TOO HIGH THEY SHALL BE GRUB HANDHESED DOWN BY THE GENERAL CONTRACTOR. IF THEY ARE CAST TOO LOW THE GENERAL CONTRACTOR SHALL PROVIDE FULL BEARING GRUBS TO BRING THEM UP TO THE CORRECT ELEVATIONS. THE USE OF GRUBS IS PROHIBITED.
 9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE FINAL DECK ELEVATIONS CONFORM WITH THE ELEVATIONS SHOWN.
 10. NO CONCRETE IS TO BE PLACED ABOVE BRIDGE DECK ELEVATIONS UNLESS SPEC. HAS BEEN OBTAINED.
 11. WELDING SHALL CONFORM TO THE LATEST C.B.A. SPECIFICATIONS FOR WELDING OF BRIDGES AND SHALL BE DONE BY A WELDER QUALIFIED UNDER THE PROVISIONS OF THE LATEST C.B.A. SPECIFICATION WITH W.E. DING D-4979-4 FOR PLACING STRUCTURAL STEEL ABOVE.

W.P. 280-60

PROCTOR & REDFERN
CONSULTING ENGINEERS
TORONTO

DEPARTMENT OF HIGHWAYS-ONTARIO
BRIDGE OFFICE-TORONTO

PALLISER CREEK BRIDGE
FOXBORO BY-PASS

THE KING'S HIGHWAY NO. 14 DIST. NO. 8
CO. HASTINGS
TWP. THURLOW LOT 1 CON. 1

GENERAL ARRANGEMENT

APPROVED DEC 18 1961

BRIDGE ENGINEER		SECTION ENGINEER	
NAME	D.B. D.	NAME	A.B. D.
DESIGN	A.B. D.	DESIGN	A.B. D.
DESIGN	A.B. D.	DESIGN	A.B. D.
DESIGN	A.B. D.	DESIGN	A.B. D.
DESIGN	A.B. D.	DESIGN	A.B. D.

REVISED: DATE BY: REVISIONS

NO. 10 DENOTES BLOWS/FT.

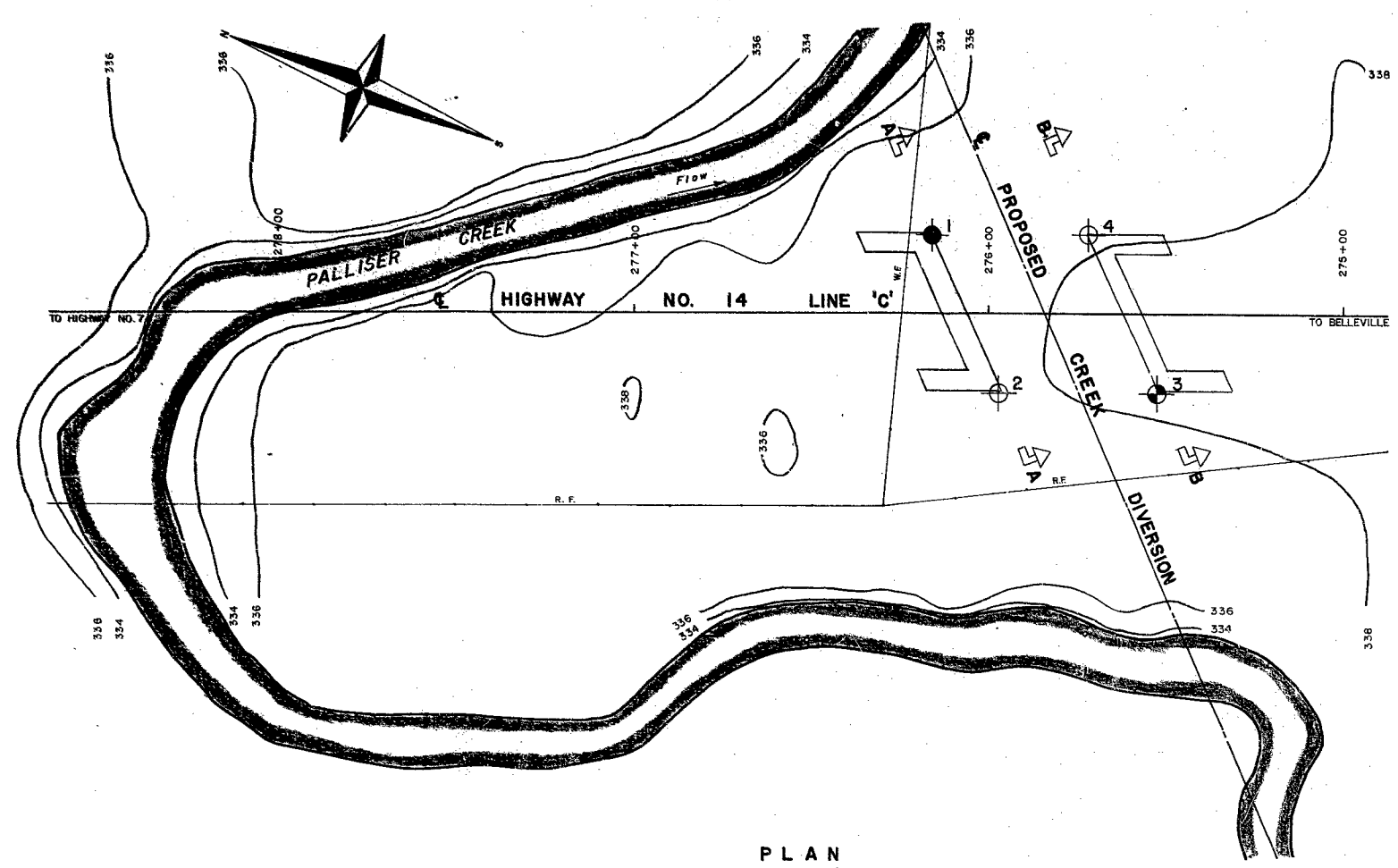
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W.P. #280-60

