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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS DEPARTMENT

G.O. No.	453. W	Press.
B.P. No.		Mis.
Dated	19-2-1881.	197.

2.8

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

19th February 1881, No. 453 W.

Buildings and Roads.
Civil Works.

Read the following papers:—

No. 75. From Captain A. AWDRY, R.E., Superintendent of Works, Buckingham Canal, to the Chief Engineer, Public Works Department, dated Iskapalle, 22nd September 1880, No. 1,700.

I HAVE the honor to forward herewith plans, estimates, report, and specification for the locks required on each side of the Adyar.

2. I have entered fully into the matter in my report, but in brief the lock on the south side of the river is required to prevent the Adyar water running to waste through the Covelong bar down the Sadras canal, and the lock on the north side to prevent the Cooum water (required to be kept up for the proper sanitation of Madras) running to waste through the junction canal to the sea by the Adyar bar when open.

3. When both Adyar and Cooum bars are closed the rivers in time will, with the south lock in use, get to the same level, when the junction canal lock can be left open, but this can only be during the dry season.

4. Temporary locks are in existence at the sites of these proposed locks, but they require much care and outlay for maintenance and a larger establishment to work them than will be necessary for the permanent structures proposed.

5. The best months in which to carry out the work are from January to August (February, March, and April being especially good); so, if the estimates are sanctioned, I have the honor to request an appropriation of Rs. 10,000 for the current official year from the grant of Rs. 1,20,000 for the year for Original Works, and the balance in next year.

6. I have the honor to solicit instructions as to height at which the Adyar bar is to be opened, and information as to whether the Committee's suggestions as to its being under the canal officer are to be carried out. You have decided in correspondence with me that 3-50 feet above mean sea level is the height at which the Cooum bar is to be opened, but I am not sure that this is the height at which it is considered by the Superintendent of Works at the Presidency to be his duty to open it. The matter is one which seriously affects the question of the headway under bridges, as the old height at which the Cooum bar was opened was apparently 4-50 feet above mean sea level.

7. The estimate for the Sadras canal lock amounts to Rs. 16,300 and that for the junction canal lock to Rs. 15,300.

8. I have the honor to return the papers forwarded to the Superintending Engineer on the subject from your office with your No. 3,487, of 19th November 1879.

No. 75-A. From the same Officer, dated Buckingham Canal, 4th February 1881, No. 2,916.

I HAVE the honor to resubmit the plans of the locks for the Adyar corrected as directed in your No. 597, of the 28th October.

2. Double sets of gates have been provided at each end of the junction canal lock so as to enable boats to pass either northward or southward and yet to keep the waters of both the Cooum and the Adyar under regulation.

3. The gates on each side of the Adyar and next to it have been revised so as to have a height of about $1\frac{1}{2}$ feet above the highest flood (8.07 above M.S.L.) in that river.

4. Designs for a lock office and for huts for the establishment have been drawn out and are added to the estimates.

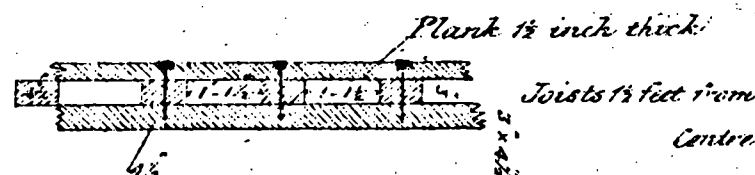
5. In regard to the preparation of the lock gates locally there will be no reason whatever against it if the workshop will carry it out at a reasonable cost; but the dressed stone must be procured either from Pallavaram or Mahavalipuram, and the cost of procuring it from the latter place will not be so heavy as the former, as there is the canal available for its transport.

6. The design has been altered in the manner directed in your paragraph 12 and the stone pitching carried up to 4.50 feet above M.S.L., and the aprons beyond the masonry of the gates have been provided for.

7. The sills of the lock gates at Shadayamkupam lock are actually 6.12 feet below M.S.L., but this was probably intended to be 6.00 feet below M.S.L., and the plans and estimate have been corrected to place the sills of the Adyar locks also at 6.00 below M.S.L.

8. A larger provision for unwatering has been made in this estimate.

9. In regard to timber I have inquired further in the matter and find that tamarind would be very expensive as the trees are valuable for fruit. I find, however, that a wood called "Irala" is very well spoken of in regard to durability under water. I have therefore proposed to use Irala for the whole of the grilles with the exception of the piling round for which casuarina will do. The rate for Irala would be about $2\frac{1}{2}$ rupees a cubic foot wrought and put up. The arrangement of grille being as in the sketch the rate per square of grille amounts to Rs. 72.



10. I am having experimental blocks of concrete made, and have in the revised estimate allowed for the proportions recommended by you for which the rate will be $17\frac{1}{2}$ rupees per 100 cubic feet.

11. The cost of repairing and working the two temporary locks with establishment during the current official year has amounted to Rs. 3,542 with the greatest economy, while the cost of repairs to the permanent locks would be very trifling and that of working them will not exceed Rs. 696, so that a saving of Rs. 2,846 per annum will be made, which will more than cover the interest on the capital required to construct the permanent locks, and there is also great inconvenience in the temporary locks and great delay to boats at them.

