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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1208	(W)	Press Mis.
Dated 7-4-		1877.

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
7th April 1877. No. 1,208.*

No. 207. Read the following Proceedings of the Madras Government in the Marine Department, dated 12th March 1877, No. 188 :—

ABSTRACT.—*Calicut Pier*.—The Public Works Department to decide as to the practicability of removing this pier opposite the old Customs House.

No. 208. ORDER THEREON, 7th April 1877, No. 1,208.

CIVIL WORKS, No. 17.

THE District Engineer of Malabar, in communication with the Contractor who constructed the Calicut Pier, now it is believed residing at Calicut, is directed to submit an estimate of the cost of conducting the necessary investigations regarding the practicability of removing from its present site and reconstructing the Calicut Pier opposite the old Custom House at Calicut; and he will, if necessary, revise and re-submit his estimate of the cost of the work in question.

(True Extract.)

(Signed) E. A. FOORD, Colonel, R.E.,

Secretary to Government, P.W.D.

To the District Engineer, Malabar,
with five Enclosures, viz., two Estimates, one Specification and two Plans.
,, Marine Department.

Exd S. T. Austin.

Spare Copies

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

12th March 1877 No. 188.

Calicut Pier.

Read the following papers:—

No. 49. From Lieutenant-Colonel R. B. KENNEDY, District Engineer, Malabar, to the Chief Engineer, Public Works Department, dated Luckadie, 19th January 1877, No. 192.

REFERENCE.—G.O., No. 3157, dated 24th November 1876.

I have the honor to forward an approximate estimate for removal of Calicut Pier and reconstruction at site opposite

One estimate for reconstructing pier at Calicut. old Custom-house.

„ survey of beach.

„ estimate for constructing groynes.

„ plan of do.

Rupees 16,090.

2. It must be understood that the present estimate is based on the assumption that the new site will be equally

favorable for screwing in the piles as the present one; at the same time I beg to say that the selection of the latter, and rejection of the other, was due, as I understand, to the presence of rock underlying the sand and mud, and thus creating a difficulty in building the pier either opposite to, or anywhere in the vicinity of, the old Custom-house. Probably a site somewhat nearer to the latter would have been practicable, but there being an unused building (the old Jail Hospital) available for utilization as a new Custom-house, it was not considered worth while to lose the benefit of the saving in that respect for the sake of shortening the distance from the principal area of native commerce, seeing that to place the pier in the immediate vicinity of it was considered inadvisable on account of the difficulty of construction caused by the presence of rock.

3. I have no apparatus for ascertaining the correctness of the conclusions arrived at regarding the rock stated to exist after borings made by the Contractor, Mr. Maylor (with apparatus belonging to himself), accompanied by the Range Officer, and consequently I have been unable to frame any approximate estimate to meet that contingency.

4. I am not aware of any work having been done by the department anywhere of a nature similar to what would be necessitated if the ends of the piles had to be inserted into rock, and am therefore altogether without data as to the probable cost. I should however roughly put the cost of erecting strong staging for the operation of boring the holes being carried on, and other expenses connected with the fixing the piles, at between 6,000 and 8,000 Rupees, inclusive of the cost of boring apparatus, and preliminary borings to ascertain the true nature of the bed of the sea at the proposed site; and if it is positively decided that the pier is to be removed, and reconstructed, I have the honor to request I may be authorized to procure the

apparatus, and that funds may be placed at my disposal for the preliminary operations, as, till then, no reliable estimate can be framed.

5. In connexion with the above, as the two works were both included in the same Government Order, I have the honor to

Rupees 29,900.

forward an estimate for constructing five groynes on the beach opposite the present (? new) Custom-house. The Government Order only directs groynes to be estimated for north of the pier, but as Colonel Farewell in his letter, dated 24th July 1876, recommended that two should be placed on the south side, I have included them also. I am still of opinion that more numerous short timber groynes, placed closer together, would answer all purposes; and in place of these long stone constructions, a large portion of which there is every chance will sink, and disappear, and have to be restored at heavy cost, I would recommend a series of eight timber groynes, varying from fifty to sixty feet in length, and three feet above high water north, and four similar ones south of the pier, at distances of not more than 100 feet apart, to be constructed of piles twelve inches square, sunk two-thirds of their length into the sand and placed in two rows, parallel to each other, at a distance of four inches; the piles in each row to be eight feet apart from centre to centre, and the four inch space to be filled in with planking of that thickness, bolted to the piles. If thought advisable, a few large boulders might be placed round the head of each groyne. The longest of these piles will be seventeen feet, and shortest will be about 450 feet, which will permit of the sand being excavated and the planking carried a little below the surface.

