Archives I - 10,006—16-8-77.

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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. 2-949 W Press.
B.P. No. Mis.

Dated 28 — 12 - 1880 197—.

V.S.M

Not to be folded or roughly handled

29494W

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

28th December 1880, No. 2,949 W.

General.
Establishment.

Read the following paper:—

No. 97. From F. N. THOROWGOOD, Esq., M. Inst. C.E., Superintendent of Madras Harbour Works, to the Secretary to Government, Public Works Department, Buildings and Roads, dated Madras, 15th December 1880, No. 71 W.

I HAVE the honor to state that from what I have learnt to-day from Mr. Parkes it will be necessary for me to request Government to sanction the entertainment of a special leading workman to put down the screw moorings for this harbour.

2. I was under the impression that such a man would be sent out by the contractor for the moorings, but this is not the case. The salary of the man is allowed for in the cost of the moorings, and would be arranged in England.

3. I have no one on the works who has had charge of the details of fixing moorings, and I have told Mr. Parkes that I must have a special workman for this. No action can be taken, however, until the request for such assistance be transmitted through the Madras Government.

4. Mr. Parkes leaves on the 17th for Madras, but he has made all arrangements for securing the services of an experienced man, and all that is now needed is sanction of this Government for the appointment. I therefore request that this sanction may be given at as early a date as possible.

No. 98. ORDER THEREON, 28th December 1880, No. 2,949 W.

SANCTION is accorded to the engagement of a Moorings Superintendent. The precise terms of the engagement should be reported for formal approval.

(True Extract.)

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

To the Superintendent of Madras Harbour Works.
„ Examiner of Public Works Accounts.

Exd. F. C. Shunker.
Spare Copies

GENERAL ESTABLISHMENT.

Govt. of [1880] Madras

PUBLIC WORKS

To

THE SUPERINTENDENT, OF
MADRAS HARBOUR WORKS,

&c, &c, &c.

Dated December, 1880.

Issued

Read.

Encl.

G. O., 28th December 1880, No. 2,949 W.

DECEMBER.

Nos. 97-98.

Moorings Superintendent for the Madras Harbour Works.—Sanctions the engagement of a — reporting the terms for formal approval.

2949W
2

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

3rd April 1880, No. 854 W.

Buildings and Roads.
Civil Works.

Read the following papers:—

No. 9. From W. PARKES, Esq., to the Secretary to the Government of Madras, Public Works Department, dated 23 Abingdon Street, 29th May 1879.

Madras Harbour Moorings.

IN the G.O. No. 862 W., of 22nd March 1879, I am requested to submit a plan of moorings with only half the number of buoys originally proposed, but in such positions that the others can be added hereafter if required.

2. Referring to the letter of the Master Attendant on which the above order is founded, I find that he considers it desirable, in the first instance at any rate, to place the buoys at greater distances apart than was originally proposed, so as to give more room for working the ships to and from their berths. In this I entirely concur, and the system proposed lends itself very advantageously to such an arrangement, but it will, I think, be readily understood that if a greater distance is allowed between the berths, the cost of half the number of berths will be more than half that of the whole system.

3. I beg to submit herewith two charts, "No. 1 Close system," being with the exception of a slight modification identical with that which I originally proposed to Captain Taylor, and "No. 2 Open system," that which I now recommend as the first step towards the ultimate accomplishment of No. 1 in accordance with the instructions quoted above.

4. The modification of the original plan above alluded to consists in the suppression of the row of six buoys nearest the shore, which being in shallow water would only be available for light and small ships, and substituting for them twelve smaller buoys attached directly to the innermost row of screw moorings which would be equally useful for such vessels as steam tugs, native craft, large cargo boats, &c., which would have room to swing freely to the wind in the space between the buoys.

5. The total cost of this complete system would be £28,065 or, taking the rupee at 1/7½, rupees 3,45,415. The details are given in the accompanying estimate, and are based on information furnished by Mr. G. Wells, who having laid down the

screw moorings in the Hooghly, and also erected the screw pile pier at Madras, has had an exceptional amount of local experience in this class of work. The prices are those at which Mr. Wells would be prepared at the present time to supply the materials, but they are of course ruled by the market price of iron and the cost of labour.

6. The plan "No. 2, Open system," may be generally described as consisting of every alternate buoy of No. 1. The number of screws is the same as in No. 1 and the whole of them would be immediately required except six, viz., the outer ones in the rows C, D and E. These would lie idle until it becomes desirable to attach the ground chains and buoys to them, but I should recommend them to be fixed at the same time as the others, as the cost would be small, while the special screwing machinery and staff are at work, and I think the berths which would depend upon them would not improbably be among the first to be added when further accommodation is wanted.

