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(1) Number of pages 46

(2) Date of repair _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 1273	Press Mis.
553-54	
Dated 29. 4	1867.

Not to be folded or roughly handled

29th April 1867.

No. 553. Read the following letter from the Superintending Engineer, 5th Division, to the Secretary to Government, Department Public Works, dated Cuddalore, 11th April 1867, No. 10:—

* No. 405, dated 1st February 1866, paragraph 30.
No. 656, dated 4th March 1867, paragraph 3.

1 Letter of the Executive Engineer.
1 Statement:

1. With reference to the Orders* of Government calling for plans and estimates for the Ulsoor Water Project and the drainage of the Race Course Barracks at Bangalore, I have the honour to report that some time is likely to

elapse before they are completed and ready for submission to Government.

2. The levels for the drainage of the Race Course Barracks have been taken by Lieutenant Pennycuik, and the positions of all the drains laid down on a block plan of the barracks. There remains now only the preparation of the detailed drawings and estimates. An estimate of Rupees 1,46,300 for the Ulsoor Water Works, with a complete report on the whole project, accompanied by detailed plans and estimates, was forwarded by the Executive Engineer, so long ago as September 1864. The revised plans and estimates, required in consequence of alterations in the arrangements of the filter and lifting apparatus, have made very little progress.

3. The Executive Engineer states that his present establishment can only just keep up the accounts and correspondence, attend to executive work, and prepare plans and estimates for the numerous repairs and minor alterations. I forward a copy of a letter I have received from him on the subject. From the statement which accompanies it, it will be seen that while the expenditure in the Bangalore Range is greater, the cost of establishment is considerably less than in any other Range.

4. The large arrears of Office work and the inadequacy of the establishment were brought to the notice of Government by the Superintending Engineer in a letter dated 16th January, and recorded in the Proceedings of Government of the 2nd February 1865. Since then the Military buildings have increased in number, and are spreading over a continually increasing area. The annual expenditure, which was then two lacs, is now four lacs.

5. During the last two years there has been, for the greater part of the time, two Engineer Officers at Bangalore, but since Captain Tulloch was deputed to report on the Ootacamund drainage, there has been only one, and the Subordinate Executive establishment was diminished in August last by the transfer of Sub-Engineer Martin to Trichinopoly, and in February by the transfer of Supervisor Soobraya Charry to Coimbatore.

In G. O. No. 1,029, dated 6th instant, Supervisor Cowley was appointed to Bangalore, but it was with a view to his being employed on repairs to buildings at Hurryhur; so that he will not fill the place of either of the Subordinates lately transferred to other divisions, and there is no one available for the superintendence of the extensive repairs to the palace at Mercara.

6. There can be no doubt that the Executive and Office establishments at Bangalore are not equal to the efficient performance of the duties now required of them. The work at that station has increased greatly of late years, and an increase

*Proceedings of the Madras Government, Public Works Department,
29th April 1867.*

to the establishment is indispensably necessary. I therefore beg to recommend that two additional Overseers be appointed, and that the Office establishment be increased by two Draughtsmen and two Estimate-makers.

From the Executive Engineer, Bangalore, to the Superintending Engineer, 5th Division, dated Bangalore, 22nd March 1867, No. 1,019.

