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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

J. W DEPARTMENT

G.O. No.	925 W	Press.
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Dated 12. 4 — 1880 ~~197~~ .		

V. S. M

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GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

12th April 1880, No 925 W.

Buildings and Roads.
Civil Works.

Read the following paper:—

No. 26. From F. N. THOROWGOOD, Esq., M. Inst. C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads, dated Madras, 3rd April 1880, No. 1 W.

I HAVE the honor to submit the following report of the progress on these works during the past month of March. The return of work has not been in all respects equal to that of the previous month, but it is satisfactory to be able to state that for the first quarter of this year 1880, the advance made has been greater than in any previous quarter since the commencement, a total length of 891 feet of deep sea work having been built in the past three months.

2. NORTH PIER, SUPERSTRUCTURE.—The work of setting blocks at the north pier was carried on steadily and with caution during the whole of March, and although occasionally the divers' work was very heavy indeed owing to deep excavation being necessary, there were 216 blocks satisfactorily set in the work, advancing the pier by a length of $124\frac{1}{2}$ feet on the curve, and making the total length of the blockwork $2,745\frac{1}{2}$ lineal feet, or considerably over half a mile.

3. The rapid advance of the past three months has drawn so heavily on the stock of concrete blocks that it will be necessary to stop work at the north pier from April 5th to April 12th, to allow the blocks made in March to harden properly. After April 12th I see no reason for any delay or stoppage unless caused by bad weather or accident as Portland cement from England now arrives regularly and in sufficient quantities to keep the blockmaking machinery in full work.

4. NORTH PIER, RUBBLE BASE.—The work of depositing rubble base has not been carried on quite so rapidly as in February, partly owing to a deficient supply of material from Ambatūr and partly to the fact of one of the Harbour Works locomotives being laid up for repairs to its fire-box. The total quantity of rubble deposited in March has been 20,753 tons, of which 14,392 tons were tipped from the two steamers and the remainder by cargo-boats. Of this quantity 3,400 tons are hard stone from Pallāvaram brought from the south pier, and used to form the top surface of the deep laterite bank, as mentioned in paragraph 5 of my report for February. The amount of rubble in advance of the north pier at the end of March was about 56,870 tons.

5. CONCRETE BLOCKMAKING.—The manufacture of concrete blocks has been carried on during March with the greatest possible rapidity and on every week day except Good Friday and Easter Monday. The number of blocks made has been 570, of which 121 were made by hand-labor at the south pier. In no previous month have so many blocks been made, but there is every reason to believe that this rate of making may be continued to the end of the work. The blocks made on March 1st will be ready for setting in the piers by April 15th.

6. None but English Portland cement has been used for blockmaking since November 1879, and there appears to be no chance now of the supply falling short and causing any further inconvenience, such as has been experienced while we depended on the local supply from General Morgan.

7. **QUARRIES.**—The working of the quarries at Ambatūr and Pallāvaram has not been at all satisfactory during March, and although I have used all efforts in my power I have been quite unable to keep the outturn up to what it should be. The cause of this is that the present season is so remarkably good for cultivation that the contractors declare themselves quite unable to keep their men at work at quarrying. Considering that the whole work is paid for per ton of stone quarried, it is greatly against the contractor's interests to diminish the quantity supplied.

8. I have been in communication with the Collector of the district on this subject, and he has given the matter much attention, but on the whole I think that it is an inconvenience that must be borne for a short time longer, as it would be doubtful policy to make the work compulsory.

9. From Ambatūr I have been obliged to reduce the number of trains from five to three daily. The amount of laterite sent down in March has been only 18,860 tons (against 25,875 tons in February). On the South Indian Railway one train per day had to be cancelled from March 15th, and the quantity of stone received from Pallāvaram has been 15,250 tons. The total amount quarried and delivered to the works in March has been 34,140 tons (against 40,821 tons in February).

10. With reference to the difficulty in keeping the coolies at work during the present season, I should state the Collector of Chingleput informs me the harvest will soon be over and labor will then be plentiful enough.

11. **SOUTH PIER, SUPERSTRUCTURE.**—The work of setting blocks at the south pier had to be suspended on the 24th March, as the blocks in the yard were too young at that date to be set with safety. Work will be resumed on April 5th and will then proceed without fear of interruption on the ground of want of blocks. During March 128 blocks were set in the work, advancing the pier by a length of 75 lineal feet, and making the total length of block work 2,146½ feet from the commencement. Since January 1st, 1880, the south pier has been advanced by a length of 427½ lineal feet.

12. **SOUTH PIER, RUBBLE BASE.**—The deposit of stone in the south pier base has been very small indeed during March, owing in a great measure to the small supply from the quarries, but also on account of such a great quantity having been required for the manufacture of concrete blocks. Only 5,380 tons were tipped in the month, but as there is a length of about 500 feet of base now in advance of the blockwork no delay will be caused by the small amount done in the month.

