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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.**Government of Madras.***Public Works* **DEPARTMENT.**

G.O. No. <u>384-85</u>	Press Mis:
<u>171-173</u>	
Dated <u>6.2.</u>	<u>18 69.</u>

Not to be folded or roughly handled

No. 171. Read the following letter from Mr. J. BLACK, Superintendent of Pier Works, to the Secretary to Government, Public Works Department, dated Chepauk, 22nd December 1868 :—

1. I have now the honour of laying before you drawings and estimates for the repair of the Pier. In doing so, you will find that the arrangement is different from my original sketch, because, in taking out the quantities and weights, I found that through the uncertainty of getting the piles down at regular distances from each other on account of the wreck, more weight would be thrown on a single pile than it might possibly bear, I have therefore altered this arrangement, by leaving out the large cross girders, and going round on each side with a width sufficient for two lines of rails, leaving the centre part to be covered over afterwards, should it be thought advisable to do so.

2. In the present drawing the piles will be well fixed together at the top by wrought-iron girders, instead of timber, as before, the difference in the price of iron instead of timber will be compensated for when we consider the constant expense being incurred in taking up and relaying timber for repairs, besides interfering with traffic on the Pier.

3. Small wrought-iron T. girders for supporting flooring would have been introduced, but not having iron of the dimensions required in stock, have put in timber, so that the work may be proceeded with at once on the arrival of the "Clarence" from England with the piles, &c.

4. I beg to suggest that the girders be made up at the Public Works Work shops, as from the uncertainty in the distance of the piles, the length of the girders cannot be determined so as to get them out from England. As the piles are being put down, the girders could be made to span the distance.

No. 172. ORDER THEREON, 6th February 1869, No. 384.

CIVIL WORKS, No. 24.

1. With this letter Mr. Black, the Engineer sent out by the Secretary of State for India to superintend the repairs of the Madras Pier, submits an estimate of Rupees 2,87,424 for repairing the breach in that structure. The plan now suggested for carrying out the work, differs from that recommended in Mr. Black's memorandum of the 27th October 1868. In that memorandum Mr. Black, having satisfied himself that the work of the old Pier could not be removed from the gap where it lay prostrate under several feet of sand, and that it would not be possible to get down fresh piles in the direction of the Pier, proposed to work round the opening on either flank, by putting down two rows of piles on the north side, so that the outside row should be at the distance of thirty feet from the line representing the north side of the present Pier, and three rows on the south side, also extending outwards thirty feet, and to cover the two extensions as well as the intermediate space by a platform supported on iron girders. In the letter now submitted he, however, explains that, by such an arrangement, more weight would be thrown on a single pile than it might possibly be able to bear, owing to the uncertainty of screwing the piles

*Proceedings of the Madras Government, Public Works Department,
6th February 1869.*

down at regular moderate distances from each other on account of the wreck. He accordingly proposes to screw down, on both sides of the breach, three rows of piles, well fixed together at the top by wrought iron girders carrying a platform of a width sufficient for two lines of rails, the centre portion being left uncovered for the present.

2. The Government approve of Mr. Black's present proposal, and resolve to forward for the sanction of the Government of India, the estimate of Rs. 2,87,424, of which Rupees 1,10,571 are the value of the materials daily expected to arrive in the ship "Clarence," and about to be indented for.

3. The proposal in paragraph 4 is approved.

4. Orders will be issued in the Marine Department for an advance of Rupees 20,000 from Port Funds, to be repaid from the special grant for which application will be made to the Government of India.

(Here enter No. 385, dated 6th February 1869.)

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the Marine Department.

.. Superintending Engineer, 4th Division.

.. Officer in charge of the Public Works Stores and Workshops.

.. Pier Committee.

To Mr. J. Black.

To the Controller of Public Works Accounts.

.. Accountant General.

Exd. S T. Augustin.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 6th February 1869.

No. 173.

No. 385.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

SIR,

CIVIL WORKS, No. 25.

