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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No.	2555	Press.
B.P. No.		Mis.
Dated	10-10-1879	197 .

A.H.
Not to be folded or roughly handled

2553
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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

10th October 1879, No. 2,555 W.

Buildings and Roads,
Civil Works.

Read the following paper :—

No. 18. 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, 2nd October 1879, No. 33 W.

I HAVE the honor to submit the following report of the progress on these works during the past month of September.

2. *North Pier Superstructure.*—The weather during September has not been very favorable for work, heavy ground swells having interfered greatly with diving and block setting operations, and often prevented work from being carried on except during a few hours of the day. By taking advantage of every opportunity 216 blocks were successfully set in the north pier, advancing the work by a length of 126 lineal feet, and making the total length from the point B 2,202½ feet. The distance of the end of the north pier from the high water line within the harbour was on September 30th about 2,400 feet.

3. *North Pier, Rubble Base.*—The heavy ground swell interfered greatly with the deposit of the rubble base, by rendering it dangerous for the steam barges and cargo boats to lie alongside the pier. During the month 18,354 tons of stone were deposited in the base of the north pier, and of this quantity 11,343 tons were dropped by the *Hobart* and *Salisbury*, and the remainder by cargo boats and hand labor. The two steamers did not work after the 20th September.

4. The result of the stone deposit in September is more to make the base up to its full height than to extend it seaward. It terminates now at about 550 feet beyond the blockwork, but that length requires much to be added before it is brought up to the finished level. I am not able to submit a complete longitudinal section of the base at the end of September, owing to other pressing requirements for cross sections throughout the whole length of the north and south piers, which have engaged Mr. Beardmore and his surveying staff throughout the greater part of the month.

5. *Block making.*—On twenty days of September the block-making machinery was at work, and 276 blocks were turned out in that time. Want of cement prevented the making from being kept up at full speed on every day of the month. General Morgan's supply was satisfactory up to the 18th September, but from the 18th to the 24th the cement from his factory was so far below the standard that I had to reject it and stop making blocks. I am in communication with him on this subject at present, and a further report shall be submitted shortly. Fortunately the cement from England has commenced to arrive, so that block making will be carried on at the highest rate of speed during the current month.

6. Of the 276 blocks made in September, 150 are for the curve of the north pier, and therefore cannot be used in the straight portion of either pier. On account of this there are at present a very few blocks available for the south pier straight work, but when 168 more blocks have been set in the north pier, the difficulty will be past as there is a good supply of the tapering blocks required for the curve, which will then be reached.

7. *Quarries.*—The quarries have been keeping up a sufficient supply of stone during September. From the 22nd the laterite supply was reduced in consequence of the steam barges having ceased work, but the supply of stone from the South Indian Railway was kept up to its full extent of four trains daily. The total quantity of laterite brought to the works from Ambathoor was 20,019 tons, and of stone from Pallavaram and the South Indian Railway 17,037 tons, giving a total for the month of 37,056 tons.

8. From the 1st October I hope to close the quarry at the 15th mile of the South Indian Railway, and in future to obtain all the stone brought by that Railway from the neighbourhood of Pallavaram.

9. *South Pier Superstructure.*—From the 12th September I had to suspend the block-setting at the south pier owing to the want of suitable blocks. I had occasion to point out in the progress report for August that this would have to be done for a time, owing to the small quantity of cement received on the works in June and July. I hope to resume advancing at the south pier during the latter part of the current month, and with favorable weather the future progress may be confidently hoped to be rapid.

10. During September there were 60 blocks set in the south pier, advancing the work by a length of 36 lineal feet, and making the total length of the block-work now 1,590 feet from the commencement. Although 36 feet is but a small advance for one month it is 10 feet more than was built in September 1878, when the sand was still covering the south pier foundations.

11. In the length that was built in September, the change of batter from 3 to $1\frac{1}{2}$ inches per foot was satisfactorily carried out, and with good results.

12. *South Pier Rubble Base.*—The base of the south pier was tipped during the past month almost entirely by cargo boats. The total quantity deposited was 12,308 tons, of which only 250 tons were brought by the steam barges from the north pier. The rubble base extends to about 810 feet beyond the block-work, and is fairly well made up for half that length.

