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Public Works DEPARTMENT.

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No. 54.

Read the following.

PROCEEDINGS OF THE COMMISSION FOR INVESTIGATING PUBLIC ESTABLISHMENTS.

1. The Commission for investigating Public Establishments have the honor to report upon the questions, relating to the District of North Arcot, in the Public Works Department, referred to in the Extract Minutes of Cousultation, Public Works Department, No. 2,201 of 20th October 1858, and upon other matters connected with that District.

2. In this investigation, the following objects have been kept in view.

First, the final adjustment of all the advances, made on account of works in the North Arcot District, remaining unaccounted for at the close of the official year 1857-58, i. e., on 30th April 1858, which amounted to Rupees 3,71,486.

Secondly, an endeavour to discover how the large arrears in the District of North Arcot have accumulated, and the causes to which the short-comings of the Public Works Department, in that District, are attributable.

3. The first of these objects has been accomplished, the result being as follows, viz. :—

Advances.	Disposals.	Balances of advances not expended.	Advances exceeded.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
3,15,254 2 3	3,16,317 13 1	15,896 9 5	16,960 4 3
56,232 10 11	54,917 2 10	1,393 6 9	77 14 8
3,71,486 13 2	3,71,234 15 11	17,290 0 2	17,038 2 11

The particulars will be found in the Appendix to this paper, marked *A* and *B*. *A* being the return which treats of the unadjusted balances of advances made, on account of works executed, or to be executed, by the New Public Works Department, i. e., subsequent to the transfer from the Collectors in the year 1855, and *B*, a similar return, in respect of the old Maramut operations, i. e., anterior to the transfer from the Collectors in the year 1855. If the suggestion, in para. 20 of Appendix *A*, be approved, and adopted by Government, the arrears may at once be disposed of, but it will be necessary to give instructions for the preparation of estimates for the unfinished portions of the works therein referred to.

Appendix A. and B.

4. The other object, i. e., enquiry into the causes which have led to the present confusion in North Arcot, involves considerations of a far more important nature, some of which appertain to questions purely Departmental, some professional in an engineering, some in an accounting point of view, and there are others, by no means the least important, which call for enquiry into the status, discipline and authority, of the Engineer, Upper Subordinate and Lower Subordinate grades.

5. It would be unfair to the Public Works Department generally, to the proposers of the new system, and to the Government, to assume that the errors, which have come to light in the District of North Arcot, apply to all or any of the other Districts, as there is reason to believe that, in some of them, the practice has been much better than in North Arcot. It is also but right to state, that there may be many defects in the working in that District, which have not been noticed in this report, and that there may have been many departures from the system, laid down in the Circular and Standing Orders, which are not alluded to herein ; there having been no opportunity for a full and systematic enquiry.

6. The following points however appear to the Commission to call for special notice, viz :—

I. The number of changes in the Engineer and Subordinate grades.

II. The great inconvenience resulting from the removal of writers with their chiefs.

III. The irregular mode of transferring charges.

IV. The dependent position of some of the Subordinates, and the power given to District Engineers to report against, fine, and retard or advance their interests.

V. The practice of signing bills and certificates, as a matter of form, and in utter ignorance of their contents.

VI. The incompleteness of the bills.

VII. The insufficient and unreliable character of the records in the District and Central Offices.

VIII. The absence of separate and independent check upon the Districts by the Central Office.

IX. The mistake committed in reading advances and expenditure as convertible terms, and the mode of drawing advances.

X. The long delay in the submission of the bills.

XI. The large cost of superintendence, the imperfect mode of shewing it, and the probable incorrectness of the existing averages; also the differential averages in the ranges.

I. The number of changes in the Engineer and Subordinate Grades.

7. The North Arcot District has been unfortunate in this respect, as will appear from the following table,* which embraces a period of 40 months, extending from the formation of the New Public Works Department, i. e., 30th September 1855, to 31st January 1859, in which there have been 119 nominations or charges as follows, viz. :—

* See also Appendix C.

	Engineers.		Subordinates.	
	District.	Executives and Agents	Upper.	Lower.
District	3	...	...	...
Range one	...	6	5	12
Range two	...	4	3	11
Range three	...	5	3	6
Range four	...	9	2	7
Range five	...	4	3	5
Palaur Project	...	6	11	13
Mr. Daniel*	...	...	...	1
	3	34	27	55
By deducting the authorised Establishment	1	4	9	18
The number of changes appear		30	18	37

* Range not known.

8. That is to say, in 40 months, the following changes have been made

Of District Engineers	2
Of Executives and Agents	30
Of Upper Subordinates	18
Of Lower Subordinates	37
Making a total of	87, which,
added to the authorised establishment	32, gives
the gross number of	119

9. It does not follow that there have been this large number of nominations, for the list of the 119 contains only 75 names, which were repeated as follows, viz. :—

1	eight times	1 × 8 = 8
1	five times	1 × 5 = 5
1	four times	1 × 4 = 4
5	three times	5 × 3 = 15
20	twice	20 × 2 = 40
47	once	47 × 1 = 47
75		119

While upon the subject of changes, it is not out of place to remark, that there have been, since the formation of the new Department of Public Works, no less than 6 Superintending Engineers of the circle in which North Arcot is situate—that is acting and fully appointed.

10. North Arcot contains an area equal to the principality of Wales. If an Engineer were to profess to have acquired a competent knowledge of that country in 13 *years*, he would not be believed. The Commission is aware that even in England it is considered desirable that a county Surveyor, whose duties are in some degree analogous to those of a District Engineer here, should be changed as seldom as possible, on account of the loss of experience that would be caused by his removal; but here the evils attendant upon change will be increased in direct proportion to the extent of the charge.

11. Besides it is impossible for any District Engineer to give due time and attention to his work, be conversant with the particulars of his own and his subordinates' duties, and acquire sufficient knowledge of the records of his office and the peculiarties of his District, in short become qualified by experience to discharge the important functions of his office, even if aided by experienced Executive Officers, conversant with their work, settled in their ranges, and masters of their duties, both engineering and accounting, in the term of 13 months, which has been the average period of incumbency in this District. How much then must the chances of success be lessened, when, in the same period of 40 months, there have been in this District, no less than 34 Executive Officers in the 6 divisions, i. e., 5 ranges and the Palaur project.

12. If it be, moreover, necessary, for a District Engineer to grant to Executives, quitting his District, certificates of no demands, surely it is equally necessary that he should be conversant with the state of the accounts and balances he is giving an acquittance for; in order to acquire this necessary knowledge, he may find it necessary to devote nearly the whole of his time to the verification of the accounts in the several ranges.

13. How largely the continual changes would trench upon the time of the Engineers may be seen from the following estimate, viz. :—

On making a change there are three parties interested, viz. :—

The District Engineer,

The Parting Executive,

The Coming Executive.

To take over a Range properly, can hardly be done under 3 weeks.

There have been 34 charges and 30 changes.

The time of 3 Engineers in 40 months, deducting at the rate of 45 days per annum for privilege and casual leave, but making no deduction for either sick leave, holidays, Sundays or three days leave, is 3,150 days—21 × 34 × 3 = 2,142 days.

14. It is perfectly impossible that a District Engineer can devote 714 out of 1,050 days to accounts; he therefore takes their correctness for granted, and, as in the case of Mr. Assistant Overseer J. Shaw Lincoln, signs a *certificate of the propriety of which he knows nothing whatever.

* See Appendix D.

15. It is thus that accounts, in which there was no difficulty originally, have been neglected and become complicated, and mystified.

16. The list of the resigned, the dismissed, and the transferred members of the Department in this District is a long one, viz. :—

Executive Engineer Lieut. A. D. Clay.
Mr. Assistant Executive Engineer D. Horgan.
Mr. Assistant Executive Engineer T. H. Bush
Mr. Supervisor F. Dick.
Mr. Assistant Overseer J. S. Lincoln.
Mr. Assistant Overseer S. Lee.
Mr. Sub Overseer Haldweil.
Mr. Sub Overseer L. Morrell.
Mr. Assistant Supervisor Damerum.
Mr. Sub Overseer Theobald.
Mr. Sub Overseer Cassidy.
Mr. Assistant Overseer Brittain.
Mr. Assistant Overseer Wright.
Mr. Sub Overseer Coshan.
Mr. Assistant Overseer Byrne.
Mr. Assistant Overseer L. Stratton.
Mr. Assistant Overseer Brown.
Mr. Assistant Overseer Cherryman.
Mr. Assistant Overseer DaSylva.
Mr. Assistant Overseer McCarthy.
Mr. Assistant Overseer A. Erskine.

Of these, all but the first, have left the District, and the Government have thereby lost the local experience of 2 Engineers and 18 Subordinates, all Europeans or of European extraction.

Four of them resigned the Service,
Six of them were dismissed,
Ten of them were transferred,

20 in all, in the short space of 40 months. Such a state of matters indicates that there must be something in the present management of the District which calls for amendment. No notice has been taken of the changes among the Natives.

17. The 2 Engineers included in the above number of 20, were Messrs. Dennis Horgan, and T. H. Bush; both of them held, one still holds, the post of Assistant Executive Engineer; both have the reputation of being able men, well acquainted with their duty. A considerable amount of soreness and ill-feeling has been caused by the positions which they held in North Arcot. They were originally in the Military service of the Government, and the highest non-commissioned rank which can be attained in the Corps in which they served, (the Sappers and Miners) was gained by them. The Government appointed them to the office of Assistant Civil Engineer, or Assistant Executive Engineer, doubtless on account of their professional fitness for the post, and in acknowledgment of their previous good conduct; and it is to be presumed, that in so appointing them, the Government intended that they should occupy, in society, that rank which their position in the service necessarily conferred on them. It appears however to have been held, that the former service in the Army of Messrs. Horgan and Bush, necessitated

their being treated as if they still remained in the ranks. An Executive Engineer in the Public Works Department has no other title than that of his grade, and what he previously was, *cannot* affect his position in the Public Works Department.

18. It is quite clear that with such ideas of discipline and superiority, there could be no cordial co-operation, and the induced result has been, the loss to the District of North Arcot of these two useful, practical, and experienced Engineers.

The great inconvenience resulting from the removal of writers with their chiefs.

19. As this practice has been very lately* prohibited by Government, it is unnecessary to discuss the matter here, the whole subject having been dealt with. It may not however be out of place to observe, that so lately as in November last, an establishment obtained permission to remove to Bellary from North Arcot.

* Ext. Min. Cons. Pub Works. Dept. No. 1656, dated 21st August 1858.

The extent to which this has been practised can be learned by ordering a return. The instance above alluded to was, when an Assistant Supervisor was transferred to another District. The Officiating Chief Engineer gave permission and orders, which permission and orders were ordered, by Captain Francis and Mr. Peachey, to be held in abeyance for a short time.

The irregular mode of transferring charges.

20. A very fruitful source of confusion is the irregular manner in which changes are effected in the Department, and charges given and taken over. It appears that when a member of the Public Works Department is gazetted to another appointment, or posted to another duty, it being his object to take up his new appointment, and enjoy his improved pay and allowances, as early as possible, he at once divests himself of all responsibility in the most summary manner.

21. To take over charge of a range, properly, is by no means so unimportant a business. Every work in it should be gone through, at the very least on paper, the money in hand counted, the advances admitted and explained, and the amount of work done, for which bills have not been submitted, measured and vouched for, and, unless all this be done, it is quite impossible that the coming Executive can properly understand the responsibilities he is assuming. In making a transfer of this complete nature, the form of certificate referred to at Para. 31 will be found invaluable, as the last certificate, with the progress report, and cash book, would then give all the elements of a complete account, so far as the money is concerned. Had, this been the rule, such cases as Mr. Assistant Overseer J. Shaw Lincolns* repudiation of his predecessor Mr. Downie's accounts, could never have been made, nor any disclaimer, such as that made by Mr. Assistant Executive Engineer T. H. Bush, with respect to the accounts of Executive Engineer Captain Barber's range, nor any such circumstances as those under which Mr. Executive Engineer Dopping received from Executive Engineer Captain Taylor, Rs. 200 over and above the balance of cash shewn to be in hand in the range, or those under which Mr. Executive Engineer Dopping received a much larger excess at the Palaur Annicut. Even under such melancholy circumstances as the sudden death of an Engineer, as in the case of Executive Engineer Lieut. B. B. Boyd, there would be no difficulty, with the aid of these elements, in adjusting the accounts of his range without delay.

*See Appendix D.

The dependent position of some of the Subordinates and the power given to District Engineers to report against, fine, or retard their interest.

22. That the system of confidential reports gives to a District Engineer the power to blast a man's career and future prospects is beyond a doubt, and that these reports should be received with caution is certain; the reports nevertheless have a value, as they may in after times be referred to, when a man, who for years has enjoyed the best of reputations, is suddenly charged with misconduct. For instance, take the case of Mr. Assistant Executive Engineer T. H. Bush; the confidential reports from the Sappers and Miners Corps, and those of all his former superiors, rate his qualifications high, and his conduct unexceptionable; this appears to have been the opinion of his superiors up to the date when the present Acting District Engineer took charge, and if Mr. Bush's had been the only case where the Government were asked to believe in

the degeneracy of their servants, it is very probable that the result would have been, to Mr. Rush, disastrous in the extreme; but it was not so, and the very disturbed state of the District, the frequent changes, and the loud complaints in all grades, have proved that nearly all the Subordinates, and many of the Engineers, are dissatisfied with, and have incurred the displeasure of their immediate local chief. One great cause of this dissatisfaction, and the *malus animus* which appears to be general, is believed to be the readiness with which tale-bearers are encouraged, most of them natives; one in particular, Ramanjooloo Pillay has, it is said, and the data already afforded confirm the statement, succeeded in ousting nearly all the European and Eurasian Subordinates, writers, &c. &c. &c., and has filled the Offices with his own immediate friends and relatives. A return of the changes in the Establishment generally, particularizing Ramanjooloo Pillay's range might prove instructive.

23. It is a question however, whether, all things considered, including the power which it gives, and is known to give, to a District Engineer, with the servility of conduct on the part of Subordinates, which it may, and certainly has, occasioned, the Government are not better *without* information so gained.

24. The smaller power of inflicting fines on Subordinates is, of course, a smaller evil; some mode of punishment is doubtless necessary; but, if an Officer is inclined to do the greater wrong, it is probable that he will not be over particular in inflicting the lesser one.

25. One of the evils of this entire dependence upon his superiors by a Subordinate, may best be explained by the following example.* Mr. Assistant Overseer S. Lee, admitted, that he knew he was doing wrong, but urged that he had orders from his superior which he dared not disobey. An Estimate was prepared, amounting to Rupees 444-1-0 for the construction of a Calingulah at Paulavaukum Tank in Suttiyadoo Talook, the execution of the work was sanctioned by the Government on 6th November 1858, an advance was made of Rupees 100-0-0, materials consisting of Bricks, Chunam, Rough stones and Upright stones were supplied; the work had not been commenced; but, as all the first advance had been expended in the purchase of materials, a second advance was requisite; before getting a second advance, it was very properly required that the first advance should be accounted for—then arose the difficulty,—the Estimate being for a work (construction,) it was assumed that it was not competent for the Executive Engineer of the range to submit a bill for materials which was got over in the following very improper manner, if the allegations be true. Mr. Assistant Overseer Lee states, that he was instructed by his immediate superior, Executive Engineer Captain Barber, to make out a bill showing, as done, a part of the work under the Estimate, i. e., according to the Estimate, to the extent and value of the amount of the first advance, Rs. 100-0-0, and his bill was accordingly made out as follows, viz.:—

* See Appendix E.

37½ cubic yards of Brick in Chunam at Rs. 2-8-0 per cubic yard.....	Rs. 93 0 0
Foundation.....	„ 7 0 0
	Rs. 100 0 0

now, as the work never was commenced, of course there was neither brick-work nor foundation; the value of the materials has since been recovered, under arrangements made by Captain Francis and Mr. Peachey, and the amount brought to account as a substantive advance in the accounts of the current year.

26. The extraordinary facilities for fraud which are afforded under such a system are manifest. In the first place, the bill is untrue from beginning to end, the measurements and rates were both invented in order to arrive at a certain sum, and, as the masonry could not consistently be built without foundations, the foundations were also invented, in order to give the whole sham an air of probability—the work, which it must be borne in mind had never been touched, is then reported "commenced by Collector," and the fabricated bill is signed by "S. Lee, Assistant Overseer," by "W. Barber, Captain, Executive Engineer," and by "J. O. Mayne, Lieutenant, District Engineer," and is dated "Camp Arcot, 1st May 1857." It was afterwards sent up to the Central Office for audit, and was received there in August 1857; it was then initialled by Mr. Johnson, one of the principal Auditors, and was passed, on 14th October 1858, by Captain P. M. Francis, then Acting Superintending Engineer of the Centre Circle. The bill, after six letters had passed between Captain P. M. Francis, the Acting Superintending Engineer of the Circle, and Lieutenant Colonel Edward Lawford, then Officiating Chief Engineer, was expunged from the Bill Registers in the Central Office, and is † hereunto annexed for the information of Government.

† See Appendix E.

Questions. What can be the value of the check exercised in the Office of the Executive Engineer, and the countercheck of the District Engineer? For of course no blame can, in this particular instance, attach to either the Superintending Engineer, or the Central Office?

Why was this bill, which was made out and dated 1st May 1857, not sent up to the Central Office until August 1857? This delay proves that excessive haste was not the cause of the non-detection of the falsity of the bill.

Why was the bill delayed in the Central Office from August 1857 until 14th October 1858, 14 clear months?

Supposing the bill had not been expunged, what was to prevent the use of the materials in another work, and how could that other work have been paid for, unless the materials, i. e., their value, were charged for again? and how could the Central Office possibly check or discover this?

Supposing the Institution of an Audit Office to have a moral effect and value, as a preventive of fraud, what must the opinion of the Subordinates and Executives, who are the parties to be checked, be, of a system under which such a transaction as this is possible? This, it is believed is by no means an uncommon case; it has been selected to show that sometimes a Subordinate must act irregularly, because he fears to disobey; there does not seem to have been any intention to defraud, nor did the Government in any way lose; but the case might have been otherwise, and as the discovery only arose out of the purest accident, and after the bill had been passed in the Central Office, and when the ordeal of check and audit had been gone through, the instance may serve to show how very insecure the working of the system is.

The practice of signing Bills and Certificates as a matter of form, and in utter ignorance of their contents.

27. The signing of documents appears to have been regarded by some members of the Public Works Department as their most important and paramount duty, and the effect which their signatures, so inconsiderately attached to bills and certificates, have produced, has proved most embarrassing. Take for instances the signature of Acting District Engineer, Lieutenant J. O. Mayne to the bill for Rupees 100-0-0 in the matter of the Paulavaukum Tank Calingulah, and the countersignature of the same Officer to the certificate of no demands granted to Mr. Assistant Overseer J. Shaw Lincoln. In this latter case, it is quite clear that the *certificate was given in respect of Range No. 1 only, by Executive Engineer, Lieutenant B. B. Boyd, and if that certificate had not been countersigned by Acting District Engineer Lieutenant J. O. Mayne, it could not have been read as a receipt in full of all demands.

* See Appendix D.

28. There does not appear to have been any necessity for this countersignature whatever, its effect has been to allow of the repudiation of any responsibility by Mr. Assistant Overseer J. Shaw Lincoln.

29. It is possible, that to make an order that no Officer shall sign or certify a document, with the contents of which he is not cognisant, might prove inconvenient, and interfere with the usual certificate as to copies and extracts being true copies and extracts. But this cannot apply to bills and vouchers, and granting such certificates, as are in law full acquittances for substantive claims, without ascertaining the correctness of that which they are vouching for. To prove, however that such things are done, the following instance is adduced, where work has been charged for twice over by bills completely certified, one bill bearing date 30th October 1858, the other 25th January 1859.

It is only fair to premise that this did not occur in North Arcot.

The bills, of which true copies are in the Appendix,* suggest the following questions:—

* See Appendix E.

Why should the number of the bill vary, one is numbered 88, the other 189?

Why should the Collector's sanction be dated, in the one case, December 1857, and in the other, January 1858?

Why, if in October 1858, there was evidence of the last bill for Rupees 182-11-0, was not reference made in the bill dated January 1859?

Why is the date of completion given, in the one case, 20th September 1858, in the other, 25th September 1858?

Why is the date of last inspection also variously stated, as 21st September 1858, and 9th December 1858? there may be a good reason for this and for the first question; but there can be but one answer to the other three, (and the still more important question, how the second bill ever came to be submitted?) that neither the Assistant Supervisor Mr. W. H. Walton, nor his office establishment, took the trouble to refer, which was also omitted by District Engineer Lieut. J. H. M. Shaw Stewart, and his establishment. The error was discovered, it appears, in the Central Office, probably from the circumstance that the bill submitted in October 1858 absorbed the whole amount of the Estimate. It is however far from certain, that the errors would have been discovered had the work been a large one, and the bills submitted been on account of, instead of in full adjustment of, the whole work.

30. It is for such cases as these that the form of certificate referred to in para. 31, will be found a complete remedy, the form and measures, there recommended, compel reference, and ensure exactness, and besides all this, they provide completeness of record and save time and labour.

The incompleteness of the Bills.

31. There does not appear to be in this district, any regulation prescribing uniformity and regularity in the preparation of the bills, any provision under which progress in detail of each work, *must*, of necessity, be shewn, or, any system by which the whole working under each Estimate or contract *must* be periodically brought under notice. A remedy for this is to be found in the system of certificate which the Commission have been informed by their Secretary, Mr. Peachey, is used on many Railways and works at home; there the practice is, when a work is proposed, to make an Estimate in detail, in which the quantities are set out; so soon as the contract is let, or it is commenced by jobwork, the prices are inserted, and a from of certificate is prepared, giving,

See Appendix I.

Quantity,	
Description,	
Rate,	
Total of Work.....	Quantity and Value.
Executed as per last certificate.....	do.
Executed as per present certificate.	do.
Total executed, inclusive of this certificate.....	do.
Remaining to be executed.....	do.
Extra work.....	do.

the form of certificate is then printed, and all payments are allowed on these certificates alone.

32. The value of these certificates consists in the full view they give of the work that has been done, and that remains to be done, under each Estimate, or contract, as the case may be;— very little time is expended in preparing them, as they are for the most part printed, the whole of the heading, and of columns 1, 2, 3 and 4 are printed, and contain all needful particulars, column 5 is a repetition of column 7 in the last certificate, column 6 is the bill, giving quantity, rate and value which is submitted to be passed, while column 7 is the total of columns 5 and

6 or the whole work done, and columns 8 and 9 shew the quantity and value of the portion left incomplete, or executed in excess of the Estimate. The two additional lines, at foot, shew the advances in juxta-position with the expenditure, whereby it may be seen, at a glance, what money has been received, what amount expended, and how much remains in hand; but this is not their only value, inasmuch as they contain the most complete check, that it is possible to devise, upon the progress reports, (which when properly kept, are invaluable documents) but they also have the peculiar benefit of being, each, a full and detailed résumé of the whole quantities and value of a work, by the aid of which an Engineer may ascertain, at a glance, and without any reference to other documents, the whole extent of the work charged for as executed, and the extent remaining to be executed. If a District Engineer goes on a tour of inspection, he need only take with him the last certificate. These should be made in quadruplicate, for the use of the Chief, Superintending, District, and Executive Engineers.

33. The mode in which these certificates or bills should be vouched must, however, entirely depend upon the constitution of the Audit Department and its *locus in quo*, the bills should be supported by cash vouchers of expenditure, and the quantities be ascertained by reference to actual measurements made; but there are many considerations which hinge so entirely upon the position of the Office of Account, and the Audit Office, that it would perhaps be premature to speculate upon them here. The Commission are of opinion, that the financial operations of the Public Works Department ought to be divided into three sections, viz:—

Of Audit,
Of Account,
Of Statistics.

34. The Audit is of course, and as its name imports, an Office of very great responsibility; it is however idle to suppose that the act of auditing alone, in its ordinary acceptation, is of any intrinsic value, indeed the arithmetical correctness of the bills, which is the ordinary object of scrutiny in the Audit offices of this Presidency, is a question of minor importance, when compared with the moral effect which a well conducted audit establishment never fails to exercise.

35. Accounting consists in simply recording, in a clear, concise and scientific manner, the various transactions, and placing them in juxta-position with each other, so that the results of working may be obtained.

36. But statistics, when properly prepared, and so arranged as to be commentaries on the accounts, are invaluable in such a department as that of Public Works, and it is the well considered union of these three important branches, that is so much to be desired, inasmuch as they provide three great securities against extravagance, carelessness, collusion or dishonesty, viz.:—

Strict Examination, *i. e.*, Audit.
Faithful Record, *i. e.*, Accounts.
Analysis and exact Comparison, *i. e.*, Statistics.

37. The first two, Audit and Accounts may be all correct, and yet there is no provision in either of them to exhibit the fact that very much higher rates are given in one District than in another, for work of exactly the same character and value. Much benefit might accrue from exercising scrutiny of this nature over the bills of the Railway Department, where the prices are, generally speaking, very much higher than those paid in the Public Works Department. It may be that sometimes such information will prove of but little value, as the rates in question may be necessarily and properly higher, but this will not always be the case. When it once becomes known that the system of check is a system of audit, account, and analysis, the moral effect will be most valuable, and of itself serve to prevent any extraordinary variation.

The insufficient and unreliable character of the records in the District and Central Offices.

38. But very recently, it was considered desirable by Lieutenant Colonel Lawford, then Officiating Chief Engineer, that the accounts of the Palaur Annicut project should be enquired into, and Captain P. M. Francis, the Acting Superintending Engineer of the Centre Circle, was instructed to undertake the investigation; his departure for Europe on sick certificate however interfered with that arrangement, and Mr. Acting District Engineer J. H. Dopping, was then

requested to report, which it appears from his letter, addressed to the Chief Engineer, 1st, dated 23rd December 1858, he was unable to do, as he says "I regret to be unable to inform you "what was the original amount for the annicut, as the Estimates, designs, site, &c., have all been "altered, more or less, since the first was despatched to the Central Office." The fact of all these essential points having been altered, simply proves the necessity of a proper system of records, and so far from constituting a valid reason why these necessary details should not be forthcoming, is exactly the contrary, as the more intricate the accounts the greater the necessity for exactitude in the records. Again, it appears from the resolution of the Chief Engineer, under date the 22nd January 1859, that Lieutenant Colonel Lawford was unable to procure satisfactory information anent this Palaur project in the Central Office, and in consequence the Commission were requested to take the matter in hand. From these two circumstances it is plain, that there is *nowhere* any clear statement of the accounts of the Palaur Annicut, and it is by no means unlikely that the work in question is not singular in that respect. The progress report does not appear to be a sufficient document, although it is difficult to understand why it is not so; and another paper in Appendix, on the subject of the Basavapully Bungarucca Tank,* proves that the records cannot be relied on as exact statements. It is an axiom in accounting, and an undoubted fact, that accounts are much more easily kept exactly than inexactly, observations are sometimes made by people who are not accountants that certain entries in books, &c., are "near enough," if not exactly correct. But no accounts can be kept upon this principle, and they are never near enough until they are quite right.

* See Appendix J.

It seems advisable that the state of the accounts of the Palaur Annicut should be closely examined and reported on, that if errors exist, they may be corrected and their true state discovered.

See Appendix G.

The absence of separate and independent check upon the Districts by the Central Office.

39. It is difficult to understand the functions of the Accountant in the Central Office, as it is quite evident, from the correspondence which the Commission have had with the Chief and the Officiating Chief Engineer, that no original accounting is done there, and that all the information in the Central Office, is obtained from the District Officers, being collated from the progress reports and other papers, sent up by the District Engineers; this is not accounting, it is not even scientific book-keeping, but is simply a system of registration, without any check whatever. The District Engineer checks the District Engineer, the whole process is neither more nor less than that, and simple as that operation would appear to be, it was not successfully done, inasmuch as the statement of arrears in North Arcot made by Lieutenant-Colonel Lawford, when Officiating Chief Engineer, was, as is shewn in Appendix A.* to this report at Para. 1, incorrect.

See Appendix A.

40. There ought to be a clear and distinct open ledger account with every District, the items of which should be supported by vouchers,—the debits from the Collectors returns of drafts, the credits from the bills submitted and passed, and these remarks suggest some observations upon two more very important subjects, viz.:—

The mistake committed in reading advances and expenditure as convertible terms and the mode of drawing advances.

41. Not a little confusion has been caused in the Department, by the adoption of the authorative reading of the Accountant General, as regards advances on account of Public Works, the effect being, that advances and expenditure are held to be convertible terms. This, so far as the Accountant General is concerned, is a matter of no consequence, as advances to the Public Works Department are literally, *quoad* the Treasury, expenditure in the books of the Accountant General. But the same wording has been adopted in the Progress Report, and thus advances, which are made to Executives to meet anticipated expenditure, are at once set down as expended. The effect of this is—that works are charged as having had money expended on them which in point of fact never have been commenced, as in the case of the Paulavaukum Sub-

tivadoo Tank, or that works are charged as having had money expended on them, which never was even advanced by the Collector, as in the case of the Bavasapully Bungarucca Tank, see Appendix‡——the irregularities in this case, which are given in detail, will serve to explain the difficulty that had to be surmounted in clearing up some of the accounts in North Arcot. Again, the Progress Report ceases to be a report of Progress, inasmuch as it contains and records, indiscriminately, works for which advances have been made, which have been commenced, and which have not been commenced—and advances which have not been made; and, lastly, as the average cost of superintendence is eliminated from the expenditure, divided into the pay and allowances, it is clear that the average will be inaccurate, because the superintendence will be charged on the whole sum advanced, some of which is not and perhaps never will be expended. The system of advances has its disadvantages, and per contra its advantages, one of which is the completeness of account that it admits of, if the members of the Public Works Department will only pay attention to their accounts, and observe the regulations made for them. Advances seem to be indispensable, and it would be waste of time to discuss their propriety. There cannot however be any necessity for wrongly describing such simple transations, as nothing causes so much confusion in accounts, as calling things out of their proper names. Again the mode of drawing these advances and recording them, is not only likely, but certain, to create confusion.

‡ See Appendix G.

42. The rule is that drafts upon the local Officers are void unless presented within the month; the value of this arrangement does not appear, neither does any necessity for it, so far as the Public Works Department is concerned; although it may be a convenient rule for the Accountant General. Either the money drawn is wanted, or it is not wanted; if wanted it is for a specific purpose, and it is difficult to understand why money, which is not required until the 4th February, should be drawn from the local Treasuries on 30th January; more especially when the insecure state of the Subordinates camps is considered;—if the money is not wanted it should not be drawn at all.

43. The Proceedings of Government in the Public Works Department, shew that large sums of money are continually drawn from the local Treasuries, which would have been much more secure in the hands of the Collector's Agents, it appears also, that some of these, (comparatively speaking) large accumulations of balances, have arisen from the practice of always, in some Districts, cashing the drafts upon the Talook Treasuries, whether the money is wanted or not,—this is done in order to save confusion in the accounts; i. e., the cash accounts, between the District Engineer and the Executive, *and it does save it to a very large extent.* But as has been already explained greater confusion has arisen therefrom, consequent upon treating the terms, advance and expenditure as synonyms. When then drafts are not cashed, there must be a difference between the cash accounts of the District Engineer and the Executive, because the District Engineer charges the Executive with the amount of the cheque so soon as he signs it, and it is entered to the debit of the range; if the cheque is not cashed, the District Engineer's debits will not agree with the Executive's credits, the cheques are cancelled, and the District Engineer has to alter his books accordingly.

44. Apart from the well known fact, that large floating balances are frequently fatal temptations to embezzlement, which sometimes results in loss to Government, there is the certain loss to the State, which arises from so much money lying unproductive in the numerous cash chests, to say nothing of the sums lost by robbery and negligence. All these, and the opportunity for extortion afforded by the practice of making payments in specie, might be avoided by the Establishment in each District of a Bank or Pay Office, where the Executives could receive such amounts, and such amounts only, as they required to meet such of their payments, as must be made in specie, and where sums could be lodged at the request of the Executive, by the District Engineer, to meet claims of Contractors and others, for amounts which might properly be paid by draft. A cash chest kept at the Talook Cutcherry in charge of a Shroff would suffice. The adoption of this measure, would secure several advantages as follows, viz.:—

First. The great bulk of the money would be in a secure place.

Secondly. It would be more under the cognizance of the District Engineer.

Thirdly. It need never be drawn from the Local Treasury until wanted.

Fourthly, The payment by a draft, endorsed to order, would be evidence of the payment to the Contractors, and in itself the best receipt that can be had, and

Fifthly. The Government would be protected from errors occasioned by ignorance of accounting, carelessness in the custody of money, the absence of temptation in the shape of opportunity for embezzlement, and the security against open fraud in the way of robbery. Last and not least, something would be gained in the shape of time expended in the discussion and investigation of cases of defalcation, embezzlement and fraud.

The long delay in the submission of the bills.

45. This, as many bills in North Arcot have been made out, and allowed to lie *perdû* in the offices, is most incomprehensible; bills were prepared and were duly signed and certified in duplicate, and only required to be sent to the Central Office; and yet they have been lying in the office for months. For this laxiety, no doubt, the present Acting District Engineer and his immediate predecessor were much to blame, but, as was explained by the Commission in its Report, dated 10th August 1858, part of the fault lies with the Bill Audit Branch of the Central Office. Some of these bills bear the signatures of Acting District Engineer Captain J. O. Mayne, and Executive Engineer Lieutenant B. B. Boyd, the former has left the District, and the latter is dead. Then again, there were many bills which might have been made out long ago, which have now been prepared, and still more for which (as there is abundant evidence to show) there were ample data for the preparation at one time; no bills were prepared then and it is now become impossible, as the documents have been lost or destroyed: here again was felt the great inconvenience arising from the practice of allowing office establishments of the Engineer Upper and Lower Subordinate grades, to remove with their Officers; there was a large amount of information in the office of the District Engineer of which nobody appeared to be cognizant, and which was found to belong to transactions which had occurred a long time ago, and beyond the memory of the present office establishments. It is impossible to require adherence to the Government order as to non-removal too strictly.

The large cost of superintendence, the imperfect mode of shewing it, and the probable incorrectness of the existing averages, also the differential averages in the ranges.

46. The Chief Engineer gives the average in one year for the whole District of North Arcot at 31 per cent., which rate, high as it is, is considerably under the mark, it is indeed quite impossible for the Chief Engineer to give it correctly; because the only elements from which it can safely be extracted, are no where completely on record.

47. The Central Office Registers are but very imperfect records at the best of times, and could only be used with any degree of safety when all the work done in a year, has been entered up, and this has never been the case.

48. The Progress Reports in North Arcot are notoriously incorrect, indeed, they are admitted to be so now by the Acting District Engineer, and appear always to have been so in this District from the first.

49. Besides the whole of the cost of expenditure is not to be discovered from the amount paid under the head of salaries as a large amount is charged to the works directly in the bills.

50. Probably from 50 @ 60 per cent. is nearer the truth in this District than 31 per cent. The Acting District Engineer of North Arcot has been requested to make a return, shewing all the cost of superintendence, divided into the several ranges. This is likely to form a very interesting document, which, when thoroughly examined, will perhaps give a very fair idea of the value of the several Officers past and present in that District.

51. Appendix A differs in some degree from the report required by Captain Francis and Mr. Peachey, and sent in a letter by Captain Francis to Lieutenant Colonel Lawford, then Officiating Chief Engineer in December last. In that letter allusion was made to some examinations of measurements of the works which had been formerly under Mr. Assistant Executive Engineer T. H. Bush, to which Executive Engineer Captain A. H. Watts had objected, and was, in consequence, directed to satisfy himself as to the correctness, or otherwise, of the works in

question, this order was given in the month of November 1858, but so little attention was paid to it, that on the 3rd January 1859, the greater number of the works had not been measured; on the 6th January 1859, Executive Engineer Captain A. H. Watts, withdrew his objections, and signed the bills, and as this was done with the concurrence of, and after consultation with the Acting District Engineer, Mr. J. H. Dopping, those bills were allowed by Mr. Peachey, then acting by himself, Captain Francis being on the way to England, and these bills appear to have reduced the balance against Mr. Bush, (which had till then remained unadjusted) to Rs. 103-15-1. Mr. Bush afterwards submitted bills for Rs. 93-14-6 and Rs. 10-1-4 which were also allowed, and which clear up the whole amount against Range No. 2, and Mr. Bush—these two last items were not certified by the Acting District Engineer, but evidence was given as to the correctness of the bill, by the Head Accountant in the District Engineer's Office, in the one case, and actual measurements were taken in the other. Some allegations of Mr. Assistant Supervisor Damerum, caused an enquiry into the transactions of his own charge, which were found to be such as not to entitle his statements (impugning Mr. Bush's measurements, &c.,) to credit.

52. Referring to paras. 16 and 17 of Appendex A. it is to be regretted that nothing further can be ascertained as to the balances unadjusted, standing to the debit of Range No. 5, and Mr. Assistant Overseer J. Shaw Lincoln. It will be seen however that he has given all the information in his power, and relies on the certificats of no demands granted to him on 2nd August 1857.* Nothing more can be done in the matter and the amount Co's. Rs, 5,476-0-11—Rs. 313-12-3 must be written off.

* See Appendex D.

53. The causes which led to the late investigation in North Arcot have been pointed out, (some of them) above, and the Commission would urge upon Government the immediate necessity for a thorough reform of that District,—to recapitulate the evils which have been descanted on is unnecessary here, and the Commission would merely observe that the same errors appear to have produced the like results in Bengal, the difference consisting only in the very much larger amount of irregularity in that Presidency, (as detailed in the Despatch of the Secretary of State for India, No. 2, dated 29th September 1858,) where they have called down the marked displeasure of the Bengal Government, in their Minutes of Consultation Public Works Department, No. 354, dated 9th February 1859.

See Appendix K.

54. The paper last referred to, gives clear and indisputable proof, that the unforeseen results of the working of the Public Works Department, both in Bengal and here, are attributable, in a great degree, to disregard of the Regulations and Circular Orders laid down for the observance of that department, though perhaps a considerable share is also due to the unfitness of Engineers to deal with accounts. The difficulty of procuring prompt measurement of work and submission of bills, together with the absence generally of proper arrangements with contractors, have also contributed to the present state of affairs. In Madras contracts for the execution of work have obtained to a very limited extent. The Chief Engineer has however recently urged the more general adoption of the contract system.

