Public Works (1896) Department.

G.O., No. 456 J

Dated 27-5-96

[Despatch Abstract.]

Lock. Estimate of Rs 17,300 for converting Ennore N2 the Flood gate into a —, Buckingham Canal Sanctioned.

BACK PAPERS.

G.O. No.	Department.	Date.	G.O. No.	Department.	Date.

FURTHER PAPERS.

G.O. No.	Department.	Date.	G.O. No.	Department.	Date.

No. 456 I., 27TH MAY 1896.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following paper:—

From A. S. RUSSELL, Esq., Executive Engineer, Buckingham Canal Division, to the Superintending Engineer, II Circle, dated Madras Basin, 30th January 1896, No. 2641.

With reference to your endorsement No. 369 B.C., dated 18th instant, on memo. No. II/2 B.C. of 7th January 1896, approving the construction of a lock at the Ennore north flood gate, I have the honour to forward for sanction an estimate, amounting to Rs. 17,000,* with enclosures † as per margin. Very early sanction is requested, as the work, being emergent, is already in hand in accordance with orders to that effect.

* As per correction in Superintending Engineer's office for Rs. 17,300.

† 1 Site plan.
1 Report.
1 Detailed estimate.
1 Abstract.
1 Estimate for temporary diversion.
—
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—

2. The experience of last November at the Pulicat lake proves conclusively that, in years of failure of the north-east monsoon, the huge extent of the lake will moderate so materially the height to which flood water rises that it will not be possible, without taking special measures, to force open its bar. These measures will be detailed in the history of the canal now under preparation. If taken whenever the bar closes, they will, in conjunction with the lock at Ennore north flood gate, the Vayalur flood gate and Pumbli lock now under actual construction, obviate the possibility of any further complications arising with this very troublesome Pulicat lake, since the risk of its draining the canal, by acting as an evaporating basin in the hot weather, is already provided against by the Coromandal and Chintamani locks.

3. From demi-official correspondence now going on with the Deputy Commissioner, Salt and Abkári Revenue, Central Division, I learn that the salt manufacture this year is seriously inconvenienced, owing to the Pulicat bar being closed. The construction of the Ennore north lock will thus be equally important to the future successful prosecution of salt manufacture as to the improvement and completion of the canal.

ENCLOSURE.

REPORT to accompany the estimate for converting the Ennore north flood gate into a lock.

	RS.
Amount of estimate	17,300

2. The design for this lock is similar to that in the general type plan for tidal locks submitted with this office No. 1295, dated 15th August 1894.

3. *Principal levels.*—The principal levels are as follow :—

M.S.L.	20·00
H.S.T.	22·20
L.R.T.	17·50
M.W.L. in canal	24·50
M.F.L. in backwater	28·45
Coping to walls or height of lock (*vide* paragraph 9) M.W.L. in canal + 2′ =	26·50
Sill	13·00
Floor (sill — ·75)	12·25
Height of wall from sill to coping (26·50 — 13·00)	13·50

4. *Batter.*—Batter of walls 1 in 4 or 3·37, which may be taken as 3·50 making 5 feet at base of superstructure.

5. *Sill.*—The sill of lock to be 4·5 feet below, L.R.T. or on the same level as sill of existing flood gate. The sill of existing flood gate to be raised 6″ for additional gate to abut against, instead of the old sill being lowered, as originally proposed in general type report.

6. *Wings.*—The width of wings in superstructure at base to be 5 feet, and the full width of masonry platform at the heel post to be 7 feet. The length of wings in superstructure to be 1½ times the height, *i.e.*, 21 feet with an extra allowance of ·75 feet for the support of revetment.

7. *Existing flood gate.*—The height of existing flood gate from old sill to coping level is (30·12 — 13·00) = 17·12 feet.

8. *Gates.*—New gates are required, as no existing gates are available for transfer to this lock.

9. *Coping.*—Coping to walls or height of lock in the case of this lock must be 2 feet above M.W.L. in canal, so as to be the same as the Chintamani lock at the other end of the reach. The reason for this is : (1) that there is no possible site for a flush escape in this reach, which will consequently, during heavy rain, rise to a very high level until the Vayalur flood gate open itself, and if only built to H.S.T. + 6″ the lock platform might thus be submerged for considerable periods of time ; (2) that the lock is partly required to prevent the escape of Pulicat lake flood water to the Ennore bar, recent experience having shown that the lake, acting as a flood moderator, keeps up to the high level of 6″ + H.S.T. for long periods of time, while not raising higher nor forcing its bar open even at this comparatively high level. It in fact passes off its flood water at or below this level very slowly by means mainly of the Ennore bar and floods the whole country in the process. High lock gates to this lock, as allowed for in this estimate, will prevent this escape to the Ennore bar, and will allow, while permitting traffic to pass, of the water level of the Pulicat lake being gradually forced up to the level necessary to open its bar.

10. All other particulars regarding construction can be gathered from the report that accompanied the general type plan. The actual rates for work done to the Ennore north flood gate are allowed in this estimate.

(Signed) A. S. RUSSELL,
Executive Engineer, Buckingham Canal.