13. **PROTECTIVE WORKS TO THE BEACH.**—Deficient supplies of suitable stone during March have interfered with the work of completing the revetment in front of Mr. Coleman's house. The work however is progressing steadily though not quite so rapidly as I should like. In the past month 1,056 tons of stone were used for this purpose.

14. **INTERCEPTING SEWER ALONG BEACH.**—The intercepting sewer along the beach was resumed at the beginning of March, orders having been received on February 21st, 1880, to extend it. The work is being pushed forward as rapidly as the crowded state of the beach will permit, and a length of 900 lineal feet has already been completed. A greater length is in an unfinished state. The cement used for this work is all made by General Morgan and is of very good quality.

15. **STORES RECEIVED ON WORKS.**—The following stores have been received in March:—

840	Casks Portland Cement,	S.S. <i>Viceroy</i> .
2,965	"	S.S. <i>Gannet</i> .
840	"	S.S. <i>Navarino</i> .
1,580	"	S.S. <i>Duke of Devonshire</i> .
4,173	"	S. <i>Rohilla</i> .

10,398 total Casks.

In addition to this cement the *Duke of Devonshire* brought some steel hammers, India-rubber washers and leathers for hydraulic cylinders, all much needed. General Morgan also supplied nearly 300 tons of cement of good quality which will be used in the sewer works.

16. **PLANS AND SECTIONS.**—The usual lithographed plan on a scale of 200 feet to 1 inch accompanies this report. The sewer extension along the beach is shown in red, the completed work of former dates in black lines. The two longitudinal sections show the extension of the piers in greater detail.

17. **EXPENDITURE.**—The expenditure up to the end of March has been Rs. 37,36,983, subject to additions which are not yet adjusted in the accounts but which will not be very considerable.

No. 29

ORDER THEREON, 12th April 1880, No. 925 W.

ORDERED to be recorded.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Secretary, Madras Harbour Works Committee.
" Marine Department.

Ed. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of Madras.
PUBLIC WORKS.

To
THE SUPERINTENDENT, MADRAS
HARBOUR WORKS,
&c., &c., &c.

Dated April 1880.

Issued

Recd.

Encl.

G. O., 12th April 1880, No. 925 W.

APRIL.
Nos. 28-29.

Madras Harbour Works.—Progress
Report of the — for March 1880, recorded.

No. 111

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To

Colonel R.H. Sankey, C. B., R. E.
Secretary to Government, P. W. Dept
Buildings & Roads
Fort Saint George,
MADRAS, 3rd April 1880

SIR,

I have the honor to submit the following report of the progress on these works during the past month of March. The return of work has not been in all respects equal to that of the previous month, but it is satisfactory to be able to state that for the first quarter of this year 1880, the advance made has been greater than in any previous quarter since the commencement, a total length of 801 feet of deep sea work having been built in the past three months.

North Pier
Superstructure.

2. The work of setting blocks at the North Pier was carried on steadily and with caution during the whole of March, and although occasionally the divers' work was very heavy indeed owing to deep

deep excavation being necessary, there were 216 blocks satisfactorily set in the work, advancing the pier by a length of 124 1/2 feet on the curve and making the total length of the blockwork 2745 1/2 lineal feet or considerably over half a mile. -

3. The rapid advance of the pier past three months has drawn so heavily on the stock of concrete blocks that it will be necessary to stop work at the North Pier from April 5th to April 12th to allow the blocks made in March to harden properly. After April 12th I see no reason for any delay or stoppage unless caused by bad weather or accident, as Portland Cement from England now arrives regularly and in sufficient quantities to keep the block-making machinery in full work: -

10. The work of depositing rubble base has not been carried on quite so rapidly as in February partly owing to

North Pier
Rubble Base

a deficient supply of material from Shulston and partly to the fact of one of the Harbour Works Locomotives being laid up for repairs to the fire box. The total quantity of rubble deposited in March has been 2075 1/2 tons of which 14392 tons were tipped from the two steamers and the remainder by cargo boats. Of this quantity 3400 tons are hard stone from Pallavaram brought from the South Pier, and used to form the top surface of the deep laterite bank as mentioned in para 5 of my report for February. The amount of rubble in advance of the North Pier at the end of March was about 56870 tons. -

Concrete Block
making

The manufacture of concrete blocks has been carried on during March with the greatest possible rapidity and on every week day except Good Friday and Easter Monday. The number of blocks made has been 570 of which 121 were made by hand labour at the South Pier. In previous months have so many blocks

been made but there is every reason to believe that this rate of making may be continued to the end of the work. The blocks made on March 1st will be ready for setting in the pier by April 15th.

6. None but English Portland Cement has been used for blockmaking since November 1879 and there appears to be no chance now of the supply falling short and causing any further inconvenience such as has been experienced while we depended on the local supply from General Morgan.