1. I am directed by His Excellency the Governor in Council to forward an estimate of Rupees 2,87,424 for repairing the breach in the Madras Pier.

2. Mr. Black, the Engineer sent out by the Secretary of State for India to superintend the repairs, having satisfied himself of the impracticability of removing the wreck of the pier from the gap where it lies buried under several feet of sand, or of getting down fresh piles in the direction of the pier, proposed in the first instance to work round the opening on either flank, by putting down two rows of piles on the north side, so that the outside row should be at the distance of thirty feet from the line representing the north side of the present pier, and three rows on the south side, also extending outwards thirty feet, the two extensions as well as the intermediate space being covered by a platform supported on iron girders. Mr. Black now reports that, as it may not be possible to get down piles at regular intervals owing to the wreck of the old work being in the way, it may be necessary to screw in the new piles at such distances apart as will cause greater weight to be brought upon one pile than it is calculated to bear, if the arrangement he had proposed be carried out. He would therefore not follow that mode of reconstruction, but would screw down, on both sides of the breach, three rows of piles well fixed together at the top by wrought-iron girders, carrying a platform of a width sufficient for two lines of rails, the centre portion being left uncovered for the present.

3. As all the efforts which have been made to remove the ruins of the pier from the gap made in the structure by the wreck of the "St. Bernard" have been unsuccessful, and the prostrated piles, with their cross bracings and tie rods, form a net work of iron through which it will be quite impossible to get down fresh rows of piles in the line of the old work, the Government can see no way in which the communication across the gap in the pier can be restored, and the work placed again in a serviceable condition, except that of working round the opening in the manner suggested by Mr. Black. His Excellency the Governor in Council therefore approves of the design submitted by that gentleman although the cost will be considerably greater than it would have been if the repairs could have been carried

*working up and retaying timber for
repairs*

out in a direct line, and accordingly directs me, in forwarding the estimate of the cost of carrying out the work for the sanction of the Government of India, to request a special grant of Rupees 1,76,853 as the amount required after deducting Rupees 1,10,571 for the value of the materials daily expected to be received from England, or about to be indented for.

4. The Government of India are probably aware that the pier was constructed under a contract with Messrs. Johnson and Company as a special work.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) CHARLES A. ORR, Colonel, R. E.,

Secretary to Government.

Exd. S. T. Augustin.

Chapault 22nd December 1868

To
The Secretary to Government
Public Works Department
Fort Saint George.

1 I have now the honor of laying before you Drawings and Estimates for the repair of the Pier. In doing so, you will find that the arrangement is different from my original sketches, because in taking out the quantities and weights, I found that through the uncertainty of getting the piles down at regular distances from each other on account of the weight, more weight would be thrown on a single pile than it might possibly bear, I have therefore altered this arrangement by leaving out the large Cross girders and going round on each side with a width sufficient for two lines of rails leaving the Centre part to be covered over afterwards, should it be thought advisable to do so.

2 In the present drawing the piles will be well fixed together at the top by wrought Iron Girders, instead of timber as before. the difference in the price of iron instead of timber will be compensated for when we consider the constant expense being incurred in taking up and relaying timber for

repairs

Small wrought iron T girders for supporting flooring would have been introduced, but not having iron of the dimensions required in stock, have put in timber, so that the work may be proceeded with at once on the arrival of the "Flarence" from England with the Pile Yea.

4 I beg to suggest that the Girders be made up at the Public Works Workshops, so from the uncertainty in the distance of the piles, the length of the Girders cannot be determined so as to get them out from England. As the piles are being put down, the Girders could be made to span the distances.

I have the honor to be
Sir
Your most Obedt. Servant.