55. But the value of contracts does not appear to be fully understood, the Commission desire therefore brefly to notice this important subject.

When contracts are cautiously let to parties, whose sufficiency, either as regards means, or energy, is assured, and due security is taken for their fulfilment, they will be found to produce the following results. The time of the Executives will be economised, because the necessary amount of superintendence will be diminished, that is to say, the duty of the Executive will once more become, as regards this part of his work, analogous to that performed by the Civil Engineers in the old Maramut days, when his Office was to inspect, instead of to construct, as at present, and this will leave him ample time for giving full attention to such works as it will continue to be his duty to construct.

56. This will in a corresponding degree reduce the cost of superintendence. It is not meant by this that the cost of superintendence is not incurred, as the contractor will of course

include his expenditure in superintendence in the amount of his tender, in practice however th Commission believe that it will be found, that contractors will willingly tender for, and under take works, and complete them to the satisfaction of the Government, on the estimates of, an at the rates paid by the Public Works Department, for *construction* only, and thus the cost o Government superintendence will virtually be reduced to the expense of inspection. Th works will moreover be completed within the estimate, and the submission of additional estimate put a stop to—whereas, under the present system, not one work in ten is completed for th original estimated sum, and until the work has been finished, the Government are without any security as to the amount they may be called on to expend, in fact estimates as now submitte to Government are little better than mere fictions.

57. There will also be a large saving in the time of the Executives, now devoted with such indifferent results to accounting, as, when work is done by contract, the accounts between the contractor and the State must be of the simplest character, literally, under the contract system, the duty of the Executives will be merely to inspect, measure and value.

58. Native contractors, at least those whose cases have recently come under enquiry in North Arcot, have been discouraged and disheartened, they have not been treated (in many instances) with candour, kindness or consideration. Some of them have been persuaded to undertake works on unsettled rates, and the result, as usually happens in such cases, when one man is left to the mercy of another, has been discontent. The contracts themselves, have been vague and indefinite, and have been broken through without scruple. Advances have been made to insufficient contractors, and the money has been, as a natural consequence, lost.—In other cases the contractor has expended advances made to him in one contract, in order to recover his extra expenditure on another.—In short, the whole practice as regards the granting of contracts, both large and small, requires revision and settlement, on such a basis as will secure to the contractor, a fair return for his services and capital employed, and to the Government, a reasonable equivalent for its outlay.

59. A proper form of contract might easily be drawn out, containing penal clauses, reciting the specifications and the quantities which would always be found in the certificate referred to in para. 31 herein. There need be no fear of making the conditions too stringent, as contractors generally mean honestly at the outset, and seldom object to any proper restrictive conditions. They might be printed too in the vernacular languages.

60. It may not be out of place here to observe, that the merits of the contract system were urged upon the Government by the Military Board,* in a report dated so far back as the 24th August 1830, in which they show, that in this Presidency, an "extreme hostility to the contract system, has always pervaded the Public Establishment in the building Department," hostility which exists up to the present time, and which, in the opinion of the Commission, should no longer be permitted to interfere with the adoption, as far as practicable, of the contract system, the advantages of which appear to them to be beyond all doubt.

* See Appendix H.

61. The report requested by Government in its Proceedings No. 2241 of 6th November 1858, at para. 27, will be proceeded with immediately after the letters referred to by Government in its Proceedings No. 257 of 27th January 1859, have been disposed of and reported upon,—which are now under consideration.

Madras,
12th March 1859.

(Signed) W. A. MOREHEAD,
President.

(Signed) G. I. PRENDERGAST.

APPENDIX A.

Report upon the unadjusted balances of advances made for Public Works in the District of North Arcot, since the formation of the Public Works Department, made in pursuance of G. O. No. 2201, Public Works Department, dated 20th October 1858.

On entering upon the work of investigating the accounts, and obtaining the adjustment of the outstanding balances in North Arcot, *i. e.* of the advances unaccounted for on 30th April 1858, stated as :

Company's Rupees	43,594 0 0	Advances unaccounted for made by Collectors, anterior to the formation of the Public Works Department and
Company's Rupees	3,20,383 0 0	Advances unaccounted for, made since the formation of the Public Works Department, making together a sum of
Company's Rupees	3,63,977 0 0	it appeared that these balances were understated, the

gross sum being greater by Company's Rupees 7,509, devisable as follows, viz. :

Company's Rupees	56,232 10 11	Advances made by Collectors, instead of 43,594 as above.
Company's Rupees	3,15,254 2 3	Advances made to Public Works Department, instead of 3,20,383 as above, making together a sum of
Company's Rupees	3,71,486 13 2	

2. The sum of 3,30,069-11-9 advances made to the Public Works Department *i. e.*, to its Subordinates, remaining unaccounted for at the date above mentioned, appear to have been distributed as follows :—

	Rs.	A.	P.
Range No. 1	1,14,537	12	6
Do. No. 2	92,879	1	1
Do. No. 3	5,754	0	6
Do. No. 4	32,903	4	8
Do. No. 5	69,139	15	6
Company's Rupees	3,15,254	2	3

RANGE No. 1.

3. Part of the work done has been adjusted, and the amount cleared off by six bills, which were sent up to the Central Office by Mr. Acting District Engineer Dopping, as follows, viz.:

Name of Works.	To be accounted for.			Bills prepared.			Advances not exhausted.			Advances exceeded by.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
	147	10	1	147	10	1	.....	...	...	.....	...	...
	10	0	0	10	0	0	.....	...	...	.....	...	...
	77	0	0	77	0	0	.....	...	...	.....	...	...
	6	4	0	6	4	0	.....	...	...	.....	...	...
	74	0	0	74	0	0	.....	...	...	.....	...	...
	62,497	1	10	62,497	1	10	.....	...	...	.....	...	...
	62,811	15	11	62,811	15	11	.....	...	...	.....	...	...

4. The remainder 51,725-12-7 has been treated as follows, viz.:

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted.			Advances exceeded by		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Pollicondah tank ...	1	51	4	0	71	2	10	.....	...	...	19	14	10
Panamadunghy tank ...	2	30	8	5	30	8	5	.....	...	...	.....	...	...
Savoor Thanghull... ... Do.	3	100	0	0	80	0	0	.....	...	...	.....	...	...
					20	0	0						
Cummasamoodrum tank ...	4	31	3	5	31	3	5	.....	...	...	.....	...	...
Basavapully Bungarucca tank ...	5	95	5	8	95	10	1	.....	...	...	.....	...	...
Nungamungalum tank ...	6	57	11	0	57	11	0	.....	...	...	0	4	5
Yacambara Nellore tank ...	7	20	0	0	39	4	4	.....	...	...	.....	...	...
Calinjoor large tank	8	49	5	0	49	5	0	.....	...	...	19	4	4
Moodoogoolum Poottairey tank.	9	96	11	0	96	11	0	.....	...	...	.....	...	...
Pillore Nagalairy tank... ...	10	35	4	6	35	4	6	.....	...	...	.....	...	...
Luttairy tank	11	4	0	0	4	0	0	.....	...	...	.....	...	...
Vinnumpully Chittairy ...	12	164	0	0	164	0	0	.....	...	...	.....	...	...
Pottoor tank	13	30	6	0	30	14	5	.....	...	...	.....	...	...
Allattoor large tank	14	50	0	0	50	0	0	.....	...	...	0	8	5
Vapoor large tank	15	27	7	7	27	7	7	.....	...	...	.....	...	...
Yeththanghul Calingulah ...	16	305	0	10	323	4	10	.....	...	...	.....	...	...
Yercumputt channel	17	220	0	0	221	0	0	.....	...	...	18	4	0
Vetrunthangur small tank ...	18	139	5	0	139	6	9	.....	...	...	1	0	0
Peddanayaneedoogum Naikenairy tank								.....	...	...	0	1	9
Luttairey Thanghul	19	158	5	6	158	5	6	.....	...	...	.....	...	...
Thanabunda tank Sluice and Calingulah...	20	131	6	0	133	14	0	.....	...	...	2	8	0
Agarum river bed	21	361	2	10	350	4	2	10	14	8	.....	...	...
Yerroovarum river channel ...	22	62	10	0	62	10	0	.....	...	...	.....	...	...
Road from Palmanair to Vencatagherrycottah	23	20	9	9	20	9	9	.....	...	...	.....	...	...
Road from Cuddapanuttum to Gooriattum	24	16,070	0	8	15,222	7	3	847	9	5	.....	...	...
Improving Synagoontah Ghaut...	25	960	8	7	884	5	4	76	3	3	.....	...	...
Opening Synagoontah Ghaut ...	26	4,707	15	8	5,437	0	4	.....	...	...	.....	...	...
Road from Pollicondah to Gooriattum	27	717	14	11				.....	...	...	11	1	9
Tunnel to Punnattoor road	28	6,545	10	3	5,510	13	10	1,034	12	5	.....	...	...
Trunk road No. 10, Annual Repairs	29	3	8	6	3	8	6	.....	...	...	.....	...	...
Annual repairs to branch road No. 10	30	15,567	3	6	16,576	0	0	.....	...	...	1,008	12	6
Do. Synagoontah Ghaut.....	31	1,289	1	11	1,629	15	5	.....	...	...	.....	...	...
Do. Suntapettah road ...	32	1,114	10	4	1,126	10	0	.....	...	...	340	13	6
Cutwall's Choultry at Chittoor...	33	10	11	8	10	11	8	.....	...	...	11	13	8
Tannah Choultry at Suntapett ...	34	354	5	6	372	11	6	.....	...	...	.....	...	...
Police Cutcherry at Vencatagherrycottah	35	145	0	0	150	0	0	.....	...	...	18	6	0
Moonshee's room and Printing Office attached to the Huzoor Cutcherry at Chittoor ...	36	467	15	5	467	15	5	.....	...	...	5	0	0
Talook Cutcherry at Gooriattum.	37	233	8	1	233	8	1	.....	...	...	.....	...	...
Do. do. Pollicondah	38	71	10	6	62	11	2	.....	...	...	.....	...	...
Nurseries of useful trees at Gooriattum	39	50	0	0	50	0	0	8	15	4	.....	...	...
Nurseries at Gooriattum for 1856-57	40	29	12	8				.....	...	...	.....	...	...
Do. do. do. 1857-58	41	53	10	1	180	2	2	.....	...	...	.....	...	...
Chittoor Church	42	97	0	2				0	4	9	.....	...	...
Tunnel across the Chittoor Fort ditch...	43	152	0	10	152	0	10	.....	...	...	.....	...	...
Draw bridge across the Vellore Fort ditch	44	172	7	9	172	7	9	.....	...	...	.....	...	...
	45	669	5	1	667	1	3	.....	...	...	.....	...	...
Total.....		51,725	12	7	51,202	12	1	1,980	15	8	1,457	15	2

5. The totals of this Range will therefore be as follows, viz. :—

	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
As per Statement	51,725	12	7	51,202	12	1	1,980	15	8	1,457	15	2
Sent up by District Engineer.....	62,811	15	11	62,811	15	11	.....	...	...	.....	...	...
Total.....	1,14,537	12	6	1,14 014	12	0	1,980	15	8	1,457	15	2

6. The expenditure has in 14 cases, ranging from Rupees 0-1-9 to Rupees 1,008-12-6 exceeded the amount advanced by Rupees 1,457-15-2, which sum should be allowed; while in 7 others, ranging from Rupees 0-4-9 to Rupees 1,034-12-5, together Rupees 1,980-15-8, one amount Rupees 10-14-8 has been recovered, leaving to be written off, the balance Rupees 1,970-1-0.

RANGE No. 2.

7. The sum unadjusted in this Range is not equal to the amount for which bills are prepared; this arises from the circumstance of several Contractors and Workmen being yet unpaid, whose works are included in the bills marked thus (*)

Contractors.

No. 1.....	547	4	0	Poinnay Annicut.	
„ 2.....	9,606	9	10	Mahindravaudy Channel.	
„ 3	4,313	13	9	Do. Tank and a portion of Superintendence.	
78 and 79.....	5	7	0	Roads from Raneepett to Ammoor and Wallajahnuggur to Ammoor.	
				.....	14,473 2 7

Workmen.

No. 25.....	103	0	0	Ammoor Tank.	
„ 51.....	56	4	0	Rendady Avarum Tank.	
„ 90.....	161	2	5	Cutwall's Choultry at Raneepett.	
„ 92.....	22	0	6	Government Church at Raneepett.	
				.....	342 6 11
				Total Company's Rupees	14,815 9 6

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Poinnay Annicut...	*1	17,354	13	5	17,635	12	9	.....	...	...	280	15	4
Mahindravaudy Channel ...	*2	11,462	14	2	20,372	1	9	.....	...	...	9,109	3	7
Do. Tank and a portion of Superintendence ...	*3	27,315	10	8	31,391	5	2	.....	...	...	4,075	10	6
Chamulconah Tank	4	2,673	4	8	2,672	12	3	0	8	5	.....	...	...
Restoration of Nagaputtah ruined Tank	5	90	0	0	90	0	0	.....	...	...	.....	...	...
Maumundoor ruined Tank ...	6	731	7	9	731	9	6	.....	...	...	1	9	0
Nagaputtah Moottoo Madoogoo.	7	66	10	9	66	11	0	.....	...	...	0	0	3
Poodooputtah Dalavay Tank ...	8	315	8	5	316	0	7	.....	...	...	0	8	2
Pullairey Cautairey	9	20	0	0	18	10	6	1	5	6	.....	...	...
Narasingapoorum Chittairey ...	10	19	0	0	18	15	11	0	0	1	.....	...	...
Vanapaudey Tank Calingulah...	11	149	4	3	227	1	1	.....	...	...	77	12	10
Vanapaudey Tank.	12	374	0	0	100	0	0	.....	...	...	.....	...	...
					274	0	0						
Codathacooppum Gooroochetty Tank Calingulah and Sluice...	13	290	2	3	302	6	10	.....	...	...	12	4	7
Do. do. large Tank	14	125	0	0	125	0	0	.....	...	...	.....	...	...
Condacooppum Surpunthanghull	15	192	14	4	150	9	4	.....	...	...	.....	...	...
					42	5	0						
Poonjay Tank Sluice... ...	16	38	9	10	38	12	8	.....	...	...	0	2	10

Name of Works.	No.	To be accounted by.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Caray Otairey Tank Sluice ...	17	41	15	1	41	15	8						
Poiney large Tank	18	247	2	11	107	14	4				0	0	7
Do Small Tank... ...	19				139	4	7						
Keerasauth Tank.	20	43	12	0	43	12	0						
Mailacooppum large Tank ...	21	126	0	0	126	4	5						
Culput Tank..	22	320	5	5	278	4	2				0	4	5
Moocoondaroyapoorum Maunairey Thanghull..	23	65	0	0	41	14	0	0	3	3			
Injum large Tank	24	54	3	1	65	2	6				0	2	6
Ammoor Tank	*25	26	14	0	78	4	0						
Chetty Thanghull	26	1,063	13	5	1,164	2	10	26	11	0	21	0	11
Mailacooppum Culputtoor Tank	27	637	8	9	732	15	10				100	5	5
Parooncanjee Tank Calingulah...	28	479	2	2	379	4	0				95	7	1
Sholinghur large Tank. ...	29	253	3	3	99	14	2						
Monyemput Tank...	30	600	0	0	124	6	10						
Nullapulley Tank	31				114	9	9	14	2	8			
Peddoopaukum large Tank ...	32	81	12	6	599	3	2	0	12	10			
Valum Tank.	33	80	6	0				81	12	6			
Cauray Paryanen Spring Channel	34	62	0	0	80	5	6	0	0	6			
Lengthening wing wall of Nuccalavanka Aqueduct	35	90	1	0	62	0	0						
Chinganuttum and Jamboocolum Channel	36	40	0	0	90	10	9				0	9	9
Matheca Channel at Triputtey...	37	189	4	9	41	0	0				1	0	0
Constructing Tunnel to do. do.	38	989	5	0	189	4	9						
Lingamma Tank	39	30	0	0	988	11	7						
Theroopputty Tank	40	49	0	0	30	0	0	0	6	5			
Pankala Ramachendra Tank ...	41	89	0	0	48	15	6						
Do. do. do. Calingulah...	42	50	0	0	88	15	10	0	0	6			
Auvalah Tank	43	85	11	3	50	0	0	0	0	2			
Panthecalvah Tank	44	41	0	0	85	8	0						
Mallul Tank...	45	73	5	0	40	15	9	0	6	3			
Condrapaukum Malairy Tank ...	46	176	6	0	73	5	0	0	0	3			
Do. do. Small Tank	47	220	0	0	176	0	0						
Clearing Poinay Eastern Channel and Corumboo	48	293	0	0	220	0	0	0	6	0			
Caray Otairey Tank ...	49	40	0	0	293	6	9						
Chinnumputt Nuckalavunkah...	50	213	7	7	21	9	1				0	6	9
Rendady Ararum Tank ...	*51	100	0	0	18	13	9				0	6	10
Parooncanjee Tank and 8 yards Calingulah...	52	50	0	0	213	7	2	0	0	5			
Paudey Tank and 10 yards Calingulah.....	53	148	1	3	156	4	0				56	4	0
Nelleecooppum Tangle ...	54	23	15	0	148	1	3	50	0	0			
Mookoondrayapoorum Viney Tangle	55	11	15	10	23	4	2						
Do. Corganairey ...	56	44	13	0	11	15	0	0	10	10			
Codathacooppum Gooroochetty Tangle	57	16	4	10	44	4	1	0	8	11			
Chekeedcooppum Tank ...	58	122	0	3	16	1	5	0	3	5			
Tookeevaukum small Tank ...	59	12	2	0	122	0	3						
Vapenjairey large Tank ...	60	224	13	0	12	2	0						
Condrapaukum Tank ...	61	69	10	0	273	4	8						
Curnacoondalavareypulley Tank.	62	18	2	0	69	10	0				48	7	8
Annelalah Tank	63	22	2	0	18	2	0						
Malacooppum Cattairey ...	64	133	5	0	22	5	0						
					133	5	2				0	3	0
											0	0	2

Name of Works.	No.	To be accounted for.			Bills approved.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Moocoondrayapoorum Mangavel Tangle	65	48	0	10	47	13	2	0	3	8			
Ramapoorum Ummanairey ...	66	79	3	0	79	3	0						
Condapullee Dasaravaddoo ...	67	7	1	0	7	1	0						
Agaramungalum Tank ...	68	159	12	0	178	15	8				19	3	8
Cotay Agaramungalum large Tank	69	236	6	0	264	14	0				28	8	0
Malacooppum Tank	70	35	0	0	35	0	6				0	0	6
Vanoothanapullee Cuttoo Calvah	71	10	1	0	10	1	0						
Goodoogoochintala Peddooda Channel	72	11	15	0	12	0	0				0	1	0
Avalah Tank and spring Channel	73	70	10	0	70	10	0						
Gazoolamundiem Nazarah Yaliahgoontah Tangle... ...	74	52	15	0	52	15	0						
Vapenjairey Spring Channel ...	75	18	8	0	2	14	8	15	9	4			
Gazoolamundiem large Tank...	76	546	5	0	546	5	1				0	0	1
Man Tangul...	77	19	0	0	13	8	0	5	8	0			
Road from Raneepett to Ammoor	*78	1,626	9	2	1,626	9	2						
Road from Wallajahnuggur to Ammoor ...	*79	4,238	5	3	2,039	11	7	129	3	5			
Road from Nuggherry to Poottoor.	80	3,672	0	3	2,069	6	3						
Annual Repairs to Trunk Road No. 11, from Chittoor to Culloor	81	2,934	6	9	3,787	14	8				115	14	5
Do. to Road from Poothalput to Kurcumbaudy ...	82	2,445	15	4	3,083	9	2				149	2	5
Do. from Nagherry to Poottoor	83	1,182	14	10	2,052	12	8	93	4	3			
Do. Wallajahnugger to Sholinghur	84	1,561	14	9	873	9	2				0	0	4
Do. Raneepett to Ammoor.	85	951	9	7	1,730	5	1				168	6	4
Discretionary Allowance to Road from Ammoor to Wallajahnuggur	86	174	15	11	1,119	0	10				167	7	3
Charges for Nurseries, &c., for 1857-58	87	191	8	1	71	10	11	47	5	0			
Planting 2 Nurseries of useful trees	88	135	0	0	56	0	0						
Traveller's Bungalow at Kurcumbaudy	89	500	0	0	184	0	1	7	8	0			
Cutwall's Choultry at Raneepett.	*90	366	14	0	554	5	1				54	5	1
Police Ameen's Cutcherry at Damulcherroo	91	483	5	4	539	12	5				172	14	5
Government Church at Raneepett	*92	136	2	6	679	1	4				195	12	0
Converting into Store room, Gram Godown in the Cavalry Lines	93	40	0	0	154	3	0				18	0	6
Cavalry Barracks at Raneepett..	94	299	6	9	42	14	11				2	14	11
European Cavalry do. do. do.	95	626	10	3	296	10	10	2	11	11			
Do. Hospital at Raneepett...	96	544	5	5	635	14	3				9	4	0
Native Hospital do.	97	270	12	1	533	9	5	10	12	0			
Magazine do.	98	15	4	1	358	11	6				87	15	5
Purchasing Iron Padlocks, &c., for the use of the Military Buildings at Raneepett ...	99	116	13	1	16	15	4				1	11	3
Inserted upon Mr. Bushe's signature alone ...	...				116	13	1				93	14	6
					93	14	6				10	1	4
					10	1	4						
Total.....	...	92,879	1	1	1,07,433	8	1	625	9	4	15,180	0	4

8. In the cases where the expenditure has exceeded the amount advanced, which occurs in 43 instances, ranging from Rupees 0-0-1 to Rupees 9,109-3-7, there appears to be an amount due, inclusive of the amount Rupees 14,815-9-6 due to Contractors and Workmen, of Rupees 15,180-0-4 which should be allowed; while in 31 other cases, ranging from Rupees 0-0-1 to Rupees 135 together Rupees 625-9-4 recoveries should be made, either wholly or in part, or the amount written off. But it appears probable that the greater portion of this last mentioned sum Rupees 625-9-4 may be recovered.

RANGE No. 3.

9. Part of the work done in this Range, has been adjusted, and the amount cleared of by one bill, which was sent up to the Central Office, by Mr. Acting District Engineer Dopping, with the others mentioned in Range No. 1.

Name of Work.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
...	...	316	1	9	316	1	9	.....	...	...	.....	...	...

10. The remainder Rupees 5,437-14-9 has been treated as follows, viz. :—

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Palaur Annicut	1	1,174	9	1	.....	...	...	1,174	9	1	.....	...	...
Annicut to the Eroomboor Channel Head Sluice	2	300	0	0	.....	...	...	300	0	0	.....	...	...
Curruvaid supplying Channel...	3	115	0	0	.....	...	...	115	0	0	.....	...	...
Soomungalee Chittairey... ...	4	144	11	3	.....	...	...	144	11	3	.....	...	...
Auyalum large Tank... ...	5	95	9	7	.....	...	...	95	9	7	.....	...	...
Brammathasem Tank... ...	6	43	3	3	.....	...	...	43	3	3	.....	...	...
Eroongaudoo Hissa Tank ...	7	75	0	0	.....	...	...	75	0	0	.....	...	...
Curruvaid supplying Channel...	8	100	0	0	.....	...	...	100	0	0	.....	...	...
Keelumbee Tank	9	25	0	0	.....	...	...	25	0	0	.....	...	...
Pauraunjee Tank	10	257	4	0	.....	...	...	257	4	0	.....	...	...
Coonnatoor do.	11	47	1	0	.....	...	...	47	1	0	.....	...	...
Agavalum Poottairey Tank.....	12	29	0	0	.....	...	...	29	0	0	.....	...	...
Sooray large Tank	13	100	0	0	.....	...	...	100	0	0	.....	...	...
Aroongoonum large Tank ...	14	125	0	0	.....	...	...	125	0	0	.....	...	...
Minnel Tank...	15	150	0	0	.....	...	...	150	0	0	.....	...	...
Ayalum Peddatangle Annicut...	16	73	3	0	.....	...	...	73	3	0	.....	...	...
Ammanoor Vadakairey... ...	17	14	15	3	.....	...	...	14	15	3	.....	...	...
Sunta Velloor Tank... ...	18	50	0	0	.....	...	...	50	0	0	.....	...	...
Maumpaukum Spring Channel..	19	3	8	0	.....	...	...	3	8	0	.....	...	...
Nelly large Tank	20	53	12	0	53	9	0	0	3	0	.....	...	...
Teroomala Cherry River Channel.	21	70	0	0	.....	...	...	70	0	0	.....	...	...
Cauverypaukum Coramboo ...	22	9	4	0	.....	...	...	9	4	0	.....	...	...
Moshoor Charity Colum... ...	23	2,006	13	4	.....	...	...	2,006	13	4	.....	...	...
Cutwall's Choultry at Wallajahnuggur	24	375	1	0	.....	...	...	375	1	0	.....	...	...
Total..... ...	...	5,437	14	9	53	9	0	5,384	5	9	.....	...	...

11. The totals for this Range will therefore be

	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
As per Statement	5,437	14	9	53	9	0	5,384	5	9	.....	...	...
Sent up by District Engineer.....	316	1	9	316	1	9	.....	...	...	.....	...	...
Total.....	5,754	0	6	369	10	9	5,384	5	9	.....	...	...

12. In two instances only has it been possible to make out a bill, while in 23 cases ranging from Rupees 3-8-0 to Rupees 2,006-13-4, recoveries must be made, either wholly or in part, or the amount written off. It appears however, that 4 amounts have already been recovered, which are not included in this Statement, viz. :—

Rs.	A.	P.
200	0	0
16	14	0
22	6	4
30	0	0

together amounting to Rupees ..... 269 4 4, and that more may follow. These amounts should be treated as suggested at para. 19.

RANGE No. 4.

13. The items in this range are as follows, viz. :—

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Vaniembaudey Tank Channel ...	1	416	4	10	416	4	10	.....	...	...	.....	...	...
Timery Paudey Tank Channel ...	2	313	0	0	53	4	2	259	11	10	.....	...	...
Thelaloor Tank Calingulah... ...	3	254	13	11	254	13	11	.....	...	...	.....	...	...
Keerasutpoorum Tank... ...	4	19	4	0	.....	...	...	19	4	0	.....	...	...
Vasunthanada Tank...	5	185	0	8	158	0	8	.....	...	...	.....	...	...
Poothaiery Tank Sluice... ...	6	37	15	0	37	15	0	.....	...	...	.....	...	...
Chadapairey supplying Channel...	7	431	12	11	431	12	11	.....	...	...	.....	...	...
Calavay Condum	8	50	0	0	50	0	0	.....	...	...	.....	...	...
Suttravaudey Tank	9	0	4	6	.....	...	...	0	4	6	.....	...	...
Coorampaudey Aryan Thanghull...	10	18	4	0	18	4	0	.....	...	...	.....	...	...
Velaumbaukum Tank	11	86	12	0	86	12	0	.....	...	...	.....	...	...
Vellairey Tank...	12	0	1	0	.....	...	...	0	1	0	.....	...	...
Cuttewaudey Tank	13	37	8	8	.....	...	...	37	8	8	.....	...	...
Aroongoonum Tank	14	448	13	8	321	6	5	127	7	3	.....	...	...
Mundyalum do.	15	2	6	7	.....	...	...	2	6	7	.....	...	...
Varagoor do.	16	6	5	3	.....	...	...	6	5	3	.....	...	...
Cauranoor Tank Channel... ...	17	266	9	5	.....	...	...	266	9	5	.....	...	...
Pynoor Tank..	18	954	14	4	703	15	1	250	15	3	.....	...	...
Suttiamungalum Tank... ...	19	467	6	0	419	4	4	48	1	8	.....	...	...
Coorambaudey Anantangle ...	20	788	13	0	783	0	0	5	13	0	.....	...	...
Numbaray Tank	21	20	0	0	.....	...	...	20	0	0	.....	...	...
Vellaurey Tank	22	50	0	0	.....	...	...	50	0	0	.....	...	...
Velumbee large Tank	23	215	0	0	206	12	11	8	3	1	.....	...	...
Chadoovalah supplying Channel...	24	1,378	5	2	1,135	7	9	242	13	5	.....	...	...
Vapumbutt Tank...	25	138	14	0	38	14	0	100	0	0	.....	...	...
Valayoor Tank	26	23	3	3	23	3	3	.....	...	...	.....	...	...
Yettethanghul Tank	27	50	5	10	50	5	10	.....	...	...	.....	...	...
Moonjoorput Tank..	28	114	8	0	114	8	0	.....	...	...	.....	...	...
Timery Tank	29	80	0	0	80	0	0	.....	...	...	.....	...	...
Paudey Tank...	30	20	0	0	.....	...	...	20	0	0	.....	...	...
Velaumpaukum...	31	518	5	8	518	5	8	.....	...	...	.....	...	...
Thammanicharry Cooppum Tank...	32	51	3	0	51	3	0	.....	...	...	.....	...	...
Therapaudey Tank	33	21	10	0	21	10	0	.....	...	...	.....	...	...
Ossoor Tank	34	151	8	2	151	8	2	.....	...	...	.....	...	...
Thippasamoodrum Tank. ...	35	20	0	0	.....	...	...	20	0	0	.....	...	...
Nelvoy Tank	36	121	6	0	121	6	0	.....	...	...	.....	...	...
Aryoor Tank...	37	355	0	3	355	0	3	.....	...	...	.....	...	...
Cooppum Tank	38	84	9	6	84	9	6	.....	...	...	.....	...	...
Canycanyah Tank	39	93	4	0	93	4	0	.....	...	...	.....	...	...

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Valiempaukum Tank ...	40	50	0	0	.....			50	0	0	.....		
Sholaverum do. ...	41	525	8	0	525	8	0	.....			.....		
Condanairey branch Channel ..	42	20	0	0	.....			20	0	0	.....		
Erinjeepoorum Oockanavarum Tank	43	78	9	0	.....			78	9	0	.....		
Suttiamungalum Spring Channel..	44	20	6	0	.....			20	6	0	.....		
Yariancaudoo river Channel Dam.	45	162	7	0	162	7	0	.....			.....		
Vinnamungalum Tank ...	46	9	8	0	9	4	0	0	4	0	.....		
Poothoor Audy Tank ...	47	56	0	0	.....			56	0	0	.....		
Do. large do. ...	48	293	13	6	293	13	6	.....			.....		
Thippasamoodrum large Tank	49	20	0	0	.....			20	0	0	.....		
Do. Thangul	50	20	13	0	20	13	0	.....			.....		
Cuttavaudey supplying Channel...	51	210	0	8	210	0	8	.....			.....		
Murthumbaudey Tank...	52	0	13	9	.....			0	13	9	.....		
Keoorambaudey Tank ...	53	14	13	8	.....			14	13	8	.....		
Tootaumputtoo Tank Sluice	54	106	4	6	106	4	6	.....			.....		
Sattoopolliem Tank ...	55	158	0	0	158	0	0	.....			.....		
Toottiputt Tank... ...	56	32	7	0	32	7	0	.....			.....		
Moonjoorputt Tank ...	57	112	6	0	112	6	0	.....			.....		
Vunnangoottay Tank ...	58	95	10	0	95	10	0	.....			.....		
Pungalattan Tank ...	59	25	3	0	25	3	0	.....			.....		
Pasmattoor Tank ...	60	300	0	0	300	0	0	.....			.....		
Malecalavay river Channel	61	327	14	0	327	14	0	.....			.....		
Cuttalumputt Tank ...	62	25	0	0	25	0	0	.....			.....		
Keelachoor Condanairey tank	63	20	0	0	20	0	0	.....			.....		
Gunganellore Tank ...	64	40	0	0	48	7	3	.....			8	7	3
Poothoor Tank ...	65	69	2	9	69	2	9	.....			.....		
Sambadoo Tank ...	66	115	0	0	115	0	0	.....			.....		
Verinjeepoorum Tank ...	67	15	13	0	.....			15	13	0	.....		
Agarum Chittairey Tank.	68	26	10	0	26	10	0	.....			.....		
Kanneeyembaudey Tank.	69	104	5	0	104	5	0	.....			.....		
Payencooppum Tank ...	70	18	13	2	18	10	10	0	2	4	.....		
Sathoomathooray Tank ...	71	10	2	0	10	2	0	.....			.....		
Veroopatcheepoorum Tank	72	52	0	0	52	0	0	.....			.....		
Oossoor Tank supplying Channel.	73	91	11	9	91	11	9	.....			.....		
Alamaloomangapoorum river Channel.	74	21	4	0	21	4	0	.....			.....		
Pullialah Cooppum Tank	75	12	8	0	12	8	0	.....			.....		
Gollamungalum Tank ...	76	60	0	0	60	0	0	.....			.....		
Tippasamoodrum supplying Channel.	77	12	0	0	.....			12	0	0	.....		
Chadoovoil Tank ...	78	89	2	0	89	2	0	.....			.....		
Irrendavadoo Tank ...	79	200	4	3	200	4	3	.....			.....		
Moorookeay Tank ...	80	254	1	3	254	1	3	.....			.....		
Dooppum Tank ...	81	2	0	0	2	0	0	.....			.....		
Sumpungheenellore river Channel...	82	46	7	3	46	7	3	.....			.....		
Coorumbaudey Tank ...	83	54	12	6	54	12	6	.....			.....		
Road from Vellore to Arnee ...	84	14,194	10	3	3,007	11	11	411	1	9	.....		
Road from Verinjeepoorum to Trunk Road No. 1. ...					10,655	12	7						
Annual repairs to do. do. do....	85	659	0	1	659	0	1	.....			.....		
Tunnel to Canavuttum field ...	86	50	0	0	.....			50	0	0	.....		
Portion of Road from Vellore to Vaniembaudey	87	41	0	0	34	14	8	6	1	4	.....		
Annual repairs to Verinjeepoorum Road	88	5,135	7	9	5,135	9	0	.....			0	1	9
Constructing Store Shed ...	89	50	0	0	50	0	0	.....			.....		
Traveller's Bungalow at Amboor...	90	20	0	0	20	0	0	.....			.....		
Dispensary at Vellore ...	91	8	0	0	.....			8	0	0	.....		
Cutwall's Choultry at Arcot ...	92	150	0	0	.....			150	0	0	.....		
	93	360	0	0	360	0	0	.....			.....		
Total.....		32,943	1	8	30,522	3	5	2429	9	9	8	8	6

14. In two instances only the expenditure has exceeded the advance Rs. 8-7-3×0-1-3 these sums Rupees 8-8-6 should be allowed. In 36 cases ranging from Rupees 0-1-0 to Rupees 441-1-9, and amounting to Rupees 2,429-9-9 recoveries should be made, either wholly or in part, or the amount written off. For 24 Items out of 36, amounting to Rupees 938-14-10 it has been impossible to make any bills.

RANGE No. 5.

15. It is necessary to divide the transactions in this Range, part of them having been executed under the old (*i. e.* advances on account of works particularly,) part under the new system, (*i. e.* advances on account of Talooks generally.) The items are as follows, viz.:

Names.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advance exceeded by.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Mr. Dick.....	36,394	7	11	36,394	7	11	.....			.....		
Mr. Lincoln.....	32,745	7	7	27,583	2	11	5,476	0	11	313	12	3
Total.....	69,139	15	6	63,977	10	10	5,476	0	11	313	12	3

16. The advances made to Mr. Dick were for the works generally in each Talook and bills have been prepared and passed for the exact amount drawn by him. No adjustment is therefore necessary. Not so with the advances made to Mr. Lincoln, who it appears left the Public Works Department in August 1857, having on the 2nd of that month obtained the Certificate in the margin, from the Executive Engineer of his Range, countersigned by the Acting District Engineer. Mr. Lincoln was reported as having died on his way to clear up these accounts. In 3 instances (Rs. 15-6-8, Rs. 54-11-7 and Rs. 243-10-0 together Rs. 313-12-3) the expenditure has exceeded the advances—these amounts should be allowed. On the other hand there are six items ranging from Rupees 5-0-7 to Rupees 3,175-5-2, making in all Rupees 5,476-0-11 to be recovered or written off.

* I hereby Certify that there are no demands against nor any balance due by Assistant Overseer J. Shaw Lincoln on account of money received for works in the 1st Section.

Camp Palmanair, 2nd Augt. 1857.

(Signed) B. B. BOYD, Lieut. *Asst. Engr. N. A.*

(Signed) J. O. MAYNE, Lieut. *Ag. Dist. Engr. N. A.*

17. The report of Mr. Lincoln's death was however untrue, he has since attended and given all the information in his power; but the long period which has elapsed since he had charge of the works, makes the chance of accounting for any of these monies, very doubtful. It is very much to be regretted that these accounts have been allowed to remain so long unsettled, as doubtless, had due deligence been used, part at least might have been adjusted by bills.

SUPERVISOR F. DICK.

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Cheyaur Annicut Channel (13 miles)	1	356	5	1	356	5	1	.....			.....		
Planting trees on the banks of the Cheyaur Channel	2	337	9	2	337	9	2	.....			.....		
Cuddalaudy Dam	3	75	13	6	75	13	6	.....			.....		
Caraput Tank	4	370	15	11	370	15	11	.....			.....		
Poloor supplying Channel ...	5	393	7	8	393	7	8	.....			.....		
Mundacolattoor Tank	6	130	0	0	130	0	0	.....			.....		
Supplying Channel from the Keelcorattoor Tank and Chittairy ...	7	785	7	9	785	7	9	.....			.....		
Nelliancoolum Streerungarapoorum Hissa Tank	8	65	13	0	65	13	0	.....			.....		
Oolunday tank	9	47	4	0	47	4	0	.....			.....		
Cawancyattoor Thangul.. ...	10	23	11	0	23	11	0	.....			.....		

