

Dominion Bridge Company, Limited.

HEAD OFFICE AND WORKS.
LACHINE, P.Q.
P.O. ADDRESS, MONTREAL.

WINNIPEG OFFICES
702 CANADA BUILDING
CABLE ADDRESS
DOMINION-WINNIPEG

BRANCH WORKS:
WINNIPEG, MAN.
TORONTO & OTTAWA, ONT.
CALGARY, ALTA.
VANCOUVER, B.C.

Winnipeg, Man. Aug. 23-1937.

Mr. McDonald,
Indian Agent,
Battleford, Sask.

Dear Sir: Re. Equipment for Beauval Indian School

THIS QUOTATION IS CONDITIONAL ON SATISFACTORY TERMS IN RESPECT TO PAYMENT AND SECURITY BEING ARRANGED AND IS SUBJECT TO PROMPT ACCEPTANCE. THE PRICE OR PRICES NAMED IN THIS QUOTATION ARE SUBJECT TO INCREASE OR DECREASE TO THE EXTENT OF ANY CHANGE (EITHER BEFORE OR AFTER ACCEPTANCE) IN PREVAILING FREIGHT RATES, IMPORT DUTIES, SALES TAX OR EXCISE TAX. THIS COMPANY WILL NOT BE RESPONSIBLE FOR DELAYS DUE TO FIRES, STRIKES, LABOR DIFFICULTIES, ACCIDENTS, DELAYS IN TRANSPORTATION OR OTHER LIKE CAUSES.

We have been requested by Mr. V. Bleau of the Beauval Indian Residential School to quote you direct on the above and take pleasure in submitting the following proposal:

Reiffenstein Turbine:

For - One (1) only #10 Reiffenstein Turbine, designed to develop 20 H.P. when operating under a net effective head of 13.5 ft. at a speed of 340 RPM, including driving pulley and oil pressure governor

Our price will be FIFTY NINE HUNDRED AND FIFTEEN DOLLARS (\$5915)

The unit will be as shown on enclosed blueprint of our Drawing #C-4818, and will include a plate steel casing, a cast iron runner, a steel shaft, ~~to~~ anti-friction bearings, a cast iron pulley, a cast iron draft tube elbow, a plate steel conical draft tube, a steel regulating gate, a self contained Woodward oil pressure governor with belt driven centrifugal head and belt driven rotary pumping unit.

Shipment - fourteen (14) to sixteen (16) weeks.

Generator:

For - One (1) Type ASI-7246, 8 pole, 15 kv-a., 12 kw., 0.8 p.f. 50° C. rise, 900 RPM 125 volt, 60 cycle, single phase alternator with pole face winding, suitable for waterwheel drive (95% overspeed).

One Sliding base
One pulley
One Generator field rheostat
One 125 volt direct connected exciter and exciter field rheostat.

Indian Affairs. (RG 10, Volume 6301, file 650-5, part 4)

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Mr. McDonald

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Aug.23-1937.

One (1) Switchboard for use with the above Alternator, consisting of:-

One(1) 36" x 16" x 1" panel on 64" pipe supports, mounting the following equipment -

One (1) AD6 Ammeter
One(1) AD6 voltmeter
One (1) Concentric rheostat operating mechanism.
One (1) D.P.S.T. 250 volt, D12 lever switch with fuses.

Our price will be ONE THOUSAND FIVE HUNDRED & FORTY DOLLARS(\$1540)

Shipment - six (6) to eight (8) weeks.

SLUICE GATE:

For One (1) 42" diameter sluice gate, with hand-stand and operating mechanism,

Our price:-
ONE THOUSAND THREE HUNDRED & THIRTY DOLLARS (\$1,330.00)

Shipment twelve (12) weeks.