7. The working of the quarries at Ambatur Quarries and Pallavarai has not been at all satisfactory during March and although I have used all efforts in my power, I have been quite unable to keep the out-turn up to what it should be. The cause of this is that the present season is so remarkably good for cultivation that the contractors declare themselves quite unable to keep their men at work at quarrying. Considering that the whole work is paid for per ton of stone quarried, it is greatly
against

against the contractors' interest to diminish the quantity supplied.

8. I have been in communication with the Collector of the district on this subject and he has given the matter much attention but on the whole I think that it is an inconvenience that must be borne for a short time longer, as it would be doubtful policy to make the work compulsory.

9. From Ambatur I have been obliged to reduce the number of trains from five to three daily. The amount of material sent down in March has been only 15,860 tons (against 25,875 tons in February). On the South Indian Railway one train per day had to be cancelled from March 15th and the quantity of stone received from Pallavarai has been 15,280 tons. The total amount quarried and delivered to the works in March has been 31,140 tons (against 40,221 tons in February).

10. With reference to the difficulty in keeping the circles at work during the present season I should state the collector of Chingleput informs me the harvest will soon be over and labour will then be plentiful enough.

11. The work of setting blocks at the South South
Superior Pier had to be suspended on the 5th March,
 as the blocks in the yard were too young
 at that date to be set with safety. Work
 will be resumed on April 5th and will
 then proceed without fear of interruption
 on the ground of want of blocks. During
 March 128 blocks were set in the work, ad-
 vancing the pier by a length of 75 lineal
 feet and making the total length of block-
 work 2146½ feet from the commencement.
 Since January 1st 1880, the South Pier
 has been advanced by a length of 427½
 lineal feet.

12. The deposit of stone in the South South
Rubble Pier base has been very small indeed dur-
 ing March, owing in a great measure to
 the small supply from the quarries, but
 also on account of such a great quantity
 having been required for the manufacture
 of concrete blocks. Only 5380 tons were
 tipped in the month, but as there is a
 length of about 500 feet of base now in
 advance of the blockwork no delay will be
 caused by the small amount done in the month.

Protective Work 13.
To the Beach.

Deficient supplies of suitable stone
 during March have interfered with the
 work of completing the revetment in front
 of Mr. Holman's house. The work however
 is progressing steadily though not quite so
 rapidly as I should like. In the past
 month, 1056 tons of stone were used for
 this purpose.

Intercepting
Diver along beach.

14. The intercepting, seaward along the
 beach was resumed at the beginning of
 March, orders having been received on
 February 21st 1880 to extend it. The
 work is being pushed forward as rapidly
 as the crowded state of the beach will per-
 mit and a length of 900 lineal feet
 has already been completed. A greater
 length is in an unfinished state. The
 cement used for this work is all made
 by General Morgan and is of very good
 quality.

Stores received
on works.

16. The following stores have been
 received in March:-

\$40	Casks	Portland Cement	S. Viceroy
2965	do	do	S. J. Gannet
\$40	do	do	S. J. Navarino
1580	do	do	S. J. J. Peronolise
4173	do	do	S. J. Robilla
10,398	Total Casks		

In addition to this cement the Duke of Devonshire brought some steel hammers, india rubber washers and leathers for hydraulic cylinders, all much needed. General Morgan also supplied nearly 300 tons of cement of good quality which will be used in the sewer works.

17. The usual lithographed plan on a scale of 200 feet to 1 inch accompanies this report. The sewer extension along the beach is shown in red, the completed work of former dates in black lines.

The two longitudinal sections show the extension of the pipes in greater detail.

18. The expenditure up to the end of March has been £37,367 8 6, subject to additions which are not yet adjusted in the accounts but which will not be very considerable.

I have the honor to be,
Sir,

Yours most Obedient servant,

J. N. Macdonald, M. Inst. C.E.
Superintendent
Madras Harbour Works

Plans &
Sections.

Expenditure

25th
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Nb. No. 582 W. 13-3-80.

P.W.D.

ENRDO

No. 2300

Buildings & Roads

From
The Superintendent
Madras Harbour Works

No 1 M 5
Dated 3rd April 1880

N. of Enclosures 3

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Progress Report
Submitted - for March 1880

No 925 W B.H.
P.H.D. 925
Proceedings of the Madras Road

Under date the 12 April 1880

Read the following:-

From
The Superintendent
Madras Harbour Works } (N. No. 1 & 2 of 2nd April
1880.)

Recorded.

OK.

5/4/80

Supt. Madras Harbour Works
Secy. Madras Harbour Works
Committee
Marine Department

E.S.

Desd
23-4-80

Cus: 2355

Govt. of (1880) Madras.

PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O. 12th April 1880, No. 9256.

Nov. 18 19.

Madras Harbour Works.

Progress Report for the
— for March 1880.
Recorded.

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