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by			Advances exceeded by		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Velaungaudoo Tank.....	11	113	3	0	113	3	0						
Pyoor Tank	12	39	1	0	39	1	0						
Extending Cheyaur Channel to Poorsay and Tettry, and constructing Bridges and Calingulahs where required...	13	4,298	1	4	4,298	1	4						
Constructing Cotay Calingulah and Morie.	14	75	0	0	75	0	0						
Mungalum Tank	15	75	0	0	75	0	0						
Anunthul Tank.	16	40	0	0	40	0	0						
Cauveripaukum Calingulah and Morie	17	40	0	0	40	0	0						
Podianoor Calingulah	18	30	0	0	30	0	0						
Murdaud Condum ...	19	10	0	0	10	0	0						
Do. Bridge.	20	75	0	0	75	0	0						
Superintendence for the above ...	21	10	0	0	10	0	0						
Podianoor Tunnel	22	30	0	0	30	0	0						
Mailcodingaloor Tank	23	35	0	0	35	0	0						
Goodaloor Tank and Channel ...	24	400	0	0	400	0	0						
Authoovaumpaudee Tank ...	25	100	0	0	100	0	0						
Thennangoor Calingulah ...	26	20	0	0	20	0	0						
Tookoovaudee Tank	27	20	0	0	20	0	0						
Eroomungalum Channel. ...	28	45	0	0	45	0	0						
Allumbaidoo Aqueduct and Channel.	29	50	0	0	50	0	0						
Goodaloor Tank in Wandiwash Talook	30	77	15	4	77	15	4						
Alliabad Yerrecooppum Tank ...	31	17	3	0	17	3	0						
Poloor large Tank	32	135	12	0	135	12	0						
Do. Mungalum supplying Channel	33	45	6	8	45	6	8						
Do. Cheyaur do	34	961	7	4	961	7	4						
Cutcherrymungalum Tank ...	35	11	15	0	11	15	0						
Seroovulloor Tank ...	36	66	2	9	66	2	9						
Carapet large Tank	37	183	10	0	183	10	0						
Mademungalum do	38	65	5	1	65	5	1						
Annially Tank.	39	100	11	0	100	11	0						
Congaroyanundul Tank ...	40	209	7	5	209	7	5						
Rendarepett Tank	41	20	6	11	20	6	11						
Seroovulloor Dam	42	25	8	0	25	8	0						
Panoolapaudy Tank	43	466	10	7	466	10	7						
Eloopacoonnum do.	44	150	13	0	150	13	0						
Chadapairy large Tank... ...	45	454	11	0	454	11	0						
Poondy Tank...	46	39	6	10	39	6	10						
Palassoor Tank	47	79	9	0	79	9	0						
Vullum Chittairey	48	37	7	0	37	7	0						
Vullum Thencaray Parumpaukum Hissa Tank.	49	87	12	0	87	12	0						
Anniboghy Tank	50	80	10	0	80	10	0						
Eroomboor Tank	51	174	8	4	174	8	4						
Sattimungalum Tank	52	193	14	0	193	14	0						
Valiumpaukum do.	53	168	8	0	168	8	0						
Sorayoor Mailnurmah Hissa Tank.	54	0	7	5	0	7	5						
Mailnurmah Tank	55	28	10	5	28	10	5						
Chemboor Tank	56	23	11	0	23	11	0						
Ooloonday Tank and Annicut ...	57	153	5	0	153	5	0						
Etchoor large Tank	58	123	4	3	123	4	3						
Salavadoo Chittairey	59	48	13	0	48	13	0						
Garoodapoorum Tank and Channel	60	19	12	0	19	12	0						
Murdaud Tank.	61	168	4	6	168	4	6						
Ponnay do.	62	93	8	0	93	8	0						
Covalay Chittairey	63	143	0	0	113	0	0						

Name of Works.	No.	To be accounted for.			Bills prepared.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	B.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Patharey large Tank	64	136	13	0	136	13	0						
Mummoorey do.	65	136	13	0	136	13	0						
Padoor tank	66	19	5	0	19	5	0						
Agaracaracottah Tank	67	63	1	0	63	1	0						
Cotavadoo do.	68	24	5	0	24	5	0						
Sattimungalum large Tank ...	69	33	9	0	33	9	0						
Covalay Tank...	70	19	9	0	19	9	0						
Mailmah Tank..	71	96	2	0	96	2	0						
Vadoor do.	72	11	2	0	11	2	0						
Eroongul Mottoo Sluice ...	73	100	3	9	100	3	9						
Alliabad Tank..	74	65	0	0	65	0	0						
Closing a breach with earth and stone work in Wandiwash Tank supply channel	75	60	0	0	60	0	0						
Ammanumpaukum Tank	76	180	0	0	180	0	0						
Sluice to Codianellore Hissa Tank	77	180	0	0	180	0	0						
Nellore Rajahnairy Tank	78	110	0	0	110	0	0						
Pyvantanghul Tank	79	150	0	0	150	0	0						
Aroongoonum Tank	80	480	0	0	480	0	0						
Clearing Moodoor Channel ...	81	450	0	0	450	0	0						
Sluice to Chembaidoo Tank ...	82	30	0	0	30	0	0						
Eroombooley large Tank ...	83	200	0	0	200	0	0						
Raising the bank of the Thellaur Vaniem Tank	84	440	0	0	440	0	0						
Sluice to Coracotah Tank ...	85	360	0	0	360	0	0						
Clearing the bed of Shanel Tank Channel	86	300	0	0	300	0	0						
Raising the bank of Thoracole Tank	87	330	0	0	330	0	0						
Raising the bund of Cootumputta Tank	88	190	0	0	190	0	0						
Sluice of Nellairey Tank ...	89	70	0	0	70	0	0						
Repairing Nellore Hissa Tank ...	90	1,437	0	0	1,437	0	0						
Rebuilding Karum Hissa Tank ...	91	200	0	0	200	0	0						
Improving Allattoor Channel ...	92	80	0	0	80	0	0						
Cotay large Tank...	93	678	10	11	678	10	11						
Mungalum Chittairey	94	115	12	3	115	12	3						
Anunthul Tank	95	168	3	8	168	3	8						
Cauverypaukum Tank	96	288	12	6	288	12	6						
Maumundoor Tank	97	329	5	11	329	5	11						
Mardaud Channel	98	307	15	6	307	15	6						
Sundries for the Cotay and 8 other Tanks	99	150	5	11	150	5	11						
Codavanoor Tank	100	602	14	8	602	14	8						
Irringhul Tank	101	96	1	2	96	1	2						
Salavadoo Damaracoolum Tank...	102	50	0	0	50	0	0						
Ponnachetty Tangul	103	40	0	0	40	0	0						
Covalay large Tank	104	470	0	0	470	0	0						
Sluice to Anundoor Chittairey ...	105	35	0	0	35	0	0						
Raising and strengthening the bank of Shevanum Chittairey ...	106	210	0	0	210	0	0						
Repairing Calingulahs in Nellairey Tank	107	230	0	0	230	0	0						
Sluice to Keelcoracattoor Channel	108	50	0	0	50	0	0						
Sluice to Coonattoor Tank ...	109	62	8	8	62	8	8						
Strengthening Keelput Tank ...	110	287	11	2	287	11	2						
Contingencies for the repairs of the Coonattoor Tank supply Channel	111	10	14	6	10	14	6						
Rebuilding Iyalawaudy Calingulah	112	20	0	0	20	0	0						
Alliabad Aracooppum Tank ...	113	560	0	0	560	0	0						
Aroonamungalum Tank ...	114	190	0	0	190	0	0						

Name of Works.	No.	To be accounted for. Rs.	A.	P.	Bills prepared. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
Poonumput Tank Channel	115	210	0	0	210	0	0						
Poloor Tank supply do. ...	116	245	0	0	245	0	0						
Seroovulloor Condum... ...	117	450	0	0	450	0	0						
Nummayandal Tank ...	118	155	0	0	155	0	0						
Carapett large do. ...	119	360	0	0	360	0	0						
Mattavett Tank... ...	120	200	0	0	200	0	0						
Sunnakawaudy Tank ...	121	100	0	0	100	0	0						
Cheddapairy do. ...	122	58	0	0	58	0	0						
Removing rock from Cheyaur extending Channel	123	620	0	0	620	0	0						
Keelcodoongaloor Channel ...	124	160	0	0	160	0	0						
Paudy Tangul	125	75	0	0	75	0	0						
Mungalum Tank	126	68	0	0	68	0	0						
Maumundoor Tank	127	95	0	0	95	0	0						
Oolunday Tank Channel... ...	128	165	0	0	165	0	0						
Vellacherry Tank	129	177	0	0	177	0	0						
Cheyaur Annicut Channel ...	130	300	0	0	300	0	0						
Allapoorandum Tank	131	20	0	0	20	0	0						
Moolagherrypett Tank and Sluice	132	430	0	0	430	0	0						
Nagarumbadoo Calingulah Moocoor do. ...	133	36	2	8	36	2	8						
Molagherrypett and Collatoor Sluices	134	119	9	3	119	9	3						
Sundry repairs to 13 Mories ...	135	167	13	4	167	13	4						
Widening and extending 2 bridges to Chinna Chengadoo and Codavanoor	136	87	6	0	87	6	0						
Chalookay Tank	137	241	2	8	241	2	8						
Karum Hissa do.	138	570	0	0	570	0	0						
Thennangoor do.	139	450	0	0	450	0	0						
Sundries for the Codavanoor Tank and Channel	140	630	0	0	630	0	0						
Saloocay Channel	141	80	0	0	80	0	0						
Sattimungalum Embankment ...	142	77	0	0	77	0	0						
Eloopay large Tank ...	143	220	10	0	220	10	0						
Do. Chittairey ...	144	50	0	0	50	0	0						
Sholaveram Tank	145	150	0	0	150	0	0						
Do. Calingulah ...	146	95	0	0	95	0	0						
Do. Channel ...	147	150	0	0	150	0	0						
Moorookarnadadee Sluice ...	148	100	12	4	100	12	4						
Sundries for the Sholaveram Tank	149	0	8	5	0	8	5						
Sluice to Cooroocay Chittairey ...	150	8	0	0	8	0	0						
Carrapoondey Tank ...	151	151	7	6	151	7	6						
Panaolypaudey embankment ...	152	650	0	0	650	0	0						
Keelpaloor Tank... ...	153	40	0	0	40	0	0						
Cuddalaudey supply Channel	154	100	0	0	100	0	0						
Carrapett Channel... ...	155	50	0	0	50	0	0						
Clearing bed of Cheyaur Annicut Channel	156	80	0	0	80	0	0						
Allynuggur Tank	157	510	0	0	510	0	0						
Muttavet Tank... ...	158	250	0	0	250	0	0						
Nummeandal Sluice	159	75	0	0	75	0	0						
Veeraloor Tank	160	66	0	0	66	0	0						
Conthapolliem Tank... ...	161	65	0	0	65	0	0						
Keelcodoongaloor Calingulah ...	162	30	0	0	30	0	0						
Annual repairs to road from Cheyaur to Thellaur 1856-57 ...	163	100	0	0	100	0	0						
Do. do. do. 1857-58 ...	164	450	0	0	450	0	0						
Do. do. from Arnee to Pooloor... ...	165	690	0	0	690	0	0						
Clearing jungle on the line of Cheyaur Channel ...	166	600	0	0	600	0	0						
	167	79	8	3	79	8	3						

Name of Works.	No.	To be accounted for. Rs.	A.	P.	Bills prepared. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
Poloor Talook Cutcherry ...	168	966	5	0	966	5	0						
2 Store Sheds at Cheyaur, Annicut and Vemmooney ...	169, 170	200	0	0	200	0	0						
2 Nurseries at do. and do. ...	171, 172	238	7	8	238	7	8						
Sundry charges for repairs to 2 Store Sheds at Cheyaur Annicut and Vemmooney... ...	173, 174	125	0	0	125	0	0						
Poloor Travellers' Bungalow ...	175	25	0	0	25	0	0						
Dismantling condemned Military buildings at Arnee... ...	176	44	3	0	44	3	0						
Total... ...		36,394	7	11	36,394	7	11						

Assistant Overseer J. SHAW LINCOLN.

No.	Name of Works.	To be accounted for. Rs.	A.	P.	Bills prepared. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
1	Widening and extending Cheyaur Channel...	4,188	3	3	1,012	14	1	3,175	5	2			
2	Planting fruit trees on the banks of the Cheyaur Channel... ...	1,000	0	0	1,243	10	0	0	0	0	243	10	0
3	Cheyaur Channel 13 Mories... ...	1,673	7	9	1,728	3	4	0	0	0	54	11	7
4	Repairing Colathoor Tank... ...	100	0	0	0	0	0	100	0	0			
5	Ellatoor Channel...	1,977	0	7	1,725	0	5	152	0	2			
6	Pooresay Cullairey... ...	2,267	6	0	2,262	5	5	5	0	7			
7	Do. large Tank ...	450	0	0	0	0	0	450	0	0			
8	Poloor Cheyaur supplying Channel.	11,564	11	8	10,071	0	8	1,493	11	0			
9	Road from Conjeeveram to Thellaur	337	8	3	337	8	3	0	0	0			
10	Road from Thoosey to Mamundoor	9,187	2	1	9,202	8	9	0	0	0	15	6	8
11	Road from Poloor to Trinamullay.												
	Total Rupees...	32,745	7	7	27,583	2	11	5,476	0	11	313	12	3

18. The general result of this examination into the transactions which commence at a date subsequent to the formation of the new Public Works Department, and which do not include any advances made under the old Maramut system by the Collectors (which will be treated separately) are as follows, viz. :

ABSTRACT.

Range.	To be accounted for. Rs.	A.	P.	Bills prepared. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
One - - - -	1,14,537	12	6	1,14,014	12	0	1,980	15	8	1,457	15	2
Two - - - -	92,879	1	1	1,07,433	8	1	625	9	4	15,180	0	4
Three - - - -	5,754	0	6	369	10	9	5,384	5	9	0	0	0
Four - - - -	32,943	4	8	30,522	3	5	2,429	9	9	8	8	6
Five - - - -	69,139	15	6	63,977	10	10	5,476	0	11	313	12	3
Total - -	3,15,254	2	3	3,16,317	13	1	15,896	9	5	16,960	4	3

19. The question arises, whether it would be better to write off the differences at once, giving directions to use all means to make the recoveries, and deal with them as waifs and strays; or to leave them to be recovered by the Officers of the Public Works Department and carried to account in the usual manner. The first plan which appears to be the best, would clear the mat-

ter up so far as the arrears are concerned, but it would have the effect of shewing all the money as expended on the works. The second plan would leave these balances open, and by consequence a part of the arrears unsettled. This would give the Officers of the Public Works Department the amount to complete the works, *when they recover it*, and would leave the estimates, &c., as they are; but so far as settling the accounts is concerned these particular items would be as much in nubibus as ever.

20. It is therefore recommended that these estimates be closed, new estimates made to complete the works, and the money outstanding recovered in the best way that may suggest itself, and the result specially reported either to the Government or the Commission for Investigating Public Establishments.

APPENDIX B.

Report upon the unadjusted balance of advances made for Public Works in the District of North Arcot previous to the organization of the Public Works Department, made in pursuance of G. O. No. 2201, Public Works Department, dated 20th October 1858.

1. As has been already shewn in that portion of the Report which deals with the unadjusted balances subsequent to the organization of the Public Works Department at para. 1—the amount remaining to be adjusted which appertains to a period anterior to that event was understated in the G. O. No. 2201, Public Works Department of 20th October 1858. The amount should have been Rs. 56,232; the difference arose in this manner. The item shewn should have been described as the balance of sums advanced for expenditure under the old Maramut rule; the advances made under the old regime to Engineers remaining unadjusted, were omitted in the Statement of Lieutenant-Colonel Lawford, the Officiating Chief Engineer, upon which the Minute of Government was framed.

2. This sum of Rs. 56,232 has, for the convenience of registery been devided into the Ranges observed by the Public Works Department. The works are however, in the Zillah Records, shewn in the several Talooks.

	Rs.	A.	P.
Range No. 1 - - - - -	8,691	4	0
" 2 - - - - -	11,126	9	4
" 3 - - - - -	2,832	8	3
" 4 - - - - -	21,029	6	7
" 5 - - - - -	12,552	11	9
Total - -	56,232	10	11

Part of the work done has been billed for in the usual manner, for part, bills were not found, but very satisfactory evidence has been given, that the money has been expended, and the work done to the full value in many instances, and in other instances, the amounts to be recovered are established. It also appears, that many measurements have been made, and many bills forwarded to the Engineer Department, which are not now forthcoming.

3. The following is the result of a very careful examination of the various documents which throw light upon the subject.

1st RANGE.

No.	Name of Works.	To be accounted for. Rs.	A.	P.	Amounts passed. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
1	Mathandacooppum Tank... ...	324	7	0	324	7	0	.....	...	...	.....	...	...
2	Gollapully Seepanairey Tank.....	59	7	0	59	7	0	.....	...	...	.....	...	...
3	Do. supplying Channel ...	165	15	0	165	15	0	.....	...	...	.....	...	...
4	Basavapulley Bungarucca Tank.	200	0	0	181	8	0	.....	...	...	.....	...	...
					18	8	0						
5	Cuttamunchee Cuttoo Calvah...	27	0	0	27	0	0	.....	...	...	.....	...	...
6	Paulcoor large Tank...	150	0	0	130	0	1	.....	...	...	.....	...	...
					19	15	11						
7	Moothecoolum Pootairey Tank...	80	0	0	72	9	6	.....	...	...	.....	...	...
					7	6	6						
8	Pilloor Nagalairey Tank... ...	195	0	0	158	0	0	.....	...	...	.....	...	...
					37	0	0						
9	Do. Cuttoo Calvah... ...	75	0	0	75	0	0	.....	...	...	.....	...	...
10	Luttairey Tank...	186	3	0	186	3	0	.....	...	...	.....	...	...
11	Nungamungalum Tank... ...	369	13	0	367	9	0	.....	...	...	.....	...	...
					2	4	0						
12	Yacambara Nellore Tank... ...	120	0	0	120	0	0	.....	...	...	.....	...	...
13	Calinjoor large Tank... ...	230	0	0	212	15	6	.....	...	...	.....	...	...
					17	0	6						
					67	14	6						
14	Vinnumpulley Chittairey... ...	100	0	0	32	1	6	.....	...	...	.....	...	...
					78	8	1						
15	Pothoor Tank...	113	0	0	34	7	11	.....	...	...	.....	...	...
					73	13	3						
16	Vapoor large Tank...	135	0	0	61	2	9	.....	...	...	.....	...	...
17	Brimmapoorum River spring Channel...	80	0	0	0	0	0	80	0	0	.....	...	...
18	Moogulput Hissa River Channel...	140	0	0	140	0	0	.....	...	...	.....	...	...
19	Saivoor spring channel... ...	120	0	0	120	0	0	.....	...	...	.....	...	...
20	Bauloor do.	75	0	0	75	0	0	.....	...	...	.....	...	...
21	Tootteeput do.	150	0	0	150	0	0	.....	...	...	.....	...	...
22	Pedda Kanoomantharoyaneeputtada spring Channel... ...	140	0	0	140	0	0	.....	...	...	.....	...	...
					64	11	0						
23	Morum large Tank... ...	96	11	0	32	0	0	.....	...	...	.....	...	...
24	Pengaragoontah Tank... ...	10	0	0	10	0	0	.....	...	...	.....	...	...
25	Peddanayaneedoorgum Naikenairey Tank...	50	0	0	32	12	0	17	4	0	.....	...	...
		74	10	0	74	10	0	.....	...	...	.....	...	...
26	Cuttamunchee River Channel...	170	0	0	170	0	0	.....	...	...	.....	...	...
27	Velacauchee spring Channel... ...	300	0	0	339	0	6	.....	...	...	39	0	6
28	Veppaulay large Tank supply do.	175	0	0	186	1	0	.....	...	...	11	1	0
29	Aunungoodey Tank... ...			0									
30	Chaircaudoocundeepoorum Hissa Tank...	50	0	0	50	0	0	.....	...	...	.....	...	...
31	Vencatasamoodrum Hissa Tank...	55	0	0	55	0	0	.....	...	...	.....	...	...
32	Chittattoor River Channel... ...	81	0	0	81	0	0	.....	...	...	.....	...	...
33	Velattoor Tank...	45	0	0	45	0	0	.....	...	...	.....	...	...
		86	5	6	36	5	6	7	4	6	.....	...	...
34	Calacattoor large Tank... ...				42	11	6						
35	Tunnel to the Fort Trench at Chittoor	293	8	0	293	8	0	.....	...	...	.....	...	...
36	Road from Cuddapanuttum to Gooriattum...	19	6	3	.....	...	...	19	6	3	.....	...	...
		0	8	10	0	8	10	.....	...	...	.....	...	...
37	Suntapett Road...	2	6	4	2	6	4	.....	...	...	.....	...	...
38	Chittoor Road...												
39	Splitting Rocks in Poodoopett, near Chittoor...	0	8	0	0	8	0	.....	...	...	.....	...	...
40	Repair to Road from Chittoor to Sholinghur...	43	13	1	43	13	1	.....	...	...	.....	...	...
41	Tunnel in Vellore Road... ...	139	8	0	114	8	0	25	0	0	.....	...	...
42	Discretionary allowance to Road from Pengaragoontah to Gooriattum...	851	1	0	823	6	5	27	10	7	.....	...	...

No.	Name of Works.	To be accounted for. Rs.	A.	P.	Amounts passed. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
43	Road from Vellore to Punnattoor.	225	0	0	225	0	0						
44	Road to the Post Office at Chittoor	0	6	0	0	6	0						
45	Repairing the Jail at Chittoor...	184	2	0	184	2	0						
46	Do. Traveller's Bungalow at Chittoor...	103	11	0	103	11	0						
47	Wheel to the well in the Jail at Chittoor...	31	0	0	31	0	0						
48	Police Cutcherry at Vencatagherry cottah...	121	8	0	121	8	0						
49	Chittoor Talook Cutcherry... ...	2,243	0	0	2,243	0	0						
50	Paudal to the Travellers' Bungalow at Vencatagherry cottah ...	2	6	0	2	6	0						
	Total.....	8,691	4	0	8,564	12	2	176	9	4	50	1	6

2nd RANGE.

No.	Name of Works.	To be accounted for. Rs.	A.	P.	Bills prepared. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
51	Poinay large Tank and Chittairey.	270	0	0	270	0	0						
52	Vapenjairey Tank	90	0	0	90	0	0						
53	Do. supplying Channel ...	5	0	0	5	0	0						
54	Agaramungalum Tank... ...	100	0	0	100	0	0						
55	Cota Agarum large Tank ...	130	0	0	130	0	0						
56	Veeraga Nellore Cunnicapoorum Tank	11	0	0	9	13	1	1	2	11			
57	Condapilly Dasaravadoo Tank ...	15	0	0	15	0	0						
58	Nellapully Tank	120	0	0	120	0	0						
59	Auvelalah Tank	91	0	0	91	0	0						
60	Gazoolamundiem Mazra Yaliagoontah Tangul	40	0	0	40	0	0						
61	Peddapakala large Tank. ...	0	9	2	0	9	2						
62	Ramapoorum Vummanairey Tank.	94	0	0	94	0	0						
63	Contapaukum Tank	105	0	0	105	0	0						
64	Goodoogoochintala Channel ...	22	0	0	22	0	0						
65	Curnacoondalavarypully Tank ...	18	0	0	18	0	0						
66	Vanoothanapully Cuttoo Calvah...	15	0	0	15	0	0						
67	Tookeewaukum small Tank ...	27	12	0	27	12	0						
68	Auveelalah Tank	17	0	0	17	0	0						
69	Poodooputlah Dalroy Tank ...	1,441	11	7	1,441	11	7						
70	Nagaputtah ruined Tank ...	5,043	3	5	5,043	3	5						
71	Do. Mootoo Sluice ...	857	12	8	857	12	8						
72	Magaral Tank	136	0	0	136	0	0						
73	Mailcooppum Tank	85	0	0	85	0	0						
74	Chetty Thanghul Tank.. ...	292	0	0	292	0	0						
75	Valem Tank	420	0	0	420	0	0						
76	Maun Thanghul Tank	533	0	0	533	0	0						
77	Checkeedeecoopum Tank ...	125	0	0	125	0	0						
78	Narasingapoorum Chittairey ...	70	0	0	60	0	0	10	0	0			
79	Pullairey Cautairey Tank ...	51	0	0	51	0	0						
80	Yacambara Nellore large Tank ...	120	0	0	120	0	0						
81	Poodeeputlathamalachervoo do. ...	354	13	0	354	13	0						
82	Codacul Tank	278	4	0	278	3	3						
83	Road from Nuggerry to Balapully	100	1	0	0	0	9						
84	Bridges to road from Pootulpett to Kircumbaudy	4	0	10	100	1	0						
85	Travellers' Bungalow at Raneeput	43	5	8	.....			4	0	10			
	Total ...	11,126	9	4	11,110	12	5	15	12	11			

3rd RANGE.

No.	Name of Works.	To be accounted for. Rs.	A.	P.	Amounts passed. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
86	Reddevellum Tank	120	0	0	120	0	0						
87	Keelumbee Tank	25	0	0	25	0	0						
88	Morumboo for the Cauveripauk Tank Bund	75	0	0	75	0	0						
89	Cauveripauk Tank supply Channel	300	0	0	300								
90	Narasingapoorum Tank ...	48	9	2				48	9	2			
91	Poodoor Tank...	141	15	4				141	15	4			
92	Velumbaukum Tank	130	3	0				130	3	0			
93	Vullia Nellore spring Channel ...	109	14	2				109	14	2			
94	Chengaud Tank	10	0	0				10	0	0			
95	Agavalum Poottairey Tank ...	15	0	0				15	0	0			
96	Seroovaliem Tank	72	10	11				72	10	11			
97	Vadyoor Tank	60	0	0				60	0	0			
98	Do. Aqueduct	40	0	0	40	0	0						
99	Mossoor Tank...	69	12	7	69	12	7						
100	Anavurthekhanpett Tank ...	22	15	0	22	15	0						
101	Ammanoor Tharookairey ...	16	14	0				16	14	0			
102	Moottavaukum Tank	305	0	0	305	0	0						
103	Cauverypaukum Madoogoocaraycondum	90	0	0	90	0	0						
104	Tuppoor Condum	70	0	0	70	0	0						
105	Cotamaury cooppum spring channel	80	0	0	80	0	0						
106	Curruvaid supplying Channel ...	510	0	0	510	0	0						
107	Paundiambaukum Tank and Channel	2	0	0				2	0	0			
108	Tennempat Tank	1	0	0				1	0	0			
109	Do. do.	29	0	0				29	0	0			
110	Doossee Maumundoor Tank ...	27	2	9				27	2	9			
111	Nellay large Tank	157	8	0	157	8	0						
112	Ookul Pauvoor river Channel ...	98	14	4	98	14	4						
113	Pandals to Travellers' Bungalows at Oochairey and Raneepett ...	49	12	0	49	12	0						
114	Cutwall's Choultry at Wallajahpett	154	5	0	154	5	0						
	Total... ...	2,832	8	3	2,168	2	11	664	5	4			

4th RANGE.

No.	Name of Works.	To be accounted for. Rs.	A.	P.	Amounts passed. Rs.	A.	P.	Advances not exhausted by. Rs.	A.	P.	Advances exceeded by. Rs.	A.	P.
115	Calavay Condyan Thanghul ...	843	10	10	680	0	0						
					163	10	10						
116	Cuttavaudy Annicut... ...	107	2	6	107	2	6						
117	Sumpunghy Nellore river Channel	94	15	5	94	15	9				0	0	4
118	Timery Hissa Tank... ...	193	5	0	43	10	7	149	10	5			
119	Syetvannum Paryonairey ...	22	0	0	66	15	1						
120	Do. Chittairey ...	58	0	0	13	0	11						
					12	2	11						
121	Malayoor Chittairey	23	5	0	11	2	1						
122	Poodoopaukum Channel ...	55	0	0	497	12	10				27	12	10
123	Do. Tank	415	0	0									
124	Cuttivadee large Tank... ...	40	0	0	25	0	0	15	0	0			
125	Poodoopaukum supplying Channel	30	0	0	30	0	0						
126	Thayanoor Tank Calingulah ...	460	0	0	460	0	0						
127	Keerasutpoorum Tank ...	105	0	0	105	0	0						
128	Caradeegoodee Tank	65	0	0	65	0	0						
129	Gunga Nellore Tank	55	8	0	55	8	0						
130	Poothoor Tank	323	0	0	323	0	0						
131	Chembadoo do.	440	0	0	440	0	0						
132	Vceringeepoorum Tank ...	150	0	0	150	0	0						

No.	Name of Works.	To be accounted for.			Amount passed.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
133	Agaronjairey Tank	500	0	0	500	0	0	.....	...	...	.....	...	...
134	Thorapaudey Tank	41	8	0	41	8	0	.....	...	...	.....	...	...
135	Caniembaudy Tank	110	0	0	110	0	0	.....	...	...	.....	...	...
136	Pareancooppum Tank	13	0	0	13	0	0	.....	...	...	.....	...	...
137	Tippasamoodrum Tank ...	2	0	0	2	0	0	.....	...	...	.....	...	...
138	Sattiamadura Tank	20	0	0	20	0	0	.....	...	...	.....	...	...
139	Chedapairey supplying Channel & Nannal	70	0	0	70	0	0	.....	...	...	.....	...	...
140	Sattiapolliem Tank	120	0	0	120	0	0	.....	...	...	.....	...	...
141	Thutteeput Tank	422	0	0	422	0	0	.....	...	...	.....	...	...
142	Nelvoy Tank	192	0	0	192	0	0	.....	...	...	.....	...	...
143	Moonjarooputt Tank	80	0	0	80	0	0	.....	...	...	.....	...	...
144	Do. Vunnancottay Tank.	65	0	0	65	0	0	.....	...	...	.....	...	...
145	Pengalathan Tank ...	90	0	0	90	0	0	.....	...	...	.....	...	...
146	Pennattoor Tank ...	259	0	0	259	0	0	.....	...	...	.....	...	...
147	Aryoor do. ...	590	0	0	590	0	0	.....	...	...	.....	...	...
148	Cooppum do. ...	258	8	0	258	8	0	.....	...	...	.....	...	...
149	Mailcayanee River Channel ...	50	0	0	50	0	0	.....	...	...	.....	...	...
150	Cathalumbutt Tank	50	0	0	50	0	0	.....	...	...	.....	...	...
151	Arasumbutt do.	25	0	0	25	0	0	.....	...	...	.....	...	...
152	Canacaneeya do.	60	0	0	60	0	0	.....	...	...	.....	...	...
153	Velaupaukum do.	40	0	0	15	11	0	24	3	0	.....	...	...
154	Sholaveram do.	180	0	0	180	0	0	.....	...	...	.....	...	...
155	Keelachoor Cunthanairey river Channel	20	0	0	20	0	0	.....	...	...	.....	...	...
156	Cunthanairey Cayaneepaukum do.	110	0	0	110	0	0	.....	...	...	.....	...	...
157	do. do. Channel	90	0	0	90	0	0	.....	...	...	.....	...	...
158	Verinjeepoorum Oockanavarum Tank	145	0	0	145	0	0	.....	...	...	.....	...	...
159	Sattiamungalum Spring Channel.	80	0	0	80	0	0	.....	...	...	.....	...	...
160	Singeereecovil river Channel ...	7	0	0	7	0	0	.....	...	...	.....	...	...
161	Veroopatcheepoorum Tank ...	450	0	0	450	0	0	.....	...	...	.....	...	...
162	Vinnamungalum Tank ...	20	0	0	20	0	0	.....	...	...	.....	...	...
163	Pareeancooppum Tank ...	107	0	0	107	0	0	.....	...	...	.....	...	...
164	Poothoor Thanghul	60	0	0	60	0	0	.....	...	...	.....	...	...
165	Do. large Tank... ...	60	0	0	60	0	0	.....	...	...	.....	...	...
166	Alamaloomungapoorum Tank ...	20	0	0	20	0	0	.....	...	...	.....	...	...
167	Pullalacooppum river Channel ...	40	0	0	40	0	0	.....	...	...	.....	...	...
168	Gollamungalum Tank... ...	217	0	0	217	0	0	.....	...	...	.....	...	...
169	Tippasamoodrum large Tank ...	15	0	0	0	0	0	15	0	0	.....	...	...
170	Do. Thanghul ...	55	0	0	55	0	0	.....	...	...	.....	...	...
171	Ummoondey river Channel ...	33	0	0	33	0	0	.....	...	...	.....	...	...
172	Chethoopairey supply Channel ...	700	0	0	700	0	0	.....	...	...	.....	...	...
173	Chittahmoor Tank	53	0	0	53	0	0	.....	...	...	.....	...	...
174	Annathanghul ruined Tank ...	1,567	5	5	1,567	5	5	.....	...	...	.....	...	...
175	Road from Caniembaudy Ghaut...	1,028	11	9	720	0	0	308	11	9	.....	...	...
176	Do. from Vellore to Arnee ...	8,338	0	11	8,338	0	11	.....	...	...	.....	...	...
177	Police Cutcherry at Pettahmoore.	1,094	5	9	1,094	5	9	.....	...	...	.....	...	...
	Total... ...	21,029	6	7	20,544	8	7	512	11	2	27	13	2

5th RANGE.

No.	Name of Works.	To be accounted for.			Amounts passed.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
178	Sorayoor Hissa Channel	60	0	0	60	0	0	.....	...	...	.....	...	...
179	Coothavadoo Tank	24	0	0	24	0	0	.....	...	...	.....	...	...
180	Shothookinnee..	50	5	0	50	5	0	.....	...	...	.....	...	...
181	Occasional Sibbendey in Poloor Talook...	50	6	6	50	6	6	.....	...	...	.....	...	...

No.	Name of Works.	To be accounted for.			Amounts passed.			Advances not exhausted by.			Advances exceeded by.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
182	Alliabad Yarecoopum Tank ...	25	0	0	25	0	0	.....	...	...	.....	...	...
183	Poloor large Tank	357	0	0	357	0	0	.....	...	...	.....	...	...
184	Munjalaur supplying Channel ...	40	0	0	40	0	0	.....	...	...	.....	...	...
185	Cutcherrymungalum Tank ...	10	0	0	10	0	0	.....	...	...	.....	...	...
186	Seroovalore Tank	205	10	3	205	10	3	.....	...	...	.....	...	...
187	Carapet large Tank	180	0	0	180	0	0	.....	...	...	.....	...	...
188	Mathavamungalum Tank ...	1,350	0	0	1,350	0	0	.....	...	...	.....	...	...
189	Annially Tank	215	0	0	215	0	0	.....	...	...	.....	...	...
190	Caungaroyanunthul	135	0	0	135	0	0	.....	...	...	.....	...	...
191	Rendaryputt Tank	20	0	0	20	0	0	.....	...	...	.....	...	...
192	Eloopacoonnum Tank.. ...	100	0	0	100	0	0	.....	...	...	.....	...	...
193	Chedapairy large Tank. ...	220	0	0	220	0	0	.....	...	...	.....	...	...
194	Poondey Tank	220	0	0	220	0	0	.....	...	...	.....	...	...
195	Cadalaudey Dam	360	0	0	360	0	0	.....	...	...	.....	...	...
196	Carapet Tank	216	10	0	92	0	6	.....	...	...	.....	...	...
197	Keelcaroocattoor Tank supply Channel...	419	3	3	124	9	6	.....	...	...	.....	...	...
					129	3	3	24	...	...	.....	...	...
					266	0	0						
					129	1	0	.....	...	...	.....	...	...
198	Eroomboor Tank	684	1	0	555	0	0						
199	Sattiamungalum Tank.. ...	950	0	0	950	0	0	.....	...	...	.....	...	...
200	Valiumbaukum Tank... ...	436	6	0	86	6	0	.....	...	...	.....	...	...
					350	0	0						
201	Mailnurmah Tank	208	0	0	208	0	0	.....	...	...	.....	...	...
202	Etchoor supply Channel ...	15	0	0	15	0	0	.....	...	...	.....	...	...
203	Vullum Chittairey	437	6	0	72	6	0	.....	...	...	.....	...	...
					365	0	0						
204	Do. Hissa Tank	530	0	0	530	0	0	.....	...	...	.....	...	...
205	Annaboghee Tank	202	4	0	82	4	0	.....	...	...	.....	...	...
					120	0	0						
206	Chemboor do.	245	0	0	245	0	0	.....	...	...	.....	...	...
207	Oolunday Tank and Annicut ...	110	0	0	110	0	0	.....	...	...	.....	...	...
208	Etchoor large Tank	590	0	0	590	0	0	.....	...	...	.....	...	...
209	Salavadoo Chittairey	248	14	0	193	14	0	.....	...	...	.....	...	...
					55	0	0						
210	Garoodapoorum Tank Channel ...	96	0	0	96	0	0	.....	...	...	.....	...	...
211	Murdaud Tank	590	0	0	590	0	0	.....	...	...	.....	...	...
212	Ponnay Tank...	105	0	0	105	0	0	.....	...	...	.....	...	...
213	Covalay Chittairey	70	0	0	70	0	0	.....	...	...	.....	...	...
214	Padoor Tank...	105	0	0	105	0	0	.....	...	...	.....	...	...
215	Agaragaracotay Cbittairey ...	50	0	0	50	0	0	.....	...	...	.....	...	...
216	Sattumbaukum large Tank ...	100	0	0	100	0	0	.....	...	...	.....	...	...
217	Covalay large Tank	20	0	0	20	0	0	.....	...	...	.....	...	...
218	Mailmah Tank...	150	0	0	150	0	0	.....	...	...	.....	...	...
219	Wadoor Tank	72	0	0	72	0	0	.....	...	...	.....	...	...
220	Nulliancoolum Streerungarajahpoorum Hissa Tank	570	0	0	570	0	0	.....	...	...	.....	...	...
221	Oolgunday Tank	25	0	0	25	0	0	.....	...	...	.....	...	...
222	Cauvaniauttoor Thanghul ...	25	0	0	25	0	0	.....	...	...	.....	...	...
223	Goodalore Tank	150	0	0	150	0	0	.....	...	...	.....	...	...
224	Do.	389	15	9	389	15	9	.....	...	...	.....	...	...
225	Velauncaudoo Tank	50	0	0	50	0	0	.....	...	...	.....	...	...
226	Pyoor Tank...	95	0	0	95	0	0	.....	...	...	.....	...	...
227	Ellathoor Tank...	265	0	0	265	0	0	.....	...	...	.....	...	...
228	Coratambutt Condum.. ...	55	0	0	55	0	0	.....	...	...	.....	...	...
229	Ellapaukum Hissa Tank ...	309	0	0	309	0	0	.....	...	...	.....	...	...
230	Valiumbaukum supply Channel ...	120	4	0	120	4	0	.....	...	...	.....	...	...
231	Oolunday Tank	10	0	0	10	0	0	.....	...	...	.....	...	...
232	Allapooranthan Tank... ...	113	1	0	113	1	0	.....	...	...	.....	...	...
233	Poloor Talook Cutcherry ...	102	8	0	102	8	0	.....	...	...	.....	...	...
	Total.....	12,552	14	9	12,528	14	9	24	0	0	.....	...	...