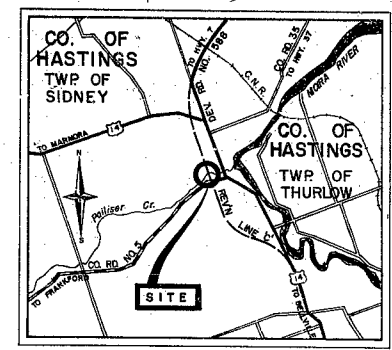
Hwy. #14

PALLISER

CREEK



PLAN
SCALE: 1 in = 20 ft.

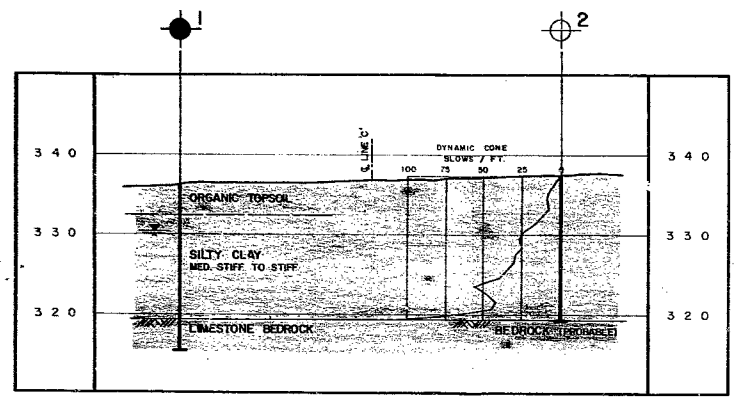


KEY PLAN
SCALE: 1 inch = 1 mile

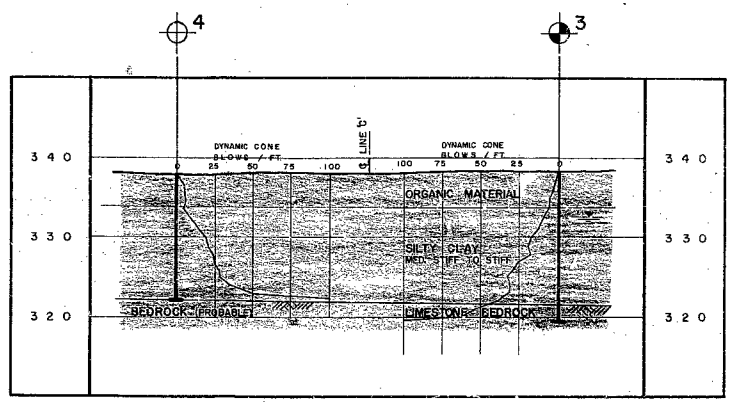
LEGEND			
	BORE HOLE		
	PENETRATION HOLE		
	BORE & PENETRATION HOLE		
	WATER LEVELS established at time of field investigation, SEPT. 22, 1961		
HOLE	ELEVATION	STATION	OFFSET
1	336.2	276+16	22' RT.
2	337.5	275+97	22' LT.
3	338.1	275+52	22' LT.
4	338.0	275+72	22' RT.