1. I have the honour to request your attention to the extremely insufficient establishment of this Range, both Office and Subordinate.
2. I have compiled the two Statements enclosed, which will show the position of Bangalore, as compared with other districts in this respect, better than any amount of writing.
3. The allotment shown for the different districts is that given in paragraph 15 of O. G. No. 656, of the 4th instant; the establishment shown for Bangalore is what we actually have at present, for the other districts the statement of establishment is taken from the Annual List of the Department, for January 1867.
4. It is true that, as regards Engineering establishment, it is scarcely fair to compare a single station like Bangalore with a range in which the work is spread over a large area, and is consequently more difficult to superintend. But this does not hold good with regard to Office establishment, the labour of which varies in almost direct proportion with the expenditure, except that where the work is chiefly building, it is rather harder on the Office than where it consists of irrigation and road work, owing to the greater number of items in the estimates.
5. There is, however, one district which is under exactly the same conditions as Bangalore in every respect; that is the Presidency, and the establishments of the two may be fairly compared.
6. The allotment for the Presidency for next year is Rupees 2,94,942, and as there are two ranges in the district, this gives an average expenditure of Rupees 1,47,471 to each range. The one range of Bangalore has 4,21,317, or nearly three times as much.
7. The salary of the Engineering establishment at the Presidency amounts to Rupees 23,203 annually, or 7.8 per cent. on the expenditure; at Bangalore it amounts to Rupees 5,949 or 1.4 per cent.
8. The Upper Subordinate establishment at the Presidency consists of one Sub-Engineer, one Mechanical Engineer, and four Overseers, whose total pay amounts to Rupees 11,880 per annum, or 2.5 per cent. on the expenditure; at Bangalore there are two Overseers, whose annual pay amounts to Rupees 1,440, or 0.3 per cent.
9. The two Range Offices at the Presidency have between them thirteen hands, with an annual pay of Rupees 7,440; at Bangalore, with 50 per cent. greater expenditure, there are five hands with an annual salary of Rupees 2,400.
10. I do not mean to say that the establishment at the Presidency is too strong, for I know, by experience it is not; but in that case, what is the inference to be drawn from these comparisons?
11. It is true that for some time we have had two Officers here, but that was professedly a temporary arrangement, and I imagine it is not likely to occur again for some time. This, however, is the least important part of the matter, for it is not the Engineering establishment to which I wish to draw attention, and there is hardly any limit to the amount of work which an Officer can superintend in a station like this, provided he has only a sufficient Subordinate establishment.
12. This, however, is not the case here; it is so utterly impossible for the two Overseers to perform their work properly, that we have been obliged to employ the Office Draughtsman as an Overseer. This cannot but throw back the office work, as a considerable portion of his time in the middle of the day is taken up with his in-door work as an Overseer, and he has very little left for his legitimate business as a Draughtsman. Even this is better than coming to an utter stand still with the executive works, as we should do if the whole were left to the two Overseers.

*Proceedings of the Madras Government, Public Works Department,
29th April 1867.*

13. Even with this assistance the two Overseers are so overworked that it is impossible to avoid frequent mistakes and omissions in the execution of work, and delay in the preparation of plans and estimates for repairs and alterations which have, as a rule, to be made by the Overseers.

14. The Office establishment is just as insufficient as the executive subordinate. Government are constantly calling for plans and estimates for the buildings to be erected here, but I must confess myself utterly unable to hold out any prospect of their being sent in for many months yet, unless I get some one to write out the estimates and draw the plans.

15. It ought also to be remembered that owing to the number of authorities that have to be consulted regarding Military buildings, and the extraordinary changes of opinion that appear to take place among them, a plan seldom has to be prepared less than three times, and sometimes twice as often.

16. I consider that we ought to have *at least* four Overseers here; with these the station could be divided so as to apportion the work fairly amongst them.

17. The Office establishment should be strengthened by the addition of two good Draughtsmen and two estimate-makers, and we might then see some prospect of getting rid of the fearful mass of plans and estimates still to be prepared.

18. Even with these additions we shall only have the same number of Overseers as there are at the Presidency, and an Office establishment of two-thirds the strength, while our expenditure is 50 per cent. greater.

19. There is a sort of impression prevalent that the execution of work by contract lightens the labour of superintendence. It undoubtedly lightens that of the Range Officer very considerably, and would, to a very slight extent, lighten that of the Overseers, if unnecessary labour were not thrown upon them by existing rules regarding measurements, &c.; as it is, their labour and that of the office is rather increased than diminished by the contract system.

20. I intend, however, to write to you separately upon this point, and others connected with it; for our present purpose it will be sufficient to observe that as nearly all the works at the Presidency are executed by contract, the system affects both districts alike.

21. It may be asked why was not this brought forward by Captain Tulloch? I have very good reason to show that Captain Tulloch felt very strongly (particularly of late, since we have lost both Mr. Martin and Supervisor Subroyachari) the insufficiency of the establishment, and only refrained from bringing the matter forward because he was about to leave the station, and thought it best to leave anything affecting the future of the Range for me to attend to. Moreover, it must be remembered that Captain Tulloch had my assistance, and that I was for the most part employed on the very work which I ask for additional Draughtsmen to do now.

22. One other point I cannot help referring to, although I may possibly be blamed for doing so, as the matter has already been brought to the notice of Government more than once, and that is the hardship of refusing horse or conveyance allowance to the Overseers stationed here. The Cantonment now occupies an area of something like six miles by five, and is extending every day, and the two Overseers have work over the whole of this area, and far beyond it. I have lately received a requisition from the Military authorities to prepare estimates for roads and wells in the Cholera encamping grounds, which are five miles out of the station on the Bellary road. This will involve several visits to the site on the part of one of the Overseers as well as myself, and as he has his ordinary work both out of doors and at office to attend to, it certainly seems to me that the absence of any conveyance allowance will press rather hardly upon him. This is only one instance out of many.