7. The accommodation in the first instance afforded by this system would be as follows:—For ships up to 360 feet long there would be in rows B, C, D, E and F, fourteen free swinging berths, and for shorter ships five more besides the twelve inshore berths for small craft. Ships of greater length than 360 feet must be moored head and stern in ordinary times, and for these the combination of rows A and C with B and F respectively would provide fixed berths at the expense of course of an equal number of swinging berths.

8. The cost of this scheme would be £17,936 or Rs. 2,20,752 rather less than two-thirds of No. 1. Additions could be made at any time by merely attaching the ground chains and buoys to the screws already fixed, which can be done by an ordinary diver. The ultimate cost of completing the scheme would not be enhanced by deferring the attachment of the alternate buoys till they are required, as the whole of the work involving special machinery and skilled superintendence would have been completed as part of the open system first carried out.

9. It will be seen that the essential difference of these two schemes is that while in No. 1, the close system, every ship must be moored head and stern, in No. 2, the open system, all ships below a limit of length, which would at present include the great majority, may swing freely at all times. There are few harbours in which ships of exceptional length can lie at swinging berths, so that Madras will not be peculiar in requiring such ships to be moored head and stern under ordinary circumstances. In case of necessity however seven berths (B, 1, 5—C, 4—D, 2—E, 4—F, 1, 5) could, by the removal of such of the buoys as are within the radius of the ship's length, be made available for such ships to swing freely round them.

10. This would be provided for in the construction of the buoys, which could be instantly freed by driving out a steel key on the top of the buoy. By this means the bridle-chain would drop to the bottom, and the buoy could be floated away. The bridle-chain would have to be afterwards recovered by a diver.

11. The change from the system of swinging moorings to that of fixed moorings for ships of moderate length would be made gradually, as the requirement for it arises. In order to give the full amount of accommodation to such vessels however special arrangements for stern moorings will have to be made. The distances between the rows of buoys are 430 feet. The whole of this space would be occupied by a tier of very long ships, so that to maintain a free passage between their sterns and the heads of the next tier of ships the adjoining space of 430 feet must be left unoccupied. But in the case of shorter vessels there would be ample space for passage between their sterns and the next row of buoys if it be not obstructed by their stern moorings.

12. To obviate such obstruction I propose to attach to each screw, where suitably situated for the purpose, a light supplementary chain cable of 12 fathoms in length continued by a still lighter hand chain of 20 fathoms, the end of which when it is out of use would be hung on the neighbouring buoy. When in use this hand chain would be taken on board the ship, and the ship's own tackle made fast to the light chain cable

2949W
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on either side, thus securing her stern in any required direction. By this means a passage of 130 feet wide would be left between the stern of a ship 300 feet long and the heads of the ships secured to the buoys in the next row. Provision for 120 such supplementary stern chains is made in the estimate for Plan No. 1 at a cost of £1,244.

13. It may be desirable to give a few particulars of the construction of the proposed moorings. The ground attachments of each buoy will consist of four screws, 4 feet diameter, sunk 20 feet in the ground at the four corners of a square of 200 feet. To each screw will be attached 21 feet of open link $2\frac{1}{4}$-inch chain, the last link of which will therefore remain above the surface of the ground. To each of these last links will be attached by means of a suitable shackle the end of a "ground chain," a $2\frac{1}{4}$-inch stud link cable, $24\frac{1}{2}$ fathoms long, the other ends of which will meet in the centre of the square. To these four ends will be attached one end of a $2\frac{1}{2}$-inch stud link chain (the bridle) of a length one fathom less than the depth of water at mean tide, the other end being attached to a spindle of round iron $3\frac{1}{2}$-inches diameter, which will pass through the buoy and be secured on the top by a steel key, which will also connect it to a strong ring or eye to which the ship's tackle will be made fast. On this key being driven out, as described in paragraph 10, the buoy will be detached from its moorings.

14. The length allowed for the ground chains, $24\frac{1}{2}$ fathoms, is one fathom more than the actual distance from the angle to the centre of the square, so that there will be a fathom of slack in each of the four. This will allow the buoy to rise and fall with the tide or with such waves as there may be within the harbour. The strain of a ship upon the mooring will first lift this slack, and then lift the one or two of the ground chains which may lie to windward, off the ground, and ultimately under a force sufficient to lift the whole length of chain, the strain will be thrown upon the screw or divided between two screws some 30 fathoms distant and buried 20 feet in the ground. The result of the greatest possible strain upon the chains will be to allow the buoy to describe a circle of about 42 feet radius round the central point of the square which is its normal position. Thus 42 feet added to the length of the ship will give the radius of the circle which a ship can describe under the influence of a gale of wind veering all round the compass, though the actual attachment to the ground will never be at a less distance than 30 fathoms.