The general arrangement of the above gate is shown on blueprint of our Sketch A-16774-B, three blueprints of which are enclosed herewith;

PUMP:

Montreal state that as your capacity is about 5000 gallons and this being your average consumption per day this would work out to a rate of 3.5 g.p.m and it seems unlikely that you would install such a small pump. 800 ft. of 2" pipe will carry 10 g.p.m. with loss of head of about 10 ft. and we take pleasure in quoting you on a pump of this size as follows:

For One (1) only 10 I.G.P.M. No.515, 1-1/4" "Westco" Turbine Pumpe, 1850 R.P.M., 130 ft. head; mounted on cast iron sub-base; complete with tight and loose pulleys.
Price - ONE HUNDRED AND SEVENTY FIVE DOLLARS (\$175.00)

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The above pump is described in the attached Bulletin Form 701 - Micro-Westco Inc., and will require about 1 H.P. for its operation.

PIPING:

You show a 42" ϕ pipe about 163' long but Montreal advise us that a pipeline 2' diameter will carry the water required to develop 20 H.P. under 13.5 ft. with loss of head about one ft. in the 163' of pipe. We are, therefore, quoting you an alternative on this length of pipe.

163 ft. of 42" pipe made from 1/4" plate supplied in eleven (11) pieces with flanged angle connections complete with gaskets for bolting in the field

Our price TWENTY TWO HUNDRED AND SEVENTY DOLLARS (\$2270.00)

As a guide to you we may say that for each right angle elbow or equivalent required in this pipe there would be an additional cost of approximately.
TWO HUNDRED & SIXTY FIVE DOLLARS (\$265.00) per elbow.

24"
163 ft. of pipe made from 1/4" plate in eleven (11) pieces with flanged angle connections complete with gaskets and bolts FIFTEEN HUNDRED & TWENTY FIVE DOLLARS (\$1525.00)
For each right angle elbow or equivalent in this pipe there would be an additional cost of approximately
ONE HUNDRED AND TWENTY DOLLARS (\$120.00)

For 35 ft. of 48" pipe made from 1/4" plate in three (3) pieces with flanged angle connections complete with necessary gaskets and bolts for field connections -
SIX HUNDRED & FORTY EIGHT DOLLARS (\$648.00)
For each right angle elbow or equivalent in this pipe there would be an additional cost of approximately
TWO HUNDRED & SIXTY FOUR DOLLARS (\$264.00)

The only peice of equipment missing from this equipment is 24" gate should you decide on this size of pipe. This, however,

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can easily be obtained at a later date.

We notice there is some reinforcing in the machine shop foundations on which we are pleased to quote a price of FIVE DOLLARS AND SEVENTY FIVE CENTS (\$5.75) per 100# net.

All of the above prices are for the material and equipment f.o.b. cars Beauval, Federal Government Sales Tax of 8% only being included, no Provincial Tax.

This quotation is based on conditions and prices for materials current at this date, and is subject to confirmation by the Company at the time order is placed.

With regard to the field assembly we could send a Supervisor and would charge you a nominal rate per day for his services while this work is being carried out.

We sincerely hope that the above prices and information will be of service to you and that we may have the pleasure of hearing favorably from you in this connection.

Yours very truly,

DOMINION BRIDGE CO. LIMITED,

EAF/DP
Cc: Mr. V. Bleau

Per:



P.S. The 42" sluice gate on which we have quoted will include a cast iron frame with brass seats, cast iron gate, a steel rising stem, cast iron hand-stand with bevel gear and hand-crank; twelve (12) 1" diameter foundation bolts will also be supplied.

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OFFICE OF THE
INDIAN AGENT

CANADA
DEPARTMENT
OF
MINES AND RESOURCES
INDIAN AFFAIRS BRANCH

132-1-5
PLEASE QUOTE
FILE 272-109

Battleford. Sask.
August 26th 1937

[Handwritten signature]
Sir:-



Further re Department letter #132-1-5, Aug 9th
and my letter of the 20th.