23. Both the Overseers here are very willing hard-working men, and the way they do the (I must say) unreasonably hard work they have is most creditable to them. The slight boon I ask for would for not cost Government very much, while it would be greatly felt by a most deserving class of men.

24. Should the views I have brought forward meet your approval, I trust you will support them with Government. I have asked for nothing but what I consider absolutely necessary for the proper execution of work, and advantageous to the interests of Government.

Statement showing the proportion of Establishment to expenditure in the various districts of the Madras Presidency.

Districts.	Allotment for 1867-68.	ENGINEERING.		UPPER SUBORDINATES.		OFFICE.		TOTAL.		Remarks.
		Annual cost.	Per-cent- age on expendi- ture.	Annual cost.	Per-cent- age on expendi- ture.	Annual cost.	Per-cent- age on expendi- ture.	Annual cost.	Per-cent- age on expendi- ture.	
Ganjam ...	Rs. 1,53,020	Rs. 10,723	7.0	Rs. 15,966	10.4	Rs. 2,520	1.6	Rs. 20,209	19.0	a The salary of the Consulting Archi- tect is not included in the cost of establishment. b Exclusive of Madras Water Supply, neither the establishment nor ex- penditure of which are counted. c Exclusive both as to establishment and expenditure of Lawrence Asy- lum and Coonoor Ghaut.
Vizagapatam ...	1,14,131	8,323	7.3	9,498	8.3	2,520	2.2	20,341	17.8	
Godavery ...	4,81,255	55,450	11.5	15,775	3.3	6,240	1.3	77,465	16.1	
Kistna ...	4,81,645	22,061	4.6	15,070	3.1	7,500	1.5	44,631	9.2	
Nellore ...	1,64,235	7,200	4.4	13,105	8.0	4,200	2.5	21,505	14.9	
Cuddapah ...	1,53,181	34,040	22.2	11,999	7.8	4,080	2.7	50,119	32.9	
Kurnool ...	91,690	8,323	9.1	11,340	12.3	2,520	2.7	22,183	24.1	
Bellary ...	2,96,686	13,256	4.5	26,755	9.0	5,040	1.6	45,051	15.1	
Presidency ...	2,94,942	23,203	7.8	11,780	4.0	7,440	2.5	42,423	14.3	
Madras ...	3,02,780	24,403	8.1	12,718	4.2	5,100	1.7	42,221	14.0	
North Arcot ...	3,22,711	8,349	2.6	19,101	5.9	5,880	1.8	33,330	10.3	
South Arcot ...	3,18,630	10,800	3.4	19,081	6.0	3,600	1.1	33,481	10.5	
Salem ...	1,55,995	8,949	5.7	10,973	6.8	3,120	2.0	22,742	14.5	
Bangalore ...	4,21,317	5,919	1.4	1,440	0.3	2,400	0.6	9,789	2.3	
Coimbatore ...	3,56,488	31,898	8.9	17,408	4.9	8,040	2.3	57,346	16.1	
South Canara ...	93,798	5,349	5.7	19,685	3.2	2,520	2.6	16,208	17.2	
Malabar ...	6,20,049	36,881	5.9	19,685	3.2	6,960	1.1	63,526	10.3	
Tanjore ...	2,58,919	29,907	11.5	16,570	6.5	5,280	2.0	51,757	20.0	
Trichinopoly ...	2,98,890	20,734	7.0	13,580	4.5	3,000	1.0	37,314	12.5	
Madura ...	1,91,990	15,289	7.9	13,570	7.1	3,120	1.6	31,979	16.6	
Tinnevely ...	1,85,773	22,091	11.9	14,399	7.7	4,680	2.5	41,170	22.1	

Statement showing the average expenditure of each Range in the various districts of the Madras Presidency.

