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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1010	Press
236-238	~~Mis.~~
Dated 12. 4-	1868-

Not to be folded or roughly handled

[Signature]

*Proceedings of the Madras Government, Public Works Department,
12th April 1865.*

Read the following letters:—

No. 236. From Colonel A. J. M. BOILEAU, R. E., Superintending Engineer, 4th Division, to Colonel C. A. ORR, R. E., Secretary to Government, Public Works Department, dated Madras, 5th April 1865, No. 6,405.

SIR,

1. With reference to your Memoranda Nos. 49 and 50, dated respectively 22nd and 23rd March 1865, I have the honor to state that, under the circumstances of His Excellency the Governor's anxiety to see the water supplied to Guindy Park as soon as possible, and the great delay which must occur in obtaining pipes from England, I shall not offer any objections to reverting to Mr. Fraser's scheme, as amended by him, although I still think that a more certain supply of water in dry seasons may be looked for in that part of the river where my proposed line starts from, than in that chosen by Mr. Fraser.

2. It is much to be regretted that Mr. Fraser should have allowed nearly four months to elapse, after having been informed of the change from his design being authorized by Government, before he took action in the matter.

3. I think it very desirable that to Mr. Fraser should be entrusted the execution of his own scheme, and I should be glad if Government are pleased to give orders accordingly.

No. 237. From W. FRASER, Esq., C. E., Special Executive Engineer, to Colonel C. A. ORR, R. E., Secretary to Government, Public Works Department, dated Madras, 3rd April 1865, No. 60.

SIR,

1. With reference to the Official Memorandum No. 50, dated 23rd March 1865, I have the honor to state that I put myself into communication with Colonel Boileau, R. E., and we examined the two lines together on the 29th ultimo. I have had the two lines carefully levelled, and I forward a tracing of the sections for your information.

2. I think that an examination of these sections will show the decided superiority of the line originally proposed.

Both lines start from the same pool or reach of the Adyar. Colonel Boileau's, from a point 300 yards higher up the river than mine.

The water is thus somewhat cleaner at the end of his line, and it is now about 12" deeper: but at the two points the water surface is at the same level.

These advantages are however trifling, compared with the great disadvantage of being 867 feet longer than mine, and from the broken nature of the ground traversed, more expensive to work in.

3. Before sending up the plans for these works (they were sent up in October 1863) I had personally examined, with great care, not only the line originally proposed by Captain Moberly, but every other which the ground and river suggested including the one now advocated by Colonel Boileau; and in deciding in favor of the one I proposed, I was influenced by the simple facts that there was, throughout

*Proceedings of the Madras Government, Public Works Department,
12th April 1865.*

the year, at least three feet of water in the river at the point from which it started, and that it was the shortest line from the river to the place where the water was to be delivered.

Captain Moberly's line was about	...	Feet 6,300
Colonel Boileau's is	...	" 4,507
Mine is	...	" 3,640

4. The mere saving of the cost of 867 feet of piping, and of the cost of laying the same, do not represent the whole pecuniary advantage obtained by adopting the shortest line.

All other things being the same (and we may assume them to be so in this case) the resistance to the flow of water through pipes is in the direct ratio of their lengths; and thus, so far as this element of resistance is concerned, the figures given above would represent the ratio of the pumping power required for the respective lines.

It is evident from these facts that very great advantages in other respects, would be necessary to justify a departure from the shortest line.

5. The section of my line, now submitted, is at the river end, about 50 feet to the east of the line formerly levelled; but such a departure was contemplated when I sent up the original plans—See note to paragraph 2 of my report.

6. From information received from the Store Department, I find that the length of piping already received from England will be sufficient for my line.

Should Government decide on reverting to the original line, I would mark out the position of the several works upon a detailed section which I have had prepared, so that there would be no further delay in proceeding with the works.

In conclusion, I have to express my regret that I should have any difference of opinion with Colonel Boileau, with whom it has always been to me a great pleasure to work in concert.

To save time I send this letter to Colonel Boileau that he may send it up with his own remarks, as under the circumstances we cannot submit a joint report.

No. 238. ORDER THEREON, 12th April 1865, No. 1,010.

CIVIL WORKS, No. 46.