12. The original report sent to me with your No. 597, of the 28th October, is returned for reference.

No. 76. ORDER THEREON, 19th February 1881, No. 453 W.

WITH the second of the letters above recorded the Superintendent of Works, Buckingham Canal, submits the following estimates revised in accordance with the instructions of the Chief Engineer:—

	Rs.
1. Lock on the head of the Sadras canal on the right bank of the Adyar river ...	25,490 Register No. 4 of 1880-81.
2. Lock on the head of the junction canal on the left bank of do. ...	30,080 " " 4 of 1880-81.
	<u>55,570</u>

2. The estimates are sanctioned for execution from the budget appropriation for the Buckingham Canal. Should the Superintendent of Works be unable to spend the full sum of Rs. 10,000 during the current official year as contemplated in paragraph 5 of his letter No. 1,700, dated 22nd September 1880, and be unable to utilize the money otherwise, it should be surrendered without delay.

3. This sanction has been classified as Communications, Original Works, Irrigation and Navigation, Navigable Canals, and registered as Provincial Nos. 4 and 5 of 1880-81.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent of Works, Buckingham Canal.
" Chief Engineer for Irrigation.
" Financial Department.
" Board of Revenue.

For PW Accounts

Exd. E. C. Shunker.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Gobt. of (1881) Madras.
PUBLIC WORKS

To

THE SUPERINTENDENT OF WORKS,
BUCKINGHAM CANAL,

&c., &c., &c.

Dated February, 19th.

Issued

Recd.

Encl.

G. O., 19th February 1881, No. 453 W.

FEBRUARY.

Nos. 75-76.

Locks for the Adyar River.—Sanctioning
estimates for constructing —.

P. W. SECRETARIAT—1879-80.

KEEP WITH.

Current No. 749

Letter No. 2946.

Dated the 11th February 1881

from the Supdt. of Works.

Buckingham Canal.

Note of Remarks

The undermentioned
Estimates with Plans, speci-
fications & Report for con-
structing two Locks at the
Heads of the Sadas & Junc-
tion Canals, on the right &
left banks of the Adyar
River & for constructing
each office & Huts for a very
amounting to Rs 55,570. have
been revised as directed in
Chief Engineer's Memo, No 597.
Dated 28th October 1880.

1. Canal Lock in the Head
of Sadas Canal in the
right bank of the
Adyar River — Rs. 25,490.
2. do. Lock in the Head
of Junction Canal,
on the left bank of
the do — 30,080.

Total Rupees 55,570.

Double sets of Salis have been
provided at each end of the
Junction Canal Lock.

The true pitching of the
Chambers has been carried
up to 4.50 ft above M.S.L. as
directed.

Rs. 1500 for the baling of
each lock has been provided
for in the Estimates.

Lock Office & Huts for
the Establishment have been
included in the Lock Es-
timate, Rs 540 & Rs 1053
respectively.

The Rates are in excess
agree with the Dred Schedule.

8th February 1881.

H. P. O.

for current

as per

...

...

...

...

C. No. 6227, 1749

P. W. Secretariat.

Note by Budget Section.

Work

Remarks and References.

1. Lock on the head
of the Madras Canal
on the right bank of
the Kallar river - Rs 25,490
2. do. Lock on the head
of Junction Canal on the
left bank of do. - 30,080

Fund - Provincial 55,570

Class Communications - High Works - Navigation & Navigation (the
Mysore Canal)

Amount of estimate ... Rs. 55,570

Expenditure in previous year ... "

Allotment in current year ... "

Balance required to complete ... 55,570

Total Rs. 55,570

Note of available funds.

The Superintendent of Works proposed
in para 5 of his letter of 17th Feb 1880
to appropriate Rs 10,000 out of the Budget grant
for the Buckingham Canal for the current
off year, and the balance from next year
grant.

A. P.
Budget Superintendent.

9/2/81.

P. W. SECRETARIAT-1879-80.

KEEP WITH.

Current No. 6229.

Letter No. 1700.

Dated the 22nd September 1880

from the, Supdt. of Works.
Buckingham Canal.

Note of Remarks.

The Plans & Estimates
in the Specification & Report
for Constructing (2) Two
Locks at the Heads of
the Ladsas & Junction
Canals on the right &
left banks of the Adyar
River, amount to Rs.
16,300 & Rs 15,300 respec-
tively. have been examined
& compared & found correct.

Some of the Rates agree
with the Dist Schedule.

A full explanation of the
Construction of the Locks
is given in the report.

18th October. 1880.