ABSTRACT.

No. of Range.	To be accounted for.	Amounts passed.	Advances not exhausted by.	Advances exceeded by.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Range No. 1...	8,691 4 0	8,564 12 2	176 9 4	50 1 6
Do. No. 2	11,126 9 4	11,110 12 5	15 12 11	.....
Do. No. 3...	2,832 8 3	2,168 2 11	664 5 4	.....
Do. No. 4	21,029 6 7	20,511 8 7	512 11 2	27 13 2
Do. No. 5...	12,552 14 9	12,528 14 9	24 0 0	.....
Total	56,232 10 11	51,917 2 10	1,393 6 9	77 14 8

APPENDIX C.

Statement of alteration in the Department of Public Works of North Arcot District Engineer.

Rank and Names.		Remarks.
District Engineer...	Captain C. C. Johnston ...	Transferred to Central Office.
Do.	Lieut. J. O. Mayne... ...	Do. to Bangalore.
Do.	J. H. Dopping, Esq.... ...	Now in charge.

Omitted in following list, D. Daniel, Sub-Overseer.

1st DIVISION.

Rank and Names.		Remarks.
Executive Engineer ...	Lieutenant Mayne	In charge.
Assistant Executive Engineer ...	Do. Boyd	In charge.
District Engineer	Do. Mayne	In charge.
Do.	J. H. Dopping, Esq.	In charge.
Executive Engineer	Lieutenant A. D. Clay ...	In charge.
Supervisor	Mr. Howard	Was in charge for a time.
Overseer	Mr. Booth	
Assistant Overseer...	Mr. Lincoln	
Do.	Mr. Lee	Transferred to Telegraph Dept.
Do.	Mr. Anderson	Do. to Chingleput.
Sub-Overseer, 1st Class, 1st Grade	Poonapah Moodely	
Do. 1st do. 2nd do...	Mr. E. Haldwell...	Transferred to 3rd Division.
Do. 1st do. 2nd do...	Veerasawmy Moodely	Do. to Salem.
Do. 1st do. 3rd do...	Mr. Willy	At Palaur Bridge and Trivellum Talook.
Do. 2nd do. 1st do...	Streenevassaloo Naidoo.....	Died, succeeded by Veerasawmy.
Do. 2nd do. 2nd do...	Teeroovengadum..	Transferred to 3rd Division.
Do. 2nd do. 2nd do...	Sawmy Pillay...	Dismissed.
Do. 2nd do. 2nd do...	Mr. Pereira...	
Do. 2nd do. 1st do...	Mr. Morrell	Palmanair Talook.
Do. 3rd do. 1st do...	Alivaroo Naidoo...	Resigned.
Do. 3rd do. 3rd do...	Paroosaramen...	Dismissed.
Mahramut Superintendent... ...	Moonesawmy Moodely ...	Do.
		Promoted to Overseer and transferred to the 4th Division.

2nd DIVISION.

Rank and Names.		Remarks.
Assistant Executive Engineer ...	Mr. T. H. Bush.	
District Engineer	J. H. Dopping, Esq.... ...	Temporarily.
Executive Engineer	Captain W. H. Watts.	
Assistant Supervisor	Mr. Damerum..	Was in charge of the Division, for 2 months and transferred to Cuddapah.
Overseer	Moonesawmy Moodely.	
Assistant Overseer...	Mr. Morrell	Transferred to the 1st Division as 3rd Class, 1st Grade Sub-Overseer.
Sub Overseer 2nd Class 1st Grade	Mr. Theobald	Resigned.
Do. 1st do. 2nd do...	Annasawmy Moodely ...	Transferred to South Arcot.
Do. 3rd do. 2nd do...	Mr. Cassidy...	Dismissed.
Do. 3rd do. 2nd do...	Iyacooty Moodely	Do. and subsequently provided with 2nd Class, 3rd Grade.
Do. 3rd do. 3rd do...	Kistnasawmy Moodely ...	Do. and subsequently provided with 3rd Class, 3rd Grade, and transferred to the 5th Division.
Do. 3rd do. 3rd do...	Permaul	Dismissed.
Do. 1st do. 1st do ..	Condasawmy Moodely.	
Do. 2nd do. 2nd do...	Mr. Gaynor.	
Assistant Overseer	Mr. Brittain...	Transferred to Cuddaph.
Do.	Mr. Enright.	
Sub-Overseer 2nd Class 2nd Grade	Aroonachella Moodely.	

3rd DIVISION.

Rank and Names.		Remarks.
Executive Engineer	Lieutenant Keyes	Ordered to Punjab.
Do.	Major Walker...	Do. to Kurnool.
Do.	Captain Barber	Do. to join his Corps.
Do.	Mr. Dopping	Subsequently promoted to District Engineer.
Do.		In charge of the Division.
Assistant Superintendent	Ramanjooloo Pillay	Transferred to 1st Division.
Assistant Overseer...	Mr. Lee	Do. to Palamcottah.
Do.	Mr. Wright...	Do. to 2nd Division.
Sub-Overseer 2nd Class 2nd Grade	Aroonachella Moodely...	
Do. 3rd do. 2nd do...	Rungasawmy Moodely.	
Do. 1st do. 1st do...	Mr. Murray.	
Do. 2nd do. 2nd do...	Seenevassaloo Naidoo.	
Do. 1st do. 1st do...	Poonapah Moodely.	
Do. 2nd do. 3rd do...	Kistnasawmy.	

4th DIVISION.

Rank and Names.		Remarks.
Sub-Collector	Mr. Sullivan.	Partly.
Executive Engineer.	Mr. Huddleston	Transferred to Kistnah Division.
Do.	Lieutenant J. O. Mayne ...	Promoted to District Engineer.
Do.	J. H. Dopping, Esq., ...	Do. do.
Do.	Lieutenant B. B. Boyd ...	Transferred to 1st Division only a part.
Do.	Captain Taylor	Furlough on sick leave.
Do.	J. H. Dopping, Esq.,... ...	Promoted to District Engineer.
Do.	Lieutenant A. D. Clay.....	
Supervisor	Mr. Howard..	Was in charge for a time.
Overseer	Moonesawmy Moodely ...	Transferred to the 2nd Division.
Sub-Overseer 2nd Class 2nd Grade	Mr. Eyles	Arcot Talook.
Do. 1st do. 3rd do.	Mr. Willy	Dead.
Do. temporary	Mr. Coshan	Dismissed.
Do. 2nd Class 2nd Grade	Sawmy Pillay	Vellore Talook.
Do. 1st do. 2d do.	Mr. Haldwell	Transferred to 1st Division.
Do. 2nd do. 1st do.	Streenevassaloo Naidoo. ...	Do. do.
Mahramut Dv. Superintendent..	Soobroya Moodely...	Pensioned.

5th DIVISION.

Rank and Names.		Remarks.
Supervisor	Mr. F. Dick..	Transferred to Malabar.
District Engineer	J. H. Dopping, Esq.	During Mr. Dick's suspension.
Assistant Executive Engineer ...	Mr. Horgan	Resigned.
Do. ...	Mr. Biggers	
Sub-Overseer 1st Class 1st Grade	Perianna Moodely	Transferred to Tanjore.
Assistant Overseer.	Mr. Lincoln	Do. to 1st Division.
Sub-Overseer 2nd Class 2nd Grade	Vadamalay Moodely	
Assistant Overseer...	Appasawmy Moodely	Lately joined.
Sub-Overseer 3rd Class 2nd Grade	Kistnasawmy Moodely ...	Transferred to 3rd Division.
Do. 2nd do., 2nd do.	Mr. Haydon	
Do. 2nd do., 2nd do.	Marrappen Moedely... ...	Lately joined.

PALAUR ANNICUT PROJECT.

Rank and Names.		Remarks.
Executive Engineer....	Captain Taylor	In charge of part of project.
Do.	Lieutenant Keyes	North Channels.
Do.	Mr. Huddleston...	South Channels.
Assistant Executive Engineer...	Mr. T. H. Bush	Masonry works and Mahendravady Channel.
District Engineer.	J. H. Dopping, Esq... ...	Entire Project.
Overseer	Ramanjooloo Pillay.	Promoted to Assistant Supervisor.
Assistant Overseer	Mr. Howard..	Govendavady Channel.
Do. do.	Mr. Copcutt	Died.
Sub Assistant Revenue Surveyor	Mr. Byrne	Dismissed.
Do.	Mr. E. A. Price	South side.
Do.	Mr. S. Ward	Transferred.
... ...	Mr. S. Lee	Do. 3rd Division.
Assistant Overseer	A. Erskine...	Do. to Bellary.
Do.	Mr. Cooke	South Channel (temporarily.)
Sub-Overseer 1st Class 2nd Grade	Mr. L. Straton	Do. to his Corps.
Do. 1st do., 2nd do.	Mr. Brown	Do. do.
Do. 1st do., 2nd do.	Veerasawmy Moodely.	Do. to 1st Division.
Do. 1st do., 2nd do.	Iyasawmy Moodely. ...	
Do. 2nd do., 1st do.	Theagaroy Moodely.	Do. to Malabar.
	Cundasawmy Moodely	Do. to Tanjore.
	Ramasawmy Moodely	
	Mr. Halge.	
	Mr. Cherryman	Dead.
Do. 2nd do., 3rd do.	Mr. D'Silva...	Dismissed.
Do. 3rd do., 3rd do.	Mr. McCarthy..	Do.
	Parthasarthy Naidoo...	Do.
Do. 2nd do., 1st do.	Seeteram Naidoo	
Do. 2nd do., 1st do.	Mr. Haydon..	Dismissed, subsequently promoted to Cheyur Annicut.
	Mr. Gaynor	

(Signed) J. H. DOPPING, C. E,
District Engineer.

APPENDIX D.

No. 256.

Assistant Engineer's Office of
North Arcot Camp Vellore,
22nd July 1857.

OFFICIAL MEMORANDUM.

As Mr. Lincoln's services have been demanded by and handed over to, the Telegraph Department, Mr. Lincoln will be good enough to close his Accounts, and prepare Bills for the amount of work done, in anticipation of the visit of Lieutenant Boyd, which will take place in a few days, when he will hand over his Accounts to Lieutenant Boyd, who will then give him a Certificate of no demands.

(Signed) B. B. BOYD, Lieut.,
Assistant Engineer of North Arcot.

To Mr. John Shaw Lincoln,
Assistant Overseer, D. P. W.

I hereby certify that there are no demands against, nor any balance due by, Assistant Overseer J. Shaw Lincoln, on account of money received for works in the first Section.

(Signed) B. B. BOYD, *Asst. Engr., N. Arcot.*

Camp Palmanair,
2nd August 1857.

(Signed) J. O. MAYNE, *Ag. Dt. Engr. N. Arcot.*

Mr. Lincoln states that he had charge of work in the Poloor, Wandiwash, Trivattoor and Conjeeveram Talooks, the greater portion of which were taken over charge from Mr. Downie in 1853-54. States also that the Accounts of this individual were kept in such a confused state, that he considered it incumbent on him, to repudiate all responsibility in regard to them; and he accordingly addressed Captain Collyer upon the subject, forwarding all Mr. Downie's Accounts, which he was afterwards called upon to assist in adjusting. States that in reply he was compelled to inform Captain Moberly of his inability to do so.

States also, that, in 1855, he was removed from the above charge, and placed under the orders of the Officer in charge of the 1st Division; that he delivered over all his Accounts to his successor, who raised no objections to receiving them, and that further on leaving the Department he received a Certificate of "no demands" signed by Lieutenant Boyd, and countersigned by Mr. Acting District Engineer Mayne, which he considers sufficient to clear him of all responsibility in reference to his transactions in the Department Public Works, as it was not a rule prior to the transfer of the Executive to the Engineer Department, to receive and grant similar Certificates on taking or giving over charge.

I have read the above and found the same to be correct.

(Signed) J. SHAW LINCOLN.

1st February 1859.

APPENDIX E.

Irrigation New Works.

Bill No. 12 of ~~1856-57~~ 1855-56.

North Arcot.

Work—Construction of a Calingulah at Paulavaukum in Suttivadoo Talook. Amount of Estimate Rupees 444-1-0 sanctioned by Government, 6th November 1854.

Description of charge.	Amount. Rs.	A	P.	Total. Rs.	A.	P.
~~37½ Cubic yards of Brick in Chunam @ 2-8-0 per C. Yd.~~	~~93~~	~~0~~	~~0~~			
Bricks, Chunam, Rough Stone and upright Stones supplied.....						
~~Foundation~~	~~7~~	~~0~~	~~0~~			
Total Company's Rupees....	..	..	..	100	0	0

Central Office of P. W. / *Fort Saint George...* / *4th October* 1853. / *Passed by the Chief Engineer for* 100 / *Rupees One hundred.* / *By Order* / (Signed) P. FRANCIS, / *Supdt. Engr. Central Circle.* / T. W. J.

Amount of Estimate...444-1-0
Bill No.12 of 1855-56..100-0-0

Balance 344-1-0

Commenced by Collector.

(Signed) S. LEE,
Asst. Overseer of N. Arcot.

(Signed) W. BARBER, Captain,
Executive Engineer of N. A.

(Signed) J. O. MAYNE, Lieut.,
District Engineer.

Camp Arcot,
1st May 1857.

Cal. Exd. P. P.

N. B.—Cancelled as the money has been recovered and brought to account in this year 1859.

Print for M.S.; this is a facsimile of the Bill.

NORTH ARCOT DISTRICT,

3RD SECTION.

BILL No. 12 OF 1858-59.

Construction of a Calingulah at Pa-
lavankum Tank in Sullivaloo Talook.

Rupees.....100-0-0.

A. D. No. 254.

APPENDIX F.

IRRIGATION.

Bill No. 88 of 1858-59.

CUDDAPAH DISTRICT.

Work.—Repairs of Pitchapaud Tank, amount of Estimate Rupees 405 sanctioned by Collector in January 1858.

Description of Charges.	Amount. Rs.	A.	P.	Total. Rs.	A.	P.
LABOR.						
3 Head Coolies, at 4 Rupees each	12	0	0			
1 Do. at 3½ Rupees	3	8	0			
220 Men Coolies, at 2 annas each	27	8	0			
40 Small Coolies, at 1 anna and 4 pice each	3	5	4			
				46	5	4
MATERIALS.						
217 Cubic yards of new revetment, at 5 annas per yard	67	13	0			
2,033 Cubic yards of earth work, at 10 pice per yard	105	14	2			
38½ Cubic yards of old revetment, at 1 anna per yard	2	4	6			
				175	15	8
Total Rupees				222	5	0
Amount of the last Bill No. 187 of 1857-58 of 27th May 1858 brought forward				182	11	0
Total				405	0	0

Commenced .....20th February 1858.
Completed .....20th September ,,
Date of Inspection..21st ,, ,,

District Engr.'s Office, 30th October 1858.

(Signed) W. B. WALTON,
Assistant Supervisor.

(Signed) STEWART, Lieut.,
District Engr. of Cuddapah,

IRRIGATION.

Bill No. 189 of 1858-59.

CUDDAPAH DISTRICT.

Work.—Repair of Pitchapaud Tank, amount of Estimate Rupees 405 sanctioned by the Collector in December 1857.

Description of Charges.	Amount. Rs.	A.	P.	Total. Rs.	A.	P.
LABOR.						
3 Head Coolies, at 4 Rupees per mensem	12	0	0			
1 Do. at 3½ ,, do.	3	8	0			
220 Men Coolies, at 2 annas each	27	8	0			
40 Small Coolies, at 1 anna and 4 pice each	3	5	4			
				46	5	4
MATERIAL.						
217 Cubic yards of new stone, at 5 annas per yard	67	13	0			
2,033 Do. earth-work, at 10 pice per yard	105	14	2			
36½ Do. old stone, at 1 anna	2	4	6			
				175	15	8
Total Rupees				222	5	0
Amount of last Bill No. of 1857-58, brought forward				182	11	0
Total Rupees				405	0	0

Commenced .....20th February 1858.
Completed .....25th September ,,
Date of last inspection..... 9th December ,,

(Signed) W. H. WALTON,
Assistant Supervisor.

(Signed) J. SHAW STEWART, Captain,
District Engineer, Cuddapah.

APPENDIX G.

NORTH ARCOT DISTRICT.

RANGE No. 1.

BASAVAPULLY BUNGARUCCA TANK.

Estimate Rupees 318-3-0.

Advances on Estimate, to Tahsildar, ...	Rupees	200	0	0
to District Engineer, ...	„	118	3	0
	Rupees	318	3	0
Advances for works, by Tahsildar, ...	Rupees	181	8	0
by District Engineer, ...	„	95	10	1
	Rupees	277	2	1
Expended on works by Tahsildar, prior to 16th April 1856,	Rupees	181	8	0
by District Engineer, ...	„	95	10	1
	Rupees.....	277	2	1
	or, under the Estimate, „	41	0	11

2. It appears that the Tahsildar received Rupees 200 and expended Rupees 181-8-0, he has therefore to refund or account for Rupees 18-8-0.

This amount 18-8-0 has since been accounted for.

3. The District Engineer is said to have received Rupees 118-3, while the Statement shews the expenditure as follows:—

In 1855-56 Rupees 75-0-0, in 1856-57, Rupees 20-5-8 together Rupees 95-5-8, he has therefore to refund or account for Rupees 22-13-4.

4. The work executed by the District Engineer amounts to Rupees 95-10-1, and it appears by the last para. that the amount advanced for expenditure was Rupees 95-5-8, there is therefore due to somebody Rupees 0-4-5.

5. The Accounts must be adjusted as follows, viz,:

* Since accounted for. * The Tahsildar must account for or refund ...	Rupees	18	8	0
The District Engineer.....	„	22	13	4
and there is due to somebody	Rupees	41	5	4
which leaves excess of Estimate over cost	„	0	4	5
	Rupees	41	0	11

6. Although the figures, given in the foregoing, are all extracted from authentic and certified documents and books, it is clear that, from the system, even these cannot be relied on, which fact this instance will prove.

7. Captain Johnston stated, and as is evident, believes, that the amount Rupees 118-3-0, was drawn from the Collector; it appears that it was included in a credit given by Captain Johnston in favor of Lieutenant Mayne, and the amount appears in the Account Current to the debit of Lieutenant Mayne. The fact is, that a part of the money never was drawn at all, because the credit of Rupees 926-10-0, the aggregate balances for 15 Estimates, of which Rupese 118-3-0, was for one Estimate, was never fully drawn, it is therefore quite *impossible* to decide as to which of the 15 items the amount short drawn properly belongs. The impropriety of entering a credit opened by Captain Johnston in favor of Captain Mayne as a substantive charge against the latter Officer, it would be idle to discuss, the entry is radically wrong, both in theory and practice, and can only tend to render the accurate balancing of the Accounts an utter impossibility.

8. In any other Statement of Account than an Account Current, items which are not strictly cash transactions, are sometimes admissable, but the entry of a sum which has never been drawn, to the debit of an individual, is delusive and confusing to a degree, and opposed to the most important principle of accounting, viz., that the records shall be true. An Account Current is in every particular analogous to a Pass Book with a banker, in which are entered nothing but accomplished facts, sums actually received on the one side, and amounts actually disbursed on the other.

9. There is another circumstance which it has been found impossible to account for, viz., The work executed by the District Engineer amounted to Rupees 95-10-1, on account of which Rupees 75 had been drawn, why then was Rupees 20-5-8 only drawn when Rupees 20-10-1 was due? If the second amount drawn had been a round one like the first, it might be considered an advance, but it was evidently not a payment on account, but one made on some calculation. The Assistant Engineer's bill gives the amount *paid* by Engineer's Department Rupees 95-10-1, while the actual disbursements are shewn to have been only Rupees 95-5-8.

10. Again in the District Engineer's Statement, the advances for this work are stated to be Rupees 200. The expenditure by the Collector is also stated to be Rupees 200 which is not true; the amount expended being only Rupees 181-8. The expenditure of the District Engineer is stated at Rupees 75, instead of Rupees 77-2-1. The total expenditure is stated at Rupees 275-0-0, which is also untrue; the correct amount being Rupees 277-2-1. In Captain Johnston's Statement, there appears an item as follows. "Advances by the District Engineer, Rupees 118-3-0" this must be a mistake of that Officer—his Statement goes on to exhibit the expenditure until completion as follows:

May.....Rs.	285	1	2
June..... „	295	3	2
August..... „	295	5	8
September..... „	295	5	8
October..... „	295	5	8
November..... „	295	5	8
December.....Completed.			

Now as the total expenditure amounts only to Rupees 277-2-1 either all these items must be wrong, or all the other records in the Office must be erroneous. The work appears to have been completed on the 6th September 1856.

APPENDIX H.

No. 310.

TO THE RIGHT HONORABLE S. R. LUSHINGTON,
Governor in Council.

SIR,

1. A very material progressive improvement, has been observable for some years, in the number, respectability, and structure, of private houses at Madras, clearly evincing, that building materials, as well as Artificers, are abundant; we have looked with considerable anxiety to a realization of the advantages which such a state of things should have produced to the public, viz., a reduction in the charges made against Government in the Department of buildings and repairs, but we regret to say, we have been disappointed, at least to the extent that we consider the public have substantial grounds to require. We have therefore been induced to give the subject, our serious consideration; the result of our enquiries impose upon us as an imperative duty to declare in distinct terms that the existing system of executing Public Works in the department of buildings and repairs is in our opinion essentially erroneous in principle, and detrimental to the public interests, both as regards efficiency and economy.

2. Tracing the various orders which have been passed on this important question, we are at a loss to discover why the system of building by contract, should not have been practically introduced long ago.

3. We find that so far back as the year 1796, it was ordered by Government to be adopted, but the order was not acted upon. Again in 1808, Government directed the Regulations of 1797 to be recurred to, and their opinion was forcibly stated, that building by contract was the most efficient system that could be followed, but delays occurred, and the order was not carried into effect.

Letter from Government, 4th October.

Extract letter from Government, dated 18th June 1808.

Para. 2. "The Governor in Council is satisfied that the "principle adopted at that period (contract 1797) with re- "spect to the execution of works by contract, may be now "continued with great public advantage, and that it should "be extended in all practicable cases to every building of "whatever description."

Para. 4. "The Governor in Council directs me to observe "that the advantage of this plan has been confirmed by "experience, as all buildings and repairs in Bengal are "now executed by that means."

Letter from Government, 9th November 1810.

4. The Establishment of the Commissariat, and the principle that all supplies of whatever description which might be required

for the public service, should be provided by that department appear to have superceded the considerations of advantage, which had been entertained from the contract system, and we find that in 1810, our Board was required to revise the Engineer Regulations, adapting them in respect to the provision of building materials by the Commissariat to the method, which had been lately adopted in Bengal.

5. About the same period, a Regulation was passed, which placed Superintending Engineers of Divisions upon a fixed staff allowance, in place of remuneration by a cash commission on the amount of Estimates sanctioned for execution.

Letter from Government, 24th September 1813.

6. The Regulations (revised as above noticed) having been submitted by our Board accordingly were approved by Government in 1813, and ordered to be adopted, they continued in force until 1823, when, having on various occasions found it necessary to represent that the plan did not work well, principally on the ground, of frequent disappointment and delay, arising out of the supply of materials, and their application being vested in separate departments; our Board suggested that the duties should be entrusted to the Executive Officers, which was accordingly approved, and is the system now in force.

Letter from Government, 17th January 1823.

7. We were at the time and continued to feel so fully impressed with the conviction that Government were required to pay much more extravagantly for building, than individuals, that, with a view to ascertain the best means of remedying the evil we recommended in 1824, that a bridge which was required to be erected over the Coum river at the Presidency, should be built by contract, the suggestion was approved, and the work successfully, and satisfactorily executed at a considerable saving to Government.

Military Board's Report, No. 440, dated 2nd November 1824—answered 30th November following.

Chief Engineer's Estimate	Rupees	47,376	1 5
Contract.....		40,873	10 0
Difference.....		6,502	7 5

8. The Honorable Court of Directors on observing in the Consultations of Government, the acceptance of the above contract, were pleased to express their approbation, and strongly recommended the adoption of the method of building generally.

With letter from Government, dated 30th June 1826. Extract from General letter—Court of Directors, dated 8th February 1826.

Para. 21. "From your Consultations in this Department, "dated 17th August 1824, we observe that you have au- "thorized the Military Board to invite Tenders for build- "ing another bridge over the same river by contract. "This mode of executing Public Works appears to us to "be attended with so many advantages, we do not hesi- "tate to approve of your having adopted it in this instance, "and to recommend your adopting it in others, always "taking effectual measures to ascertain that the contract "is properly executed."

Sanctioned by Government, 9th November 1827.

9. A further trial was made of the system in 1827, when another bridge was required to be built over the same river, but as several alterations and additions were adopted in the course of the undertaking arising out of fortuitous and unforeseen causes, we cannot say whether the work was executed at a lower cost to Government, than would have been incurred, had it been performed in the ordinary way; but, comparing the original Estimate of the public Officer, with that which was accepted for the contract, the latter has the advantage.

Chief Engineer's Estimate	Rupees	27,438	0 0
Contract		26,600	0 0
Difference.....		838	0 0

10. The foregoing comparison of Estimates shews very satisfactorily that at the period the first contract was accepted, the Engineer's charges were much higher, (and lest it should be stated that the public Officers worked below their Estimates, we beg to quote a a para. from one of our reports to Government on that point) and that by the time the second was accepted, these prices had been brought down to nearly a par, with the contract rates! and thus far a considerable advantage was gained by the experiment.

Military Board's Report to Government, No. 440, dated 2nd November 1824.

Postscript para. 3. "With reference to the remark of the "Acting Chief Engineer that nine times out of ten, the "Bills of Executive Engineers fall within the Estimates, "we beg to annex a Statement of new buildings con- "structed at the Presidency since 1818 (and finally re- "ported upon) by which it will be seen that in 3 instances "the Bills have fallen within the original Estimates, whilst "in 13, additional Estimates have been required to cover "the Bill."

11. We shall now proceed to point out more in detail, the evils attendant on the present system of executing Public Works, and the grounds on which we found our opinion, that greater economy and increased efficiency would follow the general introduction of building by contract.

12. Our own experience and the information we have sought has led us to the conviction that a serious, and extensive evil exists, in the possession of a monopoly by certain Natives of building materials, and an over-powering control over the Artificers, both at the Presidency and at Out-stations.

13. This has arisen out of certain rules adopted many years ago by Government, where works were executed by contract, great difficulty then existed in the provision of materials, and Government claiming the privilege of being first served, passed an order that no bricks or lime should be burned at Madras without a license from the Collector, and that such license should invariably contain a clause, that the contractor for buildings should have the first offer, as well as choice of materials; when contracts were given up, the privilege was continued to the public Executive Officer; Government being the principal consumer, the monopoly thus became established and sanctioned by authority.

14. We first became aware of the existence of this bar to improvement in the building department in the year 1827, and having represented the circumstance to Government, we were informed that the practice would be discontinued in the future issue of licenses. The persons however, who had before furnished supplies of bricks and lime, were already established in the possession of their monopoly, and we are assured continue to be the suppliers, from the circumstances they must have been for years, in hourly communication, (and it has been mentioned to us in direct connection) with the Native portion of the public Executive branch of the Engineer Department; and there having been no competition in the supply of meterials previously, it was evident that any attempt to supplant them (the monopolists) so long as the supply and appropriation continued in the same hands, would be attended with an almost certainty of failure! The consequence was natural, they keep up their prices and retain their control.

15. The extent to which this influence is carried, is scarcely credible! We have received credible information that an individual who is obnoxious to the monopolists, (and all who attempt to work for Government by contract are so considered) finds the utmost difficulty in procuring materials, and even persons who are not viewed as inimical to established usage, are often obliged to have recourse to the agency of the Public Department, before they can procure supplies.

16. The principal evil of the combination to which we allude consists in its tendency to keep down all competition, and perpetuate the monopoly; it has been represented, and we have reason to believe with entire truth, that the moment a contract work is undertaken, every nerve is strained to cause either its failure, or by opposition to render it ruinous to the party undertaking it; thus it has occurred that, whilst the contractor, anticipating no interruption to his progress, has continued to engage his Artificers from day to day, he has found that when the people have been mustered for work, materials are not forthcoming—not that there existed any deficiency, but on a pretence that they were required for the Public Department, and as the suppliers are all bound by contract to the Public Officer they cannot sell till he is supplied; but this "contract" (as it is termed) is no more than a less objectionable name for the combination to which we are opposed, for every purveyor of lime, (with one single exception, who, we are informed is prescribed, because he undertook to supply a contractor) is "retained" (if we may apply the term) although an abundant supply could be obtained from one or two contractors properly so called were the market freely opened to the public.

17. The influence of the combination extends also to private works, with the same view of destroying competition; no sooner is a building undertaken, by an individual, than it is made known to him, that if he will employ a maistry, who is recommended, he will be able to execute the work much cheaper than any other professional person, can, and no doubt it is the case, for it is evidently the interest of those people to underwork all competitors at whatever cost, and their profits are so enormous that they can afford to sacrifice a great deal so long as they retain their influence over the supplies; as an instance of the means resorted to for the purpose of ruining competitors, we are credibly informed, that common workmen are employed, who engage themselves by the day until an opportunity offers, of laxity of supervision to mar the work, and thus bring discredit on the architect, and not only the lower class of workmen are so employed, but even the maistries are drawn into the combination. An instance was lately brought before the Police Magistrates, and so satisfactorily proved that the culprit was sentenced to punishment.

18. Another serious objection to the present system, arises from the delay which frequently occurs, in the completion of Public Works, and non adjustment of balances.

19. When an Estimate is passed, an advance of cash, to one-third the amount of it, is authorized to be taken up, it has often occurred that from many works being on hand at the same moment, delay has taken place in their execution. The Engineer by Regulations is prohibited, applying money granted on account of one Estimate to any other work whatever, and the consequence is, the account of the public money so issued remains unadjusted; it may be said, that it is in the hands of traders for supply of materials, but that is even worse, for if materials are supplied which from pressure of business elsewhere cannot be worked up, the public would have to bear any loss which might follow the delay.

20. Again, when works are executed by the Public Officer, the risk of injury or failure from stress of weather is of necessity borne by the public; considerable loss has occasioned from this cause, particularly in buildings of great extent which could not be finished in one season.

21. We look upon it to be totally impossible for Superintending Engineers (in the proper acceptation of that term, viz., as checks upon the Executive) efficiently to fulfil their duties, when they are also charged, with the supply of materials; a great portion of one or other of these duties must of necessity be entrusted to Natives, the combination to which our observations have reference, pervades the whole of this part of the department, and it requires no deep acquaintance with the Native character particularly that class, to determine, what would be, (and what we have no doubt is) the result of placing their interest in opposition to their duty.

22. In stating the above opinion regarding the inefficiency of superintendence of Engineers where that duty is combined with supply of materials, we beg to be distinctly understood, as not intending to impugn the official conduct of Superintending Engineers, we believe they are most zealous, able and attentive; but the evils to which we would point are beyond their control, and originate and have their support in the system which we have stated to be in our opinion fundamentally erroneous in principle.

23. It may be argued that there exists other check than that of Superintending Engineers over buildings, viz., the Military Board and Committees for new works, and the Chief Engineer for repairs, but their inspections are only occasional, and are intended principally to watch the progress of works, as connected with advances of cash; until their completion when in reality they can only examine external measurement and finishing; the substance combining materials and workmanship is shut out from view, and it is in this point particularly that the evil is most clearly seen, viz., the Superintending Officer being the only check upon his own work, as Executive.

24. We shall now turn to the second proposed point of our enquiry, viz., whether adopting the contract system would not be productive of economy.

25. A contractor in framing the terms on which he shall make his tender, has to calculate the expense of Draughtsmen, Estimate-makers, Conocopolies, Peons, Superintendence, scaffolding and risk of injury or failure from stress of weather to which he must add security for the due performance of his contract and profit and loss.

26. On a calculation of the expenses (to Government) attending the former of these charges at the Presidency (but omitting risk, and excluding the staff pay of the Superintending Engineer and his Assistant, as also 2 companies of Lascars,) taken for one year, and applying it to the expense of buildings and repairs for a similar period, taken on an average of 5 years, we find the establishment to be about 9 per cent. on the expenditure, but it has been shewn that the Engineer's and Contractor's charges are nearly on a par; consequently the existing system costs Government 9 per cent. more than the contract would do, without taking into account risk! 9 per cent. applied to the abovementioned average annual expense of building would give Rupees 19,477 per annum as a saving at the Presidency.

Statement of Expense of buildings and repairs for 5 years, 1825 to 29 inclusive, and Office and Executive Establishment of the Engineer Department, Presidency Division for 1 year, with the value of tools and implements expended in one year, taking on an average of 5 years as above.

Total expense on account of new buildings and repairs at the Presidency for 5 years, being from 1825 to 1829 inclusive.....Rs.	10,82,114		
Average for 1 year.....Rs.	2,16 422		
Engineer's establishment for 1 year, exclusive of the Lascar establishment and Officer's allowances....Rs.		11,430 equal to 5¼ per cent.	
Amount value of tools and other articles expended by the Engineer department Presidency from Nov. 1824 to July 1829.. .....Rs.	36,680		
Average for 1 year of expenditure.....Rs.		7,722 equal to 3½ per cent.	

27. But again, the risk, security and profit and loss which the Contractor is bound to provide for, cannot be assumed at less than 20 per cent. on the estimate, with any prospect of the undertaking being either safe or profitable; and thus it appears the Engineer's estimates when on a par only with those of the Contractor are 29 per cent. including establishments higher than they ought to be.

28. We believe our calculation to be below the reality, but assuming that it is not, it has been shown that Government pay for their buildings 20 per cent., which in a Contractor's estimate comes under heads for which the public estimates are not required to provide. Then who derives this profit? Government have the security of the Engineer's affidavit that he does not profit by the works he executes on account of the public. The conclusion is therefore obvious, and fully accounts in our opinion for the extreme hostility to the contract system which has always pervaded the public establishments in the building department.

			Retail prices as per Acting Chief Engineer's price list.	Prices as charged by the Superintending Engineer.
1st Sort. wall bricks	9 by 4½ by 2½	per	1,000 3 8 0..	3 8 0
2nd do. do	9 „ 5¼ „ 2½	„	1,100 3 8 0..	3 8 0
Arch bricks.....	10 „ 4 „ 2	„	810 3 8 0..	3 8 0
Terrace bricks..	5 „ 3½ „ 1	„	2,050 3 8 0..	3 8 0
Flat tiles	6 „ 4¾ „ ½	„	2,100 3 8 0..	3 8 0
Pan do..... ..	11 „ 5 „ ½	„	1,200 3 8 0..	3 8 0
Shell Chunam, including Cart hire per 14 parahs			3 8 0	3 8 0
Jaggery, per candy			25 0 0	25 0 0

29. We believe it is an established usage in all commercial transactions that the wholesale purchaser has a right to a reduction of price as compared with that charged to the retail buyer. But in the purchase of materials for the building department, no such advantage accrues to Government, though the consumption of materials by individuals will bear no comparison in extent with theirs! A reference to the comparative statement in the margin taken from the Acting Chief Engineer's periodical report of bazar rates, and the actual bill charges of the Superintending Engineer will bear us out in what we have stated.

30. But although it is notorious that the number of buildings has so greatly increased of late years; and consequently the demand for materials, it is equally well known that the sale price of those materials remains nearly the same; and this we account for by the monopoly before noticed; we may here mention that an individual may purchase the soil and make his own bricks at little more than half of what the public are to this day paying.

31. With regard to advances of cash, the contract system has advantages, in their being paid by quarters; the last of which is reserved till the contract has been fulfilled, whereas under Superintending Engineers, the advances are by thirds, and the total amount of the estimate may be taken up by the time the work has been two-thirds finished, and all risk arising from fortuitous causes falls upon the public.

32. We have before shewn, that the expense of establishments, or 9 per cent. would accrue as a bonâfide saving on estimates, if work is performed by contract; but we consider from what has followed competition in other trades, that prices of materials and labour would also come down in the building department were the market free! It might and probably would occur that for the first year or two, the reduction would not be so decided, but so soon, as it became known that contract was to be the permanent system, we have no doubt, that many competitors would start up, and that instead of the builder combining in his own business, the trades of Bricklayer, Carpenter, Painter, Plumber, Glazier, &c. &c., each would form a separate occupation.

33. It is universally known that Native builders, will work cheaper than others; this is partly owing to the high prices Government and the Europeans generally are required to pay, and partly to the Native Maistry not being at any expense, in keeping up a stock of materials, scaffolding, &c., and being satisfied with a very moderate profit, sufficient merely to keep them and their families in food, till they can procure further employment.

34. The difference of charges by Natives and others, is not so great at the Presidenc but an instance is within our knowledge, whe a Native Maistry executed a work quite sat factorily for Rupees 537-4-0, whereas the Sup intending Engineer's Estimate amounted Rupees 1,299-7-9 and the Maistry's work w more substantial than the plan provided, a we do not feel the least hesitation in stating our opinion that in a few years, the data for buil ings would be reduced, at least 20 per cent. below its present standard.

Side wall of the Dragoon Fives Court to be rebuilt at Bangalore.

Engineer's Estimate.....	Rs.	1,299	7 9
Work executed under the arrangement of the Officer Commanding the Regiment..	Rs.	537	4 0
Difference Rupees.....		762	3 9

35. We have only adverted to reduction in the office and working establishment of Superi tending Engineer; but the expense of a great portion of stationary charges would also be save and probably the Lascar establishment at the Presidency mig be considerably reduced.