13. *Protective Works and Coast Line.*—From the 17th to the 20th September the tides rose very high, especially at night, and the revetment to the shore by Mr. J. G. Coleman's house was heavily attacked by the ground swell. All available force was at once put on to prevent serious damage, and fortunately with good results. Further north by the Police thannah, the sea has encroached also, and altogether the protection of the coast is just now giving a good deal of trouble. For the repairs during September 1,409 tons of laterite were used up, and it is probable that as much more will be required during October. The general result of the protective measures is, however, satisfactory, as the whole of the shore from the north pier to the Police thannah is much more secure than it was twelve months ago.

14. At the south of the south pier the greatest advance of coast seaward should now be reached for this year, as with the north-east wind the sand is invariably cut away and the shore recedes. The present coast line is shown in brown dots on the accompanying plan, and the line of September 30th, 1878, is shown in a full red line. The difference between the two lines shows the alteration of the coast in twelve months.

15. *Steam Hopper Barges.*—The *Hobart* and *Salisbury* left Madras for the north-east monsoon on the 27th and 28th September. While at Cocanada as great a reduction of hands will be made as possible, but the work that the vessels do while at Madras is of such a nature that a good many repairs are necessary which the crew can best carry out themselves. The *Salisbury* will remain in the port of Cocanada, and the *Hobart*, which wants cleaning very badly, will have to go into dock. I have this day (October 2nd) learnt from their respective commanders that each vessel has arrived safely at Cocanada.

16. *Stores received on Works.*—During September the following vessels brought stores for the works. The S.S. *Deccan* with 178 tons of Portland cement from England. The ship *Newcastle* with railway grease and turpentine, which were

indented for on August 19th, 1878. The S.S. *Almora* with hides and cast iron truck-wheels of special make. These wheels have been seriously needed for the past eight months, they also were ordered on August 19th, 1878, and received September 24th, 1879. The steamers *Madura*, *Africa*, *Goa* and *Chinsura* brought 1,424 sal-wood sleepers from Gopalpur.

17. *Plans and Sections.*—I submit herewith a plan on a scale of 500 feet to 1 inch and two longitudinal sections of the piers. I had hoped to be able to submit with this report a recent survey of the whole roadstead, but the state of the sea has prevented its being completed as yet. A very complete set of cross sections of the two piers has been made for record of the state of the bases, &c., and this work has occupied most of the Assistant Superintendent's time. On September 15th Mr. Beardmore and I arranged to commence the survey of the roadstead, but although we have taken advantage of every favourable day the work is not quite completed yet. When all the soundings on the traverses have been taken and reduced, some time will still be required to plot them on the 200 feet lithographed plan now in course of preparation. I therefore propose to forward one of these plans when completed as a supplement to the present plan, and would respectfully ask that I may be allowed also to forward one for the Government of India instead of the less recent one now submitted, although some weeks must necessarily elapse before its completion.

18. By waiting till the present survey is complete, I shall be able to show the contours of February and October 1878 and of September 1879.

19. *Expenditure.*—The expenditure on the works up to September 30th, 1879, has been approximately Rupees 31,70,051.

No. 19. ORDER THEREON, 10th October 1879, No. 2,555 W.

RECORDED in continuation of G.O., No. 2,335-A W., dated 12th September 1879.

2. A copy of the plan referred to in the concluding portion of paragraph 17 of the Superintendent's letter may be forwarded as requested for submission to the Government of India.

(True Extract.)

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

To the Superintendent, Madras Harbour Works.
Secretary, Harbour Committee.
To General Morgan.

Exd. S. T. Austin.
Spare Copies



BUILDINGS AND ROADS,
CIVIL WORKS.

Govt. of (1879) Madras.

PUBLIC WORKS

To
THE SUPERINTENDENT, MADRAS
HARBOUR WORKS.

at: 40, 40, 40.

Dated October 10th.

Issued

Recd.

Encl.

G. O., 10th October 1879, No. 2,555

OCTOBER.

Nos 18-19.

Madras Harbour Works' Progress Report
for September 1879, recorded.

No. 33 m.

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To

Colonel R. H. Sankey, C. B. V.C.
Secretary to Government, P. W. Dept.
Buildings & Roads
Madras

MADRAS, 2^d October 1879.

