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Government of Madras.

DEPARTMENT.

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Proceedings of the Madras Government, Public Works Department,
2nd November 1866.

No. 35. Read the following letter from the Secretary to the Government of India, Public Works Department, (Civil Works—Miscellaneous), to the Secretary to the Government of Madras, in the Public Works Department, dated Simla, 8th October 1866, No. 907C:—

1. I am directed by the Governor General in Council to enclose copy of a Minute recorded by the Chief Commissioner of the Central Provinces, in submitting to the Government of India the Annual Progress Report of Public Works in those Provinces for the past official year.

2. It seems to be very desirable that these reports should be prefaced by some general observations by the head of the Administration as has, in this instance, been done by Mr. Temple, and His Excellency in Council will be glad to receive such a review with future Progress Reports.

Minute by the Chief Commissioner of Central Provinces.

1. In submitting to the Supreme Government the Progress Report by the Chief Engineer of the Public Works Department in these Provinces, for the year 1865-66, I have to record some general observations in conformity with the directions conveyed in the Government Orders of the 28th October 1862.

2. On former occasions I have had to point out the detriment to the best interests of the Public Works, occasioned by the too frequent incapacity of the Executive Engineers. At all times there have, in these Provinces, been a certain number of Executive Officers, whose zeal and skill did credit both to themselves and the Department. But at most times there were many Officers quite deficient both in professional knowledge and practical ability. There must always be *some* proportion of such Officers. But during several years the proportion in these Provinces was excessive; much greater indeed in this Department than in any other. Despite all the exertions of successive Chief Engineers, the amount of bad work of undue expense, and various irregularities, has been considerable, owing to the circumstances abovementioned. But within the last year or two, the improvement in this respect has been marked and satisfactory. Most (if not all) of the untrained and inefficient Officers have been eliminated. And the new Officers, supplied by the Government of India, have proved to be well educated Engineers. Several of the young Civil Engineers, sent out from England, are gentlemen of really remarkable promise and aptitude.

3. The same remarks apply generally to the important class of officials, termed Upper Subordinates. Of these, a large portion used to be men of inferior education, or indifferent character, though here, also, there have been always some bright exceptions. Several of the worst have been got rid of; and those lately supplied from Roorkee have been of a better stamp, though most of them are inexperienced and raw to their duty. Thus it must be said, that a staff of competent Upper Subordinates is still a *desideratum*, and, until this can be obtained, the Department will never be in anything like perfect order.

4. However at last, and perhaps for the first time, I am able to report that the Department is well officered, and better manned than it was. There are still some few Officers in all grades whose fitness may be doubted: a small proportion of such will probably, under all circumstances, be unavoidable. And below them there are many young subordinates of good promise, though of inchoate performance. But, as a rule, the establishments are now well cast and well set up. The merits, or otherwise, of the various Officers, can be seen exactly from the Progress Report. But I would select the following as Officers of tried efficiency, whose proceedings have been honourable to themselves, and beneficial to the public service:—

Captain Mead.	Lieutenant Roberts.
Major Priestley.	Mr O'Callaghan,
Mr. Heyman,	,, Bell.
,, O'Donnell,	,, Johnston,
,, Tyndall,	,, Whiting,
,, Hanna,	,, Moolchund.

5. In former years, at the close of the official year, there always remained unexpended cash balances in almost every Executive Division, and this too, without sufficient reason. This was always a source of regret, because such sums necessarily lapsed, and were lost to these Provinces. This year, however, there have been no such balances, save in the heading of Military Works, where operations were sometimes in abeyance, unavoidably for want of the sanctioned designs and estimates. In all headings, except the Military, the full amount of the Budget allotments has been spent, and not a Rupee has lapsed on the whole, with the above exception, which could not be helped.

6. The Account Department has been very efficiently conducted by Captain B. Prior, and his Assistant, Mr. Carpenter. Captain Prior reports that he receives the accounts from the Executive Engineers with very tolerable regularity. Nothing in the way of arrears seems ever to occur now.