District.	Allotment for 1867-68.	Number of Ranges.	Average per Range.	Remarks.
	RS.		RS.	
Ganjam ...	1,53,020	3	51,007	
Vizagapatam ...	1,14,131	3	38,044	
Godavery ...	4,81,255	6	80,209	
Kistna ...	4,81,645	7	68,806	
Nellore ...	1,64,235	4	41,059	
Cuddapah ...	1,53,181	4	38,295	
Kurnool ...	91,960	3	30,653	
Bellary ...	2,96,686	6	49,448	
Presidency ...	2,94,942	2	1,47,471	
Madras ...	3,02,780	4	75,695	a Exclusive of Madras Water Supply project, (3,00,000,) which is not executed by the regular Range establishments.
North Arcot ...	3,22,711	5	64,542	
South Arcot ...	3,18,630	4	79,657	
Salem ...	1,55,995	3	51,998	
Bangalore ...	4,21,317	1	4,21,317	
Coimbatore ...	3,56,488	4	89,122	b Exclusive of Lawrence Asylum buildings (1,40,000) and Coonoor Ghaut (33,667,) for which separate superintendence is provided.
South Canara ...	93,798	3	31,266	
Malabar ...	6,20,049	5	1,24,010	
Tanjore ...	2,58,949	5	51,790	
Trichinopoly ...	2,98,890	4	74,772	
Madura ...	1,91,990	3	63,997	
Tinnevely ...	1,85,773	5	37,155	

(True Copy.)

(Signed) E. A. FOORD, Lieut.-Colonel, R. E.,
Superintending Engineer, 5th Division.

No. 554.

ORDER THEREON, 29th April 1867, No. 1,273.

ESTABLISHMENT, No. 57.

1. In this letter the Superintending Engineer of the 5th Division brings to notice the inadequacy of the Executive and Office Establishments which are allotted to Bangalore.

2. The Government gather from a Statement furnished by the Controller that the establishments now employed at that station, exclusive of Captain Tulloch's special establishment, which has in separate orders been placed at that Officer's disposal for duty at Ootacamund, are as follows :—

2 Talook Overseers at 60 Rupees	RS. 120
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Range Establishment.

1 Accountant	60
1 Writer and Accountant	50
1 Do. do.	40
1 Draughtsman and Estimator	50
1 Store-keeper	40
2 Peons	12

2 Minor Establishments, each consisting of 1 Writer and two Lascars

252
54

*Proceedings of the Madras Government, Public Works Department,
29th April 1867.*

3. Colonel Foord shows that it is impossible for two Talook Overseers efficiently to superintend the works which are in progress at Bangalore; that the present Office Establishment is just sufficient to keep up the current accounts and correspondence, and to prepare plans and estimates for minor alterations and repairs to public buildings; that the submission of large projects is in consequence greatly delayed, and that while the expenditure on Public Works at Bangalore has increased 100 per cent. of late years, no increase has been made to the establishments.

4. The Governor in Council, while concurring with the Superintending Engineer that an augmentation of the Executive and Office Establishments at Bangalore is indispensably necessary, is of opinion that no proper comparison can be drawn between the duties of a Range and that of the Executive charge of Bangalore. In the former the works are numerous and scattered over a large extent of country, and, in most cases, are executed under departmental agency, while in the latter they are few in number and concentrated, and are, as a rule, carried out by contract.

5. In separate Proceedings, the Government sanctioned the transfer of Mr. Supervisor Cowley from the Madras District to Bangalore, and, with a view to further strengthening the Executive Establishment at that Station, they resolve to place the services of Mr. Supervisor Hudson (doing duty at the Presidency) at the disposal of the Assistant Engineer in charge, as a temporary measure. As regards the Office Establishment, the Government request that, bearing in mind that Captain Tulloch's establishment will be relieved by the end of the ensuing month of the special duty at Ootacamund on which it is now engaged, and will then be again available for employment in Bangalore, the Superintending Engineer will furnish a statement of the additional aid which he considers to be absolutely necessary.

6. As the work for the supervision of which an Upper Subordinate is stated to be required at Hurryhur is of a trifling character, the Superintending Engineer will endeavour either to arrange for its being executed by the Mysore Department of Public Works or will depute an Overseer for the duty.

(True Extract.)

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

To the Superintending Engineer, 4th Division.
Do. do. 5th do.
To Captain Tulloch, Ootacamund.
To the Controller of Public Works Accounts.

Exd. S. T. Augustin.

Statement shewing the proportion of Establishment to expenditure in the various Districts of the Madras Presidency.

