1960

CARILLON DEVELOPMENT

Report on C.I.P. Properties
at
Calumet and Pointe Gatineau

3292 (A-11) h

THE SHAWINIGAN ENGINEERING COMPANY LIMITED

MONTREAL, CANADA

CARILLON DEVELOPMENT

C.I.P. Properties at Calumet and Gatineau

Following a meeting held in the offices of the Quebec Hydro Electric Commission on November 9, 1960 and receipt of information from Mr. Bennett of the Canadian International Paper Company, Messrs. J. A. Thomas and C. G. Smallridge visited the C.I.P. mills at Calumet and Pointe Gatineau on Friday, November 18, 1960.

Calumet

At the Calumet saw mill a meeting was held with the Mill Manager, Mr. McGibbon, at which the C.I.P. estimate of damage was discussed and the basis of the estimate established. A copy of the estimate is included in this report (page 3). Following this, a tour was made of the general mill area which will be affected by raising the Carillon forebay.

The quantity of fill noted under "Fill in Lumber Yard" in the C.I.P. estimate has been checked on the basis of the drawing supplied by C.I.P., and we agree with the volumes given. However, we question the use of gravel for the top layer of fill, since this is considerably more expensive than sand and to our knowledge has not been used under the present storage areas. The use of sand fill throughout would give a saving of $44,000, using the unit costs in this estimate. We were advised by Mr. McGibbon that sawdust would be laid on top of the sand, as at present.

The item under "Erosion Protection" for 1,900 linear feet of rockfill crib at Calumet Bay is open to question. Mr. McGibbon advised that this was to provide protection against waves generated in the fetch between the Carillon Dam and the east side of the storage yard when the bay becomes flooded out. From the local topography, we doubt that large waves would penetrate this bay and protection would therefore not be necessary. No protection is provided for present conditions under which flooding of this bay occurs with high flows (See photo #2).

Also included under "Erosion Protection" is a length of 2,900 linear feet of rock filled crib along the Ottawa River. This includes a length of approximately 1,000 feet east of the present wharf which has no protection at present (see photo #3) and some 1,500 feet of broken down wharf and unprotected shoreline to the west (see photo #4). Over this total length of 2,500 feet, we suggest that boulder riprap would be adequate, together with a length of approximately 200 feet of rock filled crib to form a wharf comparable to that presently available.

We were advised that the figure of 10,000 mbf used for the Spring Inventory in the estimate is an average figure and could vary according to economic conditions. However, the inventory is a minimum in the spring.

HYDRO-QUÉBEC/DOC.
3292 (A-11) h
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We suggest that the above points be discussed further with C.I.P. when the rights to the use of the river bed have been resolved. In this regard, it is interesting to note that the mill now uses an area of 5.2 acres for storage which was formerly under water in Calumet Bay, as shown on the 1907 Georgian Bay Ship Canal plans. This is illustrated on the accompanying sketch No. SK-2980.

The attached curve sheets #12-S-0-SK-2969 and #12-S-0-SK-2971 show stage duration curves for the flood period and for the whole year at Calumet for present and future conditions. These are based on records of levels at Upper Grenville but since the drop in the reach is small, they are an accurate representation of conditions at Calumet.

Gatineau Mill

Following the inspection at the Calumet mill, a visit was made to the Gatineau Mill to look over the arrangement of the jack ladder. A brief discussion was held with Mr. McMartin and the operation of the ladder was then checked over. After a further discussion on the C.I.P. proposal for raising the jack ladder, it was agreed that the scheme is feasible and should ensure effective operation under future conditions when the variation in levels during the logging period will be considerably less than at present. At the time of the visit, no accurate estimate of cost had been made but Mr. McMartin anticipated that the total cost would be between $10,000 and $13,000 of which $3,000 would be for material. Presumably this estimate of cost will be forthcoming from C.I.P. in the near future.

Stage duration curves comparing the variation in levels for present and future conditions during the logging season are attached. (#12-S-0-SK-2970). This shows a reduction in normal variation of levels from 5.6 to 2.6 feet during the C.I.P. logging period.

The attached photographs show the jack ladder in operation.

The Shawinigan Engineering Company Limited
Montreal, Quebec

December 7, 1960
ECG:CD

CALUMET SAWMILL

Expenditures to modify the effects of backwater from the Carillon Dam:

Fill in Lumber Yard	
East and West Yards	
Sand Fill to El. 138 - 30,825 yds. at $0.85	$ 26,200.
Gravel Fill El. 138 to El. 139 - 20,150 yds. at $2.00	40,300.
North Yard	
Sand Fill to El. 138 - 29,992 yds. at $0.85	25,400.
Gravel Fill El. 138 to El. 139 - 18,213 yds. at $2.00	36,400.
Moving and Repiling Lumber Inventory Before Filling	
Spring Inventory 10,000 M.B.F. at $5./M.B.F.	50,000.
Move and Rebuild Pile Bottoms	
2,200 piles at $6./pile bottom	13,200.
Erosion Protection	
Raise 2,900 lin.ft. rock filled crib (includes raising wharf) on Ottawa River	20,000.
Install 1,900 lin.ft. rock filled crib (8 ft. high) on Calumet Bay	45,000.
Raising Fire Pump	
Including rearranging piping	5,300.
Fire Lines	
1,200 lin.ft. of water lines to hydrants, Dig up, raise to El. 135 and back fill	9,200.
Log Haul-Up	
Concrete Footings	1,600.
Take down and replace conveyor	3,000.
Contingencies	27,400.
Timber Flooded	12,000.
TOTAL	315,000.

NOTE:

SAND HAULED 2 MILES

Price to pit owner	$0.05	per	cu.	yd.
Loading	0.20	"	"	"
Hauling	0.30	"	"	"
Unloading & Spreading	0.30	"	"	"
	$0.85	"	"	"

GRAVEL HAULED 10 MILES

Price to pit owner	$o.15	per	cu.	yd.
Loading	0.30	"	"	"
Hauling	1.20	"	"	"
Unloading & Spreading	0.35	"	"	"
	$2.00	"	"	"

CALUMET SAW MILL

Photo 1 Calumet Saw Mill. General view of mill building above flood line.

Photo 2 Present limit of storage yard in Calumet Bay.

Photo 3 Shoreline looking east from wharf.