7. The sanctioned estimates are fairly adhered to by the Executive Engineers in their work. The plans and estimates are, however, reported to be too often fraught with errors, and have to be extensively rectified by the Chief or Superintending Engineers before being sanctioned. Economy is certainly looked to, and probably enforced to some extent. The constant rise in prices of all kinds has rendered it difficult for the Engineers to work according to the rates of cost originally proposed and approved. Still they have striven to do this; and the manner in which, despite the high prices and high wages, they have contrived to comparatively keep down the rates, both for earthwork and masonry, redounds to their credit.

8. In respect to Military buildings, the fact is, that these structures have either to be built afresh, or else extensively renewed, at all the large Cantonments in these Provinces. At Saugor, at Seetabuldee, and Chindwarra, the barracks for European troops have to be constructed *ab initio*. At Jubbulpoor and Kamptee they have to be altered and renovated. The abandonment of the old Arsenals at Saugor and at Seetabuldee having been determined, new Depôts and Magazines have to be erected at Jubbulpoor and at Kamptee. Thus, although for some years past, Military works have been going on, whereby what may be called subsidiary buildings, such as family quarters, hospitals, school-houses, bakeries, Sergeant's quarters, plunge-baths, drainage cuts, and the like, have been substantially completed; yet the main works, such as barracks, have still to be undertaken. The undertaking of these has heretofore been delayed partly, because sites were undetermined, and partly because the final standard designs were awaited. These causes of delay have now been removed, and vigorous progress may be expected. During the year under review, a beginning was made both at Saugor and at Jubbulpoor. The year now current will, it is hoped, see a similar commencement made at Kamptee, Chindwarra, and at Seetabuldee. Three years of hard work and large expenditure will be required in order to place the Military buildings in these Provinces in the condition necessitated by the new rules.

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10. As to Public Improvement (technically so called in the prescribed headings), the business of the year has, in the main, been confined to projecting. But, though ground has not been broken actually, still some five irrigation schemes have been elaborated on sites where water may, and we hope one day will, be stored by millions of cubic feet, and thence conducted to the fertilization of many square miles of cultivated country.

11. The heaviest item in the expenditure of the year is, of course, that devoted to Roads and Communications. The operations have been concentrated on the three Trunk lines which, radiating from Nagpoor as a centre, are named, respectively, the Northern Road, the Eastern Road, and the Southern Road.

12. The Northern Road has two component parts: first, that between Jubbulpoor and the Khutra Pass near Mirzapoor; second, that between Jubbulpoor and Nagpoor. The piece between Jubbulpoor and the Khutra Pass (190 miles), is now complete, bridged, and metalled as far as Rewah (170 miles); the bridges lately built comprising two first class structures over the Rivers Kutnee and Tonse—the Heron river alone remaining unbridged. This section, it should be observed, extends to Rewah, full seventy miles beyond the frontier of these Provinces. From Rewah to the Khutra (60 miles), the road is made and metalled, but not bridged, and is, therefore, not permanently passable for wheeled carriage during the rainy months of the year. A few small bridges have been constructed of late. But the distance from our frontier, and our resources, is so great, that even the making of these few has proved a serious drain. It is, in fact, hardly possible for this Administration to do justice to the section between Rewah and the Khutra; and there is a proposal to transfer it to the Government of the North Western Provinces, as being much nearer at hand.

13. The second part of the Northern Road, that between Jubbulpoor and Nagpoor, is the work which, for three years past, has absorbed the best part of our engineering means and energies. It crosses right athwart the Central Sautpoora Plateau, which has a breadth of more than a hundred miles of broken hilly country, and is flanked by two mountain ranges rising abruptly near a thousand feet above the plains. It is now nearly complete throughout, save the works at the Korai Pass, well advanced; and the bridge over the Kunhan river, at Kamptee, under construction. The other bridges of first-rate dimensions, those over the Wyngunga, the Shere, and the Bijua rivers, and all the lesser bridges and culverts, are finished. The roadway has been conducted up or down five rugged and difficult hill passes. The Kunhan bridge will not be arched over for two years to come. That done, however, there will only remain one river between Nagpoor and Jubbulpoor, namely, the Nerbudda itself, unbridged.

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16. Besides these main roads, there is the North-West line, leading from Nagpoor towards Chindwarra and Hoshungabad. Of this about twenty-five miles have been completed, and some ten more commenced.

17. There is also a section of the road from Candeish (Bombay Presidency) to Indore, passing through the Nimar District, much out of repair. If Budget provision can possibly be made, it will be very desirable to execute extensive repairs and renewals on this section during the next working season.