Letter No. 3,887, dated 2nd November 1864.

sanctioned estimate for the works connected with the Guindy Water Project, reported that he had selected a different spot from that chosen by Mr. Fraser for taking off the proposed supply of water from the Adyar, and had fixed upon a fresh site for the Engine-house, Filter, &c. These alterations were approved of in the

No. 3,426, dated 30th November 1864.

Government for the additional length of piping thereby rendered necessary. A question, however, having arisen as to whether it would not be advisable to revert to the original arrangement, the Superintending Engineer and Mr. Fraser were

1. In November last the Superintending Engineer, 4th Division, in bringing to notice certain variations which it had been deemed advisable to make from the

G. O. marginally noted, and in due course an indent was made on the Home

*Proceedings of the Madras Government, Public Works Department,
12th April 1865.*

In Office Memorandum No. 50, dated 23rd March 1865.

called on jointly to report on the subject. The replies to this requisition are above recorded.

2. On a careful consideration of the matter the Government are of opinion that it would be in every respect better to adopt the shortest line ~~for the proposed channel~~. They accordingly direct that Mr. Fraser's line be reverted to, and authorize the execution of the work being entrusted to him. Mr. Fraser will accordingly at once assume charge of operations, and will be responsible for their successful and early completion.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 4th Division.
To W. Fraser, Esq., C. E.
To the Controller of Public Works Accounts.

Exd. S. T. Augustin.

N^o 60.

2

Madras Water works Office
Church Park, Mount Road
3^d April 1865.

From

W. Treaver Esq^r & Co.

Special Ex. Engineer

To

Colonel C. A. Cox & Co.

Secretary to Government P^W & S^d

Sir.

With reference to the ~~Official Memorandum~~
~~of Government~~

N^o 50 Dated 23 March/65 I have the honor to state
that I put myself into communication with Colonel
Boileau & Co. and we examined the two lines together
on the 29th ultimo. — I have had the two lines
carefully levelled and I forward a tracing of the sections
for your information. —

I think that an examination of these sections
will show the decided superiority of the line originally
proposed:

Both lines start from the same pool or
reach of the Adyar. — Colonel Boileau's, from a
point 300 yards higher up the river than mine: —

The water is thus somewhat cleaner at the end
of his line, and it is now about 12" deeper: — but
at the two points the water surface is at the

Same level: —

These advantages are however trifling, compared with the great disadvantage of being 867 feet longer than mine, and from the broken nature of the ground traversed, more expensive to work in. —

3. Before sending up the Plans for these works (they were sent up in October 1863) I had personally examined with great care not only the line originally proposed by Capt. Moberly, but every other which the ground and River suggested including the one now advocated by Colonel Boileau; — and in deciding in favour of the one I proposed I was influenced by the simple facts that there was, throughout the year, at least 3 feet of water in the River at the point from which it started, and that it was the shortest line from the River to the place where the water was to be delivered. —

	feet
Captain Moberly's line was about	6300
Colonel Boileau's is	4507
Mine is	3640

4. The mere saving of the cost of 867 feet of piping, and of the cost of laying the same,

do not represent the whole pecuniary advantage obtained by adopting the shortest line.

All other things being the same (and we may assume them to be so in this case) the resistance to the flow of water through pipes is in the direct ratio of their lengths; and thus, so far as this element of resistance is concerned, the figures given above would represent the ratio of the pumping power required for the respective lines: —

It is evident from these facts that very great advantages in other respects, would be necessary to justify a departure from the shortest line. —

5. The section of my line now submitted is, at the River end, about 50 feet to the East of the line formerly levelled; but such a departure was contemplated when I sent up the original Plans: (see note to paragraph 2 of my report). —

6. From information received from the Store Department I find that the length of piping already received from England will be sufficient for my line: —

Should Government decide on

reverting to the original line I would mark out the position of the several works upon a detailed section which I have had prepared, so that there would be no further delay in proceeding with the works -

In conclusion I have to express my regret that I should have any difference of opinion with Colonel Boileau with whom it has always been to me a great pleasure to work in concert -

To save time I send this letter to Colonel Boileau that he may send it up with his own remarks, as under the circumstances we cannot submit a Joint report -