I beg to forward enclosed Plans and specification
and they are apparently far above the Estimate made by
the school Principal, but as I am not in any way qualif-
ied to judge on this material, there are no comments
that I could make but the Department nodoubt have
qualified Engineers or advisers to deal with it.

Your obedient servant,

Indian Agent.

(13673)
The Secretary,

Indian Affairs Branch.

Dept Mines & Resources.

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	<u>42"</u>	<u>24"</u>
Turbine -	5915.00	5915.00
Generator	1540.00	1540.00
Sluice Gate 42" -	1230.00 x	1000.00 ?
Penslock 42"	2270.00 x	1525.00
2 Elbows 42"	530.00 x	240.00
Pipe 48"	648.00	400.00 ?
	<u>17233.00</u>	<u>10620.00</u>

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EXTD.

132-1-5

Ottawa, September 14, 1937

Sir:

The Department is in receipt of your letter of the 26th ultimo enclosing plans, specifications and a quotation from the Dominion Bridge Company, Winnipeg, in connection with proposed equipment at the Beauval Indian Residential School, for lighting and pumping systems.

The estimate of the Dominion Bridge Company is approximately \$14,000.00. This is considerably higher than the quotation contained in your letter of November 4th, 1936, and it is apparent that if the request of the Reverend Principal is granted, the expenditure will be extremely heavy.

Before making a definite decision the Department requires considerable additional information as follows:

1. Is the Beauval Residential School wired for electricity, and have the school authorities been developing electricity from the present water power?
2. Before expending any money on the water power development did the school authorities have the advantage of expert opinion? If so, you should state who was consulted at that time.

S. L. Macdonald, Esq.,
Indian Agent,
Battleford, Sask.

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3. What is the head of water in the lake as the result of the erection of the dam mentioned in the Reverend Principal's letter?

4. Have the school authorities carefully considered the fact that if the new machinery suggested by the Dominion Bridge Company were supplied it would require a great deal of water to operate it and, as a result, the quantity of water available for other purposes might not be sufficient?

5. Have the school authorities considered the advisability of generating their electric current by means of a steam plant or a Diesel engine? Information that the Department has received indicates that either system would be much cheaper than the proposed water power installation. Of course, to operate a steam plant successfully it would be necessary to have plenty of wood available for some years to come. Is this available in the vicinity of Beauval? To operate a Diesel engine plant would it be possible to obtain the necessary fuel oil at a cost that would not be prohibitive?

A copy of this letter is being forwarded to the Principal of the Beauval Residential School, and the Department would appreciate an early reply both from him and from yourself. You can understand that when such a large amount is involved it is felt that very complete information should be available before proceeding on any plan that might prove unworkable in the future. It may even be necessary to send a qualified electrical engineer to Beauval to survey the situation, but a decision in this regard will not be made until your reply is received.

Yours truly,

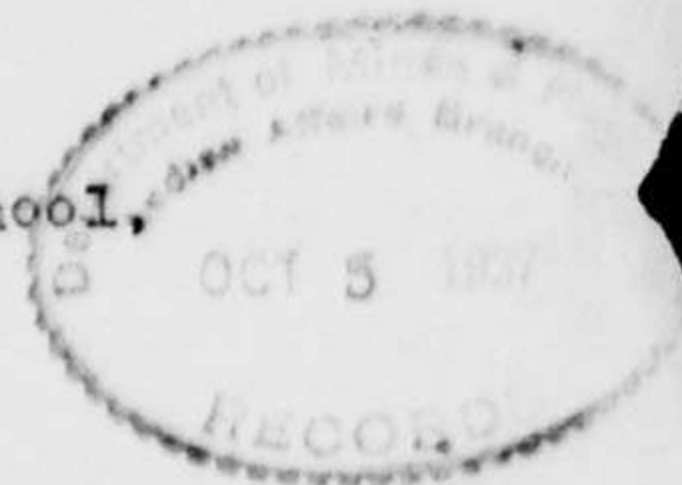
R. A. Hoey,
Supt. of Welfare & Training.