15. The strength given to every detail of the parts of these moorings which are liable to the greatest strain is in excess of that specified by Lloyd's rules for the tackle to be carried by the largest class of merchant ships, steamers of 5,000 and sailing vessels of 3,000 gross tonnage. Thus the weakest link in the chain of attachment will be that which is on board the ship itself and under constant authoritative inspection. For vessels of a size beyond the limits of the scale recognized by Lloyd's, if such should visit the port, exceptional arrangements will have to be made.

16. In the charts showing the proposed arrangement of the berths I have indicated the depths by the contours taken from the survey of February 1878. The disturbance of the bottom in the following south-west monsoon would affect a few of the berths for small vessels in the extreme south-west angle of the harbour, but as I anticipate further changes in this locality, and that the ultimate form of the bottom will probably be more like that shown by the contours of February 1878 than by those of more recent surveys, I have thought it would only complicate the question to show an exceptional state of things which will certainly change if it do not entirely pass away. It will of course be understood that the moorings should not be laid down till there is good evidence that no further important disturbance of the bottom is likely to occur, but I hope the present south-west monsoon will afford materials for a final settlement of that question.

17. I may be permitted to request that this matter should have early attention. Three months from the date of order will be required for the preparation and shipment of the materials required to commence operations, and if the moorings are

to be ready for use in November 1880 advantage should be taken of the favorable season of January and February next for laying them down.

ESTIMATE OF MOORINGS.

No. 1, *Close System.*

	£	s.	d.
134 screws 4 feet diameter with 21 feet of 2¼″ open link chain at £22 each	2,948	0	0
180 lengths of 2¼″ stud ground chain, each 24½ fathoms—560 tons at £17	9,520	0	0
36 lengths of 1⅝″ stud ground chain for Harbour side moorings of lines A and C, each 24½ fathoms—52½ tons at £16 ...	840	0	0
54 lengths of 2⅛″ stud bridle-chain, from 3 to 6½ fathoms—42 tons at £17	714	0	0
12 lengths of 1½″ stud bridle-chain, each 4½ fathoms, for inner line of buoys—3½ tons at £16	52	0	0
Shackles for connections—15½ tons at £35	542	10	0
54 wrought iron buoys 10′ × 9′—126 tons at £35	4,410	0	0
12 do. do. 6′ × 5′ 8¾ do. £40	350	0	0
120 lengths of 1½″ stud chain for stern moorings, each 12 fathoms, 1,440 fathoms at ⅞ cwt.—54 tons at £16	864	0	0
120 lengths of ⅞″ hand chain for do., each 20 fathoms, 2,400 fathoms—24 tons at £15	360	0	0
Screwing machinery	600	0	0
Portable engine and boiler	290	0	0
Contingencies and extras 5 per cent.	1,074	10	0
Total cost of materials shipped f.o.b. in the Tyne ...	22,565	0	0
Freight for 1,000 tons at 60′	3,000	0	0
Local materials and labour, say	2,000	0	0
Special superintendence	500	0	0
	28,065	0	0

or Rs. at 1/7½, Rs. 3,45,416.

(Signed) W. PARKES.

No. 2, *Open System.*

	£	s.	d.
134 screws 4 feet diameter with 21 feet of 2¼″ open link chain at £22 each	2,948	0	0
96 lengths of 2¼″ stud ground chain, each 24½ fathoms—300 tons at £17	5,100	0	0
20 lengths of 1⅝″ stud ground chain for Harbour side moorings of lines A and C, each 24½ fathoms—29½ tons at £16.	472	0	0
29 lengths of 2⅛″ stud bridle-chains, from 3 to 6½ fathoms—22 tons at £17	374	0	0
12 lengths of 1½″ stud bridle-chains each 4½ fathoms for inner line of buoys—3½ tons at £16	52	0	0
Shackles for connections, 12 tons at £35	420	0	0
29 wrought iron boys 10′ × 9′ 68 tons at £35	2,380	0	0
12 „ „ 6′ × 5′ 8¾ „ at £40	350	0	0
Screwing machinery	600	0	0
Portable engine and boiler	290	0	0
Contingencies and extras 5 per cent.	650	0	0
Total cost of materials shipped f.o.b. in the Tyne ...	13,636	0	0
Freight for 600 tons at 60′	1,800	0	0
Local materials and labour, say	2,000	0	0
Special superintendence	500	0	0
	17,936	0	0

or Rs. at 1/7½, Rs. 2,20,752.

(Signed) W. PARKES.

2949W
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No. 2,377.