Schuback

Description of Article, No.	Weight or Contents	Per	Total Weight	Rate	Per	Amount
Wrought Iron Plate Girders						
of 1/2" iron in the foot web. Rft. 3400	36	ft.	136 12 - 16	237	Iron	34,167 12 7
Wrought Iron Caps to Piles. Rft. 140	1	each	8	237		2000 - -
Pivots for Caps. 1/4" iron at 1/4"						
each pivot Rft. 407	14 1/2	ft.	5 1 12	237		66 15 5
Piles 8" Diameter Rft. 50	2 10 2 23	each	126 15 1 2	245		31,057 - 6
Piles 6" Do Rft. 90	1 8 1 1		127 3 1 6	245		31,155 7 6
Tide Braces in a set. Rft. 41	14 2 10	set	29 18 - 18			
Longitudinal Braces for the Tide Braces			44 17 - -			
Bolts and Nuts for fastening Girders to Piles. Rft. 1164	3	each	1 19 - 24	245		19,124 3 6
Bolts and Nuts for fastening Timber Beams to Girders. Rft. 1200	2 1/2		1 6 3 4			
Cast Iron Distances Pieces over Caps Rft. 140	1 1 27 1/4		10 9 - 7	180		1,881 9 -
Cast Iron Pins for Beams over Girders Rft. 476				2 14 - Cft.		3,385 6 - -
Teak Timber for planting	7060					

labor_____

Contingencies _____

less on account of Times per
Ship "Clarence" and now
indented on Haverly etc.

Ingles
4th February 1869

John Black

153293 6
7664683
22993089
57484142
287424611
11057182
176852149

P. W. Dept. 11
No. 384.

Proceedings of the Madras Government
Under date the 6th Feb'y/89
Read the following

From Mr. John Black - (R. dated 22nd Decr/88)

With this letter Mr. Black,
the Engineer in charge, the
Secretary of State for India
to superintend the repairs
of the Madras Pier, submits
an estimate of Rs. ^{2,87,424}~~2,70,775~~
for repairing the breach in
that structure. The plan
now suggested for carry-
ing out the work, differs
from that recommended
in Mr. Black's memorandum
of

W.D.

M.A.

Copy to Mr. Black
1st of Jan'y/89
12.01

Mem

Mr. John Black

24.22 not Decr/88

Recd 12. Jan'y/89.

Plans 2.

Estimate 1.

Submitting
Plans & estimate

for the repair of
the Madras Pier.

No 384.1335-6-1 Feb'y/89

46/11

of the 27th October/68. In
that Memorandum Mr Black,
having satisfied himself
that the work of the old
Pier could not be re-
-moved from the gap
where it lay prostrate
under several feet of
sand, and that it would
not be possible to
get down fresh piles
in the direction of the
Pier, proposed to work
round the opening on
either flank, by putting
down two rows of piles
on

on the north side, so that
the outside row should
be at the distance of
thirty feet from the line
representing the north
side of the present Pier,
and three rows on the
south side, also extend-
-ing outwards thirty
feet, and to cover the
two extensions as well
as the intermediate
space by a platform
supported on iron
girders. In the letter
now submitted, he
however explains that,
by

by such an arrangement,
more weight would be
thrown on a single pile
than it might possibly
be able to bear, owing
to the uncertainty of
screwing the piles down
at regular moderate
distances from each other,
on account of the wreck.
He accordingly proposes
to screw down, on both
sides of the breach, three
rows of piles, well fixed
together at the top by
wrought iron girders
carrying a platform
of

of a width sufficient
for two lines of rails, the
centre portion being
left uncovered for the
present.

The Govt. approve
of Mr Black's present
proposal, and resolve
to forward for the
sanction of the Govt.
of India, the estimate
of Rs. $\frac{2,87,424}{2,70,775}$, of which
Rs. $\frac{1,10,571}{67,615}$ are the value
of the piles ^{materials} ~~indented for~~
~~on the Home Govt.~~ and
daily expected to ar-
rive in the ship "Clarence"
and about to be indented for.