[Signature]

ADYAR RIVER

PLAN ELEVATION AND SECTION

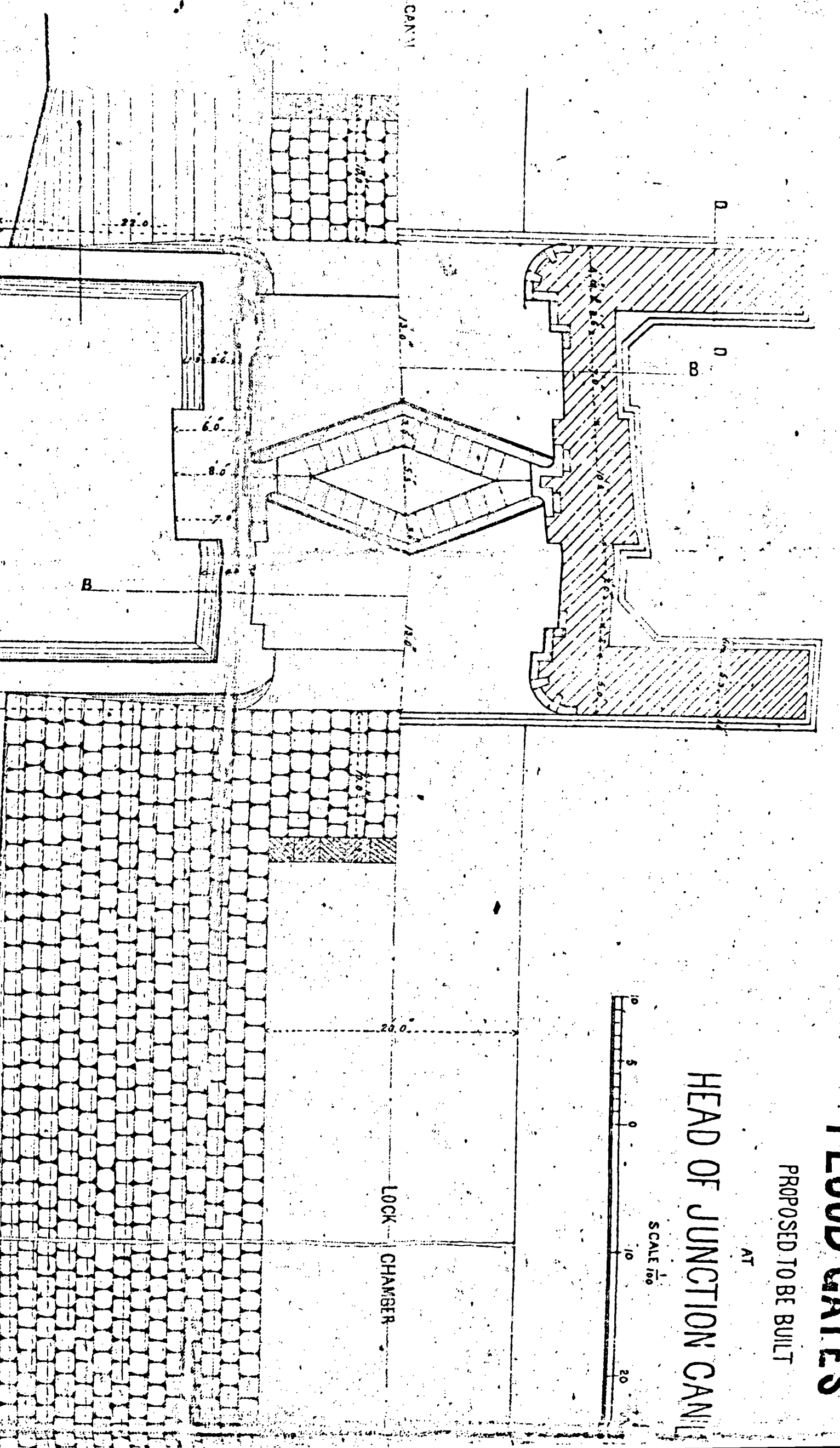
FLOOD GATES

PROPOSED TO BE DRAFT

1

HEAD OF JUNCTION CANAL

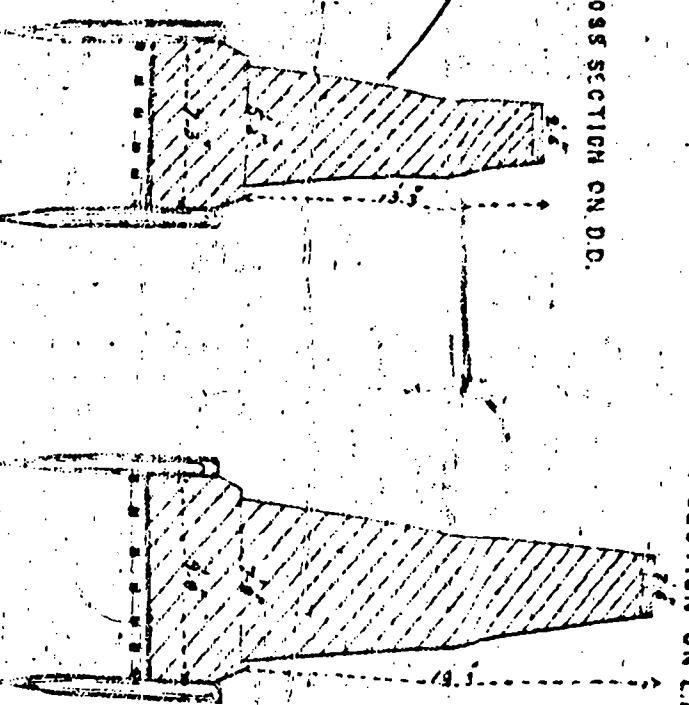
SCALE 1.