No. 443 B.C.

Forwarded to the Chief Engineer for Irrigation, with reference to his No. II/2 B.C., dated 7th January 1896, for favour of obtaining the early sanction of Government to the estimate, amounting to Rs. 17,300, for constructing a lock at the Ennore north flood gate.

26th February 1896.

(Signed) W. M. ELLIS,
for Supg. Engineer, II Circle.

No. 77 I.

Submitted to Government with a recommendation that the estimate forwarded by the Superintending Engineer, II Circle, be sanctioned.

1st April 1896.

(Signed) R. R. E. DRAKE-BROCKMAN, Col., R.E.,
Chief Engineer for Irrigation.

ORDER—No. 456 I., dated 27th May 1896.

The following estimate is sanctioned from the balance of the amount reserved for unforeseen work of the Buckingham Canal, which will then be reduced to Rupees 1,40,177 :—

Irrigation.
43. Minor Works and Navigation.
Minor Works for which Capital and Revenue Accounts are kept.
Buckingham Canal.
Capital Account.
I. Works.
2. Main Canals and Branches.
9. Navigation.
Converting Ennore north flood gate into a lock.

	Rs.
Estimate	17,300

2. This sanction is registered as No. 41 I. of 1896–97.

(True Extract.)

Under Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with four enclosures.
" Examiner, Public Works Accounts.
" Revenue Department.

Exd. T. K. Narayana Aiyangar.
Spare Copies

IRRIGATION.
ACCOUNT.

Govt. of {1896} Madras.

PUBLIC WORKS.

Dated May, 27th.

Read. *Encl.*

G.O. No. 456 I., 27th May 1896.

MAY.

Lock

Estimate of Rs. 17,300 for converting Ennore north flood gate into a —, Buckingham Canal, sanctioned.

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

From Supt. Engr. Trondench. No. 4438 C.
dy 26 Feb 96
Rc No. d 41-496

1. Work sanctioned.
2. Supt. Engr. states that it has been already begun without the previous sanction of Govt. Vide C.E.'s Memo. 17th Jan., read with Supt. Engr.'s letter dy. Town Canals, No. 2292, 27 Dec. 95.
3. Reference should be made in the f.o. to the report of Capt. Walker and Mr. Boyd. The report of the C.E. in this matter should be expedited.

A.C.S. 30.4.96

+Rs 196,167

Submitted to Govt with a recommendation that the estimate forwarded by the Supt. Engr. Trondench. be sanctioned.

Order thereon.

No. 456 Dated 27 May 1896

The following estimate is sanctioned from the balance of the amount reserved for unforeseen work of the Buckingham Canal, which will then be reduced to Rs. 140177 as intended upon issue

Irrigation.

43. Minor Works Majja.

Minor Works for which Capital & Rev. Accts are kept.

Buckingham Canal.

Capital Account.

I. Works

2. Main Canals Branches

9. Navigation.

Converting Ennore north flood gate into a lock. Estimate Rs 17,300

2. This sanction is registered as R.

41 J of 1896-97.

1/4

Revds

1/4

DESPATCHED
8- JUN. 95

To

The Chief Engr for I.

Supdg Engr II circle 24/5 with 4 encls.

Ex. J. Ch.

Rev Dept.

1.6.95

30/3

P. W. CURRENT No. 3403

Estimate for converting Ennore north flood gate into a lock — Buckingham Canal.

Encl 6 (Plan)

No. 623 dt 8-8-95

Recd: 4-6-96

Urgent.

F.E.D. 22/5

Rect 28/5

Issue Form Rect 29/5

Recd 12/5/96

Recd. from I Office 22.5.96

P. I. Form No. 1—500—14-5-95

H.E. C/G R 11/4

5/4

Report to accompany the estimate for Converting the Ennore North flood gate into a Lock.

(1750)

Amount of Estimate Rs. 17,000

2. The design for this lock is similar to that in the general Type plan for tidal locks submitted with this office No 1295 dated 15th August 1894.

3. Principal levels.— The principal levels are as follow—

M. S. L. _____ 20·00

H. S. J. _____ 22·20

L. R. J. _____ 17·50

M. W. L in Canal — 24·50

M. F. L. in backwater 28·45.

Coping to walls or height of lock in Canal, (Vide para 9) M. W. L + 2 = 26·50

Sill _____ 13·00

Floor (Sill - ·75) = 12·25

Height of wall from Sill to Coping (26·50 — 13·00) = 13·50.

4. Batter.— Batter of walls 1 in 4 or 3·37, which may be taken as 3·50, making 5 feet at base of Superstructure

5. Sill.— The Sill of lock to be 4·5 feet below.

S. R. I. or on the same level as sill of existing flood gate. The Sill of existing flood gate to be raised 6" for additional gate to abut against, instead of the old Sill being lowered, as originally proposed in general type report.

6. Wings.— The width of wings ie Super-Structure at base to be 6 feet, and the full width of masonry platform at the butt-post to be 7 feet. The length of wings in Superstructure to be 1½ times the height, ie 21 feet with an extra allowance of 1·75 feet for the support of revetment.