2 Companies of Engineer Lascars.

36. We have said that superior efficiency would follow the adoption of our suggestion.

37. Superintending Engineers being relieved from the provision of materials would be liberty to devote their whole attention to the Executive; there would not exist the same o portunity of surreptitiously introducing inferior materials, and experience has sufficiently shew at Madras, with what jealous, and scrupulous exactness every step a Contractor takes in the fu filment of his work is watched.

38. To exemplify what we consider to be more efficient superintendence, we would i stance the bridge built by contract over the Cooum river in place of Anderson's. An Officer Engineers, aided by a Maistry was placed in superintendence of the work; his constant presen effectually prevented irregularity, and we feel fully assured that as regards materials and work manship, no public edifice has been built superior in those respects; but had the Superintendin Engineer been required to build that edifice, having at the period of its commencement, 15 ne works and 39 buildings under repair on his hands at Madras, Palaveram, the Mount and Poo namallee; it needs no argument to prove, that a great proportion of superintendence and th principal examination of materials must of necessity have been left to Natives.

39. We do not mean to argue that it would be necessary or practicable to appoint a Officer of Engineers to superintend each separate work, but it is evident that the Superintend ing Officer as such being relieved from the provision of materials, must have more time dispos able for his other duty.

40. Having endeavoured to prove that Government are paying most extravagantly for the performance of works in the building department having, we believe succeeded in showing the causes which produced such a result, and the evils arising therefrom, we consider i to be our duty to recommend that the present system of building be abolished, and that all pub lic works whatever shall be executed by contract.

41. It may perhaps be proper that we should advert to the stability of works by contract which have stood the test of time, and we would therefore mention the palace for the ladies of Tippoo's family at Vellore, and the Banquetting Hall at Government House, as specimens which are highly in favour of the system.

42. We have no doubt that the introduction of building by contract will meet with great opposition from those interested in the continuance of the existing system; but feeling it to be fully practicable, and that public Officers will receive that degree of support from Government which such opposition will render necessary, we repeat, that we have no doubt whatever of its proving successful; and its introduction without distinction for all buildings and repairs, will very soon put an end to all hope of a renewal to the monopolists of present advantages.

43. Shoud our proposition meet the approval and sanction of Government, we shall be prepared to submit the general principles and subsidiary rules which we consider would most effectually secure the public interest in the department of buildings and repairs to be executed by contract.

24th August 1830.

Initialled J. P.
W. G. P.

APPENDIX I.

Range No. 1. Certificate No. 1.

District, North Arcot.

Sanctioned 30th February 1859.

Estimate No. 99.

Construction of a Tank at Chittoor.

Quantity.	Description.	Rate.	Total of Work.			Executed as per last Certificate.			Executed as per this Certificate.			Total executed inclusive of this Certificate.			Remaining to be executed.			Extra work.			Remarks.
1	2	3	4			5			6			7			8.			9			
			Quantity	Value.		Quantity	Value.		Quantity	Value.		Quantity	Value.		Quantity	Value.		Quantity	Value.		
				Rs.	A. P.		Rs.	A. P.		Rs.	A. P.		Rs.	A. P.		Rs.	A. P.		Rs.	A. P.	
10,000 c. y.	Earth-work.....	One Anna	10,000	625	0 0				2,000	125	0 0	2,000	125	0 0	8,000	500	0 0				
400 c. y.	Rough stone.....	Seven As.	400	175	0 0										400	175	0 0				
121 c. y.	Rough stone in chunam.....	1 R. 6 As.	121	176	6 0										121	176	6 0				
12	Upright stones..	1 R. 8 As.	12	18	0 0										12	18	0 0				
26 c. y.	Brick in Chunam	2 Rs. 4 As.	26	58	8 0										26	58	8 0				
				1,052	14 0					125	0 0		125	0 0		927	14 0				

Advances have been made as follows.....			
		200	0 0
		75	0 0
		125	0 0
Difference in hand.....			

Range No. 1. Certificate No. 2.

Sanctioned 30th February 1859.

District, North Arcot.

Estimate No. 99.

Construction of a Tank at Chittoor.

Quantity.	Description.	Rate.	Total of Work.		Executed as per last Certificate.		Executed as per present Certificate.		Total executed inclusive of this Certificate.		Remaining to be executed.		Extra work.		Remarks.
1	2	3	4		5		6		7		8		9		
			Quantity.	Value. Rs. A. P.	Quantity.	Value. Rs. A. P.	Quantity.	Value. Rs. A. P.	Quantity.	Value. Rs. A. P.	Quantity.	Value. Rs. A. P.	Quantity.	Value. Rs. A. P.	
10,000 c. y.	Earth-work.....	One Anna	10,000	625 0 0	2,000	125 0 0	3,000	187 8 0	5,000	312 8 0	5,000	312 8 0			
400 c. y.	Rough stone....	Seven As.	400	175 0 0	.....	.....	200	87 8 0	200	87 8 0	200	87 8 0			
121 c. y.	Rough stone in chunam.....	1 R. 6 As.	121	176 6 0	.....	.....	.....	.....	.....	.....	121	176 6 0			
12	Upright stones	1 R. 8 As.	12	18 0 0	.....	.....	.....	.....	.....	.....	12	18 0 0			
26 c. y.	Brick in chunam	2 Rs. 4 As.	26	58 8 0	.....	.....	.....	.....	.....	.....	26	58 8 0			
			1,05211	0 0	.....	125 0 0	200	0 0	400	0 0	652	11 0			
Advances have been made as follows.....					.....		200	0 0	400	0 0					
Difference in hand.....					.....		.....		.....						

APPENDIX J.

No. 7279.

Extract from the Proceedings of the Chief Engineer, under date the 22nd January 1859.

Read the following

MEMORANDUM.

From the Superintending Engineer, Southern Circle, H. E., dated 22nd January 1859.

Although not now in charge of the Central Circle, I think it necessary to record my belief that some strict enquiry is necessary into the Accounts of the works connected with the Palaur Annicut and its dependencies in North Arcot; as I have little doubt that hereafter it will be found impossible to complete that project within the sanctioned Estimate.

2. I strongly recommend this subject to the notice of the Chief Engineer in order that the Accounts may be examined and that responsibility may not be fixed on me of having as either Officiating Chief or Superintending Engineer neglected to ascertain the state of the expenditure.

Supg. Engr's. Office, Sn. Circle,
Fort Saint George,
22nd January 1859.

(Signed) E. LAWFORD, Lieut.-Col.,
Supg. Engr. Sn. Circle.

To the Chief Engineer, Fort Saint George.

Resolved to refer the within Memo. of the 22nd Instant, to the Commissioner for enquiring into the state of Public Establishments for their obliging, early consideration previous to any final closure of their investigations into the Accounts of the North Arcot District.

Resolved also that a copy of this Extract Proceedings and of the Memo. by Lieutenant Colonel Lawford be forwarded for the information of the District Engineer, Mr. Dorping.

(True Extract.)

(Signed) C. E. FABER, Colonel,
Chief Engineer.

To the Commission for enquiring into the state of Public Establishments.

APPENDIX K.

PUBLIC WORKS DEPARTMENT.
Public.

No. 354.

Extract from the Minutes of Consultation under date the 9th April 1859.

Read the following Extract from the Proceedings of the Government of India, dated Fort William, 18th January 1859, No. 238.

Read the following Extract from the Proceedings of the Honorable the President of the Council of India in Council, dated Fort William, 18th January 1859.

Read the following paragraphs of Despatch No. 2 from the Secretary of State for India, dated 29th September 1858.

Para. 21. "The immediate occasion of Captain Grindall's removal was the report of a Committee appointed to investigate his conduct, which showed that his mismanagement had caused a loss of Rupees eighty-five thousand (85,000) to Government, but abundant proof had been given previously of his disregard of departmental regulations and of the orders of his superiors, his indifference to the responsibility connected with the charge of public money, and his inaptitude for accounts and office work.

72 73. Removal of Captain R. F. Grindall, from the post of Executive Engineer in charge of the 7th Division, Grand Trunk Road.

Para. 23. "Of the Rupees eighty-five thousand (85,000) lost by his remissness, about Rupees sixty-two thousand (62,000) consist of irrecoverable advances to defaulting Contractors, and the remainder of sums embezzled by Overseers. When Contractors, to whom advances had been made, failed to perform their engagements, long periods were suffered to elapse without the institution of proceedings against them or their sureties, and the latter were invariably found either to have had in the first instance no property to pledge, or to have made away with it as soon as

they discovered that the result of a suit was likely to be adverse to them. At the same time, frauds on the part of Overseers were encouraged by the absence, even of that ordinary check which would have been afforded by periodical inspection of their books.

Para. 24. "Of course, for the disorders which took place in consequence, Captain Grindall is more immediately responsible. It was his duty to ascertain that the security offered by Contractors was real and tangible, and to take care that their work was regularly measured, and that both their accounts and those of Overseers were regularly and effectively audited.

Para. 25. "But if these were the duties of the Executive Engineer, it was equally the duty of the Superintending Engineer to see that they were properly discharged, and if careful supervision had been exercised by the latter, the irregularities permitted by the former could not have remained undetected. Again, remissness on the part of the Superintending Engineer, implies proportional remissness in the Chief Engineer, whose scrutiny of the Reports rendered to him must otherwise have discovered their unsatisfactory character. Similar deficiency of energetic control is apparent throughout the whole chain of responsibility, from the highest to the lowest link. Captain Grindall took charge of his Division without any regular transfer, and the same thing occurred with the Assistant Executive Officers, and again with their subordinates, whatever deficiencies might previously have existed and whatever questionable debts of Contractors might be outstanding, being allowed to remain and to pass on unobserved or unnoticed. The Committee call this state of things "a bad system," but it is not the system, whether good or bad, which is here in fault. The best and most skilfully devised system can be of no use if its regulations are suffered to remain a dead letter! neglect of rule then becomes the rule, and inattention to duty derives an appearance of sanction from established precedent and general practice. What is now really wanted is a rigorous enforcement of existing regulations. The Chief Engineer, who is directly accountable to you for the state of the department, should be held regularly and strictly to account. He would then be compelled to exercise corresponding watchfulness over Superintending Engineers, and they in return over Executive Engineers, and the several gradations of Office would then become what they were intended to be, a series of really effective checks, instead of serving, as at present, merely as a blind, and tending to prolong the time during which delinquency may remain unperceived.

ORDER.—Ordered that the foregoing Extract be forwarded to the Local Governments and Administrations under the Government of India for information and guidance.

(True Extract.)

(Signed) R. STRACHEY, Major,
Offg. Secy. to the Govt of India.

Copy forwarded to the Government of Madras for information and guidance.

(Signed) R. STRACHEY, Major,
Offg. Secy. to the Govt. of India.

Ordered to be communicated to the Chief Engineer for his information and for circulation to the Officers of his Department.

2. The Governor in Council regrets to remark that instances have occurred to show that the censures and admonitions of the Secretary of State will not be out of place as addressed to the Members of the Madras Public Works Department. He trusts that they will have due effect.

(A true Extract.)

(Signed) J. D. BOURDILLON,
Secretary to Government.

No. 55. ORDER THERON No. 811; dated 5th April 1859.

In this Report the Commissioners for investigating Public Establishments report the result of their enquiries into the condition of the Public Works Department in the District of North Arcot.

2. In a letter to Government of date the 5th June 1858, the late Acting Chief Engineer brought under notice the large unadjusted advances in North Arcot, then amounting to about four lacks of Rupees; and requested that special assistance might be allowed the Acting District Engineer to adjust them. In a subsequent letter of the 6th September the same Officer asked permission to employ an establishment for the purpose, at a charge not to exceed on the whole one per cent. on the advances outstanding. This proposal was referred to the Commissioners for the investigation of Establishments, who in their Proceedings of the 10th August 1858, recommended that the Accounts of the North Arcot District should be subjected to a strict investigation, a suggestion which the Government adopted in their Resolution of the 7th October 1858.

In accordance with a subsequent suggestion by the Commissioners, Government ordered, on the 12th October 1858 that Captain Francis the Superintending Engineer of the Circle, and Mr. Peachy then Secretary to the Commission should jointly investigate and adjust the Accounts. Those gentlemen accordingly entered on the task on the 5th November 1858; but, shortly after, viz. on the 28th December 1858 Captain Francis was compelled by ill-health to retire from this duty, and Mr. Peachy was left alone to complete it.

3. The Report consists of two parts. In the first place the Commissioners state the result of the investigation of the outstanding advances in North Arcot. This occupies only a single paragraph (para. 3) of the Report itself, the details being given in Appendices A & B; the former relating to the advances by the present Department of Public Works, under the District Engineer, the latter to those by the late Maramut Department under the Collector. The total amount of unadjusted advances to be dealt with was Rupees 3,71,486-13-2; of which the amount in Appendix A was 3,15,254-2-3, and that in Appendix B was Rupees 56,232-10-11.

4. The whole of the Accounts of the works were minutely and skilfully examined, and the particulars are given in the two Appendices. The whole number of works in Appendix A is 448; the total unadjusted advances Rupees 3,15,254-2-3, as already said. In adjustment of these advances Bills to the aggregate amount of Rupees 3,16,317-13-1, were prepared, being Rupees 1,063-10-10 in excess of the advances; the expenditure having exceeded the advance in 62 cases, to the total amount of Rupees 16,960-4-3; and fallen short of it in 104 cases, to the aggregate amount of Rupees 15,896-9-5.

The outstanding advances made under the old Maramut Department was Rupees 56,232-10-11, on 233 works. Bills were prepared to the aggregate amount of Rupees 54,917-2-10, being Rupees 1,315-8-1 less than the amount advanced. The expenditure exceeded the advances in four cases, by the sum of Rupees 77-14-8; and fell short of it in 29 cases by Rupees 1,393-6-9.

On the whole, 606 Bills to the amount of Rupees 3,71,234-15-11 were prepared, including excess over the advances to the amount of Rupees 17,038-2-11 which the Commissioners recommend to be allowed; while the expenditure fell short of the advances by Rupees 9,339-14-6, which sum is to be recovered.

5. In accordance with the recommendation of the Commissioners the Governor in Council allows the sum of Rupees 17,038-2-11, in excess of the advances in certain cases. The present District Engineer will be instructed to take special care that the sums comprising this total duly reach the persons to whom they are respectively due.

With respect to the sum of Rupees 9,339-14-6, recoverable in 65 cases, the Commissioners recommend (para. 20 of Appendix A) that with the view of closing the Accounts all these outstanding advances shall be written off at once, leaving the District Engineer however to recover them so far as he may be able, and bring to account the sums so recovered. The Governor in Council considers that this will be, on the whole, the best course: and he directs that it shall be adopted. The estimates for all the works will be closed; and new estimates will be prepared and sent in for completing the works, where still unfinished.

The Governor in Council cannot close his review of this part of the Report without paying an acknowledgment to the skill and patience of Mr. Peachy, which brought order out of the mass of confusion which the Accounts formed before he took them in hand.

6. But by far the larger part of the Report, viz. paras. 4 to 50 inclusive, is taken up with the investigation into the causes which brought the Public Works Department in North Arcot into the state in which the Commissioners found it. The subject is ably handled, and many valuable suggestions are offered. The Governor in Council now proceeds to consider that part of the paper; but it is so clearly drawn up, and in general has so entirely his concurrence, that it will not be necessary to record more than brief remarks and orders upon it.

7. In para. 6 the Commissioners enumerate eleven principal points in the practice of this Department as administered in North Arcot, which they consider to call for special notice. These will be remarked on in order.

8. The first is the frequent changes in the Engineer and Subordinate Grades.

In the course of forty months the number of changes in the charge of the District was two, not reckoning the original appointment; of Executive Officers and Agents thirty, and of Upper and Lower Subordinates fifty-five. In the course of the same forty months one person was changed eight times, one five times, one four times, and five three times.

Paras. 10 to 15 of the Report contain some very just remarks on the very injurious effects of these constant changes.

The Governor in Council would earnestly press on the Chief Engineer, as well as on District Engineers to whom the duty of distributing their Subordinates has now been entrusted, of making as few transfers as possible. The magnitude of the evil of these changes does not seem to have been at all realized as yet by the Officers of the Department; but it is hoped that this Report will make them more sensible of it.

Paras. 16 to 19 will be noticed below under the fourth head.

9. The third point noticed is the inconvenience resulting from the removal of Office Establishments with the heads of Offices. This evil which was not peculiar to North Arcot, has already attracted the attention of Government, it was prohibited in an order of the 21st August 1858 and this order has recently been made absolute and peremptory in a second order of 8th February 1859 No. 330.

10. The fourth point is the irregular method of transferring charges. This too is a matter which has already attracted the notice of Government. The practice in this respect described in para. 20 as prevailing in the Department ought never to have been permitted; and it will now immediately cease. An Officer of whatever rank, making over charge of an Executive Range or work, will do it in the mode described in para. 21, and will not be allowed to draw the pay of any new post to which he may be appointed till he shall have received a formal receipt and discharge in the form there referred to. It will be the duty of the Civil Auditor to enforce this rule. An Officer of any rank taking over charge will be held responsible for all that is contained in the Certificate. District Engineers allowing any laxity of practice in this matter, will incur the severe displeasure of Government.

11. The fifth point is the dependent position of the Subordinates of the Department and the abuse of secret reports. The Government have already directed the abolition of the confidential reports on Subordinates, being convinced that they have done more harm than good.

Extract Minutes Consultation 15th March 1859, No. 596.

The subordination of the inferior Members of the Department to their Local head is not free from evil under an injudicious Officer; but the Governor in Council is satisfied that the disadvantages of making them independent of him, and dependent only on a distant Officer, are far greater, both as respect the parties themselves and the Public Service. For this reason the Government, while abolishing the secret reports, have placed the Subordinates more under the authority of the District Engineer than they were before. This system is found necessary to efficiency in the Revenue, Judicial, and Police Departments; and the Governor in Council believes it to be not less so in that of Public Works.

Ibid para. 14.

12. The practice unfortunately adopted by the late Acting District Engineer of North Arcot, of readily listening to secret representations against respectable and esteemed Members of the Department, is one which must have bad consequences under any system and in any Department. It appears to be this cause, in a great measure, which has led to the entire disorganization and failure of the Department in North Arcot.

13. The Governor in Council must also remark on the very reprehensible con duct of certain Officers of the Department, adverted to in the latter part of para. 17, viz. that of treating with indignity men who had by virtue of superior merit raised themselves in the scale of society. The Commissioners have not thought it necessary to record the names of the Officers so offending, and the Government will follow their example; but those Officers will remember that future offences of this nature will not be overlooked.

14. Captain Mayne, now Executive Engineer of Bangalore will now be called on to afford full explanation as to the part taken by him in the transaction detailed in paras. 25 and 26 in connection with the Paulavaukum Calingulah. Captain Barber is not now connected with the Department of Public Works.

15. The next point touched on is the carelessness with which Bills and Certificates have been signed by Officers in this District while in utter ignorance of their contents. This practice, added to that of which an instance is noticed in the foregoing para. cannot be too severely condemned and the Governor in Council desires that it may now be clearly understood that Officers are prohibited from signing or countersigning Bills, or Vouchers, or Certificates, without satisfying themselves of their substantial correctness; and that any Officer committing a breach of this rule, will incur the severe displeasure of Government. He calls on the Chief Engineer to aid the Government heartily in checking the very culpable practice under notice.

16. Captain Shaw Stewart and Assistant Supervisor Walton will be called on respectively to give an explanation of the very extraordinary transaction detailed in para. 29, viz. the submission of two distinct Bills, carefully varied in date and other details, for the very same expenditure.

17.—The next subject is the incompleteness of Bills. The means proposed to ensure uniformity and regularity in this particular appears to Government appropriate and simple; and it has the advantage of being drawn from actual experience. The Chief Engineer will however be pleased to state his opinion upon it at an early date, after consulting those whom he may think best qualified to advise him on the subject.

Para. 31.

18. The remaining remarks of the Commissioners on this head, as well as those on the two next following, appear to Government to be valuable; but they abstain from making any observation or order upon them at present, deeming it better to wait for the more complete Report of the Commissioners on the Accounts and Audit of the Department, after a full investigation of the Central Office.

19. Paras. 41 to 44 relate to the mode of drawing advances. The system of dealing with advances as equivalent to expenditure in the Accounts and Statements of the Department is undoubtedly wrong and cannot but lead to much confusion. The Government direct that it shall be immediately abandoned wherever it exists, and that the transactions be invariably described correctly.

20. With regard to the rule referred to in para. 42, it was adopted with the view of making the comparison and adjustment of the Accounts of the Collector and the District Engineer more easy. It is represented to have caused the balances in the hands of the Subordinate Executives to be larger than they would otherwise have been. The Government do not see how it can have had this effect, since it could never be proposed that money should be drawn by those Officers above three or at most four times a month; but they will be quite prepared to abrogate the rule, if after full consideration it is thought expedient to do so. Large balances in the hands of the Executives are a great evil, and the Government have repeatedly called the attention of the Chief Engineer to the subject. The expedient proposed in para. 44 might be useful; but in its pre-

sent form the suggestion calls for no more remark, than that the advantages it seems to hold out would for the most part be secured by the existing rules, if duly adhered to.

21. Para. 45 notices the long delays in the submission of Bills, even though in many cases they were actually ready for submission. The Governor in Council agrees with the Commissioners that a large part of the blame for this state of things must rest with the Audit Department of the Central Office.

22. Paras. 46 to 50 treat of the cost of superintendence in North Arcot, and the proper way of ascertaining the real cost. This subject too will properly form a part of the Commissioner's Report on the Central Office; but the Government resolve to direct the attention of the Chief Engineer at once to the character of the North Arcot Progress Reports, as noticed in para. 48, in view to their early correction by the present newly appointed District Engineer.

23. The closing paragraphs of the Report relate to Contracts, and contain some valuable remarks on the subject. The manner in which Contractors have been treated in North Arcot, as described in para. 58, goes far to explain the general failure of the Contract system. The most scrupulous maintenance of good faith with Contractors is a chief requisite to the success of that system. If liable to such treatment as that described no respectable man will come forward as a Contractor; and no Contractor can be secure from it, under the frequent changes of District Engineers, until the letting of Contracts has been brought under regulation by the Central Office. The attention of the Chief Engineer has been recently called to this subject on more than one occasion.

24. The Government have already removed Mr. Dopping from his post as Acting District Engineer of North Arcot which he had held for a period of thirteen months. He has much merit as an Executive Engineer; but his management of the District has shewn him to be quite destitute at present of the judgment, the temper, the business habits, and the knowledge of native character, essential to such a charge. The Governor in Council considers it expedient on various accounts to remove him from a District where his present subordinate position cannot but be irksome to himself.

25. Ramanjooloo Pillay whose behaviour is brought forward so unfavourably by the Commissioners cannot be allowed to remain in the District. He will be transferred immediately to South Arcot; and the District Engineer of that District will be requested to transfer to North Arcot a competent Subordinate of similar or nearly similar rank in his place.

Para. 22.

Captain Foord will ascertain Ramanjooloo Pillay's professional qualifications by personal examination, and report on them through the Chief Engineer for the information of Government. He will employ him on such duty suited to his position in the Department, as he deems fittest.

26. The Governor in Council directs also that Captain Prendergast be called on to furnish a list of all Ramanjooloo Pillay's relations now employed in the Public Works Department in North Arcot, stating the posts they hold, their ages, dates of appointments and previous position. This list should be laid before Government without delay.

27. In closing these observations, which together with the Commissioner's Report will be circulated for the information of the Officers of the Public Works Department, omitting only para. 21 of this order, the Governor in Council has to observe that although conscious that there are various irregularities and abuses in the Public Works Department more particularly in certain Districts, yet he is well aware also that the Department contains many laborious, able, and high minded Officers who not only would never countenance such irregularities, but are doing their utmost to eradicate them. Counting confidently on the efficient co-operation of such Officers, he trusts that the Department will shortly become as valuable a means of improvement to the country as it was designed to be at its formation.

(Signed) J. D. BOURDILLON,
Secretary to Government.

PROCEEDINGS OF THE COMMISSION FOR INVESTIGATING PUBLIC ESTABLISHMENTS.

1. The Commission for investigating Public Establishments has the honor to report upon the questions relating to the District of North Arcot, in the Public Works Department, referred to in the Extract Minutes of Consultation, Public Works Department, No. 2201 of 20th October 1858, and upon other matters connected with that District.

2. In this investigation, the following objects have been kept in view.

First, the final adjustment of all the advances made on account of works in the North Arcot District, remaining unaccounted for at the close of the official year 1857-58, i. e., on 30th April 1858, which amounted to Rupees 3,71,486.

Secondly, an endeavour to discover how the large arrears in the District of North Arcot have accumulated, and the causes to which the short-comings of the Public Works Department, in that District, are attributable.

3. The first of these objects has been accomplished, the result being as follows, viz.:—

Advances.	Disposals.	Balances of advances not expended.	Advances exceeded.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
3,15,254 2 3	3,16,317 13 1	15,896 9 5	16,960 4 3
56,232 10 11	54,917 2 10	1,393 6 9	77 14 8
3,71,486 13 2	3,71,234 15 11	17,290 0 2	17,038 2 11

Appendix A and B.

The particulars will be found in the Appendix to this paper, marked *A* and *B*. *A* being the return which treats of the unadjusted balances of advances made, on account of works executed, or to be executed by the New Public Works Department, i. e., subsequent to the transfer from the Collectors in the year 1855, and *B*, a similar return, in respect of the old Maramut operations, i. e. anterior to the transfer from the Collectors in the year 1855. If the suggestion in para. 20 of Appendix *A* be approved and adopted by Government, the arrears may at once be disposed of, but it will be necessary to give instructions for the preparation of estimates for the unfinished portions of the works therein referred to.

4. The other object, i. e., enquiry into the causes which have led to the present confusion in North Arcot, involves considerations of a

far more important nature, some of which appertain to questions purely departmental, some professional in an engineering, some in an accounting point of view, and there are others, by no means the least important, which call for enquiry into the status, discipline and authority, of the Engineer, Upper Subordinate and Lower Subordinate grades.

5. It would be unfair to the Public Works Department generally, to the proposers of the new system, and to the Government, to assume that the errors which have come to light in the District of North Arcot, apply to all or any of the other Districts, as there is reason to believe that, in some of them, the practice has been much better than in North Arcot. It is also but right to state, that there may be many defects in the working in that District, which have not been noticed in this report, and that there may have been many departures from the system, laid down in the Circular and Standing Orders, which are not alluded to herein; there having been no opportunity for a full and systematic enquiry.

6. The following points however appear to the Commission to call for special notice, viz.:—

I. The number of changes in the Engineer and Subordinate grades.

II. The great inconvenience resulting from the removal of writers with their chiefs.

III. The irregular mode of transferring charges.

IV. The dependent position of some of the subordinates, and the power given to District Engineers to report against, fine, and retard or advance their interests.

V. The practice of signing bills and certificates, as a matter of form, and in utter ignorance of their contents.

VI. The incompleteness of the bills.

VII. The insufficient and unreliable character of the records in the District and Central offices.

VIII. The absence of separate and independent check upon the Districts by the Central Office.

IX. The mistake committed in reading advances and expenditure as convertible terms, and the mode of drawing advances.

X. The long delay in the submission of the bills.

XI. The large cost of superintendence, the imperfect mode of shewing it, and the probable incorrectness of the existing averages, also the differential averages in the ranges.

I. The number of changes in the Engineer and Subordinate Grades.

7. The North Arcot District has been unfortunate in this respect, as will appear from the following table,* which embraces a period of 40 months, extending from the formation of the New Public Works

* See also Appendix C.

Department, i. e., 30th September 1855, to 31st January 1859, in which there have been 119 nominations or charges as follows, viz.:—

	Engineers.		Subordinates.	
	District.	Executives and Agents.	Upper.	Lower.
District	3	...	...	...
Range one	...	6	5	12
Range two	...	4	3	11
Range three	...	5	3	6
Range four	...	9	2	7
Range five	...	4	3	5
Palaur Project	...	6	11	13
Mr. Daniel*	...	...	...	1
	3	34	27	55
By deducting the authorised Establishment	1	4	9	18
The number of changes appear	2	30	18	37

* Range not known.

8. That is to say, in 40 months, the following changes have been made

Of District Engineers	2	
Of Executives and Agents	30	
Of Upper Subordinates	18	
Of Lower Subordinates	37	
Making a total of	87,	which,
added to the authorised establishment	32,	gives
the gross number of	119	

9. It does not follow that there have been this large number of nominations, for the list of the 119 contains only 75 names, which were repeated as follows, viz.:—

1	eight times	1 × 8 = 8
1	five times	1 × 5 = 5
1	four times	1 × 4 = 4
5	three times	5 × 3 = 15
20	twice	20 × 2 = 40
47	once	47 × 1 = 47
75		119

While upon the subject of changes, it is not out of place to remark, that there have been, since the formation of the new Department of Public Works, no less than 6 Superintending Engineers of the circle in which North Arcot is situate—that is acting and fully appointed.

10. North Arcot contains an area equal to the principality of Wales. If an Engineer were to profess to have acquired a competent knowledge of that country in 13 *years*, he would not be believed. The Commission is aware that even in England it is considered desirable that a county Surveyor, whose duties are in some degree analogous to those of a District Engineer here, should be changed as seldom as possible, on account of the loss of experience that would be caused by his removal; but here the evils attendant upon change will be increased in direct proportion to the extent of the charge.

11. Besides it is impossible for any District Engineer to give due time and attention to his work, be conversant with the particulars of his own and his subordinates' duties, and acquire sufficient knowledge of the records of his office and the peculiarities of his District, in short

become qualified by experience to discharge the important functions of his office, even if aided by experienced Executive Officers, conversant with their work, settled in their ranges, and masters of their duties, both engineering and accounting, in the term of 13 months, which has been the average period of incumbency in this District. How much then must the chances of success be lessened, when, in the same period of 40 months, there have been in this District, no less than 34 Executive Officers in the 6 divisions, i. e., 5 ranges and the Palaur project.

12. If it be, moreover, necessary for a District Engineer to grant to Executives, quitting his District, certificates of no demands, surely it is equally necessary that he should be conversant with the state of the accounts and balances he is giving an acquittance for; in order to acquire this necessary knowledge, he may find it necessary to devote nearly the whole of his time to the verification of the accounts in the several ranges.

13. How largely the continual changes would trench upon the time of the Engineers may be seen from the following estimate, viz.:—

On making a change there are three parties interested, viz.:—

The District Engineer,
The Parting Executive,
The Coming Executive.

To take over a Range properly, can hardly be done under 3 weeks.

There have been 34 charges and 30 changes.

The time of 3 Engineers in 40 months, deducting at the rate of 45 days per annum for privilege and casual leave, but making no deduction for either sick leave, holidays, Sundays or three days leave, is 3,150 days. $21 \times 34 \times 3 = 2,142$ days

14. It is perfectly impossible that a District Engineer can devote 714 out of 1,050 days to accounts; he therefore takes their correctness for granted, and, as in the case of Mr. Assistant Overseer J. Shaw Lincoln, signs a *certificate of the propriety of which he knows nothing whatever.

* See Appendix D

15. It is thus that accounts, in which there was no difficulty originally, have been neglected and become complicated, and mystified.

16. The list of the resigned, the dismissed, and the transferred members of the Department in this District is a long one, viz.:—

Executive Engineer Lieut. A. D. Clay.
Mr. Assistant Executive Engineer D. Horgan.
Mr. Assistant Executive Engineer T. H. Bush.
Mr. Supervisor F. Dick.
Mr. Assistant Overseer J. S. Lincoln.
Mr. Assistant Overseer S. Lee.
Mr. Sub Overseer Haldwell.
Mr. Sub Overseer L. Morrell.
Mr. Assistant Supervisor Damerun.
Mr. Sub Overseer Theobald.
Mr. Sub Overseer Cassidy.
Mr. Assistant Overseer Brittain.
Mr. Assistant Overseer Wright.
Mr. Sub Overseer Coshan.
Mr. Assistant Overseer Byrne.
Mr. Assistant Overseer L. Stratton.
Mr. Assistant Overseer Brown.

Mr. Assistant Overseer Cherryman.
Mr. Assistant Overseer DaSylva.
Mr. Assistant Overseer McCarthy.
Mr. Assistant Overseer A. Erskine.

Of these, all but the first, have left the District, and the Government have thereby lost the local experience of 2 Engineers and 18 Subordinates, all Europeans or of European extraction.

Four of them resigned the Service,
Six of them were dismissed,
Ten of them were transferred,

20 in all, in the short space of 40 months. Such a state of matters indicates that there must be something in the present management of the District which calls for amendment. No notice has been taken of the changes among the Natives.

17. The 2 Engineers included in the above number of 20, were Messrs. Dennis Horgan, and T. H. Bush; both of them held, one still holds, the post of Assistant Executive Engineer, both have the reputation of being able men, well acquainted with their duty. A considerable amount of soreness and ill-feeling has been caused by the positions which they held in North Arcot. They were originally, in the military service of the Government, and the highest non-commissioned rank which can be attained in the Corps in which they served, (the Sappers and Miners) was gained by them. The Government appointed them to the office of Assistant Civil Engineer, or Assistant Executive Engineer, doubtless on account of their professional fitness for the post, and in acknowledgment of their previous good conduct; and it is to be presumed, that in so appointing them, the Government intended that they should occupy, in society, that rank which their position in the service necessarily conferred on them. It appears however to have been held, that the former service in the Army of Messrs. Horgan, and Bush, necessitated their being treated as if they still remained in the ranks. An Executive Engineer in the Public Works Department has no other title than that of his grade, and what he previously was, *cannot* affect his position in the Public Works Department.

18. It is quite clear that with such ideas of discipline and superiority, there could be no cordial co-operation, and the induced result has been, the loss to the District of North Arcot of these two useful, practical, and experienced Engineers.

The great inconvenience resulting from the removal of writers with their chiefs.

19. As this practice has been very lately* prohibited by Government, it is unnecessary to discuss the matter here, the whole subject having been dealt with. It may not however be out of place to observe, that so lately as in November last, an establishment obtained permission to remove to Bellary from North Arcot.

* Ext. Min. Cons. Pub. Works Dept. No. 1686, dated 21st August 1858.

The extent to which this has been practised can be learned by ordering a return. The instance above alluded to was, when an Assistant Supervisor was transferred to another District. The Officiating Chief Engineer gave permission and orders, which permission and orders were ordered, by Captain Francis and Mr. Peachey, to be held in abeyance for a short time.

The irregular mode of transferring charges.

20. A very fruitful source of confusion is the irregular manner

in which changes are effected in the Department, and charges given and taken over. It appears that when a member of the Public Works Department is gazetted to another appointment, or posted to another duty, it being his object to take up his new appointment, and enjoy his improved pay and allowances as early as possible, he at once divests himself of all responsibility in the most summary manner.

21. To take over charge of a range, properly, is by no means so unimportant a business. Every work in it should be gone through, at the very least on paper, the money in hand counted, the advances admitted and explained, and the amount of work done, for which bills have not been submitted, measured and vouched for, and, unless all this be done, it is quite impossible that the coming Executive can properly understand the responsibilities he is assuming. In making a transfer of this complete nature, the form of certificate referred to at Para. 31 will be found invaluable, as the last certificate, with the progress report, and cash book, would then give all the elements of a complete account, so far as the money is concerned. Had this been the rule, such cases as Mr. Assistant Overseer J. Shaw Lincoln's *repudiation of his predecessor Mr. Downie's accounts, could never have been made, nor any disclaimer, such as that made by Mr. Assistant Executive Engineer T. H. Bush, with respect to the accounts of Executive Engineer Captain Barber's range, nor any such circumstances as those under which Mr. Executive Engineer Dopping received from Executive Engineer Captain Taylor Rs. 200, over and above the balance of cash shewn to be in hand in the range, or those under which Mr. Executive Engineer Dopping received a much larger excess at the Palaur Anniçut. Even under such melancholy circumstances as the sudden death of an Engineer, as in the case of Executive Engineer Lieut. B. B. Boyd, there would be no difficulty, with the aid of these elements, in adjusting the accounts of his range without delay.

The dependent position of some of the Subordinates and the power given to District Engineers to report against, fine, or retard their interests.

22. That the system of confidential reports gives to a District Engineer the power to blast a man's career and future prospects is beyond a doubt, and that these reports should be received with caution is certain; the reports nevertheless have a value, as they may in after times be referred to, when a man, who for years has enjoyed the best of reputations, is suddenly charged with misconduct. For instance, take the case of Mr. Assistant Executive Engineer T. H. Bush; the confidential reports from the Sappers and Miners Corps, and those of all his former superiors, rate his qualifications high, and his conduct unexceptionable; this appears to have been the opinion of his superiors up to the date when the present Acting District Engineer took charge, and if Mr. Bush's had been the only case where the Government was asked to believe in the degeneracy of its servants, it is very probable that the result would have been, to Mr. Bush, disastrous in the extreme; but it was not so, and the very disturbed state of the District, the frequent changes, and the loud complaints in all grades, have proved that nearly all the Subordinates, and many of the Engineers, are dissatisfied with, and have incurred the displeasure of their immediate local chief. One great cause of this dissatisfaction, and the *malus animus* which appears to be general, is believed to be the readiness with which tale-bearers are encouraged, most of them natives; one in particular, Ramanjooloo Pillay has, it is said, and the data already afforded confirm the statement, succeeded in ousting nearly all the Euro-

pean and Eurasian Subordinates, writers, &c. &c. &c., and has filled the offices with his own immediate friends and relatives. A return of the changes in the Establishment generally, particularising Ramanjooloo Pillay's range might prove instructive.

23. It is a question however, whether, all things considered, including the power which it gives, and is known to give, to a District Engineer, with the servility of conduct on the part of Subordinates which it may and certainly has occasioned, the Government is not better *without* information so gained.

24. The smaller power of inflicting fines on Subordinates is, of course, a smaller evil; some mode of punishment is doubtless necessary; but, if an Officer is inclined to do the greater wrong, it is probable that he will not be over particular in inflicting the lesser one.

