

(1) Number of pages 10

(2) Date of repair 16-9-42

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

G.O. No.	693	Press Mis.
Dated	7-3-1864.	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
7th March 1864.*

No. 173. Read the following letter from Captain H. TULLOCH, R. E., Special Engineer, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Madras, 1st March 1864, No. 50:—

Sir,

1. The work in connection with the project for draining Madras is in such a forward state that little now remains but to make fair copies of the original Plans and Sections. These when completed will amount in number to about sixty drawings. I am anxious to submit my Report as early as possible, but with the present strength of my Establishment there is little hope of my being able to do so under five or six months. I beg very respectfully to urge on Government the advisability of further aid being granted me as soon as possible.

2. I have at present only three Draughtsmen, inclusive of Mr. Martin my Surveyor. The latter is employed on the few original drawings that now remain to be completed, while the other two are engaged in making copies. Of these, there are some which will occupy a Draughtsman as much as a week to finish, and there is scarcely one which can be completed in less than two days. To expedite the work I am paying a man out of my own pocket at present to do the printing on the Plans.

3. Under these circumstances I trust Government will sanction the immediate entertainment of six temporary Draughtsmen for two months, three on 30 Rupees a month and three on 20 Rupees a month. The total expense of this measure will be only 300 Rupees, while if no aid is given me the cost of the project to Government will be considerably greater. In fact in the one case there will be the pay of myself and my Establishment for two months + 300 Rupees = about 3,000 Rupees + 300 Rupees = 3,300 Rupees, and in the other the pay of myself and my Establishment for five or six months = 6 (1,500) = 9,000 Rupees. With the help which I now ask for I may almost promise to send in my Report by the 1st of May, and I should then be ready to take up any other project which Government might wish me to investigate.

4. I beg also very respectfully that Government will be pleased to allot immediately a sum of money to enable me to have borings made along the line of the main and branch sewers which I propose to lay down. It is absolutely necessary that this should be done, as otherwise we should have no knowledge of the strata which must be pierced in order to the laying down of the sewers. I would propose that from three to six borings be made along each mile of length according as we feel satisfied or not of the nature of the sub-soils. From enquiries made I find the cost of each boring or well will be from 5 to 8 Rupees. There will be in all fourteen miles of main and branch sewers, so the cost may be roughly estimated at fourteen miles + five borings + 6 Rupees = 420 Rupees. An allowance must be made for pumping, as it is almost certain that in some parts of the town we shall meet with water. I would therefore ask for the sanction of about 700 Rupees, and with this money I would set to work at once and complete the borings as expeditiously as possible. I am especially anxious on this subject as I wish the report to contain the fullest information possible on every point in connection with the project.

No. 174. ORDER THEREON, 7th March 1864, No. 693.

1. As it is desirable that Captain Tulloch's Report on the project for the drainage of Madras should be submitted at an early date, the Government sanctions the employment of the temporary Establishment of Draughtsmen applied for in paragraph 3 of this letter at a cost of Rupees 150 per mensem for a period of two months.

2. Sanction is also accorded for the expenditure of a sum of Rupees 700 for ascertaining the nature of the strata along the line of the main and branch sewers proposed to be laid down.

Three at Rs. 20	Rupees 90
Three at „ 20	„ 60
	—
	Rupees... 150
	—

*Proceedings of the Madras Government, Public Works Department,
7th March 1861.*

The cost of this work as also of the Establishment, will be met from the balance of Rupees 4,000 available from the Income Tax Funds allotted for the Madras District. See Proceedings No. 605, dated 29th February 1861.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To Captain H. Tulloch, Special Engineer.
To the Superintending Engineer, 4th Division.
„ Controller and Auditor of Public Works Accounts.

Ed. S. T. Augustin.

to 50.

From

Captain H. Tulloch R.E.
Special Engineer

To

Colonel C. A. Orr R.E.
Secretary to Government P.W.D.

Sir,

The work in connection with the Project for draining Madras is in such a forward state that little now remains but to make fair copies of the original plans and sections. These when completed will amount in number to about 60 drawings. I am anxious to submit my Report as early as possible, but with the present strength of my Establishment there is little hope of my being able to do so under 5 or 6 months. I beg very respectfully to urge on

Government the advisability of further aid being granted me as soon as possible.

2. I have at present only three draftsmen, inclusive of Mr. Martin my surveyor. The latter is employed on the few original drawings that now remain to be completed, while the other two are engaged in making copies. Of these there are some which will occupy a draftsman as much as a week to finish, and there is scarcely one which can be completed in less than 2 days. To expedite the work I am paying a man out of my own pocket at present to do the printing on the Plans.

3. Under these circumstances I trust Government will sanction the immediate entertainment of 6 temporary draftsmen for two months - 3 on 30 Rs a month

and 3 on 20 Rs a month. The total expense of this measure will be only 300 Rs, while if no aid is given the cost of the Project to Govt. will be considerably greater. In fact in the one case there will be the pay of myself & my Establishment for two months + 300 Rs = about 3000 Rs + 300 Rs = 3,300 Rs, and in the other the pay of myself and my Establishment for 5 or 6 months = 6(1500) = 9000 Rs. With the help which I now ask for I may almost promise to send in my Report by the 1st of May, and should then be ready to take up any other Project which Government might wish me to investigate.

I beg also very respectfully that Government will be pleased to allot immediately a sum of money to enable me to...

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I would propose that from 3 to 6 borings be made along each mile of length according as we feel satisfied or not of the nature of the subsoils. From inquiries made I find the cost of each boring or well will be from 5 to 8 Rupees. There will be in all 14 miles of main and branch sewers so the cost may be roughly estimated at

$$14 \text{ miles} \times 5 \text{ borings} \times 6 \text{ Rs} = 420 \text{ Rs.}$$

An allowance must be made for pumping as it is almost

certain that in some parts of the town we shall meet with water. I would therefore ask for the sanction of about 700 Rs, and with this money I would set to work at once and complete the borings as expeditiously as possible. I am especially anxious on this subject as I wish the Report to contain the fullest information possible on every point in connection with the Project.

I have the honor to be
Sir

Your most obedient servant

J. H. Black Capt.
Special Engineer

Madras
1st March
1854

1874
J. H. Johnson
No. 900

Special Engineer

Colonel C. C. Orr
Secretary of the
Department of the
Interior

Recd & Paid
of 693-74 March 18

Address for the Association

of 6 temporary droppings
from 2 months at the total
cost of \$300-00

for the location of 700

Ms. March 1899
The week along the

live specimens preserved

the said Brown in care

Western with the 1000's
for Draining Meadows.

3 @ R. 30- 20
3 @ R. 20 60
(R. 150)

It is clear in the North

capitulum. The report on the subject for the drawing of a standard should be submitted at an early date.

The loss & inconvenience the enlargement of the tem porch & enlargement of the room & special for in favor of the latter at a cost of \$1500⁰⁰ & more for a period of 3 months.

ed for the ex/position of a Rem.

of \$2700 for erecting the outfall

of the Shakti along the line of the

main & small doors propared
laid down - The cost of this work has

also of the Establishment, will be

and from the balance of Rs. 4000

available from the Income Tax Tribunal

Allocated for Mr. Nathan Sharp - see
(No: - 4605 date) 29/12/54

(No: 27065 - received)
Ephraim - Oct 8.

North - Grand Canyon - March 1897 -
to the Grand Canyon