305300
4901300
3103
18

NOTE
THE BOUNDARIES BETWEEN SOIL STRATA HAVE BEEN ESTABLISHED ONLY AT BORE HOLE LOCATIONS. BETWEEN BORE HOLES THE BOUNDARIES ARE ASSUMED FROM GEOLOGICAL EVIDENCE AND MAY BE SUBJECT TO CONSIDERABLE ERROR.



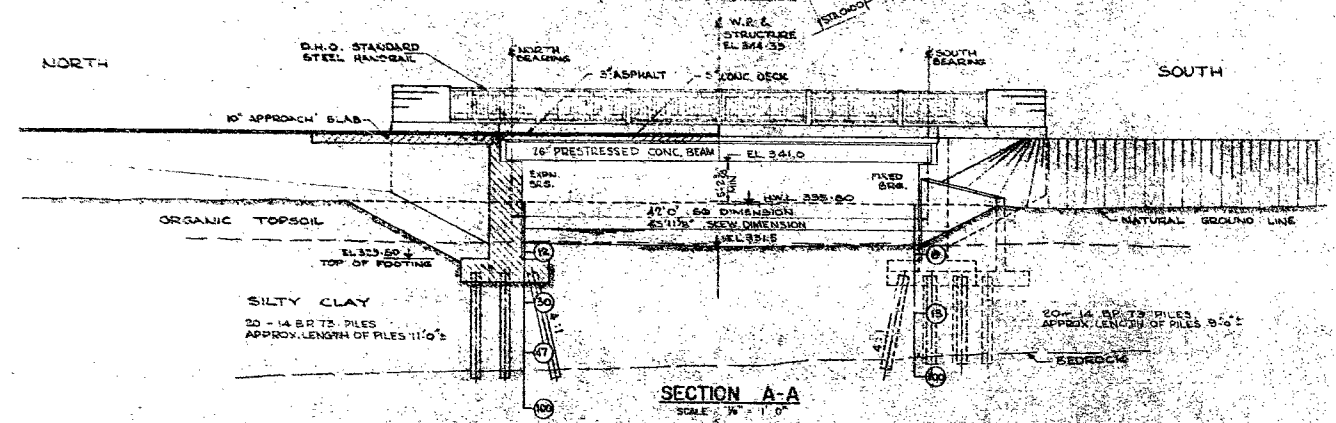
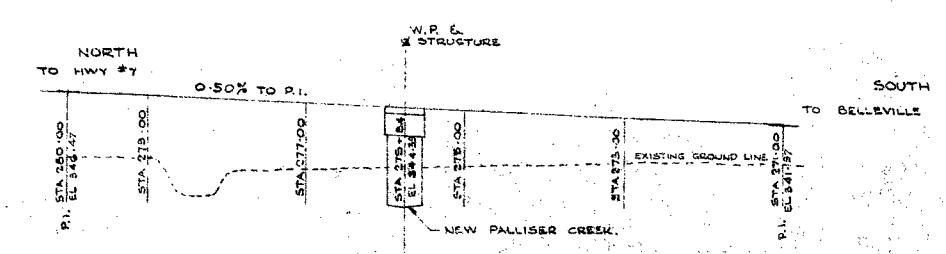
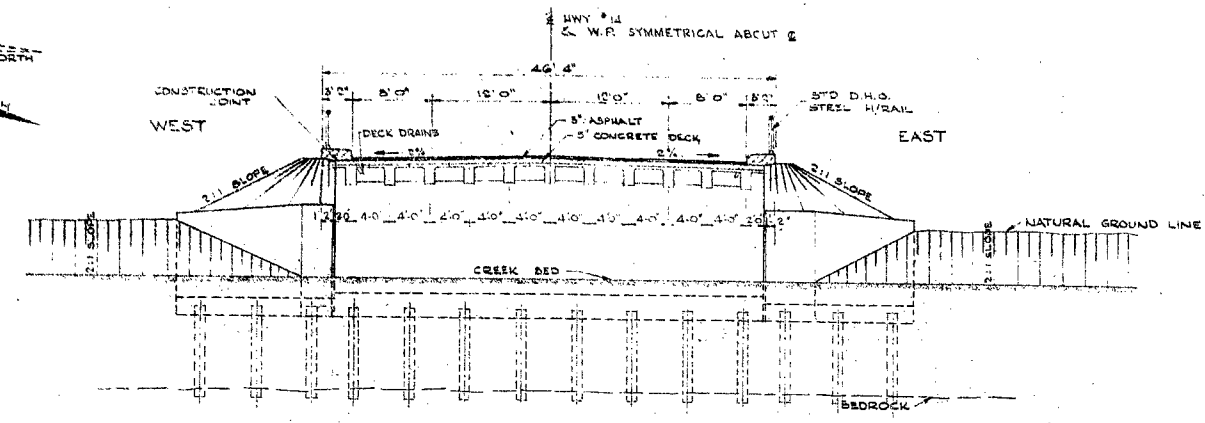
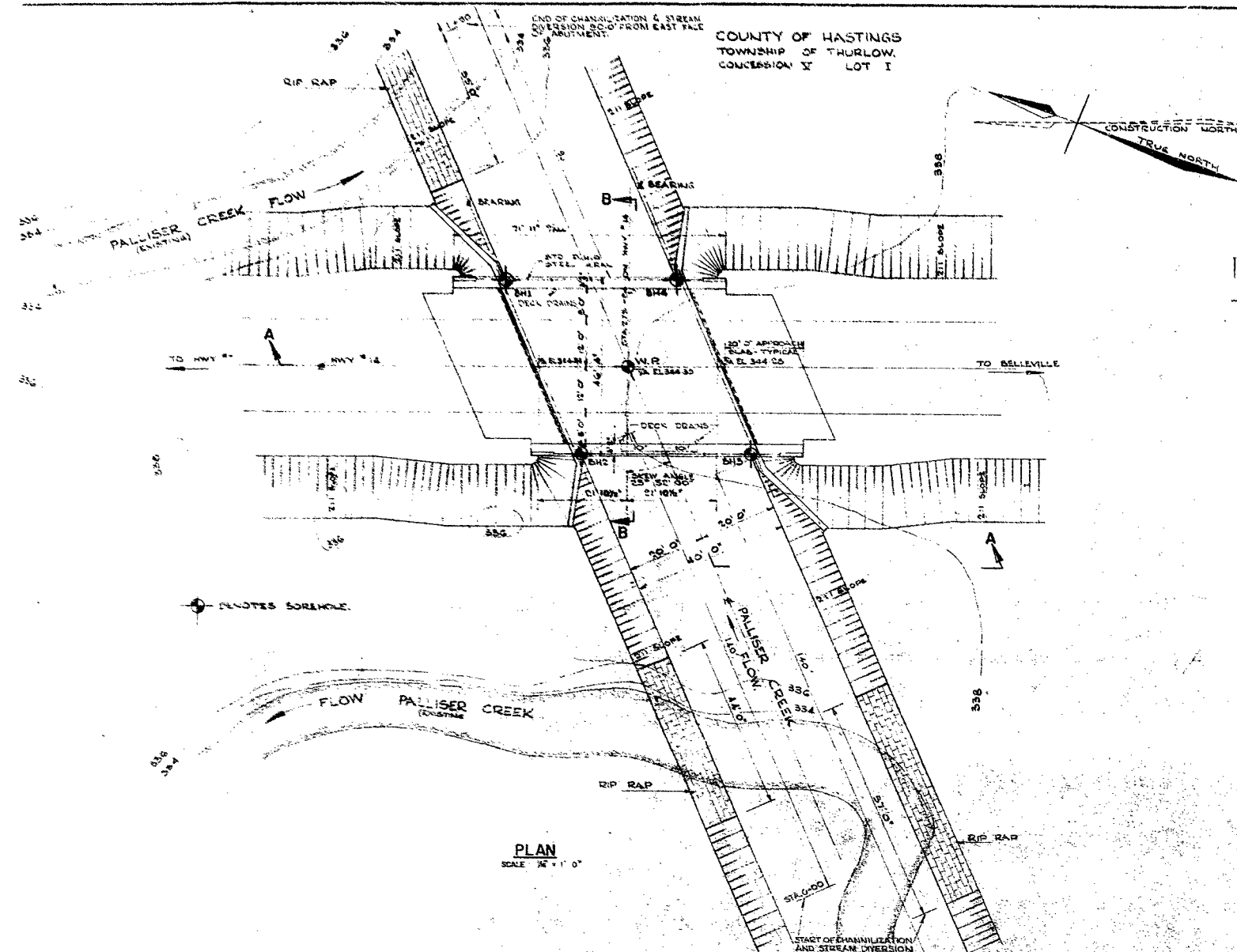
A - A
SCALE: 1 in = 10 ft.



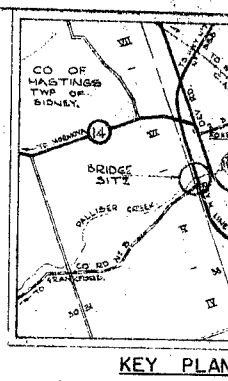
B - B
SCALE: 1 in = 10 ft.