REFERRED to the Harbour Committee for early remarks.

(By Order.)

(Signed) J. PENNYCUICK, Major, R.E.,
Under Secy. to Govt., P.W.D.

27th June 1879.

To the President, Harbour Committee.

No. 9-A. Proceedings of the Madras Harbour Works Committee in circulation, dated 10th July 1879.

Read letter from Mr. Marshall, Port Conservator, regarding Mr. Parkes' system of moorings suggesting certain modifications.

Letter referred to Captain Taylor and Mr. Thorowgood for careful consideration. On the explanation offered by these officers the Committee beg to *recommend that* *B. *Mr. Parkes' open* system of moorings, "*vide* plan* and description," be adopted by Government as a commencement. If it should be found afterwards that a still more open style as advice by Mr. Marshall is necessary, the removal and return of the tier of buoys adjoining the harbour wall in either monsoon can be effected without assistance from England, and if the close system of Mr. Parkes is even brought into action the screws being already in position it will only be necessary to attach chains and buoys.

(Signed) P. MACFADYEN.
(„) J. H. TAYLOR.
(„) R. C. WALKER.
(„) J. PENNYCUICK.

No. 9-B. 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, 23rd March 1880, No. 68 W.

I HAVE the honor to submit the following reply to your memorandum No. 933, of yesterday's date, in which you ask me whether I believe the savings on the estimate of Rs. 58,50,790 for these works will be sufficient to cover the cost of the lesser scheme of moorings estimated by Mr. Parkes to cost Rs. 2,20,752, (*vide* his letter to the Madras Government, May 29th, paragraph 7.)

2. I have now gone carefully through the whole items of expenditure up to the end of February, and am able to estimate very fairly what the work will cost apart from serious accidents. I am able to show that the saving will be very nearly sufficient to cover the cost of the moorings.

3. The main heads under which excess or saving occur are as follow :—

Excesses.

	Rs.
Preliminary works	68,258
Rubble bases	1,00,000
Establishment	1,36,077
Total Excesses ...	3,04,335

Savings.

	Rs.
Block-making	1,27,790
Block setting	2,62,246
Contingencies	1,34,472
Total Savings ...	5,24,508

4. In all the above items I have estimated quite fairly, the calculations being based on what has gone before. The large excess estimated to occur in "Establishment" arises from my allowing for twenty-four months more to run at the present rates of pay, but Rs. 20,000 of the amount should by Mr. Parkes's estimate go to "*Works*" and not to *Establishment*. It is charged to the latter in obedience to G.O., 2,254 W., of 3rd September 1879.

5. In the items on which there are to be savings it will be observed that I have allowed Rs. 1,34,472 to be saved from "Contingencies." I arrive at this by taking the total amount now expended on contingencies and adding to it *twice as much* again, which I think to be giving a liberal margin.

6. It will be seen then the total probable excesses over estimate amount to Rs. 3,04,335, while the probable savings will be Rs. 5,24,508, giving a nett saving of Rs. 2,20,173 against Rs. 2,20,752, the estimated cost of the moorings allowing for exchange at 1s. 7½d. per rupee.

No. 10.

ORDER THEREON, 3rd April 1880, No. 854 W.

ORDERED that the Government of India be addressed on the subject of the moorings, a copy of the letter being forwarded to the Secretary of State for information.

(Here enter No. 855 W., dated 3rd April 1880.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

Supdt R. H. Nash.

Exd. S. T. Austin.
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2949 W
5

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1880} Madras.

PUBLIC WORKS.

To

Dated April, 3rd.

Issued

Read.

G. O., 3rd April 1880, No. 864 W.

APRIL.

Nos. 9-10.

Moorings for the Madras Harbour Works.
The Government of India addressed on the subject of the

29/9W
6

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 855 W.

No. 11.

FROM

THE SECRETARY TO THE GOVERNMENT OF MADRAS,

Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

Public Works Department.

SIR,—I am directed to forward correspondence relating to the provision of mooring apparatus for the Madras Harbour.

2. On the recommendation of the Madras Harbour Committee, this Government have resolved on the adoption, as a commencement, of the open system of mooring proposed by Mr. Parkes. It has been ascertained that the Calcutta and Bombay dockyards are unable to supply any of the requisite gear, and it will therefore be necessary that the Secretary of State invite tenders in the open market for the whole of the apparatus, such tenders being submitted for choice to the ordinary Engineering advisers of the India Office.

3. The cost of the moorings will amount to about £18,000; and as this Government are of opinion that the item might properly have been included in the general estimate for the Harbour Works, it appears desirable to adopt the suggestion made in the 29th paragraph of Mr. Parkes' report, dated 25th February last, and to provide for the mooring from the sanctioned estimate of £628,000.*

* Inclusive of £43,000 for interest on loan.