7. Existing flood gate.— The height of existing flood gate from old Sill to Coping level is (30·12 − 13·00) = 17·12 feet.

8. Gates.— New gates are required, as no existing gates are available for transfer to this lock.

9. Coping.— Coping to walls or height of lock in the case of this lock must be 2 feet above M.W.L in Canal, so as to be the same as the Chintamony lock at the other end of the reach.

The reason for this is (1) That there is no possible site for a flush escape in this reach, which will consequently during heavy rain rise to a very high level until the Vayalur flood gate open itself, and if only built to S.S.J + 6" the lock platform might thus be submerged for considerable periods of time (2) That the lock is partly required to prevent the escape of Pulicat lake flood water to the Ennore bar, recent experience having shown that the lake, acting as a flood moderator, keeps up to the high level of 6" + S.S.J. for long periods of time, while rising higher nor not forcing its bar open even at this comparatively high level: It in fact passes off its flood water at or below this level very slowly by means mainly of the Ennore bar + floods the whole country in the process. High lock gates to this lock, as allowed for in this Estimate, will prevent this escape to the Ennore bar, and will allow, while permitting traffic to pass, of the water level

of the Pulicat lake being gradually forced up to the level necessary to open its bar.

10. All other particulars regarding construction can be gathered from the report that accompanied the general type plan. The actual rates for work done to the Ennore north flood gate are allowed in this Estimate.

A. S. Russell.
Executive Engineer
Buckingham Canal.

C.V.N. 5/2/96.

SUPG. ENGR. 10 FEB. 96 R. WD. SECOND CIRCLE.

CHIEF FOR IRRIGATION 20 FEB. 96 No. 213 B.C.

On 5 to 3/96

B.C. 500—26-9-95.

No. 2641

OFFICE OF THE EXECUTIVE ENGINEER,
Buckingham Canal,
Madras Basin, 30th January 1896.
Despd. 5th February 1896

From
A. S. Russell Esqr.
EXECUTIVE ENGINEER,
Buckingham Canal Division,

To
THE Superintending Engineer
Second Circle

SIR,

ENCLOSURES
1 Site plan
1 Report
1 Del. Estimate
1 Abst do
1 Estimate for temply diversion

With reference to your endorsement No. 369 B.C., dated 18th instant, on Memo No. II / 213 C of 7th January 1896, approving the construction of a lock at the Ennore north flood gate, I have the honor to forward for sanction an estimate, amounting to Rs 17,000, with enclosures as per margin. Very early sanction is requested, as the work, being emergent, is already in hand, in accordance with orders to that effect

2. The experience of last November at the Pulicat lake proves conclusively that, in years of failure of the North East monsoon, the huge extent of the lake will moderate so materially the height to which flood water rises that it will not be possible, without taking special measures, to force open its bar. These measures will be detailed in the History of the Canal, now under preparation. If taken, whenever the bar closes, they will, in conjunction

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* Ab for execution in S.E. office for Rs 17,000

conjunction with the lock at Ennore North Flood gate, the Vayalur Flood gate and Pumbli lock now under actual construction, obviate the possibility of any further complications arising with this very troublesome Pulicat Lake, since the risk of its draining the canal, by acting as an evaporating basin in the hot weather, is already provided against by the Kosamandal and Chintamani locks.

3. From Demi official correspondence now going on with the Deputy Commissioner, Salt and Abkari Revenue, Central Division, I learn that the salt manufacture this year is seriously inconvenienced owing to the Pulicat bar being closed. The construction of the Ennore North lock will thus be equally important to the future successful prosecution of salt manufacture as to the improvement during Completion of the Canal.

I have the honor to be
Sir
Your most obedient Servant

A Russell
Executive Engineer
Buckingham Canal

No. 443 BC
26.2.96

Forwarded to the Chief Engineer for Irrigation with reference to his No. III/2 B.C. dy 7th January 96 for favour of obtaining the early sanction of Government to the estimate amounting to Rs 17,300 for Constructing a lock at the Ennore North Flood Gate.

Encl: 5

Wm. Mc Lue: Superintg: Engineer,
for Superintg: Engineer,
II Circle.
28.2.96

From

Workshop Engineer,
II Circle.

To

The Chief Engineer
for Irrign.
Madras.

No 443-98C

Dated 26th Feby 1896.

RECEIVED
FOR REGISTRATION
28 FEB 96
No 2318C

Encls: 5

Ows.1
3403/96

Constg: a lock at the
Eruvoor N. F. Cake.
Forwards for sanction
of Estt: to Schedule to
Amy: 6Rs 17300 for —.

3935

Govt. of (1896) Madras.

PUBLIC WORKS.

Dated

Read. Encl.

G.O. No. 2857 1896. No. 458?

Channel

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Rep. India Letter sanctioning
Rs. remarks Estimate amount-
ing to Rs. 262,000 for a supply
from the Penner river
above the Sangam and to
the Nellore tank and for
~~distributing~~ improving its
distributaries Govt. with
remarks to Govt. of India Office
encl.

4

110/6

P. W. D.
A. 100—4-5-95.