25. One of the evils of this entire dependence upon his superiors by a Subordinate, may best be explained by the following example.* Mr. Assistant Overseer S. Lee, admitted, that he knew he was doing wrong, but urged that he had orders from his superior which he dared not disobey. An Estimate was prepared, amounting to Rs. 444-1-0 for the construction of a Calingulah at Paulavaukum Tank in Suttivadoo Talook, the execution of the work was sanctioned by the Government on 6th November 1854, an advance was made of Rs. 100-0-0, materials consisting of Bricks, Chunam, Rough stones and Upright stones were supplied; the work had not been commenced; but, as all the first advance had been expended in the purchase of materials, a second advance was requisite; before getting a second advance, it was very properly required that the first advance should be accounted for—then arose the difficulty,—the Estimate being for a work (construction), it was assumed that it was not competent for the Executive Engineer of the range to submit a bill for materials, which was got over in the following very improper manner, if the allegations be true. Mr. Assistant Overseer Lee states, that he was instructed by his immediate superior, Executive Engineer Captain Barber, to make out a bill showing, as done, a part of the work under the Estimate, i. e., according to the Estimate, to the extent and value of the amount of the first advance, Rs. 100-0-0, and his bill was accordingly made out as follows, viz.:—

* See Appendix. *E*.

37½ cubic yards of Brick in Chunam at 2-8-0 per cubic yard	Rs.	93 0 0
Foundation	„	7 0 0
	Rs.	100 0 0

now as the work never was commenced, of course there was neither brickwork nor foundation; the value of the materials has since been recovered, under arrangements made by Captain Francis and Mr. Peachey, and the amount brought to account as a substantive advance in the accounts of the current year.

26. The extraordinary facilities for fraud which are afforded under such a system are manifest. In the first place, the bill is untrue from beginning to end, the measurements and rates were both invented in order to arrive at a certain sum, and, as the masonry could not consistently be built without foundations, the foundations were also invented, in order to give the whole sham an air of probability—the work, which it must be borne in mind had never been touched, is then reported "commenced by Collector," and the fabricated bill is signed by "S. Lee, Assistant Overseer," by "W. Barber, Captain, Executive Engineer," and by "J. O. Mayne, Lieutenant, District Engi-

neer," and is dated "Camp Arcot, 1st May 1857." It was afterwards sent up to the Central office for audit, and was received there in August 1857; it was then initialled by Mr. Johnson, one of the principal auditors, and was passed, on 14th October 1858, by Captain P. M. Francis, then Acting Superintending Engineer of the Centre Circle. The bill, after six letters had passed between Captain P. M. Francis, the Acting Superintending Engineer of the Circle, and Lieut. Colonel Edward Lawford, then Officiating Chief Engineer, was expunged from the Bill Registers in the Central Office, and is *hereunto annexed for the information of Government.

Questions. What can be the value of the check exercised in the office of the Executive Engineer, and the countercheck of the District Engineer? For of course no blame can, in this particular instance, attach to either the Superintending Engineer or the Central Office?

Why was this bill, which was made out and dated 1st May 1857, not sent up to the Central Office until August 1857? This delay proves that excessive haste was not the cause of the non-detection of the falsity of the bill.

Why was the bill delayed in the Central Office from August 1857 until 14th October 1858, 14 clear months?

Supposing the bill had not been expunged, what was to prevent the use of the materials in another work, and how could that other work have been paid for, unless the materials, i. e., their value was charged for again? and how could the Central Office possibly check or discover this?

Supposing the Institution of an Audit Office to have a moral effect and value, as a preventive of fraud, what must the opinion of the Subordinates and Executives, who are the parties to be checked, be, of a system under which such a transaction as this is possible? This, it is believed is by no means an uncommon case, it has been selected to show that sometimes a Subordinate must act irregularly, because he fears to disobey; there does not seem to have been any intention to defraud, nor was the Government in any way a loser; but the case might have been otherwise, and as the discovery only arose out of the purest accident, and after the bill had been passed in the Central Office, and when the ordeal of check and audit had been gone through, the instance may serve to show how very insecure the working of the system is.

The practice of signing Bills and Certificates as a matter of form, and in utter ignorance of their contents.

27. The signing of documents appears to have been regarded by some members of the Public Works Department as their most important and paramount duty, and the effect which their signatures, so inconsiderately attached, to bills and certificates have produced, has proved most embarrassing. Take for instances the signature of Acting District Engineer, Lieut. J. O. Mayne to the bill for Rs. 100-0-0 in the matter of the Paulavaukum Tank Calingulah, and the countersignature of the same Officer to the certificate of no demands granted to Mr. Assistant Overseer J. Shaw Lincoln. In this latter case, it is quite clear that the *Certificate was given in respect of Range No. 1 only, by Executive Engineer, Lieut. B. B. Boyd, and if that certificate had not been countersigned by Acting District Engineer Lieut. J. O. Mayne, it could not have been read as a receipt in full of all demands.

28. There does not appear to have been any necessity for this

* See Appendix.

countersignature whatever, its effect has been to allow of the repudiation of any responsibility by Mr. Assistant Overseer J. Shaw Lincoln.

29. It is possible, that to make an order that no Officer shall sign or certify a document, with the contents of which he is not cognisant, might prove inconvenient, and interfere with the usual certificate as to copies and extracts being true copies and extracts. But this cannot apply to bills and vouchers, and granting such certificates, as are in law full acquittances for substantive claims, without ascertaining the correctness of that which they are vouching for. To prove, however that such things are done, the following instance is adduced, where work has been charged for twice over by bills completely certified, one bill bearing date 30th October 1858, the other 25th January 1859.

It is only fair to premise that this did not occur in North Arcot.

The bills, of which true copies are in the Appendix,* suggest the following questions—

Why should the number of the bill vary, one is numbered 88, the other 189?

Why should the Collector's sanction be dated, in the one case, December 1857, and in the other, January 1858?

Why, if in October 1858, there was evidence of the last bill for Rs. 182-11-0, was not reference made in the bill dated January 1859?

Why is the date of completion given, in the one case, 20th September 1858, in the other, 25th September 1858?

Why is the date of last inspection also variously stated, as 21st September 1858, and 9th December 1858? there may be a good reason for this and for the first question; but there can be but one answer to the other three, (and the still more important question, how the second bill ever came to be submitted?) that neither the Assistant Supervisor Mr. W. H. Walton, nor his office establishment, took the trouble to refer, which was also omitted by District Engineer Lieut. J. H. M. Shaw Stewart, and his establishment. The error was discovered, it appears, in the Central office, probably from the circumstance that the bill submitted in October 1858 absorbed the whole amount of the Estimate. It is however far from certain, that the errors would have been discovered had the work been a large one, and the bills submitted been on account of, instead of in full adjustment of, the whole work.

30. It is for such cases as these that the form of certificate referred to in Para. 31, will be found a complete remedy, the form and measures, there recommended, compel reference, and ensure exactness, and besides all this, they provide completeness of record and save time and labour.

The incompleteness of the Bills.

31. There does not appear to be in this district, any regulation prescribing uniformity and regularity in the preparation of the bills, any provision under which progress in detail of each work, *must*, of necessity, be shewn, or, any system by which the whole working under each Estimate or contract *must* be periodically brought under notice. A remedy for this is to be found in the system of certificate which the Commission has been informed by its Secretary, Mr. Peachey, is used on many Railways and works at home; there the practice is, when a work is proposed, to make an Estimate in detail, in which the quantities are set out; so soon as the contract is let, or it is com-

menced by jobwork. the prices are in erted, and a form of certificate [illegible] is prepared, giving,

Quantity,
Description,
Rate,
Total of Work, ...Quantity and Value
Executed as per last certificate, ... do.
Executed as per present certificate..... do.
Total executed, inclusive of this certificate..... do.
Remaining to be executed..... do.
Extra work..... do.

the form of certificate is then printed, and all payments are allowed on these certificates alone.

32. The value of these certificates consists in the full view they give of the work that has been done, that remains to be done, under each Estimate, or contract, as the case may be;—very little time is expended in preparing them, as they are for the most part printed, the whole of the heading, and of columns 1, 2, 3 and 4 are printed, and contain all needful particulars, column 5 is a repetition of column 7 in the last certificate, column 6 is the bill, giving quantity rate and value which is submitted to be passed, while column 7 is the total of columns, 5 and 6 or the whole work done, and columns 8 and 9 show the quantity and value of the portion left incomplete, or executed in excess of the Estimate. The two additional lines at foot shew the advances in juxta-position with the expenditure, whereby it may be seen at a glance what money has been received, what amount expended, and how much remains in hand; but this is not their only value, inasmuch as they contain the most complete check that it is possible to devise upon the progress reports, (which when properly kept, are invaluable documents) but they also have the peculiar benefit of being each a full and detailed résumé of the whole quantities and value of a work, by the aid of which an Engineer may ascertain at a glance, and without any reference to other documents, the whole extent of the work charged for as executed, and the extent remaining be executed. If a District Engineer goes on a tour of inspection, he need only take with him the last certificate. These should be made in quadruplicate for the use of the Chief, Superintending, District, and Executive Engineer.

33. The mode in which these certificates or bills should be vouched, must, however, entirely depend upon the constitution of the Audit Department, and the locus in quo, the bills must be supported by cash vouchers of expenditure, and the quantities be ascertained by reference to actual measurements made; but there are many considerations which hinge so entirely upon the position of the office of account, and the audit office, that it would perhaps be premature to speculate upon them here. The Commission is of opinion, that the financial operations of the Public Works Department ought to be divided into three sections, viz;—

Of Audit,
Of Account,
Of Statistics.

34. The Audit is of course, and as its name imports an office of very great responsibility; it is however idle to suppose that the act

of auditing alone, in its ordinary acceptation, is of any intrinsic value indeed the arithmetical correctness of the bills, which is the ordinary object of scrutiny in the Audit offices of this Presidency, is a question of minor importance, when compared with the moral effect which a well-conducted audit establishment never fails to exercise.

35. Accounting consists in simply recording, in a clear, concise and scientific manner, the various transactions, and placing them in juxtaposition with each other, so that the results of working may be obtained.

36. But statistics, when properly prepared, and so arranged as to be commentaries on the accounts, are invaluable in such a department as that of Public Works, and it is the well considered union of these three important branches, that is so much to be desired, inasmuch as they provide three great securities against extravagance, carelessness, collusion or dishonesty, viz.:—

Strict Examination, i. e. Audit.
Faithful Record, i. e. Accounts.
Analysis and exact Comparison, i. e. Statistics.

37. The first two, Audit and Accounts may be all correct, and yet there is no provision in either of them to exhibit the fact that very much higher rates are given in one District than in another, for work of exactly the same character and value. Much benefit might accrue from exercising scrutiny of this nature over the bills of the Railway Department, where the prices are, generally speaking, very much higher than those paid in the Public Works Department. It may be that sometimes such information will prove of but little value, as the rates in question may be necessarily and properly higher, but this will not always be the case, and when it once becomes known that the system of check is a system of audit, account, and analysis, the moral effect will be most valuable and of itself serve to prevent any extraordinary variation.

The insufficient and unreliable character of the records in the District and Central Offices.

38. But very recently, it was considered desirable by Lieut. Colonel Lawford then Officiating Chief Engineer, that the accounts of the Palaur Anicut project should be enquired into, and Captain P. M. Francis the Acting Superintending Engineer of the Centre Circle, was instructed to undertake the investigation, his departure for Europe on sick certificate however interfered with that arrangement, and Mr. Acting District Engineer J. H. Dopping, was then requested to report, which it appears from his letter addressed to the Chief Engineer $\frac{1947}{58\text{-}59}$ dated 23rd December 1858, he was unable to, do as he says "I regret to be unable to inform you what was the original amount for the anicut, as "the Estimates designs site, &c. have all been altered, more or less, since "the first was despatched to the Central Office." The fact of all these essential points having been altered, simply proves the necessity of a proper system of record, and so far from constituting a valid reason why these necessary details should not be forthcoming, is exactly the contrary, as the more intricate the accounts the greater the necessity for exactitude in the records. Again, it appears from the Resolution of the Chief Engineer under date 22nd January 1859, that Lieutenant Colonel Lawford was unable to procure satisfactory information anent this Palaur project in the Central Office, and in consequence the Commission was requested to take the matter in hand. From these two circumstances it is plain, that there is *nowhere* any clear statement of the

accounts of the Palaur Anicut, and it is by no means certain that the work in question is not singular in that respect. The progress report does not appear to be a sufficient document, although it is difficult to understand why it is not so; and another paper in Appendix, on the subject of the Bavasapully Bungaruvca Tank,* proves that the records cannot be relied on as exact statements. It is an axiom in accounting, and an undoubted fact, that accounts are much more easily kept exactly than inexactly, observations are sometimes made by people who are not accountants that certain entries in books, &c. are "near enough," if not exactly correct. But no accounts can be kept upon this principle, and they are never near enough until they are quite right.

It seems advisable that the state of the accounts of the Palaur Anicut should be closely examined and reported on, that it errors exist, they may be corrected and their true state discovered.

The absence of separate and independent check exercised by the Central Office.

39. It is difficult to understand the functions of the Accountant in the Central Office, as it is quite evident, from the correspondence which the Commission has had with the Chief and the Officiating Chief Engineer, that no original accounting is done there, and that all the information in the Central Office, is obtained from the District Officers, being collected from the progress reports and other papers, sent up by the District Engineers, this is not accounting, it is not even scientific book-keeping, but is simply a system of registration, without any check whatever. The District Engineer checks the District Engineer, the whole process is neither more nor less than that, and simple as that operation would appear to be, it was not successfully done, inasmuch as the statement of arrears in North Arcot made by Lieutenant Colonel Lawford, when Officiating Chief Engineer, was as is shown in Appendix A.† to this report at Para. 1, incorrect.

* See Appendix

40. There ought to be a clear and distinct open ledger account with every District, the items of which should be supported by vouchers,—the debits from the Collectors returns of drafts, the credits from the bills submitted and passed, and these remarks suggest some observations upon two more very important subjects, viz.:—

The mistake committed in reading advances and expenditure as convertible terms and the mode of drawing advances.

41. Not a little confusion has been caused in the Department, by the adoption of the authoritative reading of the Accountant General, as regards advances on account of Public Works, the effect being, that advances and expenditure are held to be convertible terms. This, so far as the Accountant General is concerned, is a matter of no consequence, as advances to the Public Works Department are literally, *quoad* the Treasury, expenditure in the books of the Accountant General. But the same wording has been adopted in the Progress Report, and thus advances, which are made to Executives to meet anticipated expenditure, are at once set down as expended. The effect of this is—that works are charged as having had money expended on them, which in point of fact never have been commenced, as in the case of the Paulavaukum Suttivadoo Tank, or that works are charged as having had money expended on them, which never was even advanced by the Collector, as in the case of the Bavasapully Bungaruvca Tank, see Appendix‡ —— the irregularities in this case, which are given in detail, will serve to explain the difficulty that had to be surmounted in clearing up some of the accounts in North Arcot. Again, the

‡ See Appendix

Progress Report ceases to be a report of Progress, inasmuch as it contains and records, indiscriminately, works for which advances have been made, which have been commenced, and which have not been commenced—and advances which have not been made; and, lastly, as the average cost of superintendence is eliminated from the expenditure divided into the pay and allowances, it is clear that the average will be inaccurate, because the superintendence will be charged on the whole sum advanced, some of which is not and perhaps never will be expended. The system of advances has its advantages, and per contra its advantages, one of which is the completeness of account that it admits of, if the members of the Public Works Department will only pay attention to their accounts, and observe the regulations made for them. Advances seem to be indispensable, and it would be waste of time to discuss their propriety. There cannot however be any necessity for wrongly describing such simple transactions, as nothing causes so much confusion in accounts, as calling things out of their proper names. Again the mode of drawing these advances and recording them is not only likely but certain to create confusion.

42. The rule is that drafts upon the local Officers are void unless presented within the month; the value of this arrangement does not appear, neither does any necessity for it, so far as the Public Works Department is concerned; although it may be a convenient rule for the Accountant General. Either the money drawn is wanted, or it is not wanted; if wanted it is for a specific purpose, and it is difficult to understand why money which is not required until the 4th February, should be drawn from the local Treasuries on 30th January; more especially when the insecure state of the Subordinates camps is considered,—if the money is not wanted it should not be drawn at all.

43. The Proceedings of Government in the Public Works Department, shew that large sums of money are continually drawn from the local Treasuries which would have been much more secure in the hands of the Collector's Agents, it appears also, that some of these, (comparatively speaking) large accumulations of balances, have arisen from the practice of always, in some Districts, cashing the drafts upon the Talook Treasuries, whether the money is wanted or not,—this is done in order to save confusion in the accounts, i.e., the cash accounts, between the District Engineer and the Executive, *and it does save it to a very large extent.* But as has been already explained greater confusion has arisen therefrom, consequent upon treating the terms advance and expenditure as synonyms. When then drafts are not cashed, there must be a difference between the cash accounts of the District Engineer and the Executive, because the District Engineer charges the Executive with the amount of the cheque so soon as he signs it, and it is entered to the debt of the range; if the cheque is not cashed, the District Engineer's debits will not agree with the Executive's credits, the cheques are cancelled, and the District Engineer has to alter his books accordingly.

44. Apart from the well known fact, that large floating balances are frequently fatal temptations to embezzlement, which sometimes results in loss to Government, there is the certain loss to the State, which arises from so much money lying unproductive in the numerous cash chests, to say nothing of the sums lost by robbery and negligence. All these, and the opportunity for extortion afforded by the practice of making payments in specie, might be avoided by the Establishment in each District of a Bank or Pay Office, where the Executives could receive such amounts, and such amounts only, as they required to meet

such of their payments, as must be made in specie, and where sums could be lodged at the request of the Executive, by the District Engineer, to meet claims of contractors and others, for amounts which might properly be paid by draft. A cash chest kept at the Talook Cutcherry in charge of a shroff would suffice. The adoption of this measure, would secure several advantages as follows, viz:—

Firstly. The great bulk of the money would be in a secure place.

Secondly. It would be more under the cognizance of the District Engineer.

Thirdly. It need never be drawn from the local Treasury until wanted.

Fourthly. The payment on a draft, endorsed to order, would be evidence of the payment to the contractors, and in itself the best receipt that can be had, and

Fifthly. The Government would be protected fron errors occasioned by ignorance of accounting, carelessness in the custody of money, the absence of temptation in the shape of opportunity for embezzlement, and the security against open fraud in the way of robbery. Last and not least something would be gained in the shape of time expended in the discussion and investigation of cases of defalcation embezzlement and fraud.

The long delay in the submission of the bills.

45. This, as many bills in North Arcot have been made out, and allowed to lie perdu in the offices, is most incomprehensible; bills were prepared and were duly signed and certified in duplicate, and only required to be sent to the Central Office and yet they have been lying in the office for months. For this laxity, no doubt, the present Acting District Engineer and his immediate predecessor were much to blame, but, as was explained by the Commission in its Report, dated 10th August 1858, part of the fault lies with the Bill Audit Branch of the Central Office. Some of these bills bear the signatures of Acting District Engineer Captain J. O. Mayne, and Executive Engineer Lieut. B. B. Boyd, the former has left the District, and the latter is dead. Then again, there were many bills which might have been made out long ago, which have now been prepared, and still more for which (as there is abundant evidence to show) there were ample data for the preparation at one time; no bills were prepared then and it is now become impossible, as the documents have been lost or destroyed: here again was felt the great inconvenience arising from the practice of allowing office establishments of the Engineer Upper and Lower Subordinate grades, to remove with their Officers, there was a large amount of information in the office of the District Engineer of which nobody appeared to be cognizant, and which was found to belong to transactions which had occurred a long time ago, and beyond the memory of the present office establishments. It is impossible to require adherence to the Government order for non-removal too strictly.

The large cost of superintendence, the imperfect mode of shewing it, and the probable incorrectness of the existing averages, also the differential averages in the ranges.

46. The Chief Engineer gives the average in one year for the whole District of North Arcot at 31 per cent, which rate, high as it is,

is considerably under the mark, it is indeed quite impossible for the Chief Engineer to give it correctly; because the only elements from which it can safely be extracted, are no where completely on record.

47. The Central Office Registers are but very imperfect records at the best of times, and could only be used with any degree of safety when all the work done in a year, has been entered up, and this has never been the case.

48. The Progress Reports in North Arcot are notoriously incorrect, indeed, they are admitted to be so now by the Acting District Engineer, and appear always to have been so in this District from the first.

49. Besides the whole of the cost of expenditure is not to be discovered from the amount paid under the head of salaries as a large amount is charged to the works directly in the bills.

50. Probably from 50 @ 60 per cent. is nearer the truth in this District than 31 per cent. The Acting District Engineer of North Arcot has been requested to make a return, shewing all the cost of superintendence, divided into the usual ranges. This is likely to form a very interesting document, which, when thoroughly examined, will perhaps give a very fair idea of the value of the several Officers past and present in that district.

51. Appendix A differs in some degree from the report required by Captain Francis and Mr. Peachey, and sent in a letter by Captain Francis to Lieutenant Colonel Lawford, then Officiating Chief Engineer in December last. In that letter allusion was made to some examinations of measurements of the works which had been formerly under Mr. Assistant Executive Engineer T. H. Bush, to which Executive Engineer Captain A. H. Watts had objected, and was in consequence directed to satisfy himself as to the correctness or otherwise of the works in question, this order was given in the month of November 1858, but so little attention was paid to it, that on the 3rd January 1859, the greater number of the works had not been measured; on the 6th January 1859, Executive Engineer Captain A. H. Watts withdrew his objections, and signed the bills, and as this was done with the concurrence of, and after consultation with the Acting District Engineer Mr. J. H. Dopping, those bills were allowed by Mr. Peachey then acting by himself, Captain Francis being in the way to England, and these bills appear to have reduced the balance against Mr. Bush, (which had till then remained unadjusted) to Rs. 103-15-1. Mr. Bush afterwards submitted bills for Rs. 93-14-6 and Rs. 10-1-4 which were also allowed, and which clear up the whole amount against Range No. 2, and Mr. Bush—these two last items were not certified by the Acting District Engineer, but evidence was given as to the correctness of the bill by the Head Accountant in the District Engineer's Office, in the one case, and actual measurements were taken in the other. Some allegations of Mr. Assistant Supervisor Damerum, caused an enquiry into the transactions of his own charge, which were found to be such as not to entitle his statements (impugning Mr. Bush's measurements, &c.,) to credit.

52. Referring to paras, 16 and 17 of Appendix A it is to be regretted that nothing further can be ascertained as to the balances unadjusted standing to the debit of Range No. 5 and Mr. Assistant Overseer J. Shaw Lincoln. It will be seen however that he has given all the information in his power, and relies on the certificate of no demands granted to him on 2nd August 1857.* Nothing more can

be done in the matter, and the amount Co's. Rs. 5,476-0-11--Rs. 313-12-3 must be written off.

53. The causes which led to the late investigation in North Arcot have been pointed out, (some of them) above, and the Commission would urge upon Government the immediate necessity for a thorough reform of that District,—to recapitulate the evils which have been descanted on is unnecessary here, and the Commission would merely observe that the same errors appear to have produced the like results in Bengal, the difference consisting only in the very much larger amount of irregularity in that Presidency (as detailed in the Despatch of the Secretary of State for India, No. 2 dated 29th September 1858,) where they have called down the marked displeasure of the Bengal Government, in their Minutes of Consultation Public Works Department, No. 354, dated 9th February 1859.

54. The paper last referred to, gives clear and indisputable proof, that the unforeseen results of the working of the Public Works Department, both in Bengal and here, are attributable, in a great degree, to disregard of the Regulations and Circular Orders laid down for the observance of that department, though perhaps a considerable share is also due to the unfitness of Engineers to deal with accounts. The difficulty of procuring prompt measurement of work and submission of bills, together with the absence generally of proper arrangements with contractors have also contributed to the present state of affairs. In Madras contracts for the execution of work have obtained to a very limited extent. The Chief Engineer has however recently urged the more general adoption of the contract system.

55. But the value of contracts does not appear to be fully understood, the Commission desires therefore briefly to notice this important subject.

When contracts are cautiously let to parties, whose sufficiency, either as regards means, or energy, is assured, and due security is taken for their fulfilment, they will be found to produce the following results. The time of the Executives will be economised, because the necessary amount of superintendence will be diminished, that is to say the duty of the Executive will once more become, as regards this part of his work, analogous to that preformed by the Civil Engineers in the old Maramut days, when his office was to inspect instead of to construct as at present, and this will leave him ample time for giving full attention to such works as it will continue to be his duty to construct.

56. This will in a corresponding degree reduce the cost of superintendence. It is not meant by this that the cost of superintendence is not incurred, as the contractor will of course include his expenditure in superintendence in the amount of his tender, in practice however the Commission believes that it will be found that Contractors will willingly tender for and undertake works and complete them to the satisfaction of the Government on the Estimates of and at the rates paid by the Public Works Department for *construction* only, and thus the cost of Government superintendence will virtually be reduced to the expense of inspection. The works will moreover be completed within the estimate and the submission of additional estimates put a stop to—whereas under the present system not one work in ten is completed for the original estimated sum, and until the work has been finished the Government are without any security as to the amount they may be called on to expend, in fact estimates as now submitted to Government are little better than mere fictions.

57. There will also be a large saving in the time of the Executives now devoted with such indifferent results to accounting, as, when work is done by contract, the accounts between the contractor and the state must be of the simplest character, literally under the contract system the duty of the Executives will be merely to inspect, measure and value.

58. Native Contractors, at least those whose cases have recently come under enquiry in North Arcot, have been discouraged and disheartened they have not been treated (in many instances) with candour kindness or consideration. Some of them have been persuaded to undertake works on unsettled rates, and the result, as usually happens in such cases, when one man is left to the mercy of another, has been discontent. The Contracts, themselves have been vague and indefinite, and have been broken through without scruple. Advances have been made to insufficient Contractors, and the money has been, as a natural consequence lost.—In other cases the Contractor has expended advances made to him in one Contract, in order to recover his extra expenditure on another,—In short, the whole practice as regards the granting of contracts both large and small, requires revision and settlement, on such basis as will secure to the Contractor a fair return for his services and capital employed, and to the Government a reasonable equivalent for its outlay.

59. A proper form of contract might easily be drawn out, containing penal clauses, reciting the specifications and the quantities which would always be found in the certificate referred to in para. 31 herein. There need be no fear of making the conditions too stringent, as Contractors generally mean honestly at the outset, and seldom object to any proper restrictive conditions, they might be printed too in the vernacular languages.

60. It may not be out of place here to observe, that the merits of the contract system were urged upon the Government by the Military Board,* in a report dated so far back as the 24th August 1830, in which they show that in this Presidency an "extreme hostility to the contract system, "has always prevailed the Public Establishment in "the building Department" hostility which exists up to the present time, and which, in the opinion of the Commission, should no longer be permitted to interfere with the adoption, as far as practicable, of the Contract system, the advantages of which appear to them to be beyond all doubt.

61. The report requested by Government in its Proceedings No. 2241 of 6th November 1858, at para. 27 will be proceeded with immediately after the letter referred by Government in its Proceedings No. 257 of 27th Jan. 1859, have been disposed of and reported upon,—which are now under consideration.

* See Appendix. K.

Madras 12th March 1859

H. D. Rose Head
President.
H. Pendergast

27 to Com 29th Oct 58 R. 1,175
24th Nov 58 — 0:10:66
15th Jany 59 — 4:8:5

Copy in a L to E
8/ 6th June 1859 No. 15.

9/9 Works 1859 Dispatches
Comm. April
No. 648

Proceedings of the Commission
for investigating Public
Establishments.

Dated 12th } March 59.
Received 18th }

Encl: 7.

No. 54

Report upon the question
relating to the District of North Arcot
in the P.W.D. referred to in Collr.
P.W.D. No. 2201 of 20th October 1858.
& upon other matters connected
with that District.

C28 Mr. Much

Report upon the unadjusted balances of advances made for Public Works in the District of North Arcot since the formation of the Public Works Department, made in pursuance of G.O. No. 2201 P. W. D, dated 20th October 1858.

On entering upon the work of investigating the accounts, and obtaining the adjustment of the outstanding balances in North Arcot i.e. of the advances unaccounted for on 30th April 1858 stated at —

Company's Rupees 63,591 — — advances unaccounted for made by Collectors anterior to the formation of the P. W. Dept and

Company's Rupees 3,20,383 — — advances unaccounted for made since the formation of the P.W.D. making together a sum of

Company's Rupees 3,63,977 — — it appeared that these balances were understated. the first sum [illegible]

[illegible] station

greater by Company's Rupees 7,509 divisible as follows. Viz.

Company's Rupees 56232—10—11 advances made by Collectors instead of 43594 as above—

Company's Rupees 3,15,252—2—3 advances made to Ch.ef Dep.t instead of 320383 as above,

making together a sum of—

Company's Rupees 371486—13—2—

2 The sum of 330069—11—9 advances made to the Public Works Department, i.e. to its Subordinates, remaining unaccounted for at the date abovementioned, appear to have been distributed as follows—

Range No 1	114537	12	6
Do. No 2	92879	1	1
Do. No 3	5754		6
Do. No 4	32943	4	8
Do. No 5	69139	15	6
Company's Rupees	3,15,252	2	3

Range No 1

3 Part of the work done has been adjusted, and the amount cleared off by Six Bills, which were sent up to the Central Office by Mr. Acting District Engineer Dopping, as follows. Viz.

Name of Works	To be accounted for			Bills prepared			advances not exhausted			Advances exceeded by		
	147	10	1	147	10	1	.	.	.	.	.	.
	10	.	.	10	.	.	.	.	.	.	.	.
	77	.	.	77	.	.	.	.	.	.	.	.
	6	4	.	6	4	.	.	.	.	.	.	.
	74	.	.	74	.	.	.	.	.	.	.	.
	62,497	1	10	62,497	1	10	.	.	.	.	.	.
	62,811	15	11	62,811	15	11	.	.	.	.	.	.

4 The remainder 51725—12—7 has been treated as follows. Viz.

Name of Works	No	To be accounted for			Bills prepared			Advances not exhausted			Advances exceeded by		
Ollicondah Tank	1	51	4	.	71	2	10	.	.	.	1	19	14	10
Panamdurghy Tank	2	30	8	5	30	8	5	.	.	.	.	.	.	.
Sarroor Channel	3	100	.	.	80	.	.	.	.	.	.	.	.	.
Do.					20	.	.							
Cummasamoodrum Tank	4	31	3	5	31	3	5	.	.	.	.	.	.	.
Kadarapully Nurparacherum	5	95	5	8	95	10	1	.	.	.	.	4	5	
	Carried Over	308	5	6	328	8	9	.	.	.	20	3	3	

No.	To be accounted for			Bills prepared			Advances not exhausted by			Advances exceeded by			Name of Works
Brought Over	308	5	6	328	8	9	.	.	.	20	3	3	
6	57	11	.	57	11	.	.	.	.	.	.	.	Sairamanaicum Tank
7	20	.	.	39	2	4	.	.	.	19	2	4	Vecanchara Pallam Tank
8	49	5	.	49	3	.	.	.	.	.	.	.	[illegible] Tank
9	96	11	.	96	11	.	.	.	.	.	.	.	Koodoopolam Bottaiery Tank
10	35	4	6	35	4	6	.	.	.	.	.	.	Pillore Napalairy Tank
11	4	.	.	4	.	.	.	.	.	.	.	.	Pallair Tank
12	164	.	.	164	.	.	.	.	.	.	.	.	Veeampatty Pelitairy
13	30	6	.	30	14	5	.	.	.	8	.	.	Pillore Tank
14	50	.	.	50	.	.	.	.	.	.	.	.	Pillaiore Large Tank
15	27	7	7	27	7	7	.	.	.	.	.	.	Pillaiore Pore Tank
16	305	.	10	323	4	10	.	.	.	18	4	.	Pillaiore Pallathoor Tank
17	220	.	.	221	.	.	.	.	.	1	.	.	Veeampatty Channel
18	139	5	.	139	6	9	.	.	.	1	9		Veeampatty Channel
19	158	5	6	158	5	6	.	.	.	.	.	.	Veeampatty Pallathoor Tank
20	131	6	.	133	14	.	.	.	.	2	8	.	Pillaiore Pasphair
21	361	2	10	350	4	2	10	14	8	.	.	.	Veeabadra Tank Chittoor Taluk
22	62	10	.	62	10	.	.	.	.	.	.	.	Palaru River side
23	20	9	9	20	9	9	.	.	.	.	.	.	Pallaru River Channell
24	16070	.	8	15222	7	3	847	9	5	.	.	.	Custom Palmanair Tank
25	960	8	7	884	5	4	76	3	3	.	.	.	Custom Kaddapanallaru Tank
26	4707	15	8	5437	.	4	.	.	.	11	1	9	Upperapy Pagoda Tank
27	717	14	11										Conjee Pagoda Tank
28	6545	10	3	5570	13	10	1034	12	5	.	.	.	Custom Villamadab Tank
29	3	8	6	3	8	6	.	.	.	.	.	.	Tank & Channel Tirr. Taluk
30	1557	3	6	1576	.	.	.	.	.	1903	12	6	Tank & Channel Tirr. Taluk
Carried Over	46,812	8	7	45,926	12	10	1969	7	9	1081	12	.	

Name of Works	No.	To be accounted for			Bills prepared			Advances not exhausted by			Advances exceeded by		
Brought Over		46,812	8	7	45,926	12	10	1969	7	9	1081	12	.
Annual Repairs to Branch Road No 19	31	1289	1	11	1629	15	5	.	.	.	340	13	6
Do Synagoontah Ghaut	32	1114	10	4	1126	10	.	.	.	.	11	13	8
Do Kuntapettah Road	33	10	11	8	10	11	8	.	.	.	.	.	.
Mutuall's Khaullay at Chittoor	34	354	5	6	372	11	6	.	.	.	18	6	.
Sannah Khoontry at Kuntapetty	35	145	.	.	150	.	.	.	.	.	5	.	.
Police Cutcherry at Vencatagherry	36	467	15	5	467	15	5	.	.	.	.	.	.
Coomahers Room & Printing Press attached to the Collectory Cutcherry at Chittoor	37	233	8	1	233	8	1	.	.	.	.	.	.
Talook Cutcherry at Goodiattum	38	71	10	6	62	11	2	8	15	4	.	.	.
Do Do Pollicondah	39	50	.	.	50	.	.	.	.	.	.	.	.
Sundries of publick Trees at Goodiattum	40	29	12	8									
Sundries at Goodiattum in 57	41	53	10	1	180	2	2	.	.	4	9	.	.
Do Do Pagoda	42	97	.	2									
Chittoor Choultry	43	152	.	10	152	.	10	.	.	.	.	.	.
Tunnell acrofs the Chittoor Coast Road	44	172	7	9	172	7	9	.	.	.	.	.	.
Dewan Wife's acrofs the Tunnell Coast Road	45	669	5	1	667	1	3	2	3	10	.	.	.
Total Rupees		51725	12	7	51202	12	1	1980	15	8	1457	15	2

5 The totals for this Range will therefore be as follows, Viz

As per Statement	51,725	12	7	51202	12	1	1980	15	8	1457	15	2
Sent up by District Engr	62811	15	11	62811	15	11	.	.	.	.	.	.
Total	114537	12	6	114014	12	.	1980	15	8	1457	15	2

6 The expenditure has in the cases ranging from

Rs As Ps Rs As Ps
—1—9 to 1008—12—6 exceeded the amount advanced
Rs As Ps
by 1,457—15—2, which sum should be allowed; which
in 7 others, ranging from Rs.—4—7 to Rs. 1334—12—5,
together Rupees 1980—15—9, one amount Rupees [illegible]
has been recovered, leaving to the relief of the Farmer
Rupees 1,970—1—

Range No. 12

The sum unapplied for this Range is not equal to the amount for which bills are prepared; this arises from the circumstance of several Contractors and Workmen being yet unpaid, whose names are included in the bills marked thus (*)

Contractors

No. 1—— 547—4—. Cunneyannicut
2—— 9606—9—10 Kahindravaudey Channel
3—— 4313—13—9 Do Tank & a portion of Superintendence
78 and 79—— 5—7—. Cooly from Canagapattu Settlement & Nagapatnam Channel
14,472—2—7

Workmen

No. 25—— 103—. Simmon Tank.
57—— 56—4—. Cundady Cheroon Tank
90—— 161—2—. Kahindra Vaudey Channel
92—— 22—. Government Channel Company
342—6—11

Total Company's Rupees 14,814—9—6

Name of Works	No.	To be accounted for			Bills prepared			Advances not exhausted by			Advances exceeded by		
		Rs	As	Ps	Rs	As	Ps	Rs	As	Ps	Rs	As	Ps
Cunnay Annicut	* 1	17334	13	5	17635	12	9				280	15	4
Kahindravaudey Channel	* 2	11462	14	2	20572	1	9				9109	3	7
Do Tank & a portion of Superintendence	* 3	27315	10	8	31391	5	2				4075	10	6
Schamalcomah tank	4	2673	4	8	2672	12	3		8	5			
Restoration of Nagaputtah ruined tank	5	90			90								
Caumandoor ruined tank	6	731	7	9	731	9	6				1	9	
Nagaputtah Moottoo Nadoogo	7	66	10	9	66	11							3
Poodoputtah Dalaway tank	8	315	8	5	316		7					8	2
Callairey Cautairey	9	20			18	10	6	1	5	6			
Natadingaporum Chittairey	10	17			18	15	11			1			
Vanapaudey tank Caliguelah	11	149	4	3	227	1	1				77	12	10
Vanapaudey tank	12	374			100 / 274								
Sodattacoppum Goorroo Setty Tank Caliguelah and Sluice	13	290	2	3	302	6	10				12	4	7
Do Do large Tanks	14	125			125								
Sondracoppum Carpanthanghall	15	192	14	4	150 / 42	9 / 5	4						
Coorjay Tank Sluice	16	38	9	10	38	12	8					2	10
Caray Cairey Tank Sluice	17	41	15	1	41	15	8						7
Coiney large Tank	18	247	2	11	107 / 139	14 / 4	4 / 7						
Do small Tank	19	43	12		43	12							
Veerabattee Tank	20	126			126	4	5					4	5
Kailacoppum large Tank	21	320	5	5	278 / 41	4 / 14	2 / 3		3	3			
Kulpatt Tank	22	65			63	2	6					2	6
Koocondaryapporum Kannairy Thanghall	23	54	2	1	78	4					24		11
Injum large tank	24	26	14					26	14				
Ammoor Tank	* 25	1063	13	5	1164	2	10				100	5	5
Chetty Thanghall	26	637	8	9	732	15	10				95	7	1
Kailacoppum Kulpouttoo Tank	27	479	2	2	379 / 99	4 / 14	2 / 2						
Paroncarjee Tank Caliguelah	28	253	3	3	124 / 114	6 / 9	10 / 9	14	2	8			
Kobinahur large tank	29	600			599	3	2		12	10			
Irongempatoo Tank	30												
Carried Over		65778	4	7	78911	6	7	43	14	9	13777		

№	Name of Works	№	№ to be accounted for			Bills prepared			Advances not yet handed by			Advances to be recovered by		
	Brought Over		68589	4	10	82246	9	2	178	7	9	13835	12	1
	Pookevankum small Tank	59	12	2	.	12	2	.	.	.	.	.	.	.
	Vapanjaley large tank	60	226	13	.	273	4	8	.	.	.	48	7	8
	Condrapankum tank	61	69	10	.	69	10	.	.	.	.	.	.	.
	Cutnacondalavaley valley tank	62	18	2	.	18	2	.	.	.	.	.	.	.
	Annelalah Tank	63	22	2	.	22	5	.	.	.	.	.	3	.
	Malacoopum Cattaley	64	133	5	.	133	5	2	.	.	.	.	.	2
	Inovendrayaporum Kaygavel Tanks	65	48	.	10	47	13	2	.	.	3	8	.	.
	Ramaporum Unmanaley	66	79	3	.	79	3	.	.	.	.	.	.	.
	Gondapullee Dasalavaddo	67	7	1	.	7	1	.	.	.	.	.	.	.
	Saramugalum Tank	68	159	12	.	178	15	8	.	.	.	19	3	8
	Cotay Saramugalum large Tank	69	226	6	.	264	14	.	.	.	.	28	8	.
	Malacoopum Tank	70	35	.	.	35	.	6	.	.	.	.	.	6
	Vanoottanapullee Cutto Tank	71	10	1	.	10	1	.	.	.	.	.	.	.
	Goodegoochintala Peddoorda Channel	72	11	15	.	12	.	.	.	.	.	.	1	.
	Avalah Tank & Springs Channel	73	70	10	.	70	10	.	.	.	.	.	.	.
	Cotolamandiem Pattarah Yalia poontah tanks	74	52	15	.	52	15	.	.	.	.	.	.	.
	Vapenjaley & Springs Channel	75	18	8	.	2	14	8	15	9	4	.	.	.
	Gallookamundiem large Tank	76	526	5	.	526	5	1	.	.	.	.	.	1
	Inan tangal	77	19	.	.	13	8	.	5	8	.	.	.	.
	Road from Canepetta to Ammoor *	78	1626	9	2	1626	9	2	.	.	.	.	.	.
	Road from Walajahnuggur to Ammoor *	79	4238	5	3	2039 / 2069	11 / 6	7 / 3	129	3	5	.	.	.
	Road from Nagherry to Poolloor	80	3672	.	3	3787	14	8	.	.	.	115	14	5
	Annual Repairs to Trunk Road № 11 from Chittoor to Pallaloor	81	2934	6	9	3083	9	2	.	.	.	149	2	5
	Do to Road from Poothalpet to Karvetinagar	82	2445	15	4	2052 / 299	12 / 14	8 / 5	93	4	3	.	.	.
	Do from Nagherry to Poolloor	83	1182	14	10	873 / 309	9 / 6	2 / .	.	.	.	.	.	4
	Do Walajahnuggur to Kolinghear	84	1561	14	9	1730	5	1	.	.	.	168	6	4
	Do Canepetta to Ammoor	85	957	2	7	1119	.	10	.	.	.	167	7	3
	Superintendary Office to Road from Ammoor to Walajahnuggur	86	174	15	11	71 / 56	10 / .	11 / .	47	5	.	.	.	.
	Charges for Nurseries &c for 1857/58	87	191	8	1	182	.	1	7	8	.	.	.	.
	Planting 2 Nurseries of Jaloosal trees	88	135	.	.	.	.	.	135	.	.	.	.	.
	Travellers Bungalow at Kuramkaddi	89	500	.	.	552	5	1	.	.	.	52	5	1
	Carried Over		89979	7	7	103952	14	2	612	1	5	14587	8	.