4. It is considered by the Superintendent that there is no reasonable ground for doubting that such provision may with safety be made. On this point I am directed to invite attention to his letter bearing date the 23rd March, No. 68 W.

5. His Grace the Governor in Council would be glad to have early sanction to this proposal communicated, and I am to request that, as the matter is very pressing, the Secretary of State, to whom a copy of this letter has been sent for information, may be advised by telegraph of the approval of His Excellency the Governor-General in Council to the proposal.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
3rd April 1880.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1880] Madras.

PUBLIC WORKS.

To

THE SECRETARY TO THE
GOVERNMENT OF INDIA.

Dated April, 3rd.

Issued

Recd. Encl.

G^t O^r, 3rd April 1880, No. 855 W.

APRIL.
No. 11.

MOORING APPARATUS FOR THE MADRAS HARBOUR WORKS.

2949 W
1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

10th May 1880, No. 1,120-A W.

Buildings and Roads.
Civil Works.

Read the following paper :—

No. 12-A. 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, 6th May 1880, No. 9 W.

I HASTEN to correct an error made by me in the impression which I have conveyed to Government in my letter No. 68 W. of March 23rd, regarding the defraying the cost of the harbour moorings. Fortunately the correction of my mistake places the question in a more favorable position.

2. In going through the *details* of each head of the estimate and expenditure I neglected to keep in view the total estimate of Rs. 58,50,790 and compared each item with *Mr. Parkes' estimate* for such item, consequently there still remains untouched the additional Rs. 2,00,000 suggested by General Walker.

3. I did not observe this until Mr. Parkes himself drew my attention to it in a letter received this day, and I do not lose any time in pointing out my error to Government.

4. The wording of your memorandum No. 933 of March 22nd was so perfectly clear that there is no excuse for having failed to bear in mind that I had to compare the probable future expenditure with the larger estimate of Rs. 58,50,790.

5. The only explanation I have to offer is, as I have stated, that I took by itself each sub-head of Mr. Parkes' estimate under which work had been done, and entered against it the probable total cost based upon what had been completed already, the result of such comparison resulting in an estimated saving of Rs. 2,20,173. And as the Rs. 2,00,000 of General Walker did not appear in Mr. Parkes' estimate nor was there any work done to set off against this sub-head, I entirely overlooked the sum.

6. The total estimated saving on the works may, therefore, be reckoned at Rs. 4,20,173.

7. It is with the greatest regret that I have to reflect upon having conveyed a wrong impression to Government after having received such clear instructions, and my error is only in a small way compensated for by the fact that the correction is most satisfactory in its results.

8. Having at once reported the mistake on discovery and expressed this regret, I can do no more.

No. 12-B. ORDER THEREON, 10th May 1880, No. 1,120-A W.

ORDERED that the following telegram be sent to the Government of India :—

"My 855 W., April 3rd. Thorowgood now reports moorings can be paid for within estimate even excluding additional two lakhs sanctioned for extra rubble."

(Here enter No. 1,120-B W., dated 10th May 1880.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

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

Exd. E. C. Shunker.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1880] Madras.

PUBLIC WORKS.

To

THE SUPERINTENDENT, MADRAS
HARBOUR WORKS,

&c., &c., &c.

Dated May, 10*th*.

Issued

Recd. *Encl.*

G. O., 10th May 1880, No. 1,120-A W.

MAY.

Nos. 12-A-12-B.

Madras Harbour Works.—Ordered that the Government of India be informed that the cost of the moorings for the — can be met from the estimate sanctioned for it.

2949 W
9

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 1,120-B W.

No. 12-C.

FROM

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

SIR,—In continuation of my telegram of this day I am directed to forward a further letter* received from the Superintendent of the Madras Harbour Works on the subject of the proposed moorings.

* G.O., No. 1,120-A W, dated 10th May 1880.

2. It will be seen that, even setting aside the sanctioned addition of two lakhs for the cost of extra rubble, a sufficient saving on the estimate to provide the set of moorings is anticipated by Mr. Thorowgood.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
10th May 1880.

Exd. E. C. Shunker.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1880) Madras.

PUBLIC WORKS.

To

THE SECRETARY TO THE
GOVERNMENT OF INDIA.

Dated May, 10th.

Issued

Read. *Encl*

G. O., 10th May 1880, No. 1,120-B W.

MAY.

No. 12-C.

MADRAS HARBOUR WORKS.—Informing that the cost of the moorings for the — can be met from the estimate sanctioned for it.

(2949w
10

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

29th October 1880, No. 2,502-A W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 126. From F. N. THOROWGOOD, Esq., M. INST. C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 18th October 1880, No. 49 W.