Photo 4 Shoreline looking west from wharf.

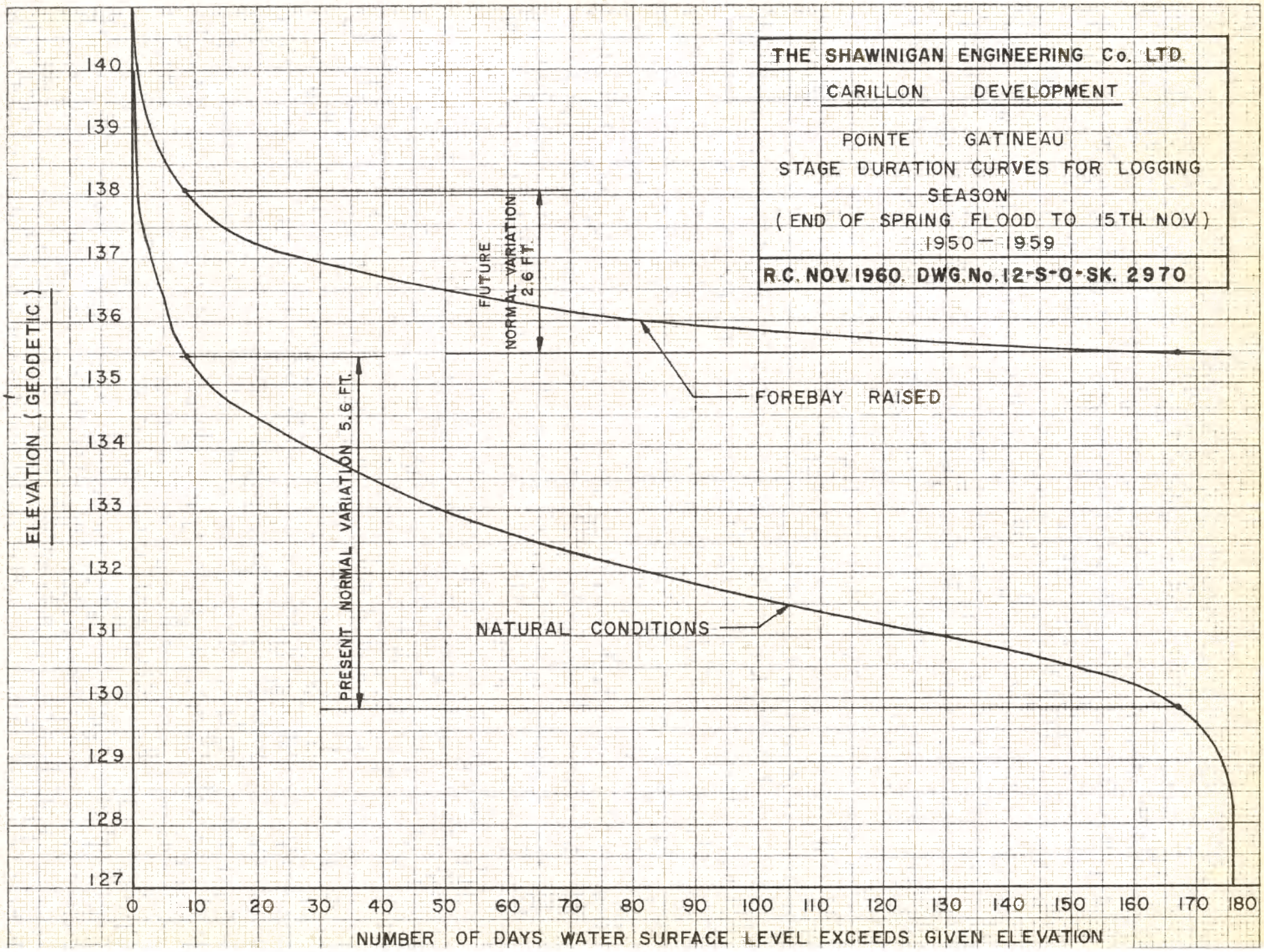
Photo 5 Lumber piles. East yard.

GATINEAU MILL

Photo 6 Jack ladder arrangement.

Photo 7 Jack ladder in operation.

K+E 10 X 10 TO THE ½ INCH KEUFFEL & ESSER CO. 359-12 MADE IN U.S.A.



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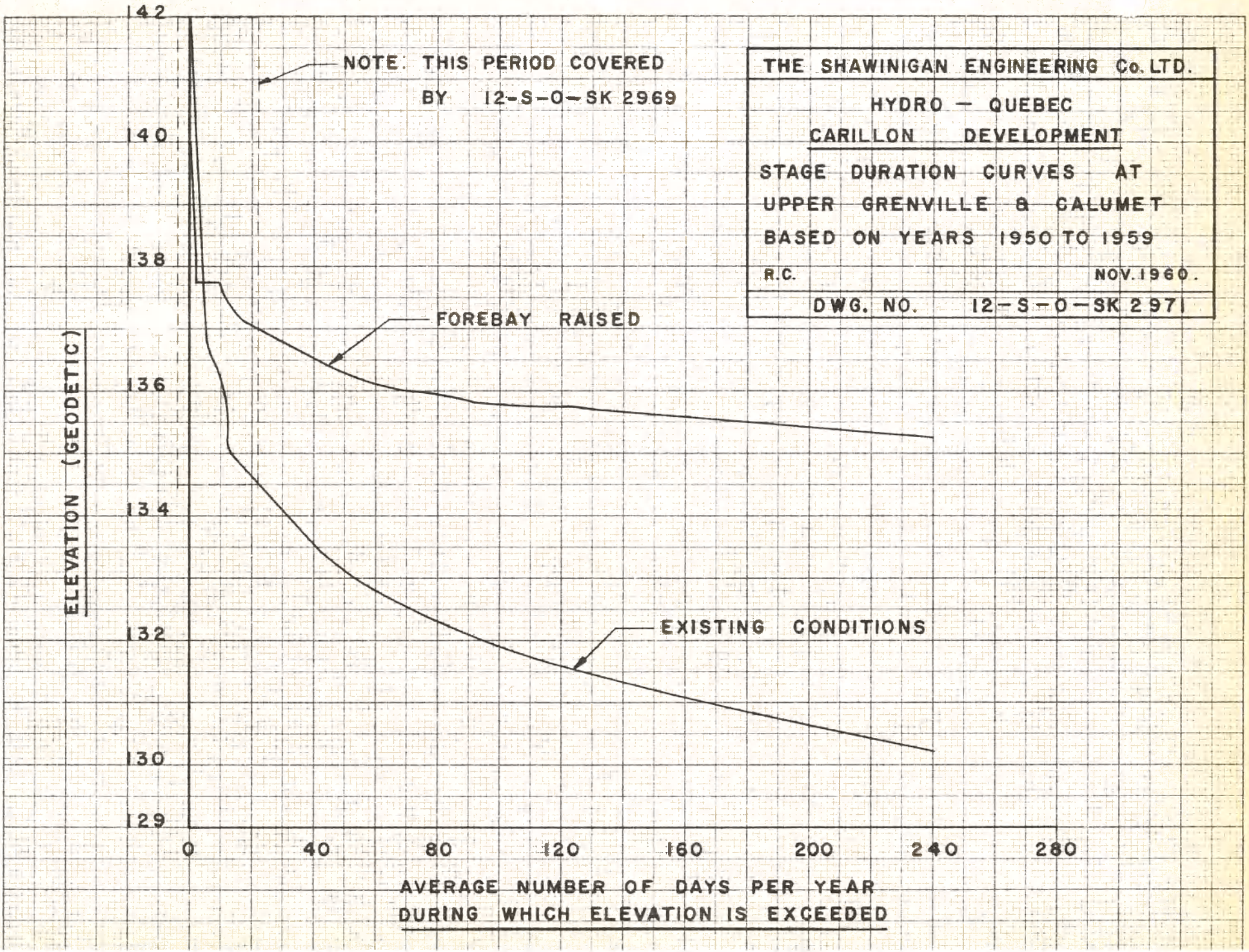