Sir,

I have the honor to submit the following
report of the progress on these works during the
past month of September.

North Pier.

Superstructure.

2. The weather during September has not
been very favourable for work, heavy ground
swells having interfered greatly with diving
and block setting operations, and often pre-
vented work from being carried on except during
a few hours of the day. By taking advantage
of every opportunity 216 blocks were success-
fully set in the North Pier advancing the
work by a length of 126 lineal feet, and
making the total length from the point B
2202½ feet. The distance of the end of the
North pier from the High Water line within
the Harbour was on September 30th about 2400
feet.

North Pier.

Rubble Base.

3. The heavy ground swell interfered
greatly with the deposit of the rubble base
by rendering it dangerous for the steam

barges

barges and cargo boats to lie alongside the pier.

During the month 18,354 tons of stone were deposited in the base of the North pier and of this quantity 11,343 tons were dropped by the "Hobart" & "Salisbury" and the remainder by cargo boats and hand labour. The two steamers did not work after the 20th September.

4. The result of the stone deposit in September is more to make the base up to its full height than to extend it seaward. It terminates now at about 550 feet beyond the blockwork, but that length requires much to be added before it is brought up to the finished level. I am not able to submit a complete longitudinal section of the base at the end of September owing to other pressing requirements for cross sections throughout the whole length of the North & South piers which have engaged Mr. Beardmore and his surveying staff throughout the greater part of the month.

5. On 20 days of September the block Blockmaking making machinery was at work, and 276 blocks were turned out in that time.

Want

82
255
Want of cement prevented the making from being kept up at full speed on every day of the month. General Morgan's supply was satisfactory up to the 18th September, but from the 18th to the 24th, the cement from his factory was so far below the standard that I had to reject it and stop making blocks.

I am in communication with him on this subject at present and a further report shall be submitted shortly. Fortunately the cement from England has commenced to arrive so that blockmaking will be carried on at the highest rate of speed during the current month.

6. Of the 276 blocks made in September 150 are for the curve of the North pier and therefore cannot be used in the straight portion of either pier. - On account of this there are at present a very few blocks available for the South pier straight work but when 168 more blocks have been set in the North Pier, the difficulty will be past as there is a good supply of the tapering blocks

blocks required for the curve, which will then be reached.

7. The quarries have been keeping up a sufficient supply of stone during September. From the 22^d the laterite supply was reduced in consequence of the steam barges having ceased work, but the supply of stone from the South Indian Railway was kept up to its full extent of four trains daily. The total quantity of laterite brought to the works from

Quarries.

Ambathoor was 20,019 tons, and of stone from Pallavaram and the South Indian Railway 17,037 tons, giving a total for the month of 37,056 tons.

8. From the 1st October I hope to close the quarry at the 15th mile of the South Indian Railway and in future to obtain all the stone brought by that railway from the neighbourhood of Pallavaram.

9. From the 12th September I had to suspend the blocksetting at the South Pier owing to the want of suitable blocks. I had occasion to point out in the progress report for August that this would have to be done for a time owing to the small quantity

South Pier Superstructure

1835/56
quantity of cement received at the works in June and July. I hope to resume advancing at the South Pier during the latter part of the current month, and with favourable weather the future progress may be confidently hoped to be rapid.

10. During September there were 60 blocks set in the South Pier advancing the work by a length of 36 lineal feet and making the total length of the blockwork now 1590 feet from the commencement. Although 36 feet is but a small advance for one month it is 10 feet more than was built in September 1878 when the sand was still covering the South pier foundations.

11. In the length that was built in September, the change of batter from 3 to 1 1/2 inches per foot was satisfactorily carried out, and with good results.

South Pier Rubble Base.

12. The base of the South pier was tipped during the past month almost entirely by cargo boats. The total quantity deposited was 12,308 tons of which only 250 tons were brought by the steam barges from the North Pier. The rubble base extends to about 810 feet beyond the blockwork

blockwork and is fairly well made up for half that length.

13. From the 17th to the 20th September the tides rose very high especially at night, and the revetment to the shore by Mr. J. J. Coleman's house was heavily attacked by the ground swell. - All available force was at once put on to prevent serious damage, and fortunately with good results. Further North by the Polia Mammale the sea has encroached also, and altogether the protection of the coast is just now giving a good deal of trouble. For the repairs during September 1409 tons of laterite were used up, and it is probable that as much more will be required during October. The general result of the protective measures is, however, satisfactory, as the whole of the shore from the North Pier to the Polia Mammale is much more secure than it was 12 months ago.