Districts	Allotment for 1867/68	Engineering	Upper Subordinate	Office	Total	Remarks
		Annual Cost Percent on expenditure	Annual Cost Percent on expenditure	Annual Cost Percent on expenditure	Annual Cost Percent on expenditure	
Channarayana	1,53,020	10,723	15,966	2,520	29,209	19.0
Channarayana	1,14,131	8,323	9,498	2,520	20,341	17.8
Channarayana	4,81,255	55,450	15,775	6,240	77,465	16.1
Channarayana	4,81,645	22,061	15,070	7,500	44,631	9.2
Channarayana	1,64,235	7,200	13,105	4,200	24,505	14.9
Channarayana	1,53,181	3,4040	11,999	4,080	50,119	32.9
Channarayana	91,690	8,323	11,360	2,520	22,183	24.1
Channarayana	2,96,656	13,256	26,755	5,040	45,051	15.1
Channarayana	2,94,942	23,203	11,780	7,440	42,423	14.3
Channarayana	3,02,780	8,349	12,718	5,100	42,221	14.0
Channarayana	3,22,711	2,4403	19,101	5,880	33,380	10.3
Channarayana	3,18,630	10,800	19,081	3,600	33,481	10.5
Channarayana	1,55,995	8,949	10,673	3,120	22,742	14.5
Channarayana	4,21,317	5,949	1,440	2,400	9,789	2.3
Channarayana	3,56,658	31,898	17,408	8,040	57,346	16.1
Channarayana	93,798	5,349	8,339	2,520	16,208	17.2
Channarayana	6,20,049	36,881	19,685	6,960	63,526	10.3
Channarayana	2,58,949	29,907	16,570	5,280	51,757	20.0
Channarayana	3,98,890	20,754	12,580	3,000	37,334	13.5
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Channarayana	1,85,773	22,091	14,399	4,680	41,170	22.1

a. The salary of the Consulting Architect is not included in the cost of establishment.
b. Expenditure of Madras water supply neither the establishment nor the expenditure of which are included.
c. Exclusive, both as to establishment and expenditure of Lawrence Allyn & Co. Ph. 26-

Statement showing the average expenditure of each range in the various Districts of the Madras Presidency.

District	Allotment for 1867-68	No. of ranges	Average per range	Remarks
Canjam	1,53,020	3	51,007	
Vizagapatam	1,14,131	3	38,044	
Godavery	4,81,255	6	80,209	
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Bellary	2,96,686	6	49,448	a. Exclusive of Madras water supply project, (3,00,000) which is not executed by the regular range establishment.
Presidency	2,94,942	2	1,47,471	
Madras	3,02,780 ^a	4	75,695	
North Arcot	2,22,711	5	64,542	
South Arcot	3,18,630	4	79,657	
Chalem	1,55,995	3	51,998	
Bangalore	4,21,317	1	4,21,317	
Coimbatore	3,56,488	4	89,122	b. Exclusive of Lawrence Asylum buildings (1,40,000) and Coonoor Phat (22,667) for which separate superintendence is provided.
South Canara	93,798	3	31,266	
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Tanjore	2,58,949	5	51,790	
Trichinopoly	2,98,890	4	74,772	
Madurai	1,91,990	3	63,997	
Tinnevely	1,85,773	5	37,155	

/True Copy/

Edmond L. Coll. R. E.,
Superintg Engineer,
5th Division

Executive Engineer's Office,
Bangalore, 22^d March 1867.

N: 1019.

From,

Lieut: J. Pennycook R.E.,

Executive Engineer,

Bangalore.

To,

The Superintending Engineer,

5th Division.

Sir,

I have the honor to request your attention to the extremely insufficient establishment of this Range, both office and subordinate.

2- I have compiled the two statements enclosed, which will show the position of Bangalore, as compared with other districts in this respect, better than any amount of writing.

3- The allotment shown for the different districts is that given in para 15 of O.G. N: 656 of the 1st inst:; the establishment shown for Bangalore is what we actually have at present, for the other districts the Statement of

Enclosure in letter from
the Supt Engineer 5th Div:
to the Secretary to Govt. of
dated 11th April 1867
No: 10

P. M. 1867/68

of establishment is taken from the Annual List of the Department, for January 1867.

4. It is true that, as regards Engineering establishment, it is scarcely fair to compare a single Station like Bangalore, with a range in which the work is spread over a large area, and is consequently more difficult to Superintend. But this does not hold good with regard to office establishment, the labour of which varies in almost direct proportion with the expenditure, except that where the work is chiefly building, it is rather harder on the office than where it consists of irrigation and road work, owing to the greater number of items in the estimates.

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or 0.3 per cent.

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Superintendent

Superintendent in a station like this, provided he has only "sufficient subordinate establishment."

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19- There is a sort of impression prevalent that the execution of work by contract lightens the labour of Superintendence. It undoubtedly lightens that of the Range Officer very considerably, and would to a very slight extent lighten that of the overseers, if unnecessary labour were not thrown upon them by existing rules regarding

regarding measurements &c; as it is
their labour and that of the office
is rather increased than diminished
by the contract system.

30- I intend however to write to you
separately upon this point, and others
connected with it; for our present
purpose it will be sufficient to
observe that as nearly all the works
at the Presidency are executed by
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districts alike.