The proposal
in

in para 4 is approved
 orders will be issued in the
 Marine Dept. for an advance
 N. E. No. 1

Rs 20000 from Govt Funds
 to be repaid from the special
 grant for which application
 will be made to the Govt of India

To
 No. 285
 The Secretary to the Govt. of India
 of India

Marine Dept.
 - Suptg Engr, 4th Div.
 - Offr in charge of the P. N. Stores & Supplies
 - Pier Committee
 - Mr J. Black
 - The Comr of P. N. Assets
 - Assets fund

Sir,
 I am directed by his
 Excellency the Govt in Council
 to forward an estimate of
 Rs. ^{2,87,424} ~~2,70,775~~ for repairing the
 breach in the Madras Pier.

Mr Black, the Engr
 sent out by the Secretary
 of State for India to
 superintend the repairs,
 having satisfied him-
 self of the impracticabi-
 lity of removing the wreck
 of the Pier from the gap
 where

Recd 6/2/69
 Revised Copies despatched 19/2/69
 Revised Statement 17/7/69

where it lies buried under
 several feet of sand, or of
 getting down fresh piles
 in the direction of the Pier,
 proposed in the first
 instance to work round
 the opening on either flank,
 by putting down two
 rows of piles on the north
 side, so that the outside
 row should be at the
 distance of thirty feet
 from the line representing
 the north side of the
 present Pier, and three
 rows on the south side,
 also extending outwards
 thirty

thirty feet; the two exten-
sions as well as the inter-
mediate space being
covered by a platform
supported on iron

girders. Mr Black now

reports that, as it may not be possible to get down
~~happening to the~~ piles at regular intervals owing
~~uncertainty of being~~ to the wreck of the old work being
~~able to get down the~~ in the way, it may be necessary
piles at regular inter- to screw in the new piles at such
vals, that their distances apart as will cause
greater weight to be brought
upon one pile than it is cal-
culated to bear, if the ar-
rangement he had proposed
be carried out.

~~cases to great~~
~~that by such an~~
~~arrangement as he~~
~~had~~

~~and proposed, more~~
~~weight might be thrown~~
~~on a pile than it could~~
~~well support.~~ He would

therefore not follow that mode
of reconstruction, but
would screw down,
on both sides of the
breach, three rows of
piles well fixed to-
gether at the top by
wrought iron girders,
carrying a platform
of a width suffic-
ient for two lines
of

of rails, the centre portion
being left uncovered for
the present.

As the Govt can
see no way in which
the communication
across the gap in the
Pier can be restored,
and the work placed
again in a serviceable
condition except that
of working round the
opening in the manner
suggested by Mr Black.

His Excellency the Govt
therefore in Council approves
of

all the efforts which have
been made to remove the
ruins of the Pier from
the gap made in the
structure by the wreck
of the St. Bernard have
been unsuccessful, &
the prostrated piles,
with their cross bracing
and tie rods, form a
mesh work of iron through
which it will be
quite impossible to
get down fresh rows
of piles on the line
of the old work,

although the cost will be
considerably greater than
it would have been
if the repairs could have
been carried out in a
direct line,

of the design submitted
by that gentleman, and
accordingly directs me, in forwarding

the estimate of the cost
of carrying out the work
for the sanction of the
Govt of India, to request
that a special grant
of Rs. ^{1,76,853}~~2,03,100~~, as the amount

The Govt of India are required after deducting
probably aware that the Pier was constructed as a
^{1,10,571}Rs. 67,615 for the value of
special work under a con-
tract with Messrs Johnson and
Company, and that it has
without been maintained
as a local fund work from England, ^{or about} ~~being~~
from monies collected as to be intended for -
Pier dues. ~~be made.~~

Recd 8/2/89 with copies
of two plans & of an estimate
& copy of G.O. 384 of 1889

W.B.

Cue 120
Govt. of 1869 Madras.

PUBLIC WORKS.

To *The Marine Dept.*

Dated

Recd.

G. O. *6 Feb 7* 1870, No. *386835*

Nos. *171-172 & 173*

Madras Pres *Opening orders*
on the Estimate of Rs 270,775
for repairing the breach in
the Madras Pres.

Madras Pres *Estimate of*
Rs 270,775 for repairing the
breach in the Madras Pres,
forwarded to the Govt of India
for sanction.