DEPARTMENT OF HIGHWAYS - ONTARIO		
MATERIALS & RESEARCH SECTION		
PALLISER CREEK DIVERSION AND HIGHWAY NO. 14 REVISION LINE 'C'		
ORIGINATED W. KULMATICAS	DISTRICT NO. 8	DATE 17 OCT. 1961
DRAWN D. MUMFORD	W.P. NO. 280-60	JOB NO. 61-F-95
CHECKED <i>[Signature]</i>	SCALE	DRAWING NO.
APPROVED <i>[Signature]</i>	AS SHOWN	61-F-95A

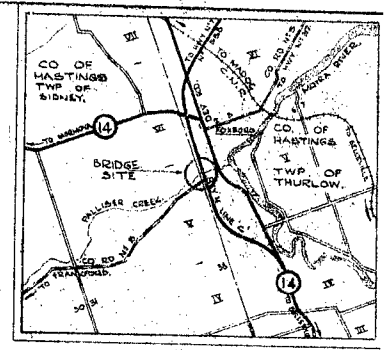
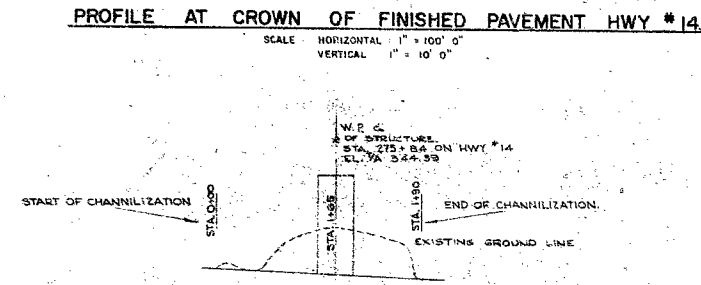
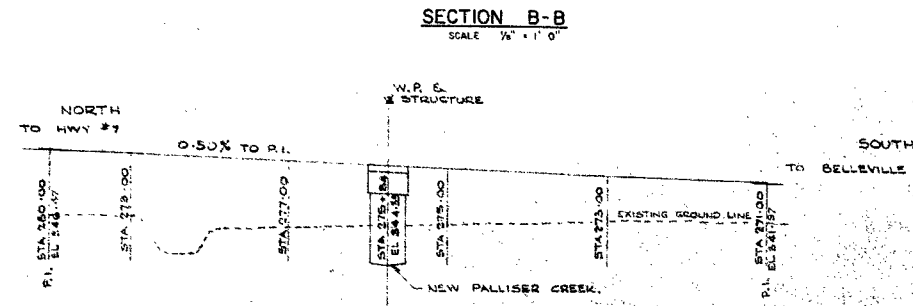
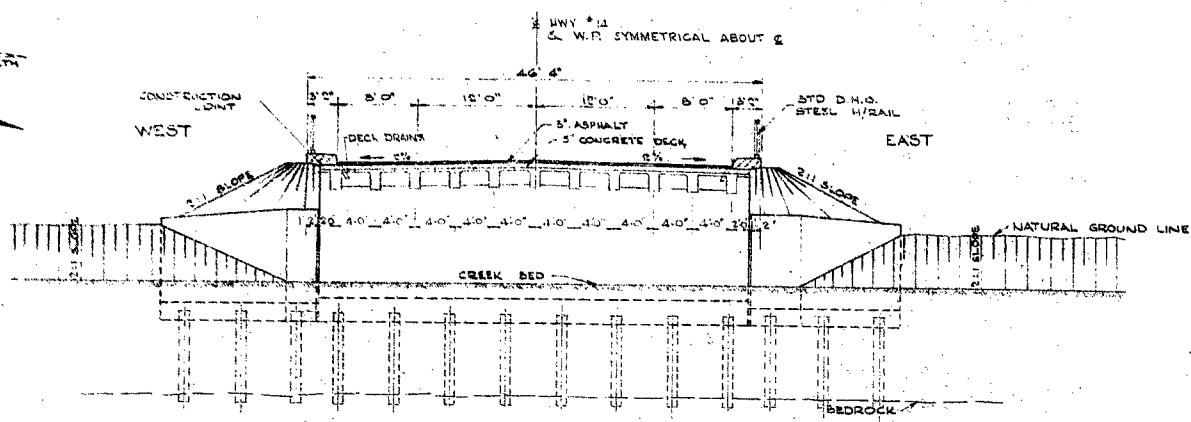
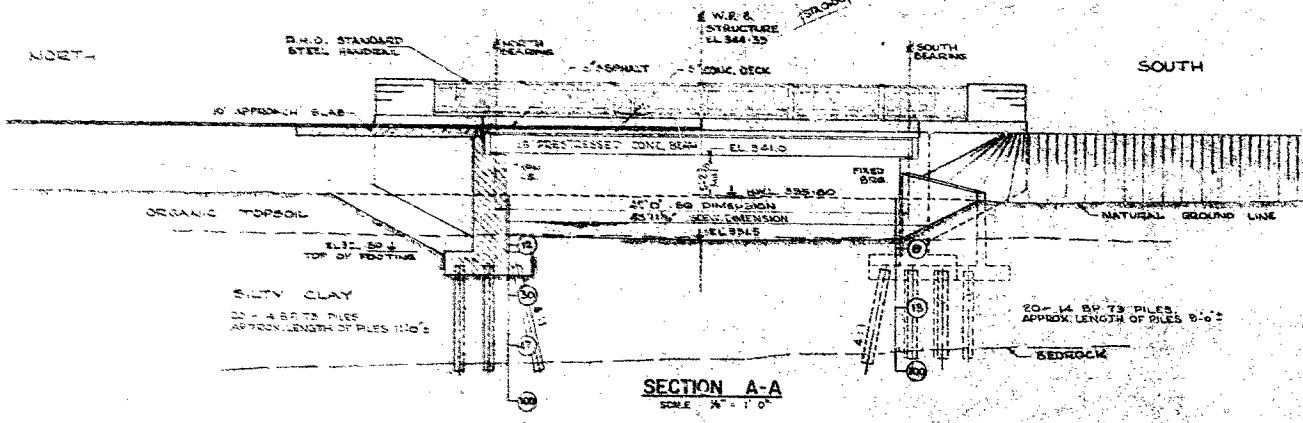
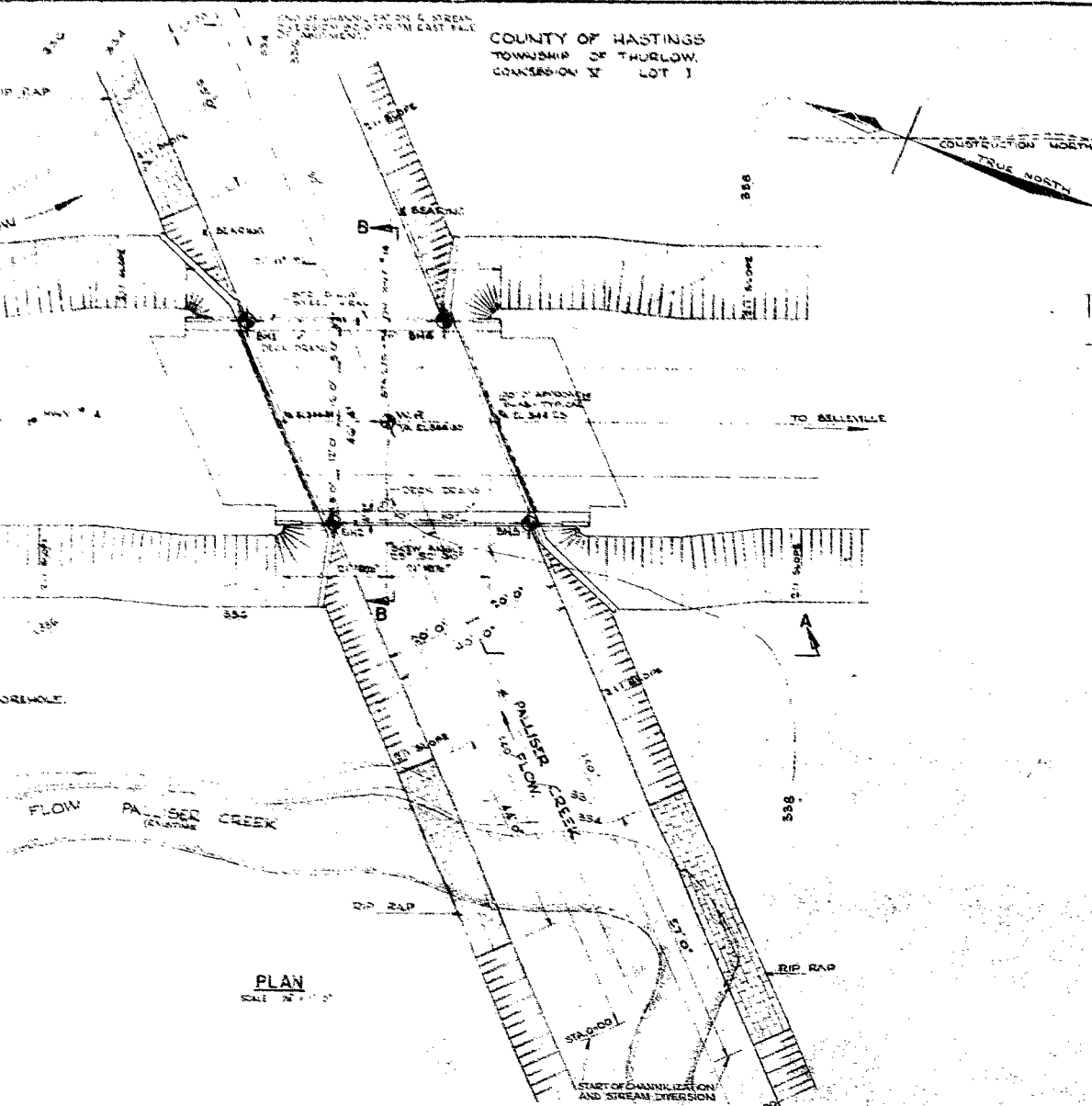
REF. NO. E-4018-1