THE SHAWINIGAN ENGINEERING Co. LTD.

HYDRO — QUEBEC

CARILLON DEVELOPMENT

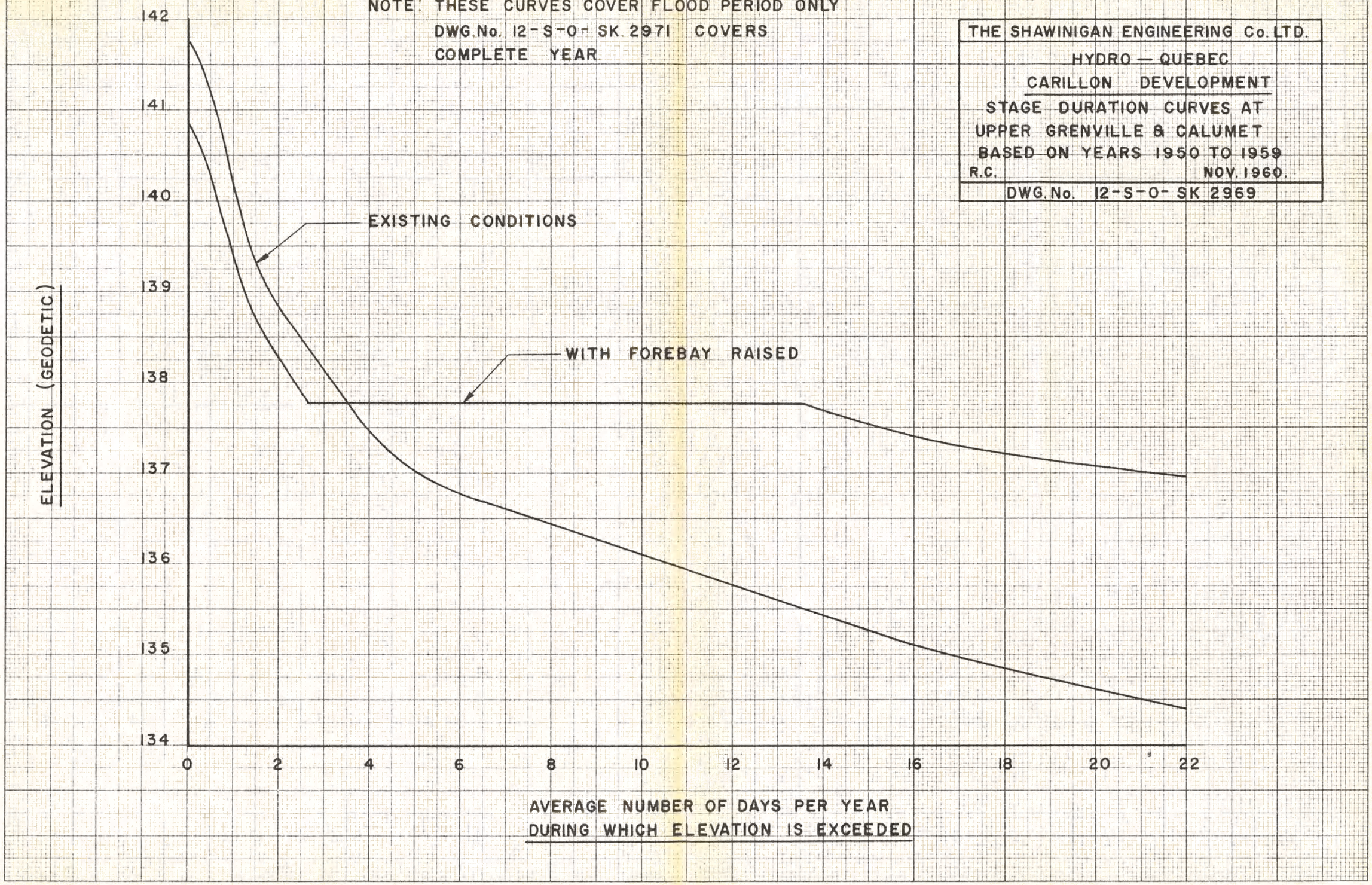
STAGE DURATION CURVES AT UPPER GRENVILLE & CALUMET BASED ON YEARS 1950 TO 1959

R.C. NOV. 1960.