31- It may be asked, why was
not this brought forward by Capt.
Tulloch? I have very good reason
to show that Captain Tulloch felt
very strongly (particularly of late,
since we have lost both Mr. Martin
and Supervisor Subroya chari) the
insufficiency of the establishment,
and only refrained from bringing
the matter forward because he
was about to leave the Station, and
thought it best to leave anything

affecting

9
affecting the future of the range for me
to attend to. Moreover it must be
remembered that Capt. Tulloch
had my assistance, and that I
was for the most part employed
on the very work which I ask for
additional draftsmen to do now.

22- One other point I cannot
help referring to, although I may
possibly be blamed for doing so,
as the matter has already been
brought to the notice of Government
more than once - and that is the
hardship of refusing horse or
conveyance allowance to the Overseers
stationed here. The Cantonment
now occupies an area of something like
six miles by five, and is extending
every day, and the two overseers have
work over the whole of this area, and
far beyond it - I have lately
received a requisition from the military
authorities to prepare estimates for
roads and wells in the Chhola

encamping

encamping grounds, which are five miles out of the station on the Bellary road - This will involve several visits to the site on the part of one of the overseers as well as myself, and as he has his ordinary work both out of doors and at office, to attend to, it certainly seemed to me that the absence of any conveyance allowance will press rather hardly upon him - This is only one instance out of many.

23 - Both the overseers here are very willing hardworking men, and the way they do the (I must say) unreasonably hard work they have, is most creditable to them - The slight boon I ask for would not cost Government very much, while it would be greatly felt by a most deserving class of men -

24 - Should the views I have brought forward meet your approval,
I

21
I trust you will support them with Government - I have asked for nothing but what I consider absolutely necessary for the proper execution of work, and advantageous to the interests of Government -

I have &c

[Signed] J. Pennycook L.A.R.C.,
Executive Engineer,
Bangalore -

[True Copy]

Ed. Ford L.A. Col. L.C.,
Superintg Engineer,
S.D. Division

23

Cuddalore April 29th

My dear Colonel Orr

I have written lately about the inadequacy of the establishment at Bangalore, and now that Tullaeh's office has been sent to join him, Pennycook has written to me again on the subject, and I enclose his letter.

Affairs at Bangalore are not in at all a satisfactory state, in fact they are getting rounder to the state in which they were two years ago. I have been expending month after month the plans and estimates of the Major Master Works. Tullaeh was allowed to go on with the work in anticipation of the sanction of Government to the estimate, and he promises that he wants forward the

Enclosure in letter from
the Major: Encls: 5th & 6th
to the Secretary & Capt. Orr.
dated 11th April 1857
No: 10-

13/10/1857/57

plans and estimates as soon as the
sack cutting had been completed and
the foundations brought up to a certain
level. The only plans I have seen to
this day, are those which I showed
you at Madras, at the end, not of
last year, but of the year before. I

had always been under the impression
that Julluck knew of a second pump
in the Public Works Store at Madras,
that could be attached to the engine
but I have heard lately that there
is no pump in the store - so we
will have to be procured elsewhere
or made.

Then as regards the drainage of the
Nac Comm barracks, Julluck sent
me an indent for galvanized iron
pipes for all the barracks, but no up

of any kind accompanied the indent.
I have received from Pennycook some
information regarding the project, and
also a plan showing the levels, and
the positions of the drains. I do not
think it advisable to send all the way
to England for the enormous quantity
of pipes that will be required, both
to collect the liquid refuse from
each building and carry it to a distance.
It will be sufficient to use pipes to
collect the drainage and build a
brick or stone sewer to carry it to a
distance.

The present plan of the hospital has
not been altered, but some changes
have been made in the elevation
and some repairs also, not in the
estimate have been ordered. Revised
plans and estimates were in progress
about eight months ago but they

have not yet reached me.
There seems to be no likelihood of
clearing off the arrears of plans and
estimates, unless an increase be made
to the establishment. It was proposed
more than two years ago to place an
officer in charge of the New Canton
Marracks, and it is a question now
whether some one should not be placed
in charge of the Water Supply and
Drainage Works, so that the Executive
Engineer may be able to devote suf-
ficient time to the Military buildings.
I wish to see some works in this
district before leaving, and intend
going to Salem and Bangalore in
the middle of June, but I can if
necessary go to Bangalore via Madras
next month taking the French steamer
of the 15th of May. Yours truly,
Ed. Dorril

27
Copy of a demi official letter from the Executive
Engineer, Bangalore, to the Superintending
Engineer, 5th Division, dated 24th April 1890

I am very sorry to have to
trouble you again about the Bangalore
range establishment, but if I were
to remain silent upon the subject I
would be accepting a responsibility
of which I am by no means ambitious.