6. I fear it will not be possible to manage more than one or two of the stone groynes before the monsoon, but it would be quite practicable to get in several of the timber ones; meanwhile erosion still continues, and has done so to a considerable extent even in the calm weather since the monsoon.

No. 393-A.

Transferred with note by the Acting Chief Engineer, Buildings and Roads Branch, to the Marine Department, with reference to G.O., No. 3157, dated 24th November 1876, paragraph 5.

FORT ST. GEORGE,
19th February 1877.

(Signed)

W. FAREWELL, Colonel,
Ag. Joint Secy. to Govt., P.W.D.

No. 393.

No. 50. Note by the Acting Chief Engineer, Buildings and Roads Branch.

There is no doubt that the site of the present pier was chosen to avoid rock, but that rock is not supposed to be a granite formation, but laterite; and if the pier is to be founded upon it careful borings must be made to ascertain the thickness of the stratum at the proposed site of each set of piles; otherwise, there will be a risk of the piles being driven through it into a substratum of cooling clay affording no hold for screw or other piles. Till this is ascertained, no reliable estimate for reconstruction can be framed. A chart on a large scale, with soundings of the coast between the old and the new Custom-houses, is very desirable showing the laterite rock where met

with. If this work cannot be carried out by the local Master Attendant and Range Officer, the services of the Coast Survey Officers who are coming to Madras to complete the survey of the Madras Roadstead might be obtained. The question of permanent groynes rests entirely on the decision arrived at in reference to the present site of the pier off the new Custom-house being maintained, or not; meanwhile, it would be well to construct temporary groynes, for which timber might answer, to prevent further erosion of the beach near the present Custom-house.

FORT ST. GEORGE,
19th February 1877.

(Signed) W. FAREWELL, Colonel,
Ag. Chief Engineer, Roads and Buildings Branch.

No. 51. ORDER THEREON, 12th March 1877, No. 188.

The estimates submitted with the above letter are in round numbers Rupees 16,000 for shifting the Calicut Pier to the front of the old Customs-house, and Rupees 30,000 for groynes at the site of the present pier, which will not be needed if the pier is shifted. How far this shifting is practicable seems to require further investigation.

2. The suggestion originated with the Public Works Department, and it seems desirable that its practicability should be decided in the same Department.

3. The cheapest means of getting rid of the difficulty of sea encroachment at the present site, whether by defending it, or by abandoning it, should probably be adopted.

(True Extract.)

Chief Secretary.

To the Public Works Department, with plan, &c.

- „ Collector of Malabar.
- „ Master Attendant, Madras.
- „ Board of Revenue.

Ed. J. Wright.

G 6 to 3157-24-11-78

P.W.D.
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G.O. of 1877 Madras.

MARINE.

To THE PUBLIC WORKS DEPARTMENT,

&c, &c, &c.

Dated March, 1877.

Issued — 24

Recd.

Encl.

G.O., 12th March 1877, No. 188.

MARCH.

Nos. 49-51.

Callout Pier—The Public Works Department to decide as to the practicability of removing this pier opposite the old Customs-house.

No 1208 Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the

7th April 1877

Read the following:—

Pro. Marine Department (N.E. No. 188 of 12th March 1877)

The District Engineer of Malabar, in communication with the Contractor, who constructed the Calicut Pier, now it is believed residing at Calicut, is directed to submit an Estimate of the cost of conducting the necessary investigations regarding the practicability of removing from its present site and reconstructing the Calicut Pier opposite the

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See 4-4-77

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Marine Dept. ✓

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Govt. of 1877 Madras.
PUBLIC WORKS.

To *The H. E. Malabar*

Dated

Issued

Recd.

G. O., *7th April* 1877, No. 1200

(1)
Nos. 207-208

Calcicut Pier — The District
Engineer Malabar directed
to investigate the practicability
of removing the — opposite
the old Custom House
at Calcicut and to revise
and submit his estimate
of the cost of the work

But in Regd.

*10/4-
relayed 25-4-77*

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