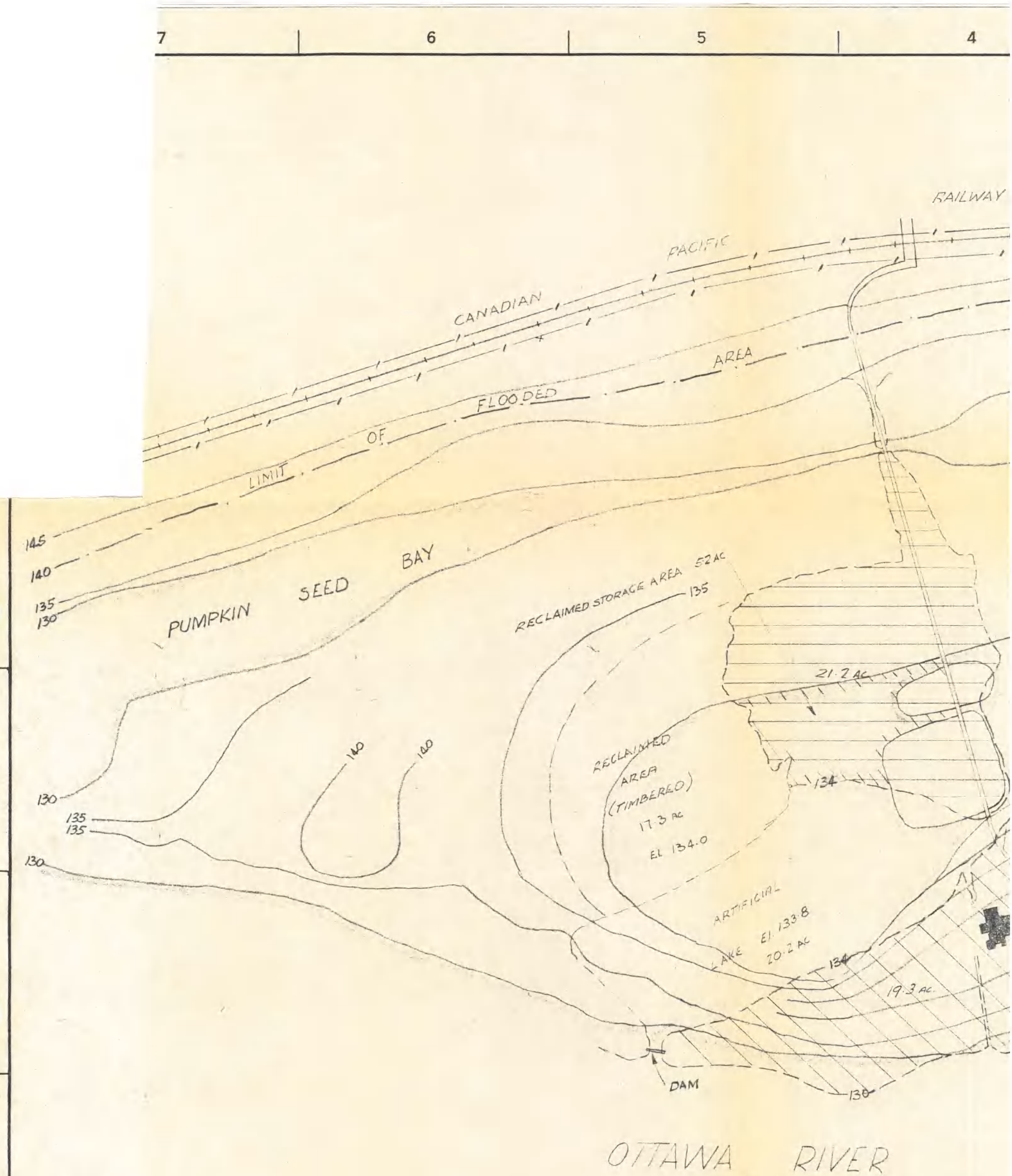
DWG. NO. 12-S-O-SK 2971

NOTE: THESE CURVES COVER FLOOD PERIOD ONLY
DWG.No. 12-S-O-SK 2971 COVERS
COMPLETE YEAR.

THE SHAWINIGAN ENGINEERING Co. LTD.
HYDRO — QUEBEC
CARILLON DEVELOPMENT
STAGE DURATION CURVES AT UPPER GRENVILLE & CALUMET BASED ON YEARS 1950 TO 1959
R.C. NOV. 1960.
DWG.No. 12-S-O-SK 2969



20 x 20 TO THE INCH 359-10 1/2 LG
KEUFFEL & ESSER CO. MADE IN U.S.A.