I have already reported upon
the inadequacy of the establishment
to the work it has to perform, and also
that it is only by the help of Tulloch's
Special office that I have been able
to keep going at all. Government have
now ordered the removal of these men
and I must ask your consideration
to the position in which I am thereby
placed.

First, as to the executive branch.
I have two overseers to do work which requires
four at least - To relieve them in some
measure Arageaswamy (the office drafts-
man) has been put in charge of the works
at

at the Nelson Rock and Artillery Barracks. In spite of this however the two overseers have so much to attend to that it is impossible for them to perform their duties properly - It is as much as I can do to inspect pretty frequently the larger works and it is only a casual and superficial consideration that I can give to minor works and repairs, which I am thus obliged to leave in a great measure to the overseers. They being unable to attend to them efficiently the contractors have almost unlimited opportunities of scamping, and I have had lately several complaints of inferior work, which I regret to say appear only too well founded.

These are due solely to the want of proper superintendence, and I must say I think it is very creditable to the overseers that they are not more frequent than they are - The superintendence of works and preparation of bills ~~year~~ takes up the whole of the overseers time, and many alterations and minor new works which

which Messrs. hand tells me are urgently required are delayed, because neither the overseers nor myself have time to take the necessary measurements and prepare the plans and estimates.

So much for the outdoor work, now for the indoor - The range office consists of five men, four of whom are employed to the very utmost of their power in keeping up the accounts and correspondence, and the only man of any use for making estimates or drawing plans is George Swaney - A great part of his time is taken up with his overseers work (and an overseer has a good deal of office work to do) and my establishment for drawing and estimating thus consists of about half a man, or rather less.

Up to this time I have had the assistance of Tulloch's two men, one of whom is a good draftsman and estimator, and the other can copy both drawings and estimates - I am now to lose both these - I have also two or three of the temporary establishment employed in the office, but none of these can do any thing more than copy estimates and trace

drawings

drawings. For some time past the original
of almost every plan that has left the
office has been drawn from beginning to
end by myself, only the traced copies
being made in the office; I have no objection
to doing this, though it is scarcely worth
for an Engineer, but unfortunately I
have only one pair of hands, and the
work requires three.

Today I am sending you two plans
which I have drawn myself, but of
which I cannot take office copies,
for I have no one to copy them.

If the Government prefer work being
left unexecuted, or worse still, being
badly executed, to giving a proper esta-
blishment to the Range, I have nothing
more to say. The extra hands will
not diminish my work at all, and
that of the Subordinates very slightly;
they will only enable us to do work which
at present is left undone; but I
will not by remaining silent upon
the matter render myself responsible
for

21
for shortcomings which I am powerless
to prevent - and I have therefore thought
it well to put the case clearly before you.

I have preferred writing this
officially, because I do not care to have
a matter of this kind discussed in the
office, but I have no objection to this letter
being considered official, and sent up
to Government should you think it
advisable. In any case I shall be
obliged by your preserving it, as I wish
the opinions I have expressed to
remain on record.

Yours copies

W. F.

No. 10.

331
Superintg Engrs Office, 5th Divn,
Cuddalore, 11th April 1867.

From,

Lieut. Col. E. A. Ford R.E.,

Superintg Engineer,
5th Division.

To,

Colonel. C. A. Orr R.E.,

Secretary to Government,
D.P.W.

Sir,

x No. 105 of 1st Feb/66
para 30.

No. 656 of 4th March
1867. para 3.

Enclosures.

1 Letter of the

Engr. Engineer

1 Statement 5.

With reference to the orders of
Government, calling for plans and
estimates for the Nilsoor Water Project
and the Drainage of the Race Course
barracks at Bangalore, I have the
honor to report that some time is
likely to elapse before they are completed
and ready for submission to Government.

2. The levels for the drainage of the
Race Course Barracks have been taken
by Lieut. Pennycuik and the positions
of all the drains laid down on a block
plan of the barracks. There remains
now only the preparation of the detailed
drawings

to Coimbatore.

In G. O. No. 1029 dated 6th instant. Supervisor Cowley was appointed to Bangalore, but it was with a view to his being employed on repairs to buildings at Kurrighur, so that he will not fill the place of either of the subordinates lately transferred to other divisions, and there is no one available for the superintendence of the extensive repairs to the Palace at Mercara.