14. At the South of the South Pier the greatest advance of coast seaward should now be reached for this year as with the N. E. wind the sand is invariably cut away and the shore

recedes.

Protective works and Coast line

Steam Tug Burgess

Stores received in works.

recedes. The present coast line is shown in brown dots on the accompanying plan, and the line of Sept 30. 1898 is shown in a full red line. The difference between the two lines shows the alteration of the coast in 12 months.

15. The "Hobart" and "Salisbury" left Madras for the North East Monsoon on the 27th + 28th September. While at Coconada as great a reduction of hands will be made as possible, but the work that the vessels do while at Madras is of such a nature that a good many repairs are necessary which the crew can not carry out themselves. The "Salisbury" will remain in the port of Coconada and the "Hobart" which wants cleaning very badly will have to go into dock. I have this day (Oct 2nd) learnt from their respective commanders that each vessel has arrived safely at Coconada.

16. During September the following vessels brought stores for the works. The "S. S. Peccan" with 175 tons of Portland Cement from England. The "Ship Newcastle" with Railway Grease and Turpentine, which

which were indented for on August 19th 1878. The S.S. "Almoira" with hides and cast iron truck wheels of special make - these wheels have been seriously needed for the past 8 months, they also were ordered on August 19. 1878 and received September 24. 1879. The Steamers "Madura", "Africa", "Goa" & "Chinsura" brought 1424 Sal wood sleepers from Gopaulpore.

17. I submit herewith a plan on a Plans & Sections. scale of 500 feet to 1 inch and two longitudinal sections of the piers. I had hoped to be able to submit with this report a recent survey of the whole Roadstead but the state of the sea has prevented its being completed as yet. A very complete set of cross sections of the two piers has been made for record of the state of the bases &c and this work has occupied most of the Assistant Superintendent's time. On September 15th Mr. Beardsmore and I arranged to commence the survey of the Roadstead, but although we have taken advantage of every favourable day the work is not quite completed yet. When all the soundings on the traverses have been taken and reduced

some

1555
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18 By waiting till the present survey is complete, I shall be able to show the contours of February and October 1878 and of September 1879.

Expenditure 19. The expenditure on the works up to September 30th 1879 has been approximately Rs 31,700.51.

I have the honor to be,

Sir

Your most obedient servant

J. P. Harcourt Esq. M. Inst. C.E.
Superintendent
Madras Harbour Works

G.O. No. 2235 A.W. 12-9-79

P.W.D.

30079

No. 7088

Buildings & Roads

From
The Superintendent
Madras Harbour Works

G.O. 10-10-79 No. 2555

No. 33

Dated 2nd October 1879

No. of enclosures 3
x Returned at 603

Progress Report.

Submits report of Progress
on the Works during Sept 1879

Cir. 6-10-79. Dtd. 5-10-79.
To Cols 11-10-

Cir

No. 2555 W

P. W. Department

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 10th Octr. 1879.

Read the following

From

The Supt. Madras
Harbour Works (H.E. No. 33 of 2nd Oct. 1879)

Received in con-

I do not see why upon termination of G.O. No. 2335 A.W. dated 12th September 1879.

2. A copy of the plan
referred to in the
concluding portion
of para 7 of the Su-
perintendent's letter
may be forwarded

as requested for
submission to the

Govt. of India.

Superintending Engineers.

Chief Engineer for Irrigation.

Consulting Engineer for Railways.

Examiner, Public Works Accounts.

Railway Accounts.

Consulting Architect.

Superintendent, Madras Harbour Works.

General Superintendent, P. W. Stores and Workshops.

Do. do. P. W. Stores Department.

Chief Engineer and Manager, Madras Irrigation and Canal Company.

Examiner Irrigation and Canal Company's Accounts.

Secy: Public Works Committee

Govt. of India.

6/10/79

C. 7088



Govt. of 1870 Madras.

PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O. 10 Oct 1870, No. 2555

Nos. 18-19

Madras Harbour Works
progress report for Sept.
1879, recorded