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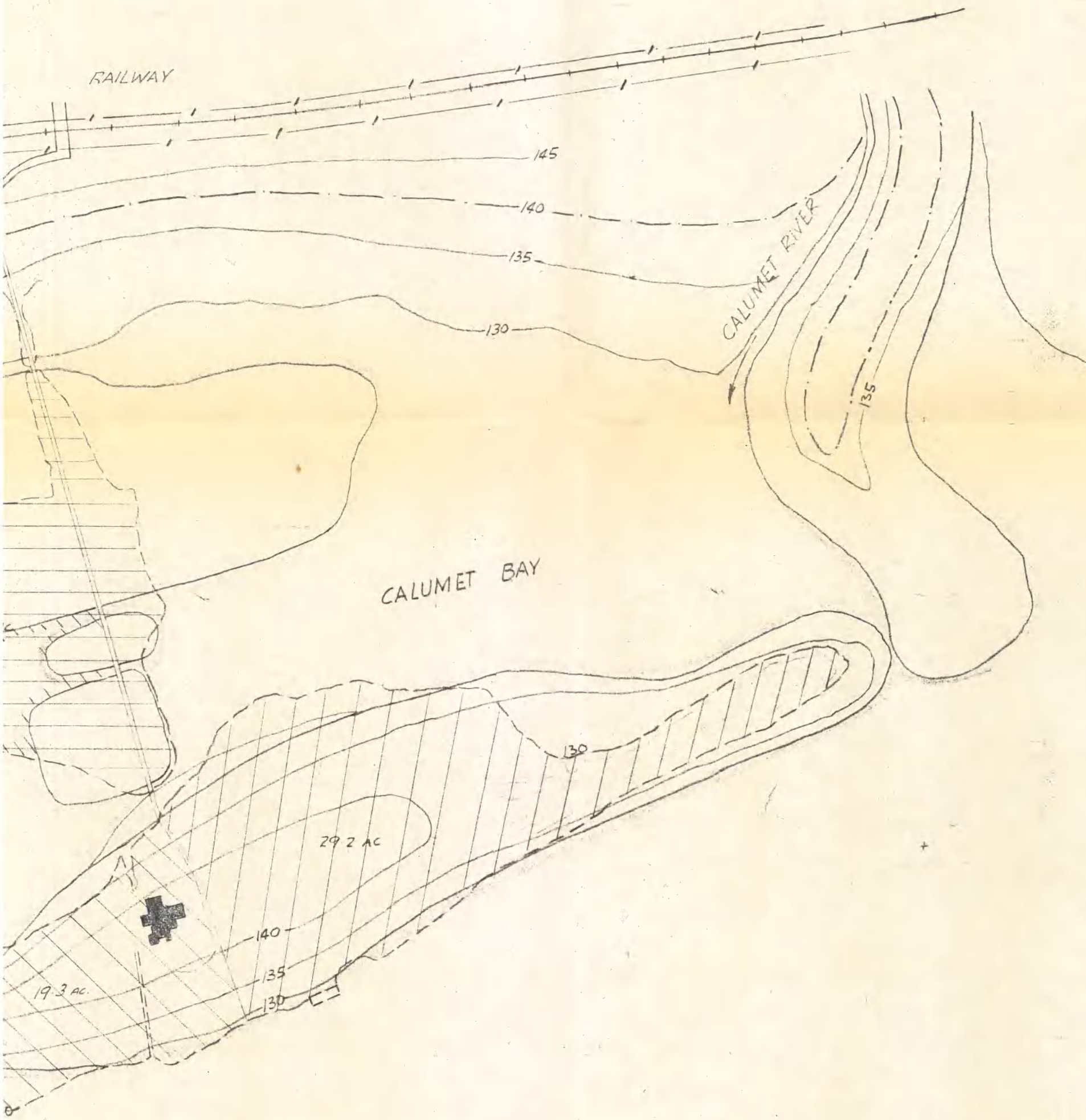

NOTE: Shaded portion indicates area now used by C.I.P.Co

DRAWN J.K.K.	CANADIAN INTERNATIONAL PAPER CO. - CALUMET - P.Q.	
TRACED	TOPOGRAPHY - 1907	
CHECKED	BASED ON GEORGIAN BAY SHIP CANAL SURVEY.	
OK'D	LOCATION CARILLON DEVELOPMENT COMPANY HYDRO-QUEBEC	
APPROVED	THE SHAWINIGAN ENGINEERING CO. LTD. MONTREAL, QUEBEC	
SCALE 1" = 400' / CONTR. No. 2205	FILE NO. / DATE DEC.-7-'60	DWG. NO. C - SK - 2980 PD

N	DESCRIPTION	MADE BY

REVISIONS

À / TO: Monsieur W.E. Johnson,
Co-secrétaire,
Secrétariat.

DATE 23 fé vrier 1961 DDA / PDD 100

AMÉNAGEMENT • DEVELOPMENT

CARILLON

P-345 (6/60)

Vous trouverez ci-joint le document suivant • Please find enclosed the following document

		CODE
	RAPPORT / REPORT NO	
	DEVIS / SPECIFICATIONS NO	
	CONTRAT / CONTRACT NO	
	ADDENDA / ADDENDUM NO AU / TO:	
2	Dessins au rapport suivant:-	H

TITRE DU DOCUMENT • TITLE OF DOCUMENT

"Hydraulic Data Sheets" -

DOCUMENT ÉMIS PAR • DOCUMENT ISSUED BY

Shawinigan Engineering Co.Ltd.

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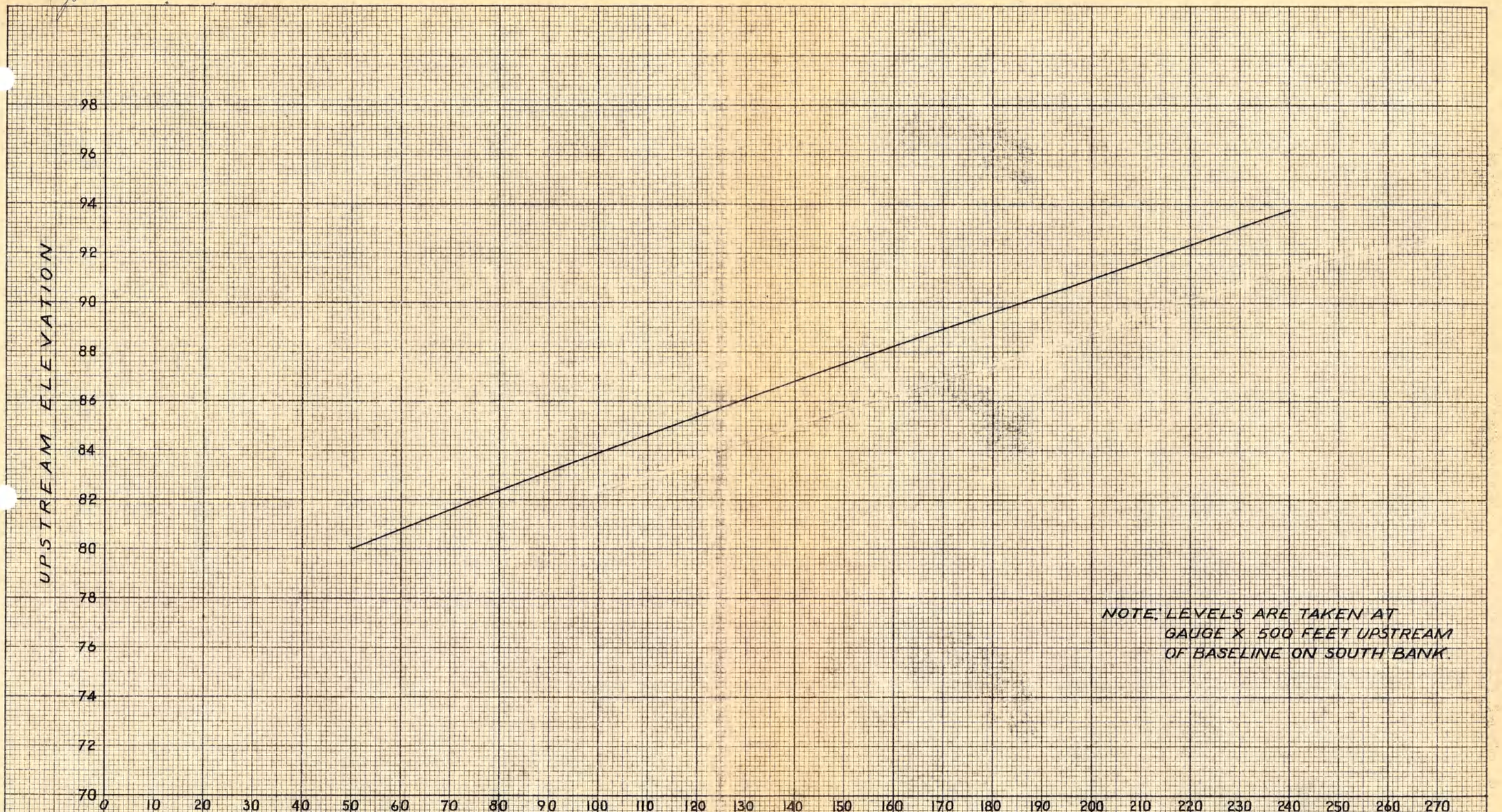
INDIQUER LETTRE DE CODE APPROPRIÉE / PLEASE INSERT PROPER CODE LETTER