- GENERAL NOTES**
1. CONCRETE WORK ON THIS STRUCTURE SHALL NOT BE COMMENCED UNTIL MONUMENTS TO FIX CONTROL POINTS HAVE BEEN ERECTED & CHECKED BY THE DISTRICT ENGINEER.
 2. STRUCTURE TO BE BUILT IN ACCORDANCE WITH D.H.O. FORM 8 & THE SPECIAL PROVISIONS, EXTRA COPIES OF WHICH MAY BE OBTAINED FROM THE DISTRICT ENGINEER.
 3. ALL CONCRETE SHALL BE 3000 P.S.I. AT 28 DAYS. AN ADMIXTURE SUPPLIED BY THE CONTRACTOR IS TO BE ADDED TO THE CONCRETE AS SPECIFIED BY THE MATERIALS & RESEARCH SECTION OF THE D.H.O.
 4. ALL EXPOSED CORNERS TO HAVE 1" CHAMFERS.
 5. CONSTRUCTION JOINTS ADDITIONAL TO THOSE INDICATED ON THE DRAWINGS TO BE APPROVED BY THE ENGINEER.
 6. COVER TO REINFORCEMENT SHALL BE: 3" TO WALLS & FOOTINGS IN CONTACT WITH SOIL & WATER; 2" OTHER WALLS & 1" ELSEWHERE UNLESS OTHERWISE NOTED.
 7. THE COMPLETE SOIL INVESTIGATION REPORT BA1257 MAY BE EXAMINED AT THE BRIDGE OFFICE, DEPT. OF HWYS., ONTARIO. THE DIST. DOES NOT GUARANTEE THE ACCURACY OF THE REPORT NOR THE ABBREVED VERSION SHOWN ON THESE PLANS.
 8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BRIDGE SEATS DEAD LEVEL TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF PLUS OR MINUS 1/8" INCH. IF THEY ARE CAST ARE CAST TOO HIGH THEY SHALL BE BUSH HAMMERED DOWN BY THE GENERAL CONTRACTOR. IF THEY ARE CAST TOO LOW THE GENERAL CONTRACTOR SHALL PROVIDE FULL BEARING SUMMS TO BRING THEM UP TO THE CORRECT ELEVATIONS. THE USE OF GROUT IS PROHIBITED.
 9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE FINAL DECK ELEVATIONS CONFORM WITH THE ELEVATIONS SHOWN.
 10. NO CONCRETE IS TO BE PLACED ABOVE BRIDGE SEAT ELEVATIONS UNTIL DECK HAS BEEN CAST.
 11. WELDING SHALL CONFORM TO THE LATEST C.S.A. SPEC. WED FOR WELDING OF BRIDGES AND SHALL BE DONE BY A WELDER QUALIFIED UNDER THE PROVISIONS OF THE LATEST C.S.A. SPECIFICATION W-49, WEL. DWG. D-4979-4 FOR FURTHER STRUCTURAL STEEL NOTES.