I HAVE the honor to enclose herewith copies of correspondence between the Examiner of Public Works Accounts and myself regarding funds for these works.

2. You will see that I shall require Rs. 1,57,230 in addition to the Rs. 12,00,000 sanctioned for the current year for the works alone. But the Examiner tells me that I ought to allow for the moorings in my request for supplemental funds.

3. I am not aware in what state the mooring contract at home is, so I allow Rs. 1,80,000 additional, which should be sufficient to cover the cost of what will be done by 31st March 1881.

4. A total supplemental grant of Rs. 3,37,230 will, therefore, be required to carry work on at full speed to the end of the present financial year.

From Major D. H. TRAIL, R.E., Officiating Examiner of Public Works Accounts, to the Superintendent, Madras Harbour Works, dated Madras, 12th October 1880, No. 515 X.

I HAVE the honor to bring to your notice that, according to the entries in your return of grants, expenditure, and balance on the 10th September 1880, your expenditure amounts to nearly eight lakhs, leaving about four lakhs for expenditure in the ensuing six months, which according to G.O., No. 2,048 W., of the 30th August 1880, will also have to meet the outlay in England on the mooring apparatus.

2. It appears therefore desirable that you should make a very careful estimate of your probable requirements for the next six months, and if there appears to be any ground for apprehending an excess of outlay over grant, it is necessary that you should lose no time in representing the matter to Government and applying for a supplemental grant.

From F. N. THOROWGOOD, Esq., M. INST. C.E., Superintendent, Madras Harbour Works, to the Examiner of Public Works Accounts, dated Madras, 16th October 1880, No. 52 C.

IN reply to your letter No. 515 X, of the 12th instant, I have the honor to state that I shall require a supplemental grant for the works themselves apart from the funds required for the moorings.

2. It will be remembered that my original request for the current year was cut down from Rs. 12,44,764 to 12 lakhs of rupees, that being the limit which could be allowed at the time, so there is nothing surprising in the fact that this sum will be exceeded.

3. I estimate that I shall require an additional grant of Rs. 1,57,230 for the works up to 31st March, and a further sum of Rs. 1,80,000 for the moorings or as much of them as can be fixed by 31st March. This gives a total of Rs. 3,37,230 required for the remainder of the financial year in addition to the grant of Rs. 12,00,000 already sanctioned.

4. Copies of this correspondence will be forwarded to the Government.

No. 126-A. From Major D. H. TRAIL, R.E., Officiating Examiner of Public Works Accounts, to the Secretary to Government, Public Works Department, dated Madras, 20th October 1880, No. 114 W.

COPY of the following forwarded to the Secretary to Government, Public Works Department, for information.

From the Examiner of Public Works Accounts, to the Accountant-General, Public Works Department, dated 19th October 1880, No. 137 A.

I have the honor to submit for your information copy of the letter received from the Superintendent of the Madras Harbour Works in reply to my letter No. 515 X, dated the 12th instant, copy of which was forwarded with this office endorsement No. 131 A of the 12th idem.

No. 126-B. From Captain W. J. TOMKINS, R.E., Assistant Secretary to the Government of India, Public Works Department, (Civil Works—Miscellaneous,) to the Secretary to the Government of Madras, Public Works Department, dated Simla, 18th October 1880, No. 243 M.

REFERRING to your letter, dated the 24th September 1880, without number, I am directed to state that, since it has been found impracticable to provide the necessary funds by re-appropriation of the Madras Budget credits, to meet the outlay on the mooring apparatus for the Madras Harbour, I am directed to request that the necessary provision for the outlay in question may be made in the Regular Estimate for the current year. Including this amount the total outlay on the Harbour Works during the current year must not exceed 14 lakhs.

No. 127. ORDER THEREON, 29th October 1880, No. 2,502-A W.

ORDERED that the Government of India be addressed.

2. The orders contained in the Government of India letter above quoted are communicated to the Superintendent, Madras Harbour Works, and the Examiner of Public Works Accounts for information and guidance.

(Here enter No. 2,502-B W., dated 29th October 1880.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Examiner of Public Works Accounts.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1880) Madras.

PUBLIC WORKS.

To

THE SUPERINTENDENT, MADRAS
HARBOUR WORKS.

&c., &c., &c.

Dated October, 29th.

Issued

Rect. Rect.

G. O., 29th October 1880, No. 2,502-A W.

OCTOBER.

Nos. 126-127.

Mooring Apparatus for the Madras Harbour Works.—Letter from the Government of India directing that provision be made in the Regular Estimate of the current year for the outlay on the —, communicated to officers concerned, and the Government of India addressed on the subject of the insufficiency of the current year's grant for the Harbour Works.