A	APPROUVÉ / APPROVED
B	APPROUVÉ SAUF TEL QUE NOTÉ / APPROVED EXCEPT AS NOTED
C	AVEC COMMENTAIRES / WITH COMMENTS
D	POUR DISTRIBUTION / FOR DISTRIBUTION
E	COPIE CONFORME / TRUE COPY
F	POUR VOS DOSSIERS / FOR YOUR FILES
G	LETTRE EXPLICATIVE SUIVRA / EXPLANATORY LETTER TO FOLLOW.
H	No. 16 revisé No. 17 pour compléter rapport.

Johnson



NOTE. LEVELS ARE TAKEN AT GAUGE X 500 FEET UPSTREAM OF BASELINE ON SOUTH BANK.

REVISED APRIL 25th 1960 to SHOW EFFECT OF BAILEY BRIDGE

SHAWINIGAN ENGINEERING CO. LTD.
CARILLON DEVELOPMENT

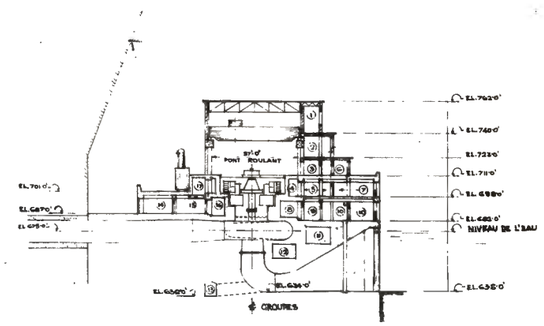
OTTAWA RIVER
UPSTREAM LEVELS AT COFFERDAM
FOR STAGE I RIVER DIVERSION

DRAWN:	DATE:	SHEET NO.
E.W.	JUNE 4/59	16

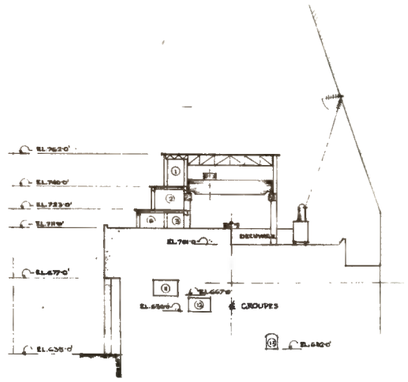
SHAWINIGAN ENGINEERING CO. LTD.
CARILLON DEVELOPMENT

OTTAWA RIVER
HYDROGRAPHS OF DAILY FLOWS FOR 1959

DRAWN BY: EW	DATE: APR 25/60	SHEET No 17



COUPE B-B



COUPE A-A

LÉGENDE

1. CONDITIONNEMENT D'AIR
2. SALLE DE CONTRÔLE ET RELAIS
3. VOIE DE CIRCULATION INTÉRIEURE
4. FORMATION DU NEUTRE
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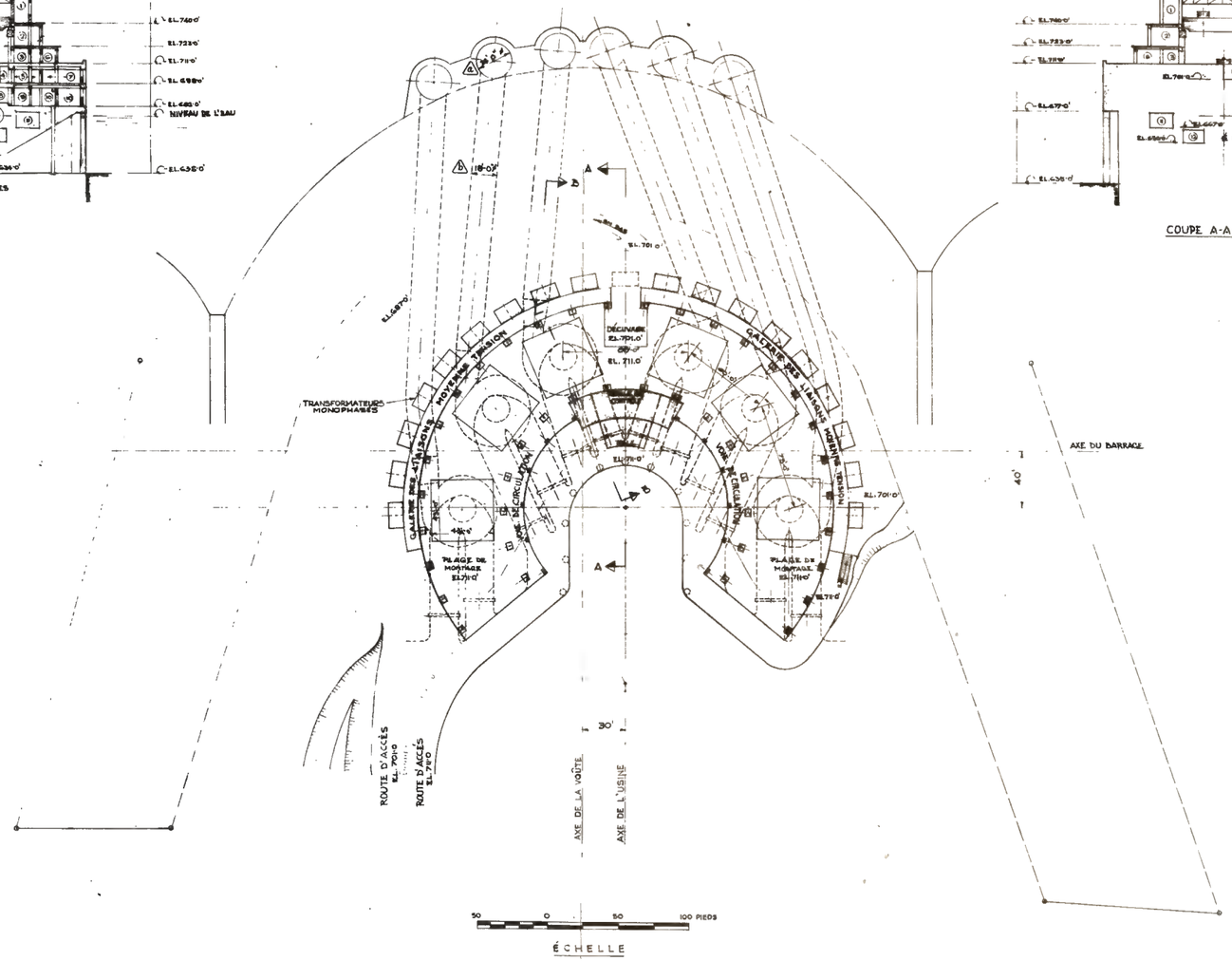