18. The *commencement, this next season, of the important* Military and Commercial road, from Saugor to the nearest point on the Railway, running along the Nerbudda Valley, has been ordered.

19. The various pieces of Imperial Road mentioned in the foregoing paragraphs, as having been operated on by our establishments during the year, may be thus stated in abstract :—

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20. On the whole, the masonry of the road works is satisfactory. The metalling, however, though in some places good, is in others indifferent, and in others even bad. And in wet weather the roadways are in most parts not traversed with the ease which the public would generally expect from metalled roads. Much of the metalling, indeed, though better than nothing, is hardly worthy of the name, and will only serve as a basis for better layers hereafter. On the other hand, the inferior metalling has been cheap, while the good metalling will certainly be expensive. The Engineers, no doubt, have often made mistakes in this matter ; but then they have had physical difficulties to contend with, which have been fully explained by the Chief Engineer in his Progress Report. Experience seems to show that Imperial first-class roads in these Provinces will average Rupees 10,000 (£1,000) per mile.

21. It is the testimony of District Officers that new roads do sensibly affect the traffic for the better, even during the first year after their being opened. Still, in respect to the smallness of the result as compared with the wants of these Provinces, with their large and roughly, undulating and often mountainous area, and their scattered population, I may insert here, what was stated in my general Administration Report :—

" Perhaps the general result, if reckoned in the aggregate, may amount to something, certainly the trouble to attain even that much in a country like this has been infinite, but in reality, the result is almost as nothing compared with the actual needs of the country, and with what yet remains to be done. Still the roads all round the large Military Station of Saugor are impassable for guns after heavy rain ; still the line down the Nerbudda Valley is closed entirely during one-half the year, and worn into ruts two or three feet deep during the other half ; still thousands of tons of valuable produce on the eastern borders are carried laboriously on the backs of bullocks, merely because it has not been possible to render the hill passes fit for wheeled carriage."

22. The work done during this year on the Godavery navigation works has not been considerable, action having been suspended, for the most part, in expectation of the decision of certain engineering and general questions, on which Colonels Anderson and Fife (Officers possessing special experience in Southern and Western India) were deputed by direction of the Supreme Government to give professional counsel. Their Report is still awaited.

23. At the present time, the condition of the works at the 1st Barrier is as follows :—

The aniout, or great dam, may be considered as three-fourths finished, the sluice wall has been finished, the head-lock nearly completed ; the canal and the flood embankments have been two-thirds finished ; the upper tail-lock is in progress.

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24. Ground has not been broken at the 2nd Barrier, but a design, with plans and estimates, prepared by Major Haig, has been submitted for the sanction of the Government of India.

25. During the year, the general sanction of the Secretary of State has been received, for the formation of a design and the prosecution of the works at the 3rd Barrier. This will render necessary some works in the River Wurdah above the Barrier ; and, as at present informed, I apprehend, that it may be desirable to add some works in the River Wyngunga, which joins in at the Barrier. This subject shall be elaborated as soon as the report of Colonels Anderson and Fife is received.

26. The total expenditure of the Public Works Department in these Provinces during the year 1865-66 may be epitomized thus :—

	Rs.
Military	4,17,527
Civil Buildings	6,96,071
Public Improvements	12,944
Roads and Communications	8,22,257
Navigation	4,74,997
Establishment	6,15,856
Tools and Plant	40,778
Profit and Loss	39,250
Total ...	31,19,680

or 31 lacs of Rupees, £310,000. Local Fund Works, in addition to the above, have also been carried out by Public Works Officers during the year to the amount of Rupees 1,37,037, or £13,703. This expenditure is, of course, irrespective of the works executed by the various Local Committees.

27. In conclusion, I would commend to the favorable consideration of the Government of India the professional skill, and the unceasing care, which the Chief Engineer, Colonel William Maxwell, R. A., has given to the supervision of the Department ; and I would beg to acknowledge cordially the assistance rendered by him in the Secretariat Branch.

NAGPOOR, (Signed) R. TEMPLE.
The 6th August 1866.

No. 36. ORDER THEREON, 2nd November 1866, No. 3,495.

CIVIL WORKS, No. 10.