2949 W
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PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 2,502-B W.

No. 128.

FROM

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

SIR,—I am directed to forward copy of Proceedings of this Government marginally noted in regard to the insufficiency of the current year's grant for the Harbour Works. The premature exhaustion of the allotment is due simply to rapid progress which is *per se* a matter for congratulation, and on every ground it is desirable that the additional grant required by the Superintendent of the Works should be made. "Provincial" being responsible for the interest, there can, it is presumed, be no financial objection to the grant.

No. 2,502-A W., dated 29th October 1880.

2. It has been from time to time urged by this Government that nothing should be suffered to stand in the way of the earliest possible completion of the Harbour, so that the costly establishment should be utilised to the utmost and discontinued as soon as possible and a return obtained at the earliest possible date.

3. The cost of the moorings will, in accordance with the instructions given in your leter of the 18th October 1880, No. 243 M., be included in the Regular Estimate for the year.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

FORT ST. GEORGE,
29th October 1880.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1880) Madras

PUBLIC WORKS.

To

THE SECRETARY TO THE
GOVERNMENT OF INDIA.

Dated October, 29th.

Issued

Recd. *Encl.*

G. O., 29th October 1880, No. 2,502-B W.

OCTOBER.
No. 128.

Addressing on the subject of the transfer of the current year's grant for the Harbour Works.

2949W
13

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

1st December 1880, No. 2,765 W.

Buildings and Roads.
Civil Works.

Read the following paper:—

No. 5. From A. B. SAMPSON, Esq., Under Secretary to the Government of India, Public Works Department, (Civil Works—Miscellaneous,) to the Secretary to the Government of Madras, Public Works Department, dated Simla, 18th November 1880, No. 271 M.

In reply to your letter without number, dated 29th October 1880, I am directed to communicate the sanction of the Government of India to an additional grant of Rs. 1,37,230, under 34 Other Public Works, for the Madras Harbour Works. This addition will raise the grant for the current official year to Rs. 15,37,230.

2. The Superintendent should be warned that the sum now sanctioned must not be exceeded.

No. 6. ORDER THEREON, 1st December 1880, No. 2,765 W.

COMMUNICATED to the Superintendent, Madras Harbour Works, and the Examiner of Public Works Accounts, with reference to G.O., No. 2,502-A W., dated 29th October 1880.

2. The special attention of the Superintendent, Madras Harbour Works, is called to paragraph 2 of the above letter.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
„ Examiner of Public Works Accounts.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1880] Madras.

PUBLIC WORKS.

To

THE SUPERINTENDENT OF
MADRAS HARBOUR WORKS,

&c., &c., &c.

Dated December, 1st.

Issued

Recd. Encl.

G. O., 1st December 1880, No. 2,705 W.

DECEMBER.

Nos. 5-6.

Madras Harbour Works.—Letter from the Government of India communicating sanction of an additional grant of Rs. 1,37,230 for the —, communicated to the Superintendent and the Examiner of Public Works Accounts.

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

1st December 1880, No. 2,766 W.

Buildings and Roads.
Civil Works.

Read the following paper:—

No. 7. From Major D. H. TRAIL, R.E., Officiating Examiner of Public Works Accounts, to the Secretary to Government, Public Works Department, dated Madras, 22nd November 1880, No. 151 W.

I HAVE the honor to forward copy of Accountant-General's, Public Works Department, letter No. 734 G., dated the 3rd November 1880, and also copy of letter from the Superintendent of the Madras Harbour Works, No. 67 C., dated the 15th instant, written with reference thereto, for such steps as the Government may consider necessary to take for furnishing the Superintendent with timely notice of the state of the expenditure on the moorings in England.

2. This seems necessary in order that the Superintendent may ascertain, in time, how much of the total grant for the Harbour Works can be utilized on the work, after providing for the mooring apparatus, the cost of which in the current year may be definitely known by the Secretary of State.

3. If definite information is not obtainable, it is imperative that the outlay on the work should be restricted to 12 lakhs, for it is plain that the additional 2 lakhs have been sanctioned in the Government of India's Proceedings, No. 243 M., dated the 18th October 1880, solely to meet the outlay in England on the mooring apparatus.

From the Accountant-General, Public Works Department, to the Examiner of Public Works Accounts, Madras, dated 3rd November 1880, No. 734 G.

Your No. 137 *A., dated* 19*th October* 1880.