E.O. 61166		DWG. NO.	
PROCTOR & REDFERN CONSULTING ENGINEERS TORONTO			
DEPARTMENT OF HIGHWAYS - ONTARIO BRIDGE OFFICE - TORONTO			
PALLISER CREEK BRIDGE FOXBORO BY-PASS			
THE KING'S HIGHWAY No. 14 CO. HASTINGS TWP. THURLLOW LOT 38 CON.			
GENERAL ARRANGEMENT			
APPROVED		DEC 1	
BRIDGE ENGINEER		DESIGN ENGINEER	
DESIGN	O.S.Z.	CHECK	A.E.R.
DRAWING	H.E.M.	CHECK	O.S.Z.
TRACING	CHECK	CHECK	CHECK
DATE	BY	DESCRIPTION	DATE
		DRAWING NO. D-4979-4	



GENERAL NOTES

1. CONCRETE WORK ON THIS STRUCTURE SHALL NOT BE COMMENCED UNTIL MONUMENTS TO FIX CONTROL POINTS HAVE BEEN ERECTED & CHECKED BY THE DISTRICT ENGINEER.
2. STRUCTURE TO BE BUILT IN ACCORDANCE WITH D.H.O. FORMS & THE SPECIAL PROVISIONS, EXTRA COPIES OF WHICH MAY BE OBTAINED FROM THE DISTRICT ENGINEER.
3. ALL CONCRETE SHALL BE 3000 P.S.I. AT 28 DAYS. AN ADMIXTURE SUPPLIED BY THE CONTRACTOR IS TO BE ADDED TO THE CONCRETE AS SPECIFIED BY THE MATERIALS & RESEARCH SECTION OF THE D.H.O.
4. ALL EXPOSED CORNERS TO HAVE 1" CHAMFERS.
5. CONSTRUCTION JOINTS ADDITIONAL TO THOSE INDICATED ON THE DRAWINGS TO BE APPROVED BY THE ENGINEER.
6. COVER TO REINFORCEMENT SHALL BE 3" TO WALLS & FOOTINGS IN CONTACT WITH SOIL & WATER; 2" OTHER WALLS, IF ELSEWHERE UNLESS OTHERWISE NOTED.
7. THE COMPLETE SOIL INVESTIGATION REPORT BA1257 MAY BE EXAMINED AT THE BRIDGE OFFICE, DEPT. OF HIGHWAYS, ONTARIO. THE DEPT. DOES NOT GUARANTEE THE ACCURACY OF THE REPORT NOR THE ADROSED VERSION SHOWN ON THESE PLANS.
8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FINISHING THE BRIDGE SEAT'S DEAD LEVEL TO THE SPECIFIED ELEVATIONS WITH A TOLERANCE OF PLUS OR MINUS 1/8 INCH. IF THEY ARE CAST TOO HIGH THEY SHALL BE BUSH HAMMERED DOWN BY THE GENERAL CONTRACTOR. IF THEY ARE CAST TOO LOW THE GENERAL CONTRACTOR SHALL PROVIDE FULL BEARING SHIMS TO BRING THEM UP TO THE CORRECT ELEVATIONS. THE USE OF GROUT IS PROHIBITED.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE FINAL DECK ELEVATIONS CONFORM WITH THE ELEVATIONS SHOWN.
10. NO CONCRETE IS TO BE PLACED ABOVE BRIDGE SEAT ELEVATIONS UNTIL DECK HAS BEEN CAST.
11. WELDING SHALL CONFORM TO THE LATEST C.S.A. SPEC. W88 FOR 'WELDING OF BRIDGES' AND SHALL BE DONE BY A WELDER QUALIFIED UNDER THE PROVISIONS OF THE LATEST C.S.A. 'SPECIFICATION' W47. SEE DWG. D-4979-4 FOR FURTHER STRUCTURAL STEEL NOTES.

E.O. 61166		W.P. 280-60	
PROCTOR & REDFERN		CONSULTING ENGINEERS	
TORONTO		TORONTO	
DEPARTMENT OF HIGHWAYS-ONTARIO			
BRIDGE OFFICE-TORONTO			
PALLISER CREEK BRIDGE			
FOXBORO BY-PASS			
THE KING'S HIGHWAY No. 14		DIST. No. 8	
CO. HASTINGS		LOT 38	
TWP. THURLOW		CON. X	
GENERAL ARRANGEMENT			
APPROVED		DEC 18 1961	
BRIDGE ENGINEER		DESIGN ENGINEER	
SEARCH	D.S.Z.	CHECK	A.E.R.
DRAWING	R.E.M.	CHECK	D.S.Z.
TRACING	CHECK	CHECK	CHECK
DATE	DATE	DATE	DATE
D-4979-1			

REVISIONS	DATE	BY	DESCRIPTION