Communicated to the Superintending Engineers, who will, in submitting future Administration Reports, furnish a short Memorandum embodying any general remarks which they may have to offer, and which may aid the Government in drawing up such a review as is required by the Government of India.

(True Extract.)

Colonel, R. E.,
Secretary to Government.

To the Superintending Engineers.

Exd. T. Cartledge.

MINUTE by R. Temple, Esq., *Chief Commissioner of Central Provinces.*

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2. On former occasions I have had to point out the detriment to the best interests of the Public Works, occasioned by the too frequent incapacity of the Executive Engineers. At all times there have in these Provinces been a certain number of Executive Officers, whose zeal and skill did credit both to themselves and the Department. But at most times there were many Officers quite deficient both in professional knowledge and practical ability. There must always be *some* proportion of such Officers. But during several years the proportion in these Provinces was excessive: much greater indeed in this Department than in any other. Despite all the exertions of successive Chief Engineers, the amount of bad work of undue expense, and various irregularities, has been considerable, owing to the circumstances abovementioned. But within the last year or two, the improvement in this respect has been marked and satisfactory. Most (if not all) of the untrained and inefficient Officers have been eliminated. And the new Officers, supplied by the Government of India, have proved to be well educated Engineers. Several of the young Civil Engineers, sent out from England, are gentlemen of really remarkable promise and aptitude.

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Tools and Plant	40,778
Profit and Loss	39,250
Total ...	31,19,680

or 31 lakhs of rupees, £310,000. Local Fund Works, in addition to the above, have also been carried out by Public Works Officers during the year to the amount of Rs. 1,37,037, or £13,703. This expenditure is, of course, irrespective of the works executed by the various Local Committees.

27. In conclusion, I would commend to the favourable consideration of the Government of India the professional skill, and the unceasing care, which the Chief Engineer, Colonel William Maxwell, R. A., has given to the supervision of the Department; and I would beg to acknowledge cordially the assistance rendered by him in the Secretariat Branch.

R. TEMPLE.

NAGPOOR :
The 6th August, 1866.

MINUTE by R. TEMPLE, ESQ., *Chief Commissioner of Central Provinces.*

Dated 6th August, 1866.

Calcutta:
PUBLIC WORKS DEPARTMENT PRESS,
1866.

No. 607C.

13

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

Civil Works.

Miscellaneous.

To The Secretary to the Govt of Madras
Pub. Works Dept

SIMLA, *the 8th October* 1866.

SIR,

I AM directed by the Governor General in Council to enclose copy of a Minute recorded by the Chief Commissioner of the Central Provinces, in submitting to the Government of India the Annual Progress Report of Public Works in those Provinces for the past official year.

2. It seems to be very desirable that these reports should be prefaced by some general observations by the head of the Administration as has, in this instance, been done by Mr. Temple, and His Excellency in Council will be glad to receive such a review with future Progress Reports.

I have the honor to be,

SIR,

Your most obedient Servant,

Lieut.-Col., R. A.,
Secretary to the Government of India.

Commi

P W Dept
Pro. of Govt. for November
GOVERNMENT OF INDIA
PUBLIC WORKS DEPARTMENT.

Civil Works.

Miscellaneous. No. 4304

To

The Secy. to Govt. P.W.D.

No. 907C.

Dated 8th October 1866.

Received 22nd Oct/66

En: one

Suggesting that future annual Progress Reports of P. Works may be prefaced by some general observations by the head of the Administration.

No 35
e. 26th Octr. 1866 Pr. 24½

No. 3495 - 2nd Novr. 1866.

3295 Civil Works X 15

Public Works Department.

No. 3495.

PROCEEDINGS of the MADRAS GOVERNMENT

Under date the 2nd Novr./66.

Read the following

From the Secy. to the Govt. of India, P W Dept (Here enter No. 907C dated 8th Oct/66).

Communicated to the Superintending Engineers, who will, in submitting future Administration Reports, furnish a short Memo embodying any general remarks which they may have to offer, and which may aid the Government in drawing up such a review as is required by the Government of India

WON

To,
The Supg. Engrs.

Desp. 3rd Novr.

70

(initialled)

P. W. 186 . *Department.*

No.

PROCEEDINGS OF GOVERNMENT,

Dated