I have the honor to be

Yours most obedient servant

William Fraser CC

Special Ex: Engrs

Col J. Fraser

Col J. Fraser

Special Ex: Engrs

Mr. Fraser Engrs

10/10/10-12/24/10/15

Representing the

that of Col. Boileau

Special Ex: Engrs

Special Ex: Engrs

10/10/10-12/24/10/15

Immediate

I wish to know in what state the arrangements for pumping spring water to the house are at present -

1. Are the Engine & Pump etc. available?

2. Are there lengths of pipe sufficient to bring the water up to the house from the site now proposed?

3. If not - would it not be better to place the Engine at the site originally intended -

It is very desirable that
the work should be pushed
forward as soon as possible
either the winter or the
summer in the future
get charter of the
Every year

[Signature]

[Faint, mostly illegible handwritten text]

No. _____

FROM

THE PRIVATE SECRETARY

TO H. E. THE GOVERNOR.

To Secretary & General
P. M. Deane

Dated March 20th / 65

Within Memo:

transferred

by order

Arthur Keeler

Per Secy

No. 50 13

Memorandum.

With reference to the Memo from this Office No. 49 dated 22nd March 1865, the undersigned has the honor to request the Superintendent Engineer 4th D. to be good enough to furnish the report called for in conjunction with Mr. Fraser, Special Executive Engineer, as to the advisability or otherwise of reverting to the original plan as designed by Mr. Fraser, or to a modification of it for supplying Grundy Park with water from the Adyar. It is observed that sufficient piping for that project is available, and that the additional lengths required if the site of the well and filter be moved to the spot selected by Colonel Braham can not be received for several months.

Copy

2. Copy of this Memorandum

will be furnished to Mr. Fraser, who
will be requested to place himself in
communication with the Superintending
Engineer.

/ Signed to A. C. Fraser.

Chepau R. } Secy to Govt
23rd March/65 }

To The Superintending
Copy to Mr. Fraser & Co.

16

In reply to the Memorandum
from His Excellency the Governor in
upon the Quindry water project, the Se:
cretary to Government Public Works Dept:
has the honor to submit the following re:
marks.

1 The Engine is now available, but
the Pumps are not yet ready. When the
project was first prepared it was intended
to use one of Gwynne's pumps, but
there was none of this kind of pump
in store suited for lifting and forcing
water to so great a distance. Vastly
there has been some delay, consequent
on the alteration in the project, in de:
ciding on the kind of pump best
suited to the pile and the work re:
quired. This has now been settled,
and the work can be done at the
mint without much further delay.

2 The length of pipe which has
arrived from England is not sufficient
to bring the water to the House from the

Site.

site now proposed. The length originally
ordered (of 5" pipe) was 5,100 feet. This
has been revised, but the Superintending
Engineer has applied for an additional
length of 1,800 feet. This has been in-
cluded in the Annual Indent on the
Home Government, but it cannot be
expected in this Country for some months.

3. With regard to the advisability
of placing the Engine and pumps at the
site originally intended, the undersigned
is not at present able to give a satis-
factory reply, but the question has been
referred to the Superintending Engineer for
immediate report.

Chester

22nd March 1865

Amos A. M.

(Coll. 528)

Secy to Govt (D.W.A.)

From W. Fraser & Co. - M. & E. Engineer
No. 60 dated 3rd April 1865

From Supy Engineer Lt. Dr.
No 6405 dated 5th April /15

On the subject of the
Supply of Water to Grinaby
Park.

Circulated for the
information and orders of
His Excellency the President
and the Members of Government

Charles A. M. Colonel. 128.
Secretary to Genl -

I think it would be in every respect better to adopt the shortest line, and that Mr. Fraser should have charge of the work & be responsible for its success.

WAM

at the question be
 referred to the Trustees,
 Deputes as well as
 Trustees of the Kings?
 Say? The Trustees
 do not the work I was
 exceedingly profitable,
 & as cheaply and at
 the original Price is
 his cheapness that
 sells as adopted.
 The entire work of
 the present must not
 be left
 W.D.

2. Time of March 1865 Q. 1412.

N^o 49.

23

Memorandum.

His Excellency the Governor being most anxious that water from the Aclay River should be supplied as soon as possible to Linnahy Park, the Sup^d Engineer of the L^d is requested to state whether it would not be advisable to erect the Engine and Pumps either as a permanent or temporary measure, at the site originally intended for them so as to make immediate use of the piping which has arrived from England - The additional length of piping applied for will probably not reach London for some months -

The favor of an immediate reply is requested.