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2	9 DEC 60	CORRECTION DU DIAMÈTRE DE LA CONDUITE : 24'-0" REMPLACE 22'-0".		
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DESSINÉ PAR - DRAWN BY	C.C.P.	L-R.T.	10 NOVEMBRE 60
VÉRIFIÉ PAR - CHECKED BY	C.C.P.		"

APPROUVÉ PAR — APPROVED BY

HYDRO-QUÉBEC
MANICOUAGAN - 5

USINE SEMI-CIRCULAIRE - (6 GROUPES)
DANS BARRAGE SOLUTION OCTOBRE 1960

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ÉCHELLE: / SCALE:
R. DE T.: / W.O.:

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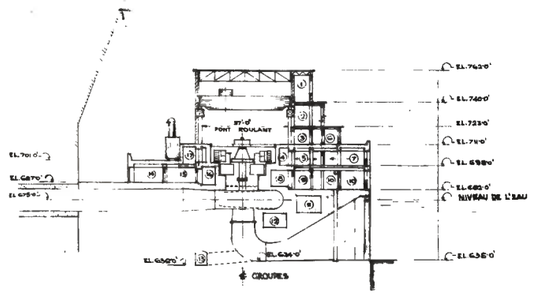

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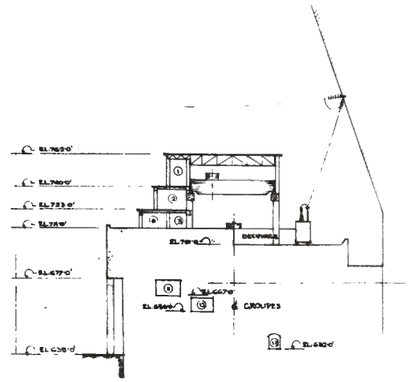

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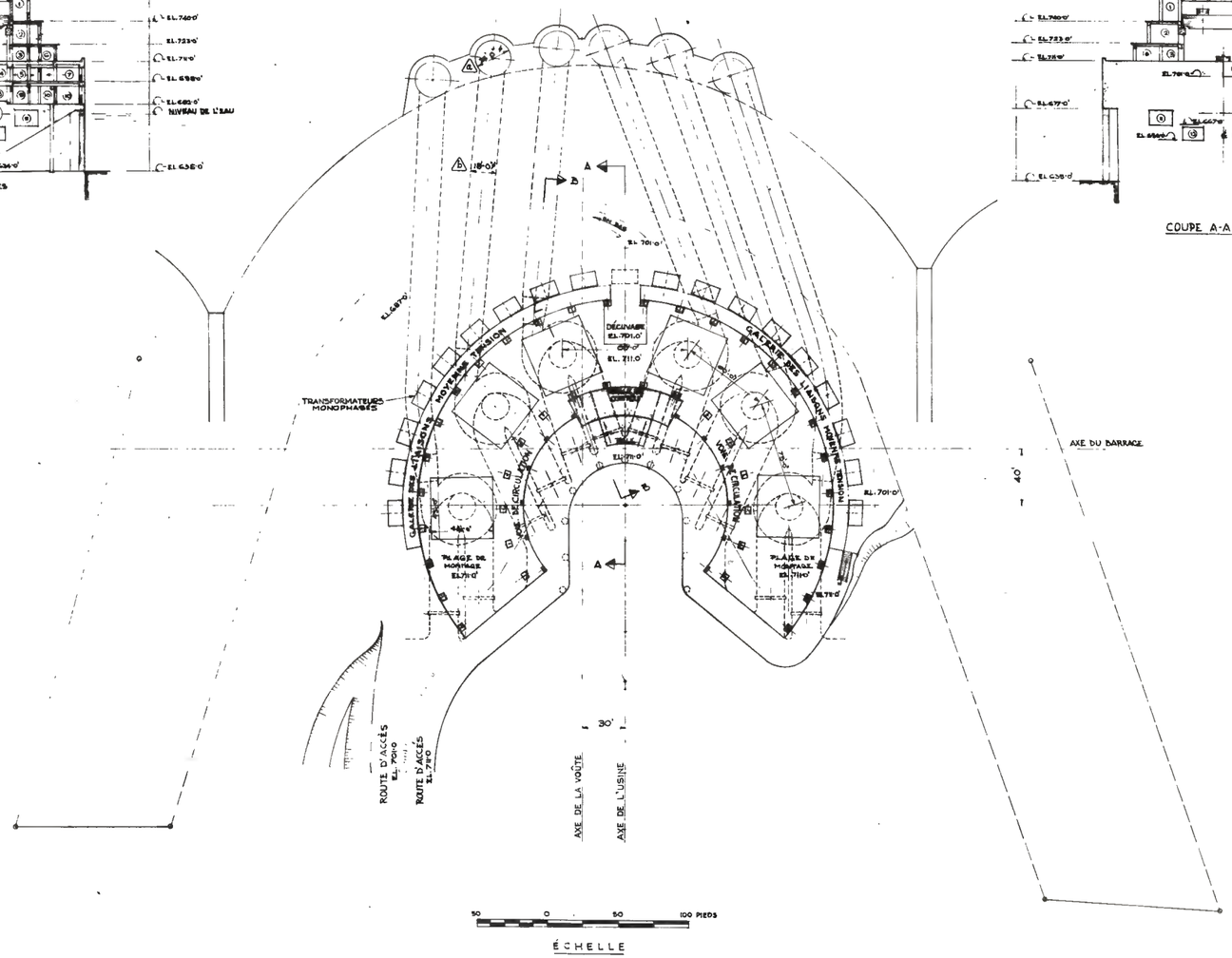