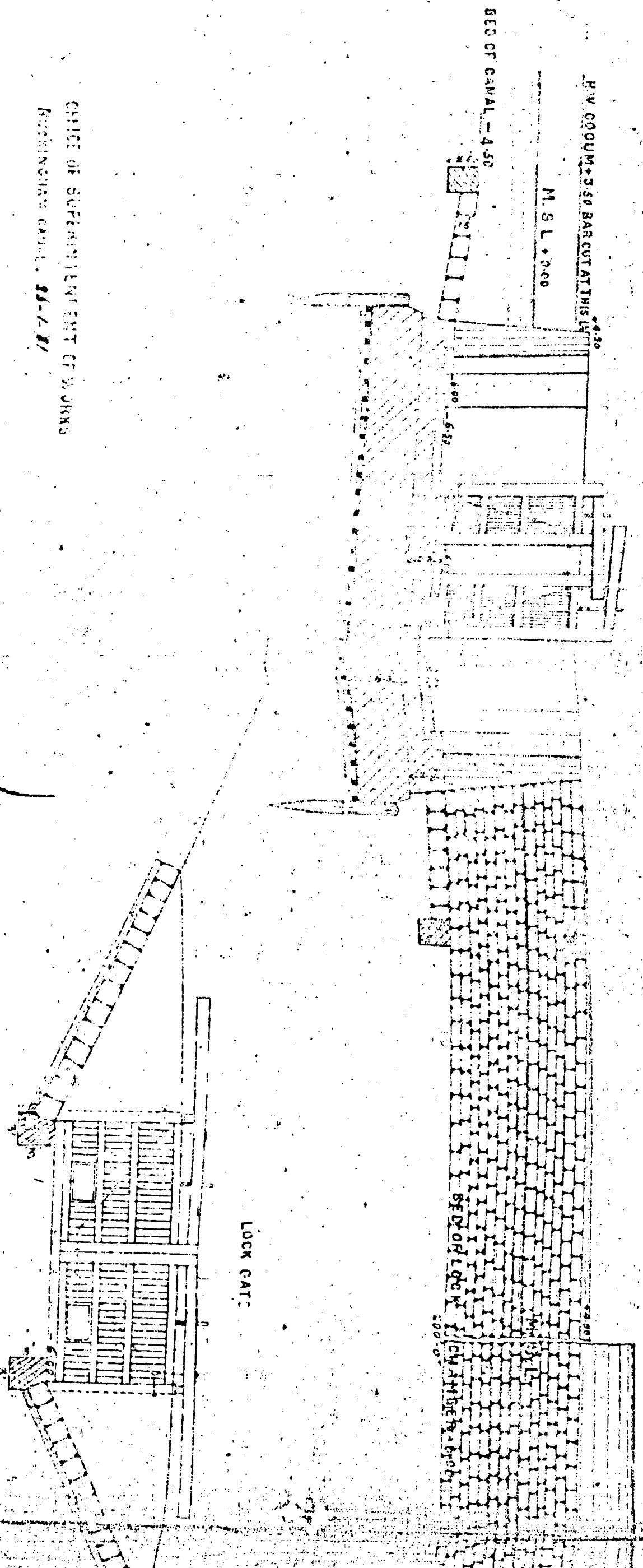
1000

CROSS SECTION ONE

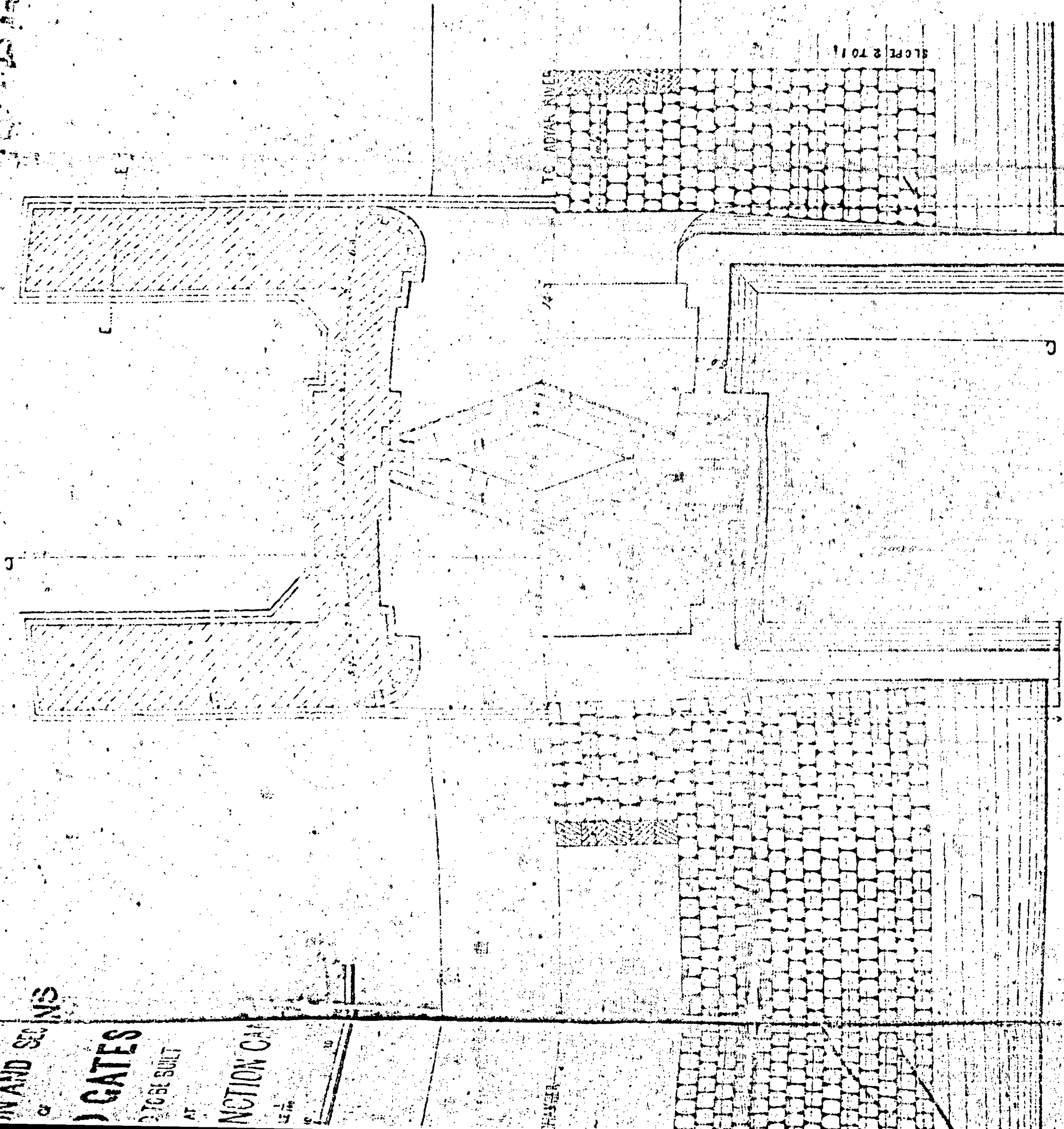