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132-1-5

Indian Residential School,
Beauval, Sask.,
September 21, 1937.



Dear Sir:

I have a copy of your letter to Mr. S. L. Macdonald in connection with equipment for the school here and am pleased to have the opportunity to answer the Department's questions.

The estimate made by Father V. Bleau, c.m.i., in a letter to Mr. Macdonald written last November, proves to be very much lower than the quotation made by Dominion Bridge Company. It was made in good faith, but without an adequate knowledge of the probable cost of the equipment required. It did not, moreover, include freight charges to Beauval, which is a part of the Dominion Bridge quotation, and must amount to perhaps \$3000 of the total cost.

1 The school itself, and the buildings in connection with it, are all wired for electricity. The school authorities have been developing electricity from the water power of the La Plonge river at this site since 1908; and have been using the water power to run a sawmill at the same site for as long a period. The generator and turbine used now for the development of electricity are those originally installed in 1908. They no longer develop enough power for the needs of the school, and the building itself is falling down and must be replaced.

2 The site has not been inspected by a qualified engineer; but Mr. J. A. Burnouf of Beauval, who installed the original equipment, was consulted, and also Brother Beaudoin of the School staff, who has been working in water power since his youth in Quebec, and has had here at Beauval a continuous experience of 14 years using the water power of the La Plonge river; and also Brother Gauthier, who installed the water power development at McIntosh School. Although these men are not qualified engineers they have had a great deal of experience with water power and their opinions could be relied on.

3 The dam at Lake La Plonge, four miles from the School, was built to keep a surplus of water in the lake for power development at the school during dry years. The dam at the school provides a fall of 14 feet, which could easily be made 16 feet if it were necessary, according to level instrument.

4 The dams were built to keep a head of water for use in generating electricity, and this has been done at considerable expense. The only other purpose for which the power is used is to operate a sawmill during about ten days in the spring of the year, when seepage from the surrounding muskegs provides enough water to operate the mill and the

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generator both, at a time when the school is only using light for about one hour at night. There has been no trouble due to insufficient water. The piping to the generator in use now is 24", and we would suggest that 24" or 30" piping be used in the new equipment, between dam and turbine.

5a. Development of power by both steam plant and Diesel engine have been considered, but these methods had numerous disadvantages. The cost of buying, freighting, and installing a boiler would be large; its operation would require the continual services of an engineer, and would be an ever-present source of danger in the hands of an inexperienced or careless man. Cordwood is available in the vicinity of the school but quantities of it are used yearly for fuel, and there is no long-time assurance of a supply of it because of the simple fact that, as during the present year, forest fires are continually laying waste thousands of acres of timber through the north and at any time may destroy our own supplies. Hauling and cutting of cordwood would also be a continual expense. It was also the opinion of the school authorities that a steam plant would not last as long as a turbine.

5b. As for the Diesel engine, this would again entail the yearly expense of an engineer qualified to run it, and the cost of fuel oil would be prohibitive, since the school is situated 120 miles from railhead at Big River by winter freight road, or 200 miles by waterways, and freight charges would be from \$1.25 to \$1.75 per hundred pounds.

It is possible that the turbine may cost more than either steam or Diesel power to install, but we believe that it will be both safer and less expensive in the long run. We do not see any reason why it might prove unworkable in the future. The Episcopal Corporation of Keewatin has spent money to build up dams to provide a sufficient head of water, and they have long been ready to cooperate with the Department on this matter. You can be assured that the matter has been thoroughly considered. It would be advisable to send a supervisor to take charge of the installation.