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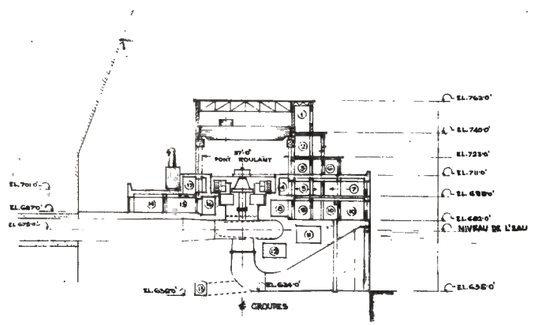

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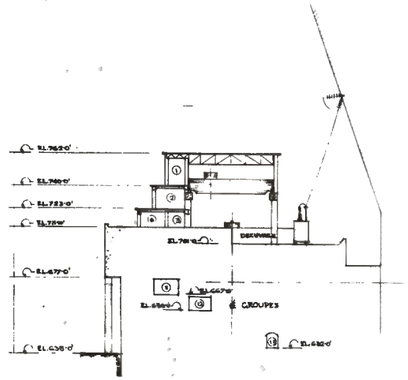

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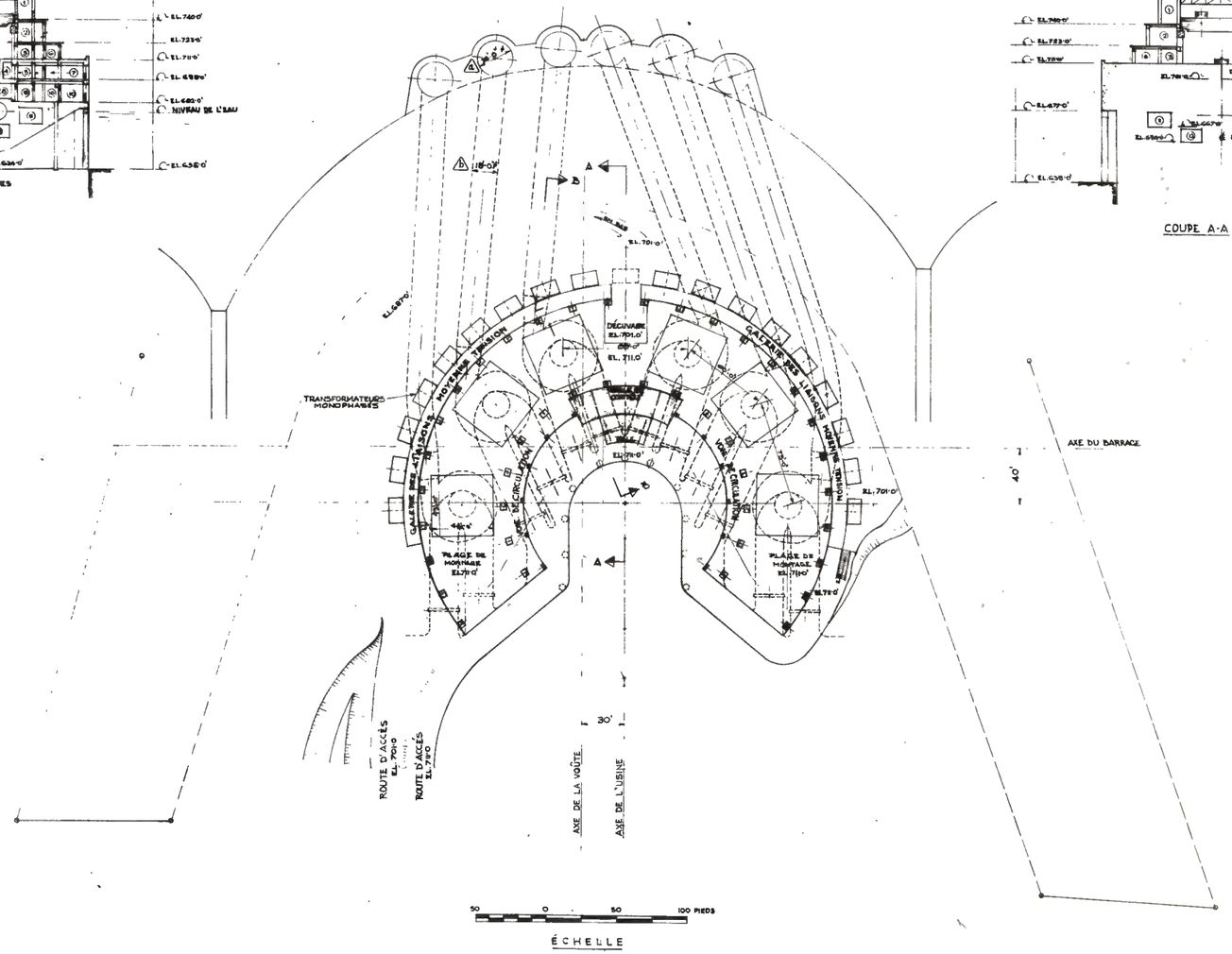

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	INSTRUMENTISTES	DESS.	DATE
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