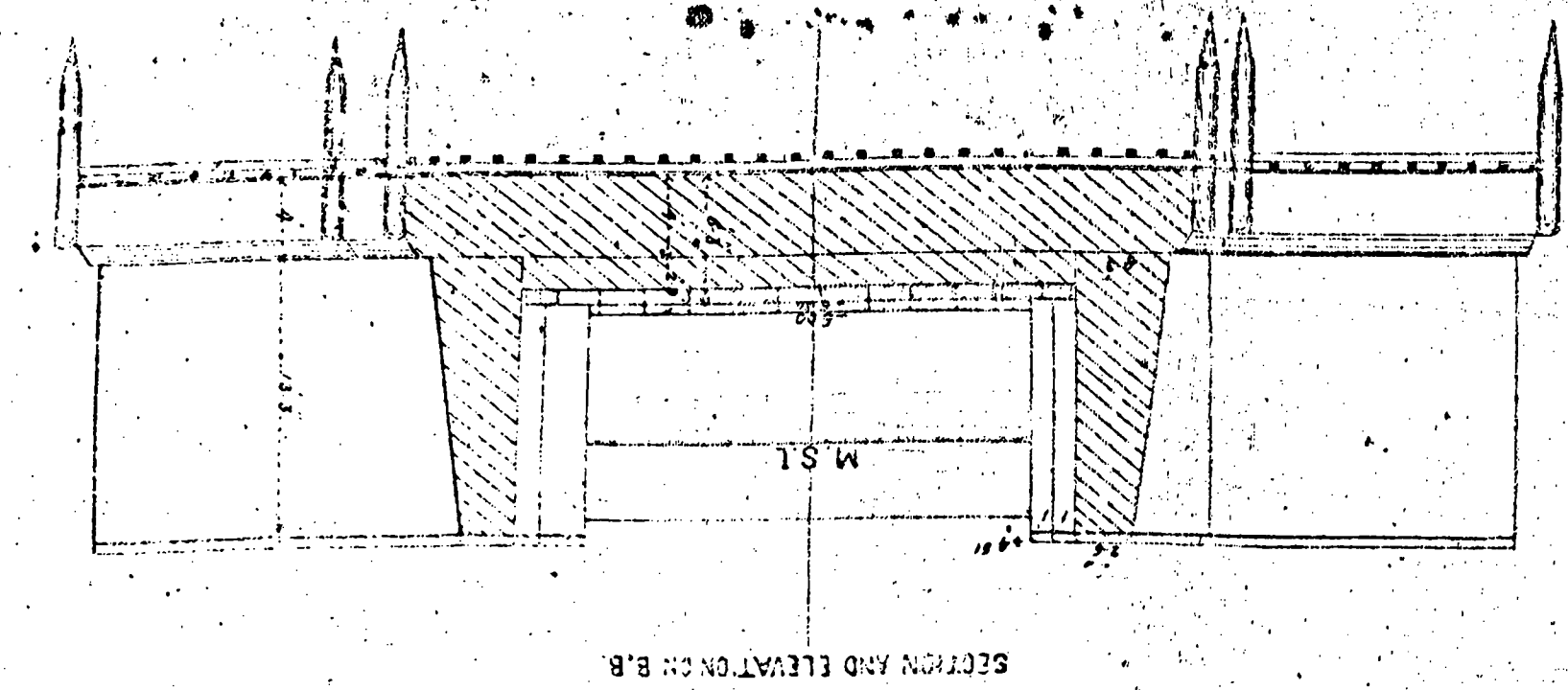
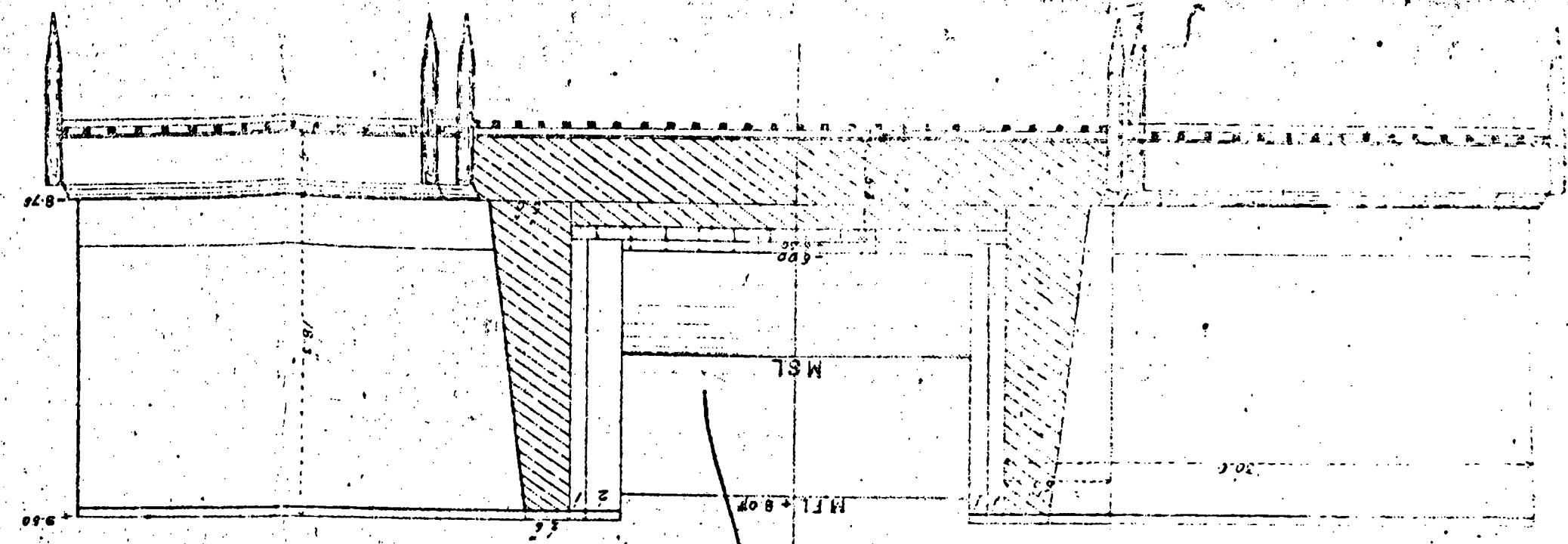
FOUNDATIONS CONCRETE ON ROUGH LOG GRILLE
AMOUNT OF ESTIMATE RUPEES *30,125*
DESIGNED BY CAPT A AWDRY R.E.
SUPERINTENDENT OF WORKS, BUCKH CAMP.