Yours very truly,
F. X. Gagnon c.m.i.
 F. X. Gagnon, c.m.i.
 (Principal)

R. A. Hoey,
 Supt. of Welfare and Training,
 Department of Indian Affairs,
 Ottawa, Ontario.

OFFICE OF THE
INDIAN AGENT



CANADA
DEPARTMENT
OF
MINES AND RESOURCES
INDIAN AFFAIRS BRANCH

PLEASE QUOTE
FILE 342-109

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However as the Expenditure is so large, I certainly would not like to be responsible for any error in either Equipment or Instalation and I do not think, there is anyone at the school qualified, they have some good Mechanics but this is specializing and I would certainly recommend that a qualified Engineer be sent there to verify or correct any chance of errors, before any definite action is taken and this should be at an early date or before freeze up approximately Oct 20th, after which all plane traffic is tied up till Skees can be used, also while there is open water he would have a better chance to measure the flow. There is a considerable Droy from the lake to the school and all of 30 feet more at plant and into the Beaver River.

Your obedient servant,

S. J. Macdonald
Indian Agent.

The Secretary,
Indian Affairs Branch.
Dept Mines & Resources.
Ottawa.

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PLEASE QUOTE
FILE 132-1-5
842-109

132-1-5
Battleford, Sask.
Sept 24th 1937

Sir:-

I beg to acknowledge receipt of Department letter 132-1-5, Sept 14th 1937, re Equipment for the Water Power at Beauval School. The Estimate as sent in by the Principal was as I understand based on prices he had received from some Manufacturing Co and is certainly far the figures of the Dominion Bridge Co.

No.1, The School is all wired and has been operating from Water tower for years.

No.2. No expert was called in to my knowledge and I am under the impression that the requirements were made by the School Mechanic and Principal with the help of Mr Bournof an Ex-brother and also Mechanical Expert who installed the present System.

No.3. Re Head of Water I could not give, but La Plonge is a large lake and they have a Dam, built last year at the mouth of the River about 3 Miles from the School and another at the Power Plant, I do not however think that there is any possible fear of Water Shortage and they have used this for all Purposes including a Mill for over 25 years to my knowledge.

No.4. Covered in above.

No.5. An Oil burning outfit up there would be costly, as transportation costs are heavy. There is unlimited wood, however with the perfect supply of Water Power which once installed, runs practically at no cost, and within 100 yards of the buildings, any other system would be out of Place.

The Church Authorities have just transferred the Rev Fr Bleau to Cross Lake, Man, and Rev F.X. Gagnon, former principal has againtaken over, but apparently intends to go ahead with the plans from a letter just received from him, I am leaving for Beauval and Canoe Lake on Sunday Sept 26th and will take this up further while there.



*Note -
also see letter
to Mr. Bournof dated 10/1/37
re water power
at Beauval School
and the
fact that the
water power
is not
to be
used
for
the
school
but
for
the
mill
at
La
Plonge*

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EX.

Ottawa, October 21, 1937.

Dear Sir:-

The Department received your letter of September 24th, also Reverend Father Gagnon's letter of September 21st in connection with the water power plant at the Beauval Indian Residential School. The contents of both these letters were very carefully considered, but, in view of the large expenditure that is necessary, our engineers consider that it is inadvisable to take any action without first sending an engineer to look over the whole situation.

From the information contained in the latter part of your letter it is now considered too late in the year to send an engineer. Arrangements will, however, be made to send an engineer early in the Spring. Please let me know the earliest date in the Spring that weather conditions will likely permit an engineer reaching the Beauval school. It should be understood that we wish this officer to be at Beauval when the lake is opened in order that he may obtain water levels and other necessary data.

Provision is being made in our appropriation for the fiscal year 1938-39 for necessary funds in order that, in the event of our engineer reporting favorably, money will be available.

Yours truly,

R.A. Hoey,
Supt. of Welfare & Training.S.L. Macdonald, Esq.,
Indian Agent,
Battleford, Sask.

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VOL.4

FROM

17/3/32.

TO

21/10/37

BUILDINGS, ACCOUNTS &C.

[illegible]

FILE No. ~~132-45~~ VOL. 4

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