№	Name of Works	№	№ to be accounted for			Bills prepared			Advances not yet handed by			Advances to be recovered by		
	Brought Over		65178	4	7	78911	1	7	25	12	1	13777	.	1
31			81	12	6	.	.	.	21	12	1	.	.	.
32			80	6	.	80	5	6	.	.	.	.	.	.
33			62	.	.	62	.	.	.	.	.	.	.	.
34			90	1	.	90	10	7	.	.	.	.	1	1
35			40	.	.	41	.	.	.	.	.	1	.	.
36			189	4	9	187	4	9	.	.	.	.	.	.
37			939	5	.	988	14	7	.	6	.	.	.	.
38			30	.	.	30	.	.	.	.	.	.	.	.
39			49	.	.	48	15	6	.	.	1	.	.	.
40			89	.	.	88	15	10	.	.	2	.	.	.
41			50	.	.	50	.	.	.	.	.	.	.	.
42			85	14	3	85	8	.	.	.	6	3	.	.
43			41	.	.	40	15	1	.	.	3	.	.	.
44			73	5	.	73	5	.	.	.	.	.	.	.
45			176	6	.	176	.	.	.	.	6	.	.	.
46														
47			220	.	.	220	.	.	.	.	.	.	.	.
48			293	.	.	293	6	9	.	.	.	.	6	1
49			40	.	.	21 / 18	2 / 13	1 / 1	.	.	.	.	6	10
50			213	7	7	213	7	2	.	.	5	.	.	.
51			100	.	.	151	4	.	.	.	.	2.50	4	.
52			50	.	.	.	.	.	50	.	.	.	.	.
53			148	1	3	148	1	3	.	.	.	.	.	.
54			23	15	.	23	4	2	.	.	.	.	.	.
55			11	15	10	11	15	.	.	10	10	.	.	.
56			44	13	.	44	4	1	.	.	10	.	.	.
57			16	4	10	16	1	5	.	8	11	.	.	.
58			122	.	3	122	.	3	.	3	5	.	.	.
	Carried Over		68589	4	10	82246	9	2	178	7	9	13835	12	1

№	To be accounted for			Bills prepared			Advances not exhausted by			Advances exceeded by			Name of Work
Brought Over	89979	7	7	103932	14	2	612	1	5	12337	8	•	
* 90	366	14	•	539	12	8	•	•	•	172	14	8	Calcutta Cemetery at Entally
91	483	5	6	679	1	6	•	•	•	195	12	•	Police Court Cutcherry at Entally
* 92	136	2	6	154	3	•	•	•	•	18	•	6	Government Charitable Grant
93	40	•	•	42	14	11	•	•	•	2	14	11	Community in Colony from Cyclone
94	299	6	9	296	10	10	2	11	11	•	•	•	Barrack Establishment Campbell
95	626	10	3	635	14	3	•	•	•	9	4	•	Lepers Community &c &c &c
96	544	5	5	533	9	5	10	12	•	•	•	•	&c Hospital at Campbell
97	270	12	1	358	11	6	•	•	•	87	15	5	Native Hospital &c
98	15	4	1	16	15	4	•	•	•	1	11	3	Lepers Line &c
99	116	13	1	116	13	1	•	•	•	•	•	•	Medical Stores & Quarters at Campbell
Inserted upon the Bunkers alone	Signature			93	14	6	•	•	•	23	14	6	
				13	1	4	•	•	•	13	1	4	
Total Rupees	92879	1	1	107422	8	1	625	9	4	15180	•	11	

8 — In the cases where the expenditure had exceeded the amount advanced, which occurs in 43 instances, ranging from Rs. As. Ps. 1. to 9,109—3—7 there appears to be an amount due, inclusive of the amount Rupees 14,815—9—6 due to Contractors and Workmen, of Rupees 15,180—4 which should be allowed; while in 31 other cases, ranging from Rs.—1 to Rs 135— together Rupees 625—9—4 Recoveries should be made, either wholly or in part;

or the amount written off— But it appears probable that the greater portion of this last-mentioned sum Rs. As. Ps. 625—9—4 may be recovered.

Range № 3

9 Part of the work done in this Range, has been adjusted, and the amount cleared off by one bill, which was sent up to the Central Office, by W. Peting District Engineer Dopping with the others mentioned in Range №7.—

Name of Work	№	To be accounted for			Bills prepared			Advances not exhausted by			Advances exceeded by		
	"	316	1	9	316	1	9	•	•	"	•	"	"

Rs. As. Ps.

10 The remainder of 43 7—14—9

has been treated as follows. Viz:

No.	To be accounted for Rs.	As.	Ps.	Bills prepared Rs.	As.	Ps.	Advances not accounted for Rs.	As.	Ps.	Advances exceeding Rs.	As.	Ps.	Name of Works
1	1174	7	1	.	.	.	1174	7	1	.	.	.	[illegible] Anicut
2	300	.	.	.	.	.	300	.	.	.	.	.	Anicut to [illegible] channel &c.
3	115	.	.	.	.	.	115	.	.	.	.	.	[illegible] Supplying Channel
4	144	11	3	.	.	.	144	11	3	.	.	.	[illegible]
5	95	[illegible]	[illegible]	.	.	.	95	[illegible]	[illegible]	.	.	.	Nagalam large tank
6	43	3	3	.	.	.	43	3	3	.	.	.	[illegible] tank
7	75	.	.	.	.	.	75	.	.	.	.	.	[illegible] tank
8	100	.	.	.	.	.	100	.	.	.	.	.	[illegible] Supplying Channel
9	25	.	.	.	.	.	25	.	.	.	.	.	[illegible] tank
10	257	4	.	.	.	.	257	4	.	.	.	.	[illegible] tank
11	47	1	.	.	.	.	47	1	.	.	.	.	[illegible] do.
12	29	.	.	.	.	.	29	.	.	.	.	.	[illegible] tank
13	100	.	.	.	.	.	100	.	.	.	.	.	[illegible] large tank
14	125	.	.	.	.	.	125	.	.	.	.	.	[illegible] large tank
15	150	.	.	.	.	.	150	.	.	.	.	.	[illegible] tank
16	73	3	.	.	.	.	73	3	.	.	.	.	[illegible] Anicut
17	14	15	3	.	.	.	14	15	3	.	.	.	[illegible]
18	50	.	.	.	.	.	50	.	.	.	.	.	[illegible] tank
19	3	8	.	.	.	.	3	8	.	.	.	.	[illegible] channel
20	53	12	.	53	9	.	.	3	.	.	.	.	[illegible] tank
21	70	.	.	.	.	.	70	.	.	.	.	.	[illegible] channel
22	9	4	.	.	.	.	9	4	.	.	.	.	[illegible]
23	2006	13	4	.	.	.	2006	13	4	.	.	.	[illegible] Choultry &c.
24	375	1	.	.	.	.	375	1	.	.	.	.	[illegible] Choultry at [illegible]
Total Rupees	5437	14	9	53	9	.	5384	5	9	.	.	.	

11 The totals for this range will therefore be

	To be accounted for			Bills prepared			Advances not accounted for			Advances exceeded by		
As per Statement	5437	14	9	53	9	.	5384	5	9	.	.	.
Entrapped by Dist. Engr.	316	1	9	316	1	9	.	.	.	.	.	.
Total	5754	.	6	369	10	9	5384	5	9	.	.	.

12 In two instances only, has it been possible to make out a bill, while in 23 cases ranging from Rs. As. Ps. 3-8-. to 2,006-13-4, recoveries must be made, either wholly or in part, or the amount written off. It appears, however, that 4 amounts have already been recovered which are not included in this Statement viz:

Rs. As. Ps.
200-.-.
15-14-.
23-6-4
30-.-. together amounting

to Rupees 269-4-4, and that more may follow. These amounts should be credited as suggested at Para 19—

Range No. 1

13 The items in this range are as [illegible]

No.	Name of work	No.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
		Brought over	6853	12	6	5211	1	1	1146	3	11
1	Tanks	30	20						20		
2	Valampauttum	31	578	5	8	578	5	8			
3	Timmanachalu Koppum Tank	32	57	3		57	3				
4	Poopandy Tank	33	21	10		21	10				
5	Odoor Tank	34	151	8	2	151	8	2			
6	Puppaimoodum Tank	35	21						20		
7	Nelloy Tank	36	121	6		121	6				
8	Nelloor Tank	37	355		3	355		3			
9	Koppum Tank	38	84	9	6	84	9	6			
10	Koruvanya Tanks	39	93	4		93	4				
11	Valampauttum do.	40	50						50		
12	Nelloor do.	41	525	8		525	8				
13	Kondanoor Vaneth Channel	42	20						20		
14	Puppaiyanum Pokanavaium Tank	43	78	9					78	9	
15	Villamaradum Spring Channel	44	20	6					20	6	
16	Pelianaudoo River Channel dam	45	162	7		162	7				
17	Viriamangalum Tank	46	9	8		9	4		4	4	
18	Odoor Kandy Tank	47	56						56		
19	Do. large Do.	48	293	13	6	293	13	6			
20	Puppaimoodum large Tank	49	20						20		
21	— do. Channel	50	20	13		20	13				
22	Vattamadu Puppaiyan Channel	51	210		8	210		8			
23	Arthiambaudy Tank	52		13	9				13	9	
24	Koorambaudy Tank	53	14	13	8				14	13	8
25	Vellamoddy do. Tank & Sluice	54	106	4	6	106	4	6			
26	Allapoddium Tank	55	158			158					
27	Vettupatt Tank	56	32	7		32	7				
28	Koonjoorpatt Tank	57	112	6		112	6				
29	Vannanpoottay Tank	58	95	10		95	10				
30	Pungalattan Tank	59	25	3		25	3				
31	Pamattoor Tank	60	300			300					
32	Malecadavu River Channel	61	327	14		327	14				
33	Soultalumpatt Tank	62	25			25					
34	Keelachoor Koondanaiku Tanks	63	20			20					
35	Soorpattiroo Tank	64	48			48	7	3			
36	Poothoor Tank	65	69	2	9	69	2	9			
		Carried Over	11088	4	5	9350	4	4	1746	7	4

No.	Sums accounted for			Sums disbursed			Advances not cleared			Advances exceeded			
	Rs	As	Ps	Rs	As	Ps	Rs	As	Ps	Rs	As	Ps	
Carried Over	11088	4	5	9350	4	4	1745	7	4	-	8	7	3
64	115	.	.	115	.	.	.	.	.	.	.	.	Embankment Work
67	15	13	.	.	.	.	15	13	.	.	.	.	Retaining wall
68	26	10	.	26	10	.	.	.	.	.	.	.	Repairing Bridges
69	104	5	.	104	5	.	.	.	.	.	.	.	Excavating Tanks
70	18	13	2	18	10	10	.	2	4	.	.	.	Repairs of Tanks
71	10	2	.	10	2	.	.	.	.	.	.	.	Bridges
72	52	.	.	52	.	.	.	.	.	.	.	.	Establishment
73	91	11	9	91	11	9	.	.	.	.	.	.	Petty Contingencies
74	21	4	.	21	4	.	.	.	.	.	.	.	Establishment
75	12	8	.	12	8	.	.	.	.	.	.	.	Allowances
76	60	.	.	60	.	.	.	.	.	.	.	.	Establishment
77	12	.	.	.	.	.	12	.	.	.	.	.	Establishment
78	89	2	.	89	2	.	.	.	.	.	.	.	Establishment
79	200	4	3	200	4	3	.	.	.	.	.	.	Establishment
80	252	1	3	252	1	3	.	.	.	.	.	.	Establishment
81	2	.	.	2	.	.	.	.	.	.	.	.	Establishment
82	46	7	3	46	7	3	.	.	.	.	.	.	Establishment
83	52	12	6	54	12	6	.	.	.	.	.	.	Establishment
84	14194	10	3	3097	11	11	441	1	9	.	.	.	Establishment
85	659	.	1	659	.	1	.	.	.	.	.	.	Establishment
86	50	.	.	.	.	.	50	.	.	.	.	.	Establishment
87	41	.	.	34	14	8	6	1	4	.	.	.	Establishment
88	5735	7	9	5735	9	.	.	.	.	.	1	3	Establishment
89	50	.	.	50	.	.	.	.	.	.	.	.	Establishment
90	20	.	.	20	.	.	.	.	.	.	.	.	Establishment
91	8	.	.	.	.	.	8	.	.	.	.	.	Establishment
92	150	.	.	.	.	.	150	.	.	.	.	.	Establishment
93	360	.	.	360	.	.	.	.	.	.	.	.	Establishment
Rupees	32,942	4	8	30522	3	5	2429	9	9	8	0	6	

12. In two instances only the expenditure has exceeded the advances: 8—7—3 + —1—3 these sums Rs As Ps Rs As Ps exceeded 8—2—6 should in allowed on 36 cases ranging from —1—6 to 6 6 1—1—9, and amounting to 2 6 29—9—9, recoveries should be made either wholly or in part, or the amount written off for 26 items, out of 36 amounting to Rupees 9:8—11—10 it had been impossible to make any—Bills.

Range No 5

15. It is necessary to divide the transactions in this Range, part of them having been executed under the old (i.e. advances on account of works preliminary), & under the new system, (i.e. advances on account of Tools generally) The items are as follows, Viz:—

Names	Sums accounted for			Sums disbursed			Advances not cleared			Advances exceeded			
	Rs	As	Ps	Rs	As	Ps	Rs	As	Ps	Rs	As	Ps	
Mr Dick.	36394	7	11	36394	7	11	.	.	.	.	.	.	
Mr Lincoln.	27415	7	7	27583	2	11	5276	.	11	313	12	3	
Total Rupees	64139	15	6	63977	10	10	5276	.	11	313	12	3	

16 The advances made to the Civil Works for the works generally — in each Taluk, and Office have been prepared and paid for the exact amount drawn by him. No adjustment is therefore necessary — Not so with the advances made to Mr Lincoln, who it appears left the Public Works Department in August 1857, having received a Medical Certificate in the Margin from Captain Cheyne Bengal Engineers countersigned by the Acting Chief Engineer was reported as having died on the way to the capital In 3 instances the expenditure had exceeded the advances allowed. On the other hand there are the three sums of Rs 3175—5—2 making in all Rs 5476—11 for which no receipts or written explanations have been received.

17 The Report of Mr Lincoln has been carefully examined and has since attended and given all the information possible. It appears that the long period which had elapsed since the last of the works, makes the chances of recovering the amount of these monies very doubtful. It is very much to be regretted that these accounts have been allowed to remain so long unsettled, as doubtless, had due diligence been used, part at least might have been adjusted by this time.

Superintendent T. Dick

	No.	Sale accounts for			Bills prepared			Advances not exhausted			Advances exceeded by		
Tellyaur annicut Channel 13 miles 1½	1	356	15	1	356	15	1						
Embankments on the banks of the Tellyaur Channel	2	337	9	2	337	9	2						
Palaudy dam	3	75	13	6	75	13	6						
Sluice tank No 1	4	370	15	11	370	15	11						
Cross Cutting Channel	5	393	7	8	393	7	8						
Surplus weir No 1	6	130	.	.	130	.	.						
Tellyaur Channel from the Grand Anicut to Vellore	7	785	7	9	785	7	9						
Establishment charges	8	66	12	.	66	12	.						
Irrigation tank	9	47	4	.	47	4	.						
Causeway at the Mangalur	10	23	11	.	23	11	.						
Elumpandra tank	11	143	3	.	143	3	.						
Sluice No 2	12	39	1	.	39	1	.						
Grand Trunk Channel from the Grand Anicut to Vellore	13	4298	1	4	4298	1	4						
Vellore Valley Supply Channel	14	75	.	.	75	.	.						
Irrigation tank	15	75	.	.	75	.	.						
Sluice No 3	16	40	.	.	40	.	.						
Cross Cutting Channel No 2	17	40	.	.	40	.	.						
Irrigation tank	18	30	.	.	30	.	.						
Surplus weir	19	10	.	.	10	.	.						
Road Bridge	20	75	.	.	75	.	.						
Superintendence for 2 years	21	10	.	.	10	.	.						
Irrigation Channel	22	30	.	.	30	.	.						
Irrigation tank No 4	23	35	.	.	35	.	.						
Grand Trunk R.V. Channel	24	400	.	.	400	.	.						
Irrigation Elumpandra tank	25	100	.	.	100	.	.						
Irrigation tank	26	20	.	.	20	.	.						
Sluice No 4	27	20	.	.	20	.	.						
Irrigation Channel	28	45	.	.	45	.	.						
Tellyaur Aqueduct Channel	29	50	.	.	50	.	.						
Irrigation tank Mangalur	30	77	15	4	77	15	4						
Irrigation tank	31	17	3	.	17	3	.						
Irrigation tank	32	135	12	.	135	12	.						
Irrigation Channel	33	45	6	8	45	6	8						
Grand Trunk Channel	34	961	7	4	961	7	4						
Irrigation tank	35	11	15	.	11	15	.						
Irrigation tank	36	66	2	9	66	2	9						
Carried Over		9437	10	6	9437	10	6						

No.	To be accounted for			Balls prepared			Advances not exhausted by			Advances exceeded by		
Brought Over	9437	10	6	9437	10							
37	183	10		183	10							
38	65	5	1	65	5	1						
39	100	11		100	11							
40	209	7	5	209	7	5						
41	20	8	11	20	8	11						
42	25	8		25	8							
43	466	10	7	456	10	7						
44	180	12		180	12							
45	452	11		452	11							
46	39	6	10	39	6	10						
47	79	9		79	9							
48	37	7		37	7							
49	87	12		87	12							
50	80	10		80	10							
51	174	8	4	174	8	4						
52	193	14		193	14							
53	168	8		168	8							
54		7	5		7	5						
55	28	10	5	28	10	5						
56	23	11		23	11							
57	153	5		153	5							
58	123	4	3	123	4	3						
59	48	13		48	13							
60	19	12		19	12							
61	168	14	6	168	14	6						
62	93	8		93	8							
63	113			113								
64	136	13		136	13							
65	136	13		136	13							
66	19	5		19	5							
67	63	1		63	1							
68	24	5		24	5							
69	33	9		33	9							
70	19	9		19	9							
71	96	2		96	2							
72	11	2		11	2							
73	100	3	9	100	3	9						
74	65			65								
Carried Over	13485	3		13485	3							

No.	To be accounted for			Balls prepared			Advances not exhausted by			Advances exceeded by		
Brought Over	13485	3		13485	3							
Sluice & Breach with earth & stone work in Mandawash Tank Supply Channel	75	60		60								
Annamumpankum Tank	76	180		180								
Sluice to Godia Nellore Vijsa Tank	77	180		180								
Nellore Cajahnairey Tank	78	110		110								
Cymantirgful tank	79	150		150								
Arroongoonum tank	80	480		480								
Clearing Moodoor Channel	81	450		450								
Sluice to Cheembaidoo Tank	82	30		30								
Coomboley large Tank	83	200		200								
Banding the bank of the Pallaur Tanning Tank	84	440		440								
Sluice to Coracotah tank	85	360		360								
Clearing the bed of Channel Tank Channel	86	300		300								
Raising the bank of Poracoil Tank	87	330		330								
Banding the bank of Vinnapatam Tank	88	190		190								
Sluice of Vellairey Tank	89	70		70								
Repairing Nellore Channel	90	1437		1437								
Rebuilding Cranam Vijsa Do	91	200		200								
Repairing Pallaur Channel	92	80		80								
Sluice to Vijya Tank	93	678	10	11	678	10	11					
Burgainum Chittairey	94	115	12	3	115	12	3					
Cauvirtal Tank	95	158	3	8	158	3	8					
Cauvirypankum Tank	96	288	12	6	288	12	6					
Tatavur Vadoor Tank	97	329	5	11	329	5	11					
Moodoor Channel	98	397	15	6	397	15	6					
Sluice in the Sirkazy Porter tank	99	150	5	11	150	5	11					
Gordavaram Tank	100	602	12	8	602	12	8					
Virapatti Tank	101	91		2	90		21					
Sluice to Vadoor Arumanoorum Tank	102	50			50							
Vinnamalla Carpum	103	40			40							
Irrigation Channel Tank	104	470			470							
Sluice to Arundoor Chittairey	105	35			35							
Raising & Repairing the bank of Chittairey	106	210			210							
Repairing Calingal to Vinnamalla Tank	107	230			230							
Sluice to Pelicanacallaur Channel	108	50			50							
Sluice to Vinnamallaur Tank	109	62	8		62	8	8					
Repairing Pelicanat Tank	110	287	11	2	287	11	2					
Carried Over	22995	9	4	22995	9	4						

No.	£ s d accounted for	Bills prepared	Advances not to be handed over by	Advances exceeded by
Brought Over	22905 9 4	22905 9 4		
111	10 14 6	13 14 6		
112	20 . .	20 . .		
113	560 . .	560 . .		
114	190 . .	190 . .		
115	210 . .	210 . .		
116	245 . .	245 . .		
117	450 . .	450 . .		
118	155 . .	155 . .		
119	360 . .	360 . .		
120	200 . .	200 . .		
121	100 . .	100 . .		
122	58 . .	58 . .		
123	620 . .	620 . .		
124	160 . .	160 . .		
125	75 . .	75 . .		
126	68 . .	68 . .		
127	95 . .	95 . .		
128	155 . .	155 . .		
129	177 . .	177 . .		
130	330 . .	330 . .		
131	20 . .	20 . .		
132	430 . .	430 . .		
133	34 2 9	34 2 9		
134	119 9 3	119 9 3		
135	157 13 4	157 13 4		
136	87 6 .	87 6 .		
137	241 2 8	241 2 8		
138	570 . .	570 . .		
139	450 . .	450 . .		
140	630 . .	630 . .		
141	80 . .	80 . .		
142	77 . .	77 . .		
143	220 10 .	220 10 .		
144	80 . .	80 . .		
145	150 . .	150 . .		
Carried Over	30454 3 9	30454 3 9		

No.	£ s d accounted for	Bills prepared	Advances not to be handed over by	Advances exceeded by
Brought Over	30454 3 9	30454 3 9		
Kalaveram Tank	146	95 . .	95 . .		
Do Galingalah	147	150 . .	150 . .		
Do Channel	148	100 12 4	100 12 4		
Karrorkandanadee Sluice	149	. 8 5	. 8 5		
Allowances for the Kalaveram Tank	150	8 . .	8 . .		
Sluice to Karroocay Cultivation	151	151 7 6	151 7 6		
Calapoondey Tank	152	650 . .	650 . .		
Panarly Poundey Embankment	153	40 . .	40 . .		
Periyalour Tank	154	100 . .	100 . .		
Cuddalaundey Supply Channel	155	50 . .	50 . .		
Karrapetty Channel	156	80 . .	80 . .		
Salaries &c of Cheyaur Annicut Channel	157	570 . .	570 . .		
Pilly Pullaur Tank	158	250 . .	250 . .		
Chittavetty Tank	159	75 . .	75 . .		
Nunneandal Sluice	160	66 . .	66 . .		
Periyalour Tank	161	65 . .	65 . .		
Karrapoolian Tank	162	30 . .	30 . .		
Periadoorgaiyar Galingalah	163	100 . .	100 . .		
Annual Repairs to Roads from Cheyaur to Pallikonda &c	164	450 . .	450 . .		
Do Do Do 1857-58	165	690 . .	690 . .		
Do Do from Roads &c	166	600 . .	600 . .		
Salaries Surplus on Repairs of Cheyaur Channel	167	79 8 3	79 8 3		
Colaar Taloo & Kulcherry	168	966 5 .	966 5 .		
2 Pore Sheds at Cheyaur annicut & Vammoney	169	200 . .	200 . .		
Do Do	170				
1 Do Do	171	238 7 8	238 7 8		
1 Do	172				
Sundry Salaries for Repairs to 2 Pore Sheds at Cheyaur annicut & Vammoney	173	125 . .	125 . .		
	174				
Colaar Travellers Bungalow	175	25 . .	25 . .		
Dilapidations condemned Military Buildings at Arnee	176	44 3 .	44 3 .		
Total Rupees		36394 7 11	36394 7 11		

In Folio

Assistant Overseer Shaw [illegible]

No.	Name of works	To be accounted for			Actual paid			Advances not adjusted			[illegible]
1	[illegible] [illegible] Cheyaur Channel	4188	2	3	1012	6	1	3175	[illegible]	[illegible]	
2	[illegible] [illegible] on the banks of the Cheyaur channel	1[illegible]	.	.	1243	13	.	.	.	.	248
3	Cheyaur Channel [illegible]	1673	7	7	1[illegible]	3	4	.	.	.	[illegible]
4	Repairing [illegible] Tank	1[illegible]	.	.	.	.	.	1[illegible]	.	.	
5	[illegible] Channel	[illegible]	.	7	1[illegible]	.	[illegible]	[illegible]	.	2	
6	[illegible] [illegible]										
7	Do. [illegible] tank	2267	6	.	22[illegible]	[illegible]	[illegible]	[illegible]	.	[illegible]	
8	Do. in Cheyaur supplying channel	450	.	.	.	.	.	[illegible]	.	.	
9	Road from [illegible] to [illegible]	11,[illegible]	11	8	[illegible]	.	.	[illegible]	11	.	
10	Road from [illegible] to [illegible]	[illegible]	8	3	[illegible]	[illegible]	[illegible]	.	.	.	
11	Road from [illegible] to [illegible]	[illegible]87	2	1	[illegible]	.	.	.	.	.	[illegible]
	Total Rupees	22745	7	7	[illegible]	[illegible]	11	[illegible]	.	[illegible]	[illegible]

48 The general results of this examination into the transactions which commenced at a date subsequent to the formation of the [illegible] C. M. [illegible] and which do not include any advances made under the old [illegible] system by [illegible] which will be treated separately are [illegible]

Abstract

Names	To be accounted for			Actual paid			Advances not adjusted			Advances [illegible]		
One	114,534	12	6	114,014	12	.	1990	15	8	1467	15	2
Two	92,6[illegible]	1	1	1[illegible]33	8	1	125	9	4	15,180	.	4
Three	5474	.	6	369	10	9	5384	5	9	.	.	.
Four	32,913	4	8	32,522	3	5	2429	9	9	8	8	6
Five	69,130	15	6	63,977	12	10	5476	.	11	313	12	8
Total	3,15254	2	3	3,163[illegible]	13	1	15896	9	5	15960	4	3

101
A

19 The question arises, whether it would be better to wait
till the differences at once, giving directions to take all means
to make the recoveries, and deal with them as debts and
strays; or to have them as it is recommended in the Revised
Public Works Department, and carry the accounts in the
usual manner. The first plan which appears to be the
best, would clear the matter up as far as the parties are
concerned, but it would leave the official accounts as they are
and expended on its works. The second, plan would leave the
balances open, and be inconvenient as far as the current
year is concerned. It would give the Executive of the Public Works
Department the amounts to complete the works when they
recover it, and would leave the Collectors and Pleaders as they are, but
so far as settling the accounts is concerned, these particulars
would be as much in arrears as ever.

20 It is therefore recommended that the Collectors be directed
to have estimates made to complete the works and the arrears
outstanding recovered in the best way they may deem pos-
sible, and the results specially reported either to the Government
or the Commission for Investigating Public Establishments.

Appendix C.

Evidence in proceedings of Commission for investigating Public Establishments dated 2nd March 1859

D.D. 645/59

Report upon the unadjusted balance of advances made for Public Works in the District of North Arcot previous to the organization of the Public Works Department made in pursuance of G. O. No 2201 C. W. D. dated 20th October 1858.

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1 As has been already shewn in that portion of the Report which deals with the unadjusted balances subsequent to the organization of the Public Works Department at Para 1.— the amount remaining to be adjusted which appertains to a period anterior to that event was understated in the G. O. No. 2201 P. W. D. of 20th October 1858.— The amount should have been Rupees 5,62,32; the difference arose in this manner. The item shewn should have been described, as the balance of sums advanced for expenditure under the old Varamat Rule;- the advances made under the old Regime to Engineers Remaining unadjusted, were omitted in the Statement

of

of Lt. Colonel Lawford the Executive Engineer,
upon which the minute of [illegible] recorded.

2— This sum of 56,232 rupees, the amount of
Registry fees divided into the [illegible] ordered by—
the Public Works Department. The works are
however, in the Zillah Records, shewn in the
several Talooks.

Range No 1 ——— 8691 — 4 — 0
2 ——— 11126 — 1 — 4
3 ——— 2832 — 1 — 3
4 ——— 21029 — 1 — 7
5 ——— 12552 — 11 — 1
56232 — 1 — 11

Part of the work done has been [illegible] in the usual
manner for part, bills were not [illegible] but
evidence has been given, that the money has been expended,
and the work done to the full value in many instances,
and in other instances, the amounts to be recovered are
established. It also appears, that [illegible] have been made, and many bills forwarded to the Engineer
Department, which are not now forthcoming.

