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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Public Works. DEPARTMENT

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

14th January 1878, No. 239 W

Buildings and Roads.

Civil Works.

Read the following papers:—

No. 121. From F. N. THOROWGOOD, Esq., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads Branch, dated Madras, 1st January 1878, No. 66 W.

I HAVE the honor to submit the following report of the progress on these works during the month of December 1877.

2. *North Pier Works.*—The weather during the month was not so favorable for work as I had anticipated, judging from the weather of December 1876, and there were only six days on which block-setting could be carried on. During these days fifteen blocks were set, and the pier was advanced $14\frac{1}{2}$ lineal feet. The total length of block-work from the point B is now 356 feet.

3. The setting of these fifteen blocks occupied some time than usual in consequence of an error in the slope or batter of the work. This error has gradually been accumulating since the commencement of block-setting, and I judged that it was now time to correct it. To do this required some special arrangements which caused considerable delay.

4. On the 23rd, 24th, 25th, and 26th the sea was very heavy, and the end row of blocks in the north pier settled down so much that it became necessary to reset them, and protect them thoroughly with a core of large laterite boulders.

5. *Protective Work.*—In order to the laterite thrown over from the pier itself to form a foreshore, Marula boats and catamarans have been engaged in widening the base of the pier, taking laterite from the "false start" and from the dispersed boulders on the south of the pier, which are now exposed by the cutting away of the sand. About 374 tons have been thus deposited by boats in December.

6. During the past month seven of the blocks built *in situ* on the top of the laterite bank, which forms a protection to the north side of the block-work, fell over into the sea, and in their present position they serve as an excellent obstruction for the heavy north-easterly seas to break against.

7. *Block-making.*—The block-making machinery has not been at work during the month, as there was a sufficiently large number of blocks already made. There have been 66 of the 6-ton blocks made in the block yard by hand labor. These will be kept in readiness for protective works.

8. No stone has been sent down from Chinnamapett, and work at that place has been stopped till more stone is required. From Ambathoor 70 tons of laterite have been received and deposited in the sea as foreshore.

9. *Buildings.*—The only building work that has been carried on during December is the completing and roofing in of the locomotive engine-shed, and the erection of a weigh-bridge house at the south pier for weighing the South Indian Railway stone wagons. The weigh-bridge for this purpose I have purchased from the South Indian Railway Company.

10. *South Pier.*—At the south pier work has been pushed on whenever the weather would permit. Thirty-two permanent blocks have been satisfactorily set

during the month, which have advanced the pier a length of 38 feet. The total length of block-work now set in the south pier is $75\frac{1}{2}$ lineal feet.

11. During the heavy seas of the 23rd, 24th, and 25th December the blocks at the extreme end of the work settled down considerably owing to the great scour of the waves on the rubble base; no damage was done however, and there is every prospect now of being able to carry the work on briskly.

12. *Stone supply*.—Nearly 200 tons of large granite boulders have been supplied from Palaveram to be used as foreshore on each side of the block-work; and about 900 tons of small stone for the rubble base from the quarry at the 15th mile, South Indian Railway. In addition to this 280 tons of small chips of Palaveram stone have been sent down for concrete block-making. This small stone will be used together with Chinnamapett stone in the concrete blocks, but at present I am not able to use much Chinnamapett stone owing to the jaws of the stone crushers being worn out.

13. *Rubble Base*.—The base of the south pier has been carried out in advance of the blocks by means of stone tipped from boats and catamarans, and thrown in from the Titan crane. This method will have to be adopted until the Hopper barges can be brought alongside the piers.

14. A good supply of 6-ton blocks is kept on hand at the south pier, and eighteen were added to the stock during December. There are now 102 at the south pier ready for use at any minute.

15. *General*.—I have not been able to take any soundings or make observations on the bottom of sea during December, but I hope to have some favorable weather during January 1878, and to be able to take a series of sections at each pier.

16. The S.S. *Hobart* arrived at Madras from Cocanada on the 17th December; her boatmen and boats will be useful for surveying purposes.

17. *Expenditure*.—In compliance with C.O., No. 17, of 31st December 1877, I have the honor to state that the total sum expended on the works up to date is (about) Rupees 15,09,185. This amount may be subject to correction, as it is not possible to get the details of the accounts properly adjusted up to date so soon after the end of the month.

18. *Summary of work done in 1877*.—I think the following brief summary of the work done during the year 1877 will not be without interest.

19. Two lines of railway have been laid in at Chinnamapett and connected with the Madras Railway, and 9,414 tons of shingle have been delivered from there to the block ground at Royapooram; 5,367 tons of granite have been brought down from Ambathoor, making a total of 14,781 tons of material carried to the works by the Madras Railway in 1877.

20. The South Indian Railway has been extended from Cochrane's Canal to the beach. This work includes the construction of the timber bridge, 200 feet long, over the canal. The line has worked satisfactorily during the past year and has brought down 28,576 tons of stone.

21. A line of railway has been laid in to the quarry at the 15th mile, South Indian Railway, and the quarry has been nearly worked out. 32,136 tons of stone have been brought from the South Indian Railway districts to the south pier and pier.

22. With the exception of the jetties for loading the Hopper barges and one or two minor details, all the preliminary works have been completed, of which the principal are—

- The whole of the south block ground,
- Carpenter's shop,
- Fitter's shop and blacksmith's shop,
- Alterations to head office,
- Locomotive engine shed,
- Erection of south pier Titan, two locomotives,
- Two light travellers and one Goliath crane,
- The whole of the railway along the beach,
- 852 concrete blocks for the permanent work of both piers have been

made, and 366 blocks of 6 tons each for protective purposes. Besides these fifty blocks have been built *in situ* to protect the north pier. At the north pier 305 blocks have been set, and an advance of 313 lineal feet has been made in the block-work. The total length from the original high-water mark on December 31st, 1877, was 1,056 feet. At the south pier 62 blocks have been set and an advance of $75\frac{1}{2}$ lineal feet has been made. The total length from the original high-water mark on December 31st, 1877, was 735 feet. The total amount of stone tipped in 1877 for rubble base is at the north pier 9,850 tons, and at the south pier 1,396 tons.

23. The works have stood the test of a cyclone in May, and the damage sustained was inconsiderable.

24. Plans and sections will follow to-morrow.

No. 121-A. From the same Officer, dated Madras, 5th January 1878, No. 67 W.

I HAVE the honor to forward three tracings of the Harbour Works mentioned in the last paragraph of my letter No. 66 W, dated January 1st, 1878.

2. I have kept the plans back so as to be able to plot the most recent soundings taken at the north pier.

No. 122. ORDER THEREON, 14th January 1878, No. 239 W.

ORDERED to be recorded.

(True Extract)

Colonel, R.E.,
Secretary to Government, P.W.D.

To the Superintendent, Madras Harbour Works.
" Lieutenant-Colonel Thomason, R.E.
" Marine Department.

Exd. S. T. Austin.

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23rd Jan 2
Marine Department
(Marine Harbour)
BUILDINGS AND ROADS
CIVIL WORKS

6801. of 1878
PUBLIC WORKS.

THE SUPERINTENDENT MARINE
HARBOUR WORKS

12th 1881

Jan 22

21st Jan 1878
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N. 36
JANUARY.
1878

23rd Jan 1878 to 15
Comd to the Marine
Attendant - Marine

24th Jan 1878
Comd to the Marine
Attendant - Marine