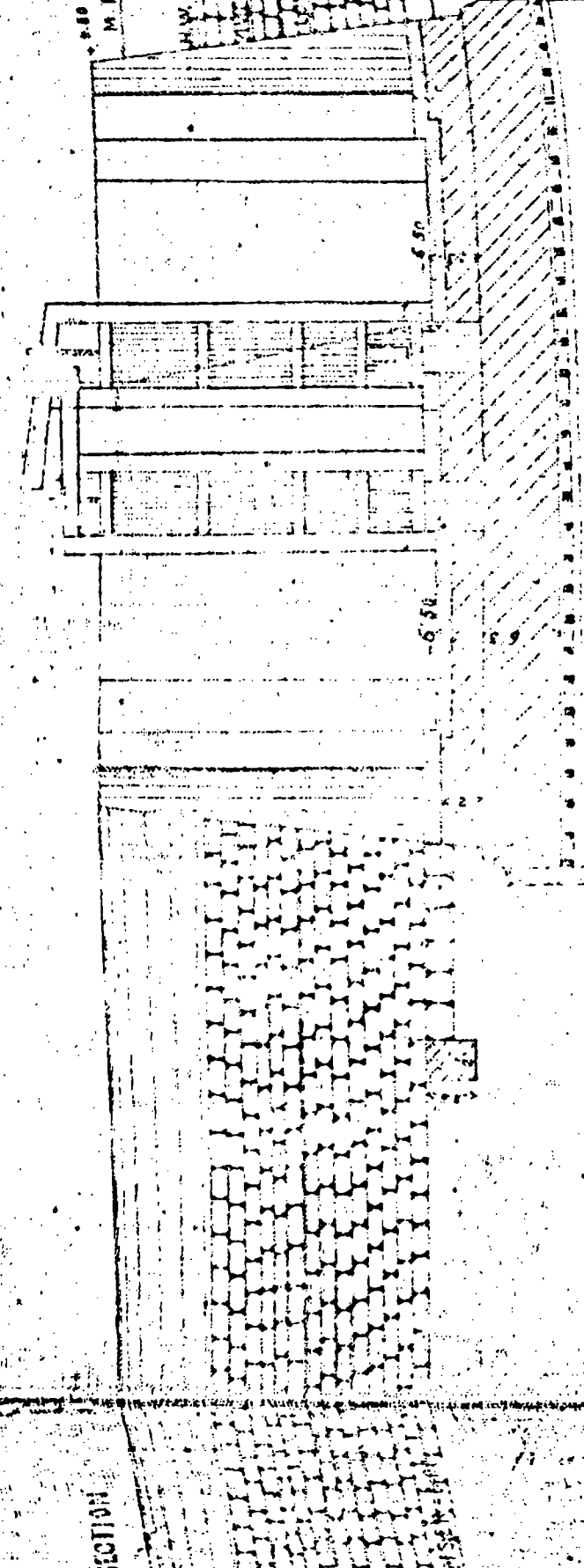
LONGITUDINAL SECTION



R. B. RICE
 CIVIL ENGINEER
 IN AND SECTIONS
 OF GATES
 TO BE BUILT
 AT
 SECTION ON



SECTION AND ELEVATION ON C.C.
 H.F.L. + 8.07
 M.S.L.
 WATER LEVEL BEING OPEN
 TO ADJACENT RIVER
 H.F.L. + 8.07



A. D. RICE, CAPTAIN RE
 SUPERINTENDENT OF WORKS B.C. DAL
 28th Jan 1907

Office of the Capt. of Works. Buckingham Canal
Camp. Iskakulli. 22nd September 1882
Despatched 30th — do —

From.

The Superintendent of Works,
Buckingham Canal

To.

The Chief Engineer,
Public Works Department
Madras

Enclosures. 5.

I have the honor to forward herewith plans, Estimates, Report, and Specification for the Locks required on each side of the Adyar.

2. I have entered fully into the matter in my report, but in brief the Lock on the south side of the River is required to prevent the Adyar water running to waste through the bovelong Bar down the Indras Canal, and the Lock on the north side to prevent the Coosum water (required to be kept up for the proper sanitation of Madras) running to waste through the junction Canal to the Sea by the Adyar Bar when open.

3. When both Adyar and Coosum Bars are closed the rivers in time will, with the South Lock in use, get to the same level. when the junction Canal Lock can be left open, but this can only be during the dry season.

4. Temporary

4. Temporary Locks are in existence at the sites of these proposed Locks, but they require much care and outlay for maintenance and a larger establishment to work them than will be necessary for the permanent structures proposed.

5. The best months in which to carry out the work are from January to August. (February, March and April being especially good) so if the Estimates are sanctioned I have the honor to request an appropriation of Rs. 10,000 for the current Official year from the grant of Rs. 120,000 for the year for original works, and the balance in next year.

6. I have the honor to solicit instructions as to height at which the Adyar Bar is to be opened? and information as to whether the Committee's suggestions as to its being under the Canal Officer are to be carried out? you have decided in correspondence with me that 3.50 feet above Mean Sea Level is the height at which the boom Bar is to be opened but I am not sure that this is the height at which it is considered by the Superintendent of Works at the Presidency to be his duty to open it. The matter is one which seriously affects the question of the headway under bridges as the old height at which the boom Bar was opened was apparently 4.50 feet above Mean Sea Level.

7. The Estimate for the Sadras Canal Lock amounts

amounts to Rs. 16,300 and that for the junction Canal Lock to Rs. 15,300.

8. I have the honor to return the papers forwarded to the Superintending Engineer on the subject from your office with your letter of 19th November 1879.

I have the honor to be
Sir,

your most obedient servant

A. Awdry. Esq. B.E.
Superintendent of Works
Buckingham Canal

This amount
was the estimate
for the Adyar Bar
for opening under
the Committee's
suggestions
28/11/80

The book of papers re. the
Buckingham Canal.

From,
The Superintendent of Public
Works
Buckingham Canal
100120
No. 6229
The Chief Engineer
Public Works Department
Madras.

Dated 22nd September 1880

Despatched 30th — do —

Rec^d 1st Oct —

221700

Enclosures. 5

4 plans.
8. enclosures per 20/10/80.

Locks on each side
of the Adyar —
Forwards plans &c.
for the —

See
20/10/80

0.19.1080

No. 2945.

OFFICE OF THE SUPERINTENDENT OF WORKS.

BUCKINGHAM CANAL.

24th February 1881.

From

THE SUPERINTENDENT OF WORKS,

BUCKINGHAM CANAL.

To

THE CHIEF ENGINEER,

PUBLIC WORKS DEPARTMENT,

Madras.

SIR,

Enclosure.

I have the honor to acknowledge the
plans of the Locks for the Adyar corrected
as directed in your No. 577 of the 28th Oct.

2. Double sets of gates have been
provided at each end of the junction and
Locks as to enable Boats to pass either
Northward or Southward, and yet to keep
the waters of both the Cooum and Adyar
under regulation.

3. The Gates on each side of the
Adyar and next to it have been provided
so as to have a height of about 1 1/2 feet above the
highest flood (8.07 above M.S.L.) in that
river.