Signed for A. C. G. 1865.
Secy to Govt. H. A.

Chepauk
22^d March 1865 }

To Sup^d Engineer
L^d

No. 6405

Superintd. Engrs. Office 4th D.
Madras 5th April 1865

From,

Colonel A. J. M. Boileau R.E.
Superintending Engineer 4th D.

To,

Colonel C. A. Orr R.E.
Secretary to Government P.W.D.

Sir,

With reference to your Memos
Nos. 49 and 50 dated respectively 22nd and
23rd March 1865, I have the honor to state
that under the circumstances of His Excellency
the Governor's anxiety to see the water supplied
to Quindly Park as soon as possible, and the
great delay which must occur in obtaining
pipes from England, I shall not offer any
objections to reverting to Mr. Fraser's scheme,
as amended by him, altho' I still think
that a more certain supply of water in dry
seasons may be looked for in that part of
the River where my proposed line starts
from, than in that chosen by Mr. Fraser.

M

2 It is much to be regretted that
Mr. Fraser should have allowed nearly
4 months to elapse after having been in-
formed of the change from his design
being authorised by Government before he
took action in the matter.

3 I think it very desirable
that to Mr. Fraser should be entrusted
the execution of his own scheme, and I
should be glad if Government are pleased
to give orders accordingly. —

Sup. Engr. Office } Having the honor to be
4th D^o Madras } Sir
5th April 1865 } Your Most Obedient Servt

A. H. Vileau Colonel R. E.

Sup. J. Engr. 4th D^o

To,
Colonel G. A. O'Connell R. E.
Secretary to Government
P. W. Dept^o

P.H.A.

no. 1070

Proceedings of the Madras Government.
Under date the 12th April/65

Read the following

From the Superintending
4th 1st 5th

N. 8. 5th April 1865
N^o. 6405

From W. Fraser Esq.
Special Engineer

N. 8. 3rd April/65
N^o. 60

Letter N^o. 3887 of
2nd Nov/64

In November last
the Superintending Engineer
4th 5th in bringing to notice
certain variations (which)
had been deemed ad-
-visable to make from the
sanctioned Estimate for the
works connected with the
Quindy Water Project, re-
-ported that he had se-
-lected a different spot
for

27/12/1865
Pro. of Govt. of Madras
From C. J. 11/192
The Superintending
Engineer
To the Secretary to Govt.
Dated 5th 3rd April 1865
N^o. 6405

Report that the

Superintending Engineer was no
-wise satisfied with the
-proposed plan for
-the water supply to the
-city as the same would
-be too much calculated
-to ensure speedy completion
-of the work.

No. 236

no. 1070 - 12th April 1865

no. 1070 - 12th April 1865

from that chosen by
Mr. Frazer for taking off
the proposed supply of water
from the Aalyar, and had
fixed upon a fresh site
for the Engine House, ~~and~~
Filter &c. These alterations
were approved of in the
G.O. marginally noted, No 3426 of 30 Nov/64.
and in due course an
indent was made on the
Home Govt for the additional
length of piping thereby
rendered necessary. A
question, however, having
arisen as to whether it
would not be advisable
to revert to the original
arrangement, the Supy
Engineer and Mr. Frazer

In Office memo: No 50
of 23 March/65

were called on jointly to
report on the subject - The
replies to this requisition
are above recorded.

On a careful con-
sideration of the matter
the Govt are of opinion
that it would be in every
respect better to adopt
the shortest line ~~for the~~
~~proposed channel~~. They
accordingly direct that
Mr. Frazer's line be re-
verted to and authorize
the execution of the work
being entrusted to him.
Mr. Frazer will accordingly
at once assume charge
of operations, and will
be responsible for them.

successful and early
completion

Abb

6 1/2 The Supr Lf- & Day
1 - W. Fraser Lf- & Day
4 - J. Fraser Lf- & Day
Public Dept
21 Sept 13th 1891
4 + Sept 13th 1891

34

J. V. 1865 Departo
Pro: of Govt for April

Nº 1010

Pro: of the Alcabala
D/12 April 1665

Mr. Frasier Esq.
By: Engr. directed to
revert to the original
plan for supplying
Guindy Park with
water from the Bay,
and to assume
charge of operations
aforesaid.

Nº 236 @ 238.