I shall feel obliged by your pointing out to the Superintendent of the Madras Harbour Works that the amount placed at his disposal must be his guide in the way of expenditure, and that it is his duty to keep the outlay of each year within the grant assigned for that period. The remarks made in paragraph 2 of his letter, No. 52 C. of the 16th ultimo, clearly show that he is ignorant of his duty in this respect, but he altogether omits to notice the heavy excess over the grants that he allowed to occur last year, which has been remarked upon by both the Governments of India and Madras.

2. If more funds are needed for this year's transactions they should be applied for in due time, and no outlay in excess of the present grant should be allowed to be incurred unless that grant is increased.

From the Superintendent, Madras Harbour Works, to the Examiner of Public Works Accounts, dated 15th November 1880, No. 67 C.

WITH reference to your memorandum No. 636 X., of the 10th instant, forwarding copy of letter from the Accountant-General, Public Works Department, No. 734 G. of November 3rd, I have the honor to state that it will be extremely difficult for me to ascertain what amount of money has been spent upon the moorings in England.

2. I learnt by last mail that expenditure has already been commenced under this head, but I do not know to what extent. If towards the end of March a heavy charge should come in for moorings, of which at present I know nothing whatever, I do not see how I can be certain to keep within the budget grant except by reducing the work here to an extent which would be most injurious to the whole undertaking.

3. If it is in your power I wish you would arrange that I may be promptly and regularly informed as to the state of expenditure on the moorings in England, because I cannot even guess what sum is required at the present date. My whole information is that Rs. 1,80,000 should cover the total cost of the mooring apparatus fixed in position.

No. 3. ORDER THEREON, 1st December 1880, No. 2,766 W.

RECORDED with reference to G.O., No. 2,765 W. of 1st December 1880.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Examiner of Public Works Accounts.
" Superintendent, Madras Harbour Works.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1880} Madras.

PUBLIC WORKS.

To

THE EXAMINER OF PUBLIC WORKS ACCOUNTS,

&c., &c., &c.

Dated December, 1st.

Issued

Read. *Encl.*

G. O., 1st *December* 1880, *No.* 2,766 W.

DECEMBER.

Nos. 7-8.

Mooring apparatus for the Madras Harbour Works.—Letter from the Examiner of Public Works Accounts regarding the necessity for furnishing the Superintendent with timely notice of the state of the expenditure on the —, recorded.

Establishment

No. 7 W

2949 W
16

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS,

To Colonel R. H. Sankey, R.E.
Secretary to Government P.W. Dept.
Buildings and Roads,
Fort Saint George,

MADRAS, 15th December 1880.

SIR,

I have the honor to state that from what I have learnt today from Mr Parkes it will be necessary for me to request Government to sanction the entertainment of a special leading workman to put down the permt moorings for this harbour.

2. I was under the impression that such a man would be sent out by the contractor for the moorings, but this is not the case. The salary of the man is allowed for in the cost of the moorings, and would be arranged in England.

3. I have no one on the works who has had charge of the details of fixing moorings

moorings, and I have told Mr Parkes that I must have a special workman for this. No action can be taken, however, until the request for such assistance be transmitted through the Madras Government.

4 Mr Parkes leaves on the 17th for Madras but he has made all arrangements for securing the services of an experienced man, and all that is now needed is sanction of this Government for the appointment. I therefore request that this sanction may be given at as early a date as possible.

I have the honor to be,

Sir,

Your most Obedt Servant,

F. W. Harrowood. M. Inst. C.E.

Superintendent

Madras Harbour Works

P.O. 857. 55 d. 3.4.80.
— 1120 R.W. 10.5.80.
— 1120 B do ——
— 2502 R.W. 29.10.80.
— 2502 B do ——
— 2765 d. 1.12.80.
— 2766 d ——

Establishment.

From

The Superintendent
Madras Harbour Works

No. 71 W.
Dated 15th December 1880.
Rec'd 16 —

Enclosures nil

Moorings Superintendent

Submits application for the employment of a —

Cir 17.12.80 Rec'd 28/12

1

P. W. C. No. 2949

Cor B

No. 2949 W

Estabt

2949 W
18

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 28 Dec 1880

Read the following:—

From

The Supt. M. H. Works (Rec. No. 71 W, 15th Dec 1880)

Sanction is accorded to the engagement of a Moorings Superintendent. The precise terms of the engagement should be reported for formal approval.

16/12/80

Supt. M. H. Works ✓
Ex. P.W. Accts. ✓
Ex. Est.

Resln 5-1-81 R.S.

7930

1880

Govt. of [~~1879~~] Madras.

PUBLIC WORKS.

To

Dated

Issued

Rcd. Encl.

G. O. 28 Dec 1880 No. 2949W

Nos.

Recommends that for the
Mr. Harbour Master
for services the Engagement
of a —, respecting the
terms for formal ob-
servance

3
/3