6- There can be no doubt that the Executive and office establishments at Bangalore are not equal to the efficient performance of the duties now required of them. The work at that Station has increased greatly of late years, and an increase to the establishment is indispensably necessary. I, therefore, beg to recommend that two additional overseers be appointed, and that the

the office establishment be increased by two draughtsmen and two estimate makers.

I have the honor to be,

Sir,

Your Most Obedient Servt.

E A Ford Lt. Col. R.E.,
Superintg Engineer,
5th Division.

1273 31/12

Public Works Department.

1273
12/12/73

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 29th April/67.
Read the following

From the Supg Engineer of the
5th Div

(Here enter No. 10 dated 11 April/67)

In this letter the
Superintending Engineer
of the 5th Div brings
to notice the inadequacy
of the Executive and Office
Establishments which are
allotted to Bangalore.

P
JP

2. The Government
gather from a State
ment furnished by the
Controller that the Es-
tablishments now em-
ployed at that station,
exclusive of Captain
Tulloch's special Es-
tablishment, which has
in

won

1273 11/12/73
12/12/73

The Deputy Engineer,
5th Division

cc. The Secretary to
Government

Dated 11/12/73
Recd 13/12/73

12/10

1273 11/12/73

Reporting that owing to
the inadequacy of the
Executive and Office Es-
tablishments at Bangalore
the preparations of plans and
estimates for the Alder Water
Project and the Drainage
of the Race Course Branch
is delayed and applying for
some additional Establishment
in order to

1273 11/12/73

1273

in separate orders been placed at that Officer's disposal for duty at Botacammur, are as follows.

2 Taluk Overseers @ 60 Rs. Rs. 120

Range Establishment

1 Accountant 60

1 Writer and Accountant 50

1 " " 40

1 Draftsman and Estimator 50

1 Store Keeper 40

2 Peons 12

252

2 Minor Establishments
each consisting of 1 writer
and 2 Peons 54

Colonel Ford
shows that it is im-
possible for two Taluk
Overseers efficiently to
superintend the ~~works~~
~~establishment~~

~~number of~~ works which
are in progress at Bangalore,
that the present Officer's
Establishment is just
sufficient to keep up the
current accounts and cor-
respondence, and to pre-
pare plans and estimates
for minor alterations and
repairs to public build-
ings; that the submission
of large projects is in
consequence greatly delay-
ed, and that while the
expenditure on Public
Works at Bangalore
has increased 100 per
cent of late years, no
increase has been made
to the Establishments.
The Governor in
Council, while concurring
with the ~~opinion of~~ the
Superintending Engineer

that an augmentation
of the Executive and Office
Establishments at Bangalore
is indispensably ne-
cessary, is of opinion
that no proper comparison
can be drawn between
the duties of a Range
and that of the Executive
charge of Bangalore. In
the former the works
are numerous and scattered
over a large extent of
country, and in most
cases, are executed under
departmental agency,
while in the latter they
are few in number and
concentrated, and are, as
a rule, carried out by
Contract.

On this

In separate Proce-
dings, the Government
~~have~~ sanctioned the
transfer of Mr. Supervisor
Cowley from the Malabar
District to Bangalore,
and, with a view to,
further strengthening the
Executive Establishment
at that station, they re-
solve to place the ser-
vices of Mr. Supervisor
Jackson (doing duty at
the Presidency) at the
disposal of the Assistant
Engineer in charge, as a
temporary measure.
As regards the Office
Establishment, the Govt.
request that, bearing in
mind

mind that Captain
Tulloch's Establishment
will be relieved by the
end of the Current month
of the special duty at
Botacamura in which
it is now engaged, and
will then be again
available for employment
in Bangalore, the
Superintending Engineer
will furnish a statement
of the additional aid
which he considers to
be absolutely necessary.
As the work
for the super-
vision of which an
Upper subordinate is
stated to be required at
Burryhun

45
Burryhun is of a
highly character, the
Superintending Engineer
will endeavour either to
arrange for its being
executed by the Mysore
Department of Public
Works or will depute
an Overseer for the
duty.

To
The S. Engr 4th Div ✓
Do. 5th Div ✓
Capt. Tulloch. Botacamura ✓
Controller - ✓

Desp 23/5/67.

Pub. Works 1867 (Departs)

Pro: of Govt for April

No 1293

Pro: of the Madras Govt.

Ap 29th April 1867.

Passing orders on a
letter from the Sup^d Engr^s
of the 5th Division, requesting
an augmentation of Establish-
ments at Bangalore (Execu-
tive and Office).

No 553-554