4. Designs for a Lock Office and
for Huts for the establishment have been
drawn out and are added to the estimate.

5 In regard to the preparation of the Lock Gates locally there will be no reason whatever against it if the workshop will carry it out at a reasonable cost; but the dressed stone must be procured either from Pilavaram or Mahabalipuram and the cost of procuring it from the latter place will not be so heavy as the former as there is the canal available for its transport.

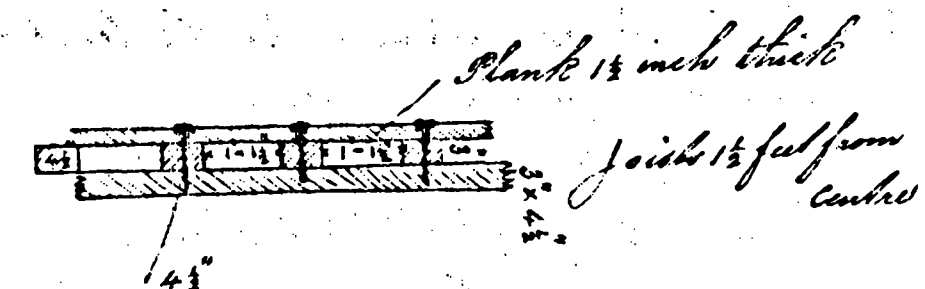
6 The design has been altered in the manner directed in your para 12 and the stone pitching carried up to 4.50 feet above M.S.L. and the aprons beyond the masonry of the piles have been provided for.

7 The sills of the Lock gates at Shadayanthupam Lock are actually 6.12 feet below M.S.L. but this was probably intended to be 6.00 feet below M.S.L. and the plans and estimate have been corrected to place the sills of the Adyar Locks also at 6.00 below M.S.L.

8 A larger provision for unwatering

has been made in this estimate

9 In regard to timber I have inquired further in the matter and find that Samard would be very expensive as the trees are valuable for fruit. I find however that a wood called 'Srala' is very well spoken in regard to durability under water. I have therefore proposed to use Srala for the whole of the grills with the exception of the piling round for which casuarinas will do. The rate for Srala would be about 24 Rupees a cubic foot wrought and put up. The arrangement



of grill being as in the sketch the rate per square of grill amounts to Rupees 72--

10. I am having experimental blocks of concrete made, and have in the revised estimate allowed for the proportions recommended by you.

you which I hope will be 17 1/2 ft.
100 feet -

11. The cost of repairing and rebuilding
the two temporary locks with establishment
during the current fiscal year has
amounted to \$3542 ^{with the quarter's economy,} while the
cost of repairs to the permanent locks
would be very trifling and that of
working them will not exceed \$196
so that a saving of \$2846 - per annum
will be made, which will more than
cover the interest on the capital
required to construct the ^{permanent} locks, and
there is ^{the} great inconvenience in the temporary locks
and great delay to boats at them.

12. The original Report sent to me with
your No. 597 of the 28th Octbr is returned for reference

I have the honor to be,
Sir,

Your most obedient servant

A. Awdry. Captain R.E.
Superintendent of Works Buckingham Canal

Ch. 597. 28.12.80. 10

From

THE SUPERINTENDENT OF WORKS,
BUCKINGHAM CANAL,

To

THE CHIEF ENGINEER,
PUBLIC WORKS DEPARTMENT,
Madras.

Dated 4th February 1881.

No. 2946

ENCLOSURE 5 with
Plans.

Estimates and
Plans of the Locks for
the Adyar —

Resubmits corrected
as directed the —

Cir 15.2.81

N^o 453 W 11

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 19th February 1881
Read the following:—

From,

The Supt^g of Works, Buckingham Canal (N^o 1700 a p^{er} 1st 1880)
do (" " 2946 " 4th Feb 1881)

MA

With the perusal of the
letters above recorded the
Supt^g of Works, Buckingham
Canal submits the following
estimates revised in accordance
with the instructions of the
Chief Engineer.

1. Lock on the head of the Sadras Canal on the
right bank of the Adyar river — Rs. 25,490
Ag^{mt} of 1880/81
 2. Lock on the head of the Junction Canal on
the left bank of — ditto — Rs. 20,080
Ag^{mt} of 1880/81
- Rs. 55,570

2. The estimates are sanctioned
for execution from the budget
appropriation for the Bucking-
ham Canal. Should the

137
Sup^t of Works be permitted
to spend the full sum of
£10,000 during the current
official year as contemplated
in para 5 of his letter
of 1700 of 22^d Sept. 1880
and be permitted to utilize
the money otherwise, it
should be surrendered
without delay.

3. This sanction has been
classified as Communication
Original Works, Irrigation
and Navigation, Navigable
Canals, and registered as
Provincialet N^o 86 & 86 1/2 of 1880 & 81.

S^r

Att^y

15-2-81

S. W. B. Birmingham Canal
Co. for Irrigation
Provincialet Sept^r
B. of Revenue
Birmingham
2-3-81

749

GOVT. of 1881. Madras.
PUBLIC WORKS.

To

Dated

Locality

Recd.

Encl.

O. O. 19th Feb. 1881, No. 463W

For

Locks for the dyke
sanctioning estimates
for constructing

26-