3 The following is the Result of a very careful examination
of the various documents which [illegible] upon the subject

1st Range

No.	Name of Works	To be accounted for			Bills Amount passed			Advances not exhausted by			Advances exceeded by		
1	Inathandacoopum Tank	324	7	.	324	7	.	.	.	.	.	.	.
2	Gollapully Seepanarey Tank	59	7	.	59	7	.	.	.	.	.	.	.
3	Do Lufs lying Channel	165	15	.	165	15	.	.	.	.	.	.	.
4	Badavapulley Bungaruccu Tank	200	.	.	181 18	8 8	. .	.	.	.	.	.	.
5	Seuttamunchee Seuttoo Calvah	27	.	.	27	.	.	.	.	.	.	.	.
6	Cou'eur large Tank	150	.	.	130 19	13 15	11 3	.	.	.	.	.	.
7	Inottecorlum Pootairey Tank	80	.	.	72 7	9	6 3	.	.	.	.	.	.
8	Pillood Nagalairey Tank	195	.	.	158 37	0	3	4	4	—	.	.	.
9	Do Seuttoo Calvah	75	.	.	75	.	.	.	.	.	.	.	.
10	Cuttairey Tank	186	3	.	186	3	.	.	.	.	.	.	.
11	Nungamungalum Tank	369	13	.	367 2	9	3	.	.	.	.	.	.
12	Gacambara Nellore Tank	120	.	.	120	.	.	.	.	.	.	.	.
13	Cauinjoor Large Tank	230	.	.	212 17	15	6 3	.	.	.	.	.	.
14	Vencompully Cuttairey	100	.	.	67 32	14 1	6 3	.	.	.	.	.	.
15	Cottoor Tank	113	.	.	78 34	5 7	13 11	.	.	.	.	.	.
16	Capoor large Tank	135	.	.	73 61	13 2	3 9	.	.	.	.	.	.
17	Brinnapoorum River Spring Channel	80	.	.	.	.	.	80	.	.	.	.	.
18	Irogaiput Vida River Channel	140	.	.	140	.	.	.	.	.	.	.	.
19	Saivoor Spring Channel	120	.	.	120	.	.	.	.	.	.	.	.
20	Vaulvoor Do	75	.	.	75	.	.	.	.	.	.	.	.
21	Sottepat Do	150	.	.	150	.	.	.	.	.	.	.	.
22	Pedda Vanomanthaiyaneeputtaur Spring Channel	140	.	.	140	.	.	.	.	.	.	.	.
23	Kolum Large Tank	96	11	.	64 32	11	3	.	.	.	.	.	.
24	Pergargoontah Tank	10	.	.	10	.	.	.	.	.	.	.	.
25	Pedda naiyaneedoogum Naikmal Tank	50	.	.	32	12	.	17	4	.	.	.	.
26	Seuttamunchee River Channel	74	10	.	74	10	.	.	.	.	.	.	.
27	Vellacauchee Spring Channel	170	.	.	170	.	.	.	.	.	.	.	.
28	Veppaulay large Tank supply Do	300	.	.	339	.	6	.	.	.	39	.	6
Carried	Over Rupees	3937	2	.	3878	14	6	97	4	.	39	.	6

Nº	Name of Works	£ s d accounted for	Amount passed	Advances not Cleared by	Advances Exceeded by
Brought	Over Rupees	3937 2 -	3878 14 6	97 4 -	39 - 6
29	Annungoodey Tank	175 - -	186 1 -	- - -	11 1 -
30	Chairandorcundeporum Tiffa Tank	60 - -	60 - -	- - -	- - -
31	Vencatadamoodrum Tiffa Tank	55 - -	55 - -	- - -	- - -
32	Cohittattoor River Channel	81 - -	81 - -	- - -	- - -
33	Vettattoor Tank	45 - -	45 - -	- - -	- - -
34	Balacattoor large Tank	85 5 5	36 5 5	7 4 6	- - -
35	Tunnel to the Post trench at Cohittoor	27 - -	22 11 5	- - -	- - -
36	Road from Cuddapanattum to Goriatta	19 6 3	293 8 -	- - -	- - -
37	Suntapetti Road	- 8 10	- 8 10	- - -	- - -
38	Cohittoor Road	2 6 4	2 5 4	- - -	- - -
39	Splitting Rocks in Poodupettu near Chittoor	- 8 -	- 8 -	- - -	- - -
40	Repair to Road from Cohittoor to Polingher	43 13 1	43 13 1	- - -	- - -
41	Tunnel in Vellore Road	139 8 -	111 8 -	25 - -	- - -
42	Discretionary Allowance to Road from Rajaka Goontah to Goria 1/8	857 1 -	423 6 5	27 10 7	- - -
43	Road from Vellore to Punnattoor	225 - -	225 - -	- - -	- - -
44	Road to the Post Office at Cohittoor	- 6 -	- 6 -	- - -	- - -
45	Repairing the Sail at Cohittoor	124 2 -	124 2 -	- - -	- - -
46	Do Travellers Bungalow at Cohittoor	103 11 -	103 11 -	- - -	- - -
47	Wheel to the well in the Sail at Cohittoor	31 - -	31 - -	- - -	- - -
48	Police Cutcherry at Vencatagherry cottah	121 8 -	121 8 -	- - -	- - -
49	Cohittoor Talook Cutcherry	2243 - -	2243 - -	- - -	- - -
50	Pundal to the Travellers Bungalow at Vencatagherry cottah	2 6 -	2 6 -	- - -	- - -
	Total Rupees	8691 4 -	8564 12 2	176 9 4	30 1 6

2nd Range

Nº	Name of Work	£ s d accounted for	Amount passed	Advances not Cleared by	Advances Exceeded by
51	Binnay large Tank and Chittairy	270 - -	270 - -	3 - -	3 - -
52	Tapenjairy Tank	90 - -	90 - -	- - -	- - -
53	Do Supplying Channel	5 - -	5 - -	- - -	- - -
54	Agaramungalum Tank	100 - -	100 - -	- - -	- - -
55	Coolai Karum large Tank	130 - -	130 - -	- - -	- - -
56	Vanapalli Vellore Cummicapoodum Tank	11 - -	9 13 1	1 1 2 11	- - -
57	Sonapilley Dasaravados Tank	15 - -	15 - -	- - -	- - -
58	Nettapulley Tank	120 - -	120 - -	- - -	- - -
59	Sunnelalah Tank	91 - -	91 - -	- - -	- - -
60	Kothamanadium Kattra Galigoontah Tingal	40 - -	40 - -	- - -	- - -
61	Siddapakala large Tank	- 9 2	- - -	2 - 9 2	- - -
62	Ramapooram Tammanairey Tank	94 - -	94 - -	- - -	- - -
63	Coontabauktum Tank	195 - -	195 - -	- - -	- - -
64	Goodagoochintala Channel	22 - -	22 - -	- - -	- - -
65	Kurnacood alavady pulley Tank	18 - -	18 - -	- - -	- - -
66	Varothanapulley Cuttoo Balavin	15 - -	15 - -	- - -	- - -
67	Cokeluvaukum small Tank	27 12 -	27 12 -	- - -	- - -
68	Nuvvelalah Tank	17 - -	17 - -	- - -	- - -
69	Pandapettah Dabay Tank	1441 11 7	1441 11 7	- - -	- - -
70	Nagapettah Bunds Tank	5043 3 5	5043 3 5	- - -	- - -
71	Do Sluices & Weir	857 12 8	857 12 8	- - -	- - -
72	Nagaral Tank	136 - -	136 - -	- - -	- - -
73	Nailavoppum Tank	85 - -	85 - -	- - -	- - -
74	Chetty Mangchal Tank	292 - -	292 - -	- - -	- - -
75	Vairn Tank	420 - -	420 - -	- - -	- - -
76	Kaun Mangchal Tank	533 - -	533 - -	- - -	- - -
77	Cheerreddecroppum Tank	125 - -	125 - -	- - -	- - -
78	Narasingapooram Chittairy	70 - -	60 - -	3 10 - -	- - -
79	Pallairey Bautairey Tank	57 - -	57 - -	- - -	- - -
80	Vasambara Vellore Cope Tank	120 - -	120 - -	- - -	- - -
81	Poodupettah Timmajacherroo Do	357 13 -	357 13 -	- - -	- - -
82	Poodacul Tank	278 4 -	278 3 3	- - -	- - -
83	Road from Nuggerry to Balapulley	100 1 -	100 1 -	- - -	- - -
84	Bridges to Road from Poolipaut to Vircumbully	4 - 10	- - -	4 4 - 10	- - -
85	Travellers Bungalow at Ranneputt	43 5 8	43 5 8	- - -	- - -
	Total Rupees	11120 9 11	11110 12 5	15 12 11	- - -

3rd Range

No	Name of Works	Rs. Ps. accounted for	Amount passed	Advances not [illegible] by	Advances exceeded by
86	Veddevellum Tank	120 . .	120 . .	. . .	. . .
87	Veelumbee Tank	25 . .	25 . .	. . .	. . .
88	Korumboo for the Sauverypaunk Tank Bund	75 . .	75 . .	. . .	. . .
89	Sauverypaunk Tank supply Channel	300 . .	300 . .	. . .	. . .
90	Naradingapoorum Tank	48 2 2	. . .	48 2 2	. . .
91	Poodoor Tank	141 15 4	. . .	141 15 4	. . .
92	Vetumbauttum Tank	130 . .	. . .	130 . .	. . .
93	Vallia Nellore Spring Channel	127 12 2	. . .	127 12 2	. . .
94	Chengaud Tank	13 . .	. . .	13 . .	. . .
95	Naravalum Pottairey Tank	15 . .	. . .	15 . .	. . .
96	Verroovalum Tank	72 10 11	. . .	72 10 11	. . .
97	Vadyoor Tank	60 . .	. . .	60 . .	. . .
98	Do Aqueduct				
99	Kottoor Tank	40 . .	40 . .	. . .	. . .
100	Nanuttekkarpetta Tank	69 12 7	69 12 7	. . .	. . .
101	Nunnanoor Pharoahairey	22 15 .	22 15 .	. . .	. . .
102	Koottaiaukum Tank	16 4 .	. . .	16 4 .	. . .
103	Sauverypaukum Nadoopoocaray conduit	305 . .	305 . .	. . .	. . .
104	Tuppoor Conduit	90 . .	90 . .	. . .	. . .
105	Cotamaury cottum Spring Channel	70 . .	70 . .	. . .	. . .
106	Carraiaid Supplying Channel	90 . .	89 . .	. . .	. . .
107	Paundiambaukum Tank & Channel	510 . .	510 . .	. . .	. . .
108	Ennempat Tank	2 . .	. . .	2 . .	. . .
109	Do Do	1 . .	. . .	1 . .	. . .
110	Poojee Kaumendoor Tank	29 . .	. . .	29 . .	. . .
111	Nellay Large Tank	27 2 9	. . .	27 2 9	. . .
112	Pokal Pauvoor River Channel	157 8 .	157 8 .	. . .	. . .
113	Pandals to Travellers Bungalows at Pothairey & Ranespetta	38 12 4	38 12 4	. . .	. . .
114	Cutwalls Choultry at Nallajahpetta	49 12 .	49 12 .	. . .	. . .
		154 5 .	154 5 .		
	Total Rs. Collected	2,832 8 3	2168 2 11	664 5 4	

1st Range

No.	Name of Works	Rs. Ps. accounted for	Amount passed	Advances not [illegible] by	Advances exceeded by
115	Calavay Soondyan Ranpetta	842 10 10	683 11 13	. . .	. . .
116	Sattiraudy Annicut	107 2 6	107 2 6	. . .	. . .
117	Sampurghy Pallore River Channel	94 15 5	94 15 9	. . .	. . 4
118	Pooloo Pulla Tank	192 5 .	43 10 7	149 10 5	. . .
119	Cyatrinnum Paryonairey	22 . .	66 15 11	. . .	. . .
120	Do Shettairey	58 . .			
121	Palayoor Shettairey	23 5 .	12 2 11	. . .	. . .
122	Poodoopaukum Channel	55 . .	11 2 1	. . .	. . .
123	Do Tank	415 . .	429 12 10	. . .	27 12 10
124	Sattiradee Large Tank	4 . .	25 . .	15 . .	. . .
125	Pandaropaukum Supplying Channel	31 . .	30 . .	. . .	. . .
126	Payanoor Tank Sattiripalah	460 . .	460 . .	. . .	. . .
127	Cheruttupoorum Tank	105 . .	105 . .	. . .	. . .
128	Parradepoodee Tank	55 . .	65 . .	. . .	. . .
129	Jumpa Nellore Tank	55 8 .	55 8 .	. . .	. . .
130	Kottoor Tank	323 . .	323 . .	. . .	. . .
131	Sevvadoo Do	442 . .	442 . .	. . .	. . .
132	Kottiyapoorum Tank	150 . .	150 . .	. . .	. . .
133	Pinnerjairey Tank	591 . .	591 . .	. . .	. . .
134	Poraputtudy Tank	41 9 .	41 8 .	. . .	. . .
135	Surrumbaudy Tank	117 . .	117 . .	. . .	. . .
136	Tadaracottum Tank	13 . .	13 . .	. . .	. . .
137	Pippaiconattum Tank	2 . .	2 . .	. . .	. . .
138	Allimadurum Tank	29 . .	29 . .	. . .	. . .
139	Poindapuram Supplying Channel & Channel	79 . .	79 . .	. . .	. . .
140	Sattiapollium Tank	129 . .	129 . .	. . .	. . .
141	Pulliepatt Tank	422 . .	422 . .	. . .	. . .
142	Nellay Tank	132 . .	132 . .	. . .	. . .
143	Moonjaroopatt Tank	89 . .	89 . .	. . .	. . .
144	Do Tunnaroottay Tank	65 . .	65 . .	. . .	. . .
145	Pongalattan Tank	97 . .	97 . .	. . .	. . .
	Rice Dues Collected	5,200 6 9	5,369 9 6	164 10 5	27 13 2

No.	Name of Works	To be accounted for	Amount paid	Advances not exhausted by	Advances exceeded by
	Brought Over Rupees	5,206 6 9	5,069 9 5	164 10 5	27 13 2
146	Pennattoor Tank	259 . .	259 . .	. . .	. . .
147	Pryoor Do	592 . .	592 . .	. . .	. . .
148	Soopum Do	253 8 .	253 8 .	. . .	. . .
149	Kailoyanee River Channel	50 . .	50 . .	. . .	. . .
150	Kothalumilla Tank	30 . .	30 . .	. . .	. . .
151	Kadumbattoor Do	25 . .	25 . .	. . .	. . .
152	Canavaneeya Do	60 . .	60 . .	. . .	. . .
153	Vellanpaukum Do	40 . .	15 11 .	24 5 .	. . .
154	Tholaveram Do	180 . .	180 . .	. . .	. . .
155	Peelacoor Kunthanarayen River Channel	20 . .	20 . .	. . .	. . .
156	Kunthanarayen Kayaniepaukum Do	110 . .	110 . .	. . .	. . .
157	Do Do Channel	90 . .	90 . .	. . .	. . .
158	Veringiepoorum Pookanavarum Tank	116 . .	116 . .	. . .	. . .
159	Valimungalum Spring Channel	80 . .	80 . .	. . .	. . .
160	Singeeveeravil River Channel	7 5 .	7 . .	. . .	. . .
161	Velapalchecoorum Tank	450 . .	450 . .	. . .	. . .
162	Vennamungalum Tank	20 . .	20 . .	. . .	. . .
163	Veeranee[illegible]um Tank	197 . .	197 . .	. . .	. . .
164	Sothoor Kanjhalli	60 . .	60 . .	. . .	. . .
165	Do Large Tank	60 . .	60 . .	. . .	. . .
166	Vlamaimungatoorum Tank	20 . .	20 . .	. . .	. . .
167	Tulaiaroottpum River channel	40 . .	40 . .	. . .	. . .
168	Gollamungalum Tank	217 . .	217 . .	. . .	. . .
169	Tippiramoodium Large Tank	15 . .	. . .	4 15 .	. . .
170	Do Kanjhali	55 . .	55 . .	. . .	. . .
171	Vennoorivey River channel	33 . .	33 . .	. . .	. . .
172	Velchoppairey Supply Channel	700 . .	700 . .	. . .	. . .
173	Vellalamoor Tank	53 . .	53 . .	. . .	. . .
174	Annakanjhali Mained Tank	1557 5 5	1557 5 5	. . .	. . .
175	Road from Caniemaudy Vaut	1028 11 3	720 . .	308 11 3	. . .
176	Do from Vellore to Arnee	8338 . 11	8338 . 11	. . .	. . .
177	Vellore Kuttaderry at Vellalamoore	1094 5 9	1094 5 9	. . .	. . .
	Total Rupees	21029 5 7	23544 8 7	512 11 2	27 13 2

5th " Range

No.	Name of Works	To be accounted for	Amount paid	Advances not exhausted by	Advances exceeded by
178	Sorayoor Feeder Channel	60 . .	60 . .	. . .	. . .
179	Coottavadoo Tank	24 . .	24 . .	. . .	. . .
180	Slottookinnee	50 5 .	50 5 .	. . .	. . .
181	Occasional Sibbendy in Polloor Talook	50 6 6	50 6 6	. . .	. . .
182	Allialad Yarecoppum Tank	25 . .	25 . .	. . .	. . .
183	Polloor large Tank	357 . .	357 . .	. . .	. . .
184	Irunjalaur Supplying Channel	40 . .	40 . .	. . .	. . .
185	Cutcherry mungalum Tank	13 . .	13 . .	. . .	. . .
186	Seroovalore Tank	295 10 3	295 10 3	. . .	. . .
187	Carapet Large Tank	180 . .	180 . .	. . .	. . .
188	Kattavamungalum Tank	1350 . .	1350 . .	. . .	. . .
189	Annially Tank	215 . .	215 . .	. . .	. . .
190	Caungaroyanuntoor	135 . .	135 . .	. . .	. . .
191	Pendaryputt Tank	20 . .	20 . .	. . .	. . .
192	Elopaconnum Tank	100 . .	100 . .	. . .	. . .
193	Chedapairey Large Tank	220 . .	220 . .	. . .	. . .
194	Poondey Tank	220 . .	220 . .	. . .	. . .
195	Cadalaudey Dam	360 . .	360 . .	. . .	. . .
196	Carapet Tank	215 13 .	92 . 5 / 124 9 5	. . .	. . .
197	Vellicarrocattoor Tank Supply Channel	419 3 3	129 3 3 / 266 . .	. . .	24 . .
198	Coomicoor Tank	554 1 .	129 1 . / 555 . .	. . .	. . .
199	Vellamunpalum Tank	950 . .	950 . .	. . .	. . .
200	Vellumbaukum Tank	435 5 .	86 5 . / 350 . .	. . .	. . .
201	Vailnurmah Tank	208 . .	208 . .	. . .	. . .
202	Elethoor Supply Channel	15 . .	15 . .	. . .	. . .
203	Vellum Cheltairey	437 5 .	72 6 . / 365 . .	. . .	. . .
204	Do Feeder Tank	530 . .	530 . .	. . .	. . .
205	Annalogkee Tank	202 4 .	82 4 . / 120 . .	. . .	. . .
206	Chembroor Do	245 . .	245 . .	. . .	. . .
207	Polundoy Tanks and Annicut	110 . .	110 . .	. . .	. . .
208	Elethoor large Tank	590 . .	590 . .	. . .	. . .
	Carried Over Rupees	8,666 4 .	8,642 4 .	24 . .	. . .

No	Name of Work	Sum accounted for	Amount Paid	Remarks
	Brought Over Rupees	8,666 12 0	8,642 12 0	
299	Ramadoss Chittaley	248 14	193 14	
2,10	Govindaperumal Ranks Named	95	95	
2,11	Ramasamy Ranks	590	590	
2,12	Somasa Ranks	105	105	
2,13	Somaiah Chittaley	70	70	
2,14	Vedan Ranks	105	105	
2,15	Ramanarayan Chittaley	50	50	
2,16	Muthusamy Ranks	100	100	
2,17	Somayya Ranks	20	20	
2,18	Krishna Ranks	150	150	
2,19	[illegible]	72	72	
2,20	[illegible]	570	570	
2,21	[illegible]	25	25	
2,22	[illegible]	25	25	
2,23	[illegible]	150	150	
2,24	[illegible]	389 15 9	389 15 9	
2,25	[illegible]	50	50	
2,26	[illegible]	95	95	
2,27	[illegible]	255	255	
2,28	[illegible]	55	55	
2,29	[illegible]	309	309	
2,30	[illegible]	120 2	120 2	
2,31	Bolundayya Ranks	10	10	
2,32	Kistnamma Ranks	113 1	113 1	
2,33	Peer Saheb Chittaley	102 8	102 8	
	Grand Total Rupees	12,852 14 9	12,852 14 9	

Statement of alteration in the D.P.W. 8
North Arcot District Engineer 25

Rank and Name		Remarks
Asst Engr	Capt C.C Johnstone	Transferred to Central Office
Do	Lieut J.B. Bragne	Do & Bangalore
Do	Lt. G.H. Hopping Engr	Now in charge

marked in pencil at the D. Daniel. Lib Bonnen.

1st Division

Rank	Class	Grade	Name	Remarks
Ex Engineer			Lieutenant Brayne	In charge
Asst Ex Engr			Do Boyd	In charge
Dist Engr			Do Brayne	In charge
Do			A. F. Bopping Esqr	—Do—
Ex Engineer			Lieutenant Col Clay	In charge
Supervisor			Mr Howard	Was in charge for a time
Overseer			Mr Booth	
Asst Overseer			Mr Lincoln	Transferred to Telegraph Dept.
Do			Mr Lee	Do to Chingleput
Do			Mr Anderson	
S. Ovr	1	1	Ponnapah Moodely	Transferred to 3d Division
Do	1	2	Mr E Baldwell	Do to Salem
Do	1	2	Veerasawmy Mr	Died Succeeded by Veerasawmy
Do	1	3	Mr Selby	
Do	2	1	Sreenevassalo Modoo	Transferred to 3d Division
Do	2	2	Teeroovengadum	Dismissed
Do	2	2	Sawmy Pillay	
Do	2	2	Mr Pereira	Pahmanair Salem
Do	2	1	Mr Morrell	Resigned.
Do	3	1	Alwaro Nadoo	Dismissed
Do	3	3	Parvodaramen	—Do—
Shahramut Supt			Moonesawmy Moodely	Promoted to Division and Transferred to the 6th Division

2nd Division

Rank	Class	Grade	Name	Remarks
Ass Ex Engr			Mr A. F. Bush	
Dist Engr			A. F. Bopping	Temporarily
Ex Engineer			Captain W. B. Watts	
Asst Supervisor			Mr Dauncey	was in charge of the 3d Div for 2 months & transferred to Cuddalore
Overseer			Moonesawmy Mr	
Asst Mr			Mr Morrell	Transferred to the 1st Div and 3d Class 1st grade Sub Overseer
S. Mr	2	1	Mr Theobald	Resigned
Do	1	2	Annasawmy Mr	Transferred to South Arcot
Do	3	2	Mr Cassidy	Dismissed
Do	3	2	Ayacooty Moodely	Do subsequently Promoted with 3d Class 2d grade
Do	3	3	Ruttanasawmy Mr	Do & subsequently Promoted with 2d Class 2d grade Do transferred to the 5th Div
Do	3	3	Perumal	Dismissed
Do	1	1	Coodasawmy Mr	
Do	2	2	Mr Gajapaty	
Asst Overseer			Mr Brittain	Transferred to Cuddalore
Do			Mr Ernsdt	
S Ovr	2	2	Veonachella Mr	

3d Division

Rank and Names		Remarks
Ex Engineer	Lt Keyes	Ordered to Punjab
do	Major Walker	do Kurnool
do	Capt Barber	do & join his Corps
do	Brt Dobbyns	Subsequently Exempted to Field Duty
Asst Surgt	Ramanjoolloo Pillay	in charge of the Division
Asst Comm	Brt Lee	transferred to 1st Division
do	Brt Wright	do & Palamcottah
Sub Conr	C-2 G-2 Coonachellum Rs	Transferred to 1st Do
do	3-2 Runjavanengar Rs	
do	1-1 Brt Burrah	
do	2-2 Seenavasaloo Rao	
do	1-1 Poonapah Brs	
do	2-3 Kistnasawmy	

1st Division

Rank and Names		Remarks
Sub Collector	Brt Sullivan	Partly
Ex Engineer	Brt Ruddlestone	Transferred to Kistna Do
do	Lieut J. C. Magne	Promoted to 1st Engineer
do	J. H. Dobbyns Esq	do do
do	Lieut W. W. Boyd	Transferred to 1st Do only a part
do	Captain Taylor	Furlough on Sick leave
do	J. H. Dobbyns Esq	Promoted to Civil Engineer
do	Lt A. D. Clay	
Superviser	Brt Howard	Transfer charge for a time
Overseer	Coonawamy Brs	Transferred to the 2d Division
Sub Conr C-2 G-2	Brt Eyles	Chief Talook
do 1-3	Brt Pilly	Head
do temporary	Brt Corsham	Dismissed
do 2-2	Sawmy Pillay	Vellore Talook
do 1-3	Brt Caldwell	Transferred to 1st Do
do 3-1	Thirnavasaloo Rao	do do
Mahamadan Supt	Soobroya Moodely	Pensioned

Rank and Names		Remarks
Superintg	Br. F. Brick	Transferred to Malabar
Asst Engr	J. B. Hopkins Esqr	during Br. Brick's suspension
Ass. Engr	Br. Hogan	Resigned
Do	Br. Biggens	
S. Br. C. 9 1-1	Perianna Brs	transferred to Sawyer
Ass. Br.	Br. Lucas	Do. & pd Off.
S. Br. 2-2	Tadamalay Brs	
Asst Br.	Appasawmy Brs	lately joined
S.C. 3-2	Kistnasawmy Brs	transferred to 3d Class
Do. 2-2	Br. Haydon	
Do. 2-2	Ramappen Brooks	lately joined

Rank and Names				Remarks
Ex Engineer	Captain Carter			In charge of Dept of Prov.
do	do Pepper			North Channel
do	Br. Middleton			South Channel
Asst Ex Engr	Br. J. S. Smith			Engineers Works & Chaloupe
Asst Engineer	Lt. Dolfsing			Entire Project
	Manufactories			Examination of Entrance
	Br. Howard			Coromandel Channel
Asst Draftsman	Br. Corbett			Died
do do	Br. Byrne			Dismissed
Sub Asst Resident Surveyor	Br. C. Coffee			Southerly
do	Br. S. Ward			Examining
do	Br. Lee			Do Do
do	Arbuthnot			Transferred to Northern
	Br. Cooke			North Channel (Chaloupe)
Asst Draftsman	Br. A. Stratton			do do
do	Br. Brown			do do
Sub Draftsman	1.	2	Veeravanny Brs	do do
do	1	2	Ayavanny Brs	do do
do	1	2	Thayavanny Brs	do do
do	1	3	Subbasawmy Brs	do do
do	2	1	Ramasawmy Brs	do do
			Br. Daly	Examining
			Br. Cherrington	Died
			Br. Silva	Dismissed
			Br. Br. Carter	Do
	2	3	Parthasarthy Brs	Do
	3	3	Seetaramdas Brs	Examining
	2	1	Br. Haydon	Dismissed on account of Chaloupe Accident
	2	1	Br. Lazarus	

Superintendent's Office 15th Dec. 1840

Appendix C

Enclosure in proceedings of Commissioners appointed under Public Establishments Act dated 12th March 1869

0006648/69

No 256

Assistant Engineer's Office
North West Camp Belfast
22nd July 1857

Official Memorandum

No 512 Lincoln's services have been demanded by & handed over to the Telegraph Department, & Mr Lincoln will therefore close his Accounts & prepare Bills for the amounts of works done in anticipation of the visit of Lt Boyd which will take place in a few days when he will hand over his Accounts to Lieut Boyd who will then give him a Certificate of no demands.

Lt R.E. B. Boyd Lieut
Mr John Shaw Lincoln
Asst Engineer 3rd Class
Asst Engineer & Accot.

I hereby Certify that there are no demands against nor any Balance due by Assistant Overseer J. Shaw Lincoln on account of money received for works in the first section.

Camp Palmanacer
2nd Regiment 1857

Lt R.E. B. Boyd
Asst Engineer & Accot.
Lt R.E. C. Mayne
No 2 Engineer & Accot.

Mr Lincoln states that he had charge of works on the Colaar, Wandenwash, Trivaddoor, & Conjeveram Palaks, the greater portion of which were taken over charge from Mr Dennis in 1833/34.

States also that the accounts of this individual were kept in such a confused state, that he considered it incumbent on him, to responsibilize all responsibility in regard to them; & he accordingly addressed Capt Colby upon the subject, forwarding all Mr Dennis's accounts, which he was afterwards called upon by the Agent in adjusting. States that in reply he was compelled to inform Capt Colby of his inability to do so.

States also, that in 1835 he was removed from the above charge, & placed under the orders of the Officer in charge of the 1st Division; that he delivered over all his accounts to his successor, who raised no objections to receiving them, & that further on hearing the Department received a Certificate of "no demands" signed by Lt Boyd, & countersigned by the Acting District Engineer Haynes, which he considers sufficient to clear him of all responsibility in reference to his transactions on the Rly as it was not a rule prior to the transfer of the Executive to the Engineer Department, to receive & grant similar Certificates on taking or giving over charge.

Same read the above & found the same to be correct.

1st February 1839. Sd/- J. Shaw Lincoln

Appendix P.

Evidence on Proceedings of Commission for investigating Public Establishments dated 12th March 1859

OOW 868/59.

Irrigation New Works
Bill Nos 12 & 38/56
North Arcot

Work Construction of Calingulah or Paulaur Dam in Cuttivadoo Talook
Amount of Estimate Rupees 444 — Sanctioned by Govt 6th November 1854

Description of Charge	Circle	Amount	Total
1st Class Overseer 37 days @ 3		33	
3rd Class Coolies 1 day @ 0		0	
Total Rupees	Supt Engineer's Circle		100

Central Office of P.W.
Fort Saint George
14th October 1858
Passed by the Chief Engineer for
By Order

Amount of Estimate 444 — —
Bill Nos 12 & 38/56 — 100 — —
Balance — 344 — —

Rupees

Examined and Countersigned
Sales
Asst Auditor & Asst Accountant
H Barber Capt
Executive Engineer

Camp Arcot
14th May 1859
Cal Ex's Office

J B Meyne Lieut
District Engineer

Sixth Street Precinct.

3d Section

Bill No 12 Dec 56

Complaint of Patrolman Thomas Sullivan

vs Patrolman Thomas Sullivan

for Neglect of Duty.

Preferred 10th January

Filed 10th January

Dec 21 1856

Appendix C

Estimate & Proceedings of Commissioner for investigating Public Establishments

Madras 12th March 1859

No 88 of 58/59.

Irrigation
Bill No 88 of 1858-59.
Cuddapah District
Work- Repairs of Pitchapaud Tank Amount of Estimate Rupees 405 sanctioned by Collector in January 1858

Description of Charges	Amount			Total		
Labor						
3 Head Coolies at 4 As each	12	0	0			
1 do @ 3½ As	3	8	0			
220 Men Coolies @ 2 annas each	27	8	0			
40 Small Coolies @ 1a 4 Pice each	3	5	4			
				46	5	4
Materials						
217 C. Yards of new Revetment @ 5 annas ₱ Yard	67	13	0			
2033 C. Yards of Earth Work at 10 Pice per Yard	105	14	2			
38½ C. Yards of old Revetment @ 1 anna per Yard	2	4	6			
				175	15	8
Total Rupees	-	-	-	222	5	0
Amount of the last Bill No 187 of 1857/58 of 29 May 1858 brought forward				182	11	0
Total	"	"	"	405	4	0

Commenced 20 Febry 1858
Completed 23 Sept
Date of Inspection 21 Sept.

Dist Engr Office
30 October 1858

(Signed) W. B. Walton
Asst Supervisor

(Signed) Stewart Lieut
Dest Engr of Cuddapah

Irrigation

Bill No 109 of 1858/59

Cuddapah District

Work - Repair of Pitchapad Tank - Amount of Estimate Rs 605 - sanctioned by the Collector in December 1857.

Description of Charges	Amount			Total		
Labor						
3 Head Coolies at 4 Rs & Bheesty	12	.	.			
1 — Do at 3½ Rs — Do	3	8	.			
220 Draw Coolies at 2 As each	27	8	.			
40 Basket Coolies at 1 A 4 Pice	3	5	4	46	5	4
Material						
217 Cubic Yards of new Stone at 5 Annas P Yard	67	13	.			
2033 — Do — earthwork at 10 Pice P Yard	105	14	2			
36½ — Do — old Stone at 1 Anna	2	4	6	175	15	8
Total Rupees				222	5	.
Amount of Last Bill Rs of 1857/58 — Brought forward				182	11	.
Total Rupees				405	.	.

Commenced 20th Feb. 1858
Completed 25th Sept. 1858
Date of last inspection - 9th December

1857 W. A. Walker
Asst Superintendent

1857 J. Shaw Stewart Captn
District Engineer Cuddapah.

Appendix H.

Enclosure in proceedings of Committee for investigating Public Establishments dated 12th March 1857

000648/59

North Arcot District

Range No 1

Basavapully Bundarucca Tank

Estimate Rupees 318: 3: "

Advances on Estimate

To Tahsildar Rupees 200 " "

To District Engineer " 118. 3. "

Rupees 318. 3. "

Advances for works

by Tahsildar Rupees 181. 8. "

by District Engineer " 95. 10-1

Rupees 277. 2. 1

Expended on works

by Tahsildar prior to 16th April 1856 Rupees 181. 8. "

by District Engineer Rupees 95. 10. 1

Rupees 277. 2. 1.

or under the Estimate —— Rupees 41. " 11

2 It appears that the Tahsildar received Rupees 200 and expended Rupees 181: 8: " he had therefore to refund or account for Rupees 18: 8: " —

this amount 18: 8: has since been accounted for

The

3. The District Engineer is said to have received Rupees 118: 3: . while the Statement shews the expenditure as follows; -

in 1855/56 Rupees 75. . . . g. in 1856/57 Rupees 20: 5: 8

together Rupees 95: 5: 8; he has therefore to refunds or account for Rupees 22: 13: 4 . -

4 The work executed by the District Engineer amounts to Rupees 95: 10: 1 and it appears by the last para. that the amount advanced for expenditure was Rupees 95: 5: 8

there is therefore due to somebody Rupees 0: 4: 5.

5 The accounts must be adjusted as follows Viz.

The Tahsildar must account for or refund Rs 18: 8: .

The District Engineer ——————— 22: 13: 4

Rupees 41 5: 4.

and there is due to somebody Rupees — 0: 4: 5

which leaves excess of Estimate over cost Rupees — 41: . 11

6 All the figures given in the foregoing, are all extracted from authentic and certified documents and books, it is clear that from the system even these cannot be relied on, which fact this instance will prove. -

7. Captain Johnston stated, and as is evident, believes that the amount Rupees 118: 3: . was drawn from the Collector; it appears that it was included in a credit given by Captain Johnston in favor of Lieutenant Mayne, and the amount appears in the Account Current to the debit of Lieutenant Mayne. The fact is, that a part of the money never was drawn at all, because the credit of Rupees 926: 10: . , the aggregate balances for 15 Estimates, of which Rupees 118: 3: . was for one Estimate, was never fully drawn. it is therefore quite impossible to decide as to which of the 15 items the amount short drawn properly belongs. The impropriety of entering a credit opened by Captain Johnston in favor of Captain Mayne as a substantive charge against the latter Officer, it would be idle to discuss. the entry is radically wrong, both in theory and practice, and can only tend to render the accurate balancing of the accounts an utter impossibility. -

8 In any other Statement of Account than an Account Current, items which are not strictly cash transactions, are sometimes admissible, but the entry of a sum which has never been drawn, to the debit of an individual, is delusive and confusing to a degree, and opposed to the most

most important principle of accounting; Viz^t that the records shall be true. An Account Current is in every particular analogous to a pass book with a banker, in which are entered nothing but accomplished facts; sums actually received on the one side, and amounts actually disbursed on the other.

9. There is another circumstance which it has been found impossible to account for Viz^t The work executed by the District Engineer amounted to Rupees 95: 10: 1 on account of which Rupees 75 had been drawn. Why then was Rupees 20: 5: 8 only drawn when Rupees 20: 10: 1 was due? If the second amount drawn had been a round one like the first, it might be considered an advance, but it was evidently not a payment on account, but one made on some calculation. The Assistant Engineer's Bill denies the amount paid by Engineer Department Rupees 95: 10: 1, while the actual disbursements are shewn to have been only Rupees 95: 5: 8.

10 Again in the District Engineers Statement, the advances for this work are stated to be Rupees 200. The expenditure by the Collector is also stated to be Rupees 200 which is not true, the amount expended being only Rupees 181: 8: . . The expenditure of the District Engineer is stated at Rupees 75, instead of Rupees 77: 2: 1. The total expenditure is stated at Rupees 275 . . . which is also untrue; the correct amount being Rupees 277: 2: 1 In Captain Johnston's Statement, there appears an item as follows. "Advances by the District Engineer. Rupees 118: 3: " : " this must be a mistake of that Officer. his Statement goes on to exhibit the expenditure until completion as follows:

May	Rupees	285: 1: 2
June	"	295: 3: 2
August	"	295: 5: 8
September	"	295: 5: 8
October	"	295: 5: 8
November	"	295: 5: 8
December	completed.	

now as the total expenditure amounts only to Rupees 277: 2: 1 either all these items must be wrong, or all the other records in the Office must be erroneous. The work appears to have been completed on the 6th of September 1856.

Appendix G

Enclosure in Proceedings of Commission for investigating Public Establishments—dated 12th March 1859

0070648/59

No. 310.

To The Right Hon'ble S. R. Lushington,
Governor in Council.

Sir,

1. A very material progressive improvement, has been observable for some years, in the number, respectability, and structure, of private houses at Madras, clearly evincing, that building materials, as well as Artificers, are abundant; we have looked with considerable anxiety to a realization of the advantages which such a state of things should have produced to the public, viz., a reduction in the charges made against Government in the department of buildings and repairs, but we regret to say, we have been disappointed, at least to the extent that we consider the public have substantial grounds to require. We have therefore been induced to give the subject, our serious consideration; the result of our enquiries imposes upon us as an imperative duty to declare in distinct terms that the existing system of executing Public Works in the department of buildings and repairs is in our opinion essentially erroneous in principle, and detrimental to the public interests, both as regards efficiency and economy.

2. Tracing the various orders which have been passed on this important question, we are at a loss to discover why the system of building by contract, should not have been practically introduced long ago.

3. We find that so far back as the year 1796, it was ordered by Government to be adopted, but the order was not acted upon. Again in 1808, Government directed the Regulations of 1797 to be recurred to, and their opinion was forcibly stated, that building by contract was the most efficient system that could be followed, but delays occurred, and the order was not carried into effect.

4. The Establishment of the Commissariat, and the principle that all supplies of whatever description which might be required for the public service, should be provided by that department appear to have superceded the considerations of advantage, which had been entertained from the contract system, and we find that in 1810, our Board was required to revise the Engineer Regulations, adapting them in respect to the provision of building materials by the Commissariat to the method, which had been lately adopted in Bengal.

5. About the same period, a Regulation was passed, which placed Superintending Engineers of Divisions upon a fixed staff allowance, in place of remuneration by a cash commission on the amount of Estimates sanctioned for execution.

6. The Regulations (revised as above noticed) having been submitted by our Board accordingly were approved by Government in 1813, and ordered to be adopted, they continued in force until 1823, when, having on various occasions found it neccessary to represent that the plan did not work well, principally on the ground, of frequent disappointment and delay, arising out of the supply of materials, and

Letter from Government, 4th October.

Extract letter from Government, dated 18th June 1808.
Para: 2. "The Governor in Council is satisfied that "the principle adopted at that period (contract 1797) "with respect to the execution of works by contract, "may be now continued with great public advantage, "and that it should be extended in all practicable cases "to every building of whatever description."
Para: 4. "The Governor in Council directs me to "observe that the advantage of this plan has been "confirmed by experience, as all buildings and repairs "in Bengal are now executed by that means."

Letter from Government, 9th November 1810.

Letter from Government, 24th September 1813.

Letter from Government, 24th September 1813.
Letter from Government, 17th January 1823.

their application being vested in separate departments; our Board suggested that the duties should be entrusted to the Executive Officers, which was accordingly approved, and is the system now in force.

7. We were at the time and continued to feel so fully impressed with the conviction that Government were required to pay much more extravagantly for building, than individuals, that, with a view to ascertain the best means of remedying the evil we recommended in 1824, that a bridge which was required to be erected over the Cooum river at the Presidency, should be built by contract, the suggestion was approved, and the work successfully, and satisfactorily executed at a considerable saving to Government.

Military Board's Report, No. 440, dated 2nd November 1824—answered 30th Nov. following;

Chief Engineer's Estimate Rupees	47,376	1	5
Contract	40,873	10	0
Difference	6,502	7	5

8. The Honorable Court of Directors on observing in the Consultations of Government, the acceptance of the above contract, were pleased to express their approbation, and strongly recommended the adoption of the method of building generally.

With letter from Government, dated 30th June 1826.
Extract from General letter—Court of Directors, dated 8th Feb. 1826.

Para: 21. "From your Consultations in this Department, dated 17th August 1824, we observe that you "have authorized the Military Board to invite Tenders "for building another bridge over the same river by "contract. This mode of executing Public Works appears to us to be attended with so many advantages, "we do not hesitate to approve of your having adopted "it in this instance, and to recommend your adopting "it in others, always taking effectual measures to ascertain that the contract is properly executed."

9. A further trial was made of the system in 1827, when another bridge was required to be built over the same river, but as several alterations and additions were adopted in the course of the undertaking arising out of fortuitous and unforeseen causes, we cannot say whether the work was executed at a lower cost to Government, than would have been incurred, had it been performed in the ordinary way; but, comparing the original Estimate of the public Officer, with that which was accepted for the contract, the latter has the advantage.

Sanctioned by Government, 9th November 1827.

Chief Engineer's Estimate Rupees	27,438	0	0
Contract	26,600	0	0
Difference	838	0	0

10. The foregoing comparison of Estimates shews very satisfactorily that at the period the first contract was accepted, the Engineer's charges were much higher, (and lest it should be stated that the public Officers worked below their Estimates, we beg to quote a Para. from one of our reports to Government on that point) and that by the time the second was accepted, these prices had been brought down to nearly a par, with the contract rates! and thus far a considerable advantage was gained by the experiment.

Military Board's Report to Government, No. 440, dated 2nd November 1824.

Postscript Para: 3. "With reference to the remark "of the Acting Chief Engineer that nine times out of "ten, the Bills of Executive Engineers fall within the "Estimates, we beg to annex a Statement of new buildings constructed at the Presidency since 1818 (and "finally reported upon) by which it will be seen that in "3 instances the Bills have fallen within the original "Estimates, whilst in 13, additional Estimates have been "required to cover the Bill."

11. We shall now proceed to point out more in detail, the evils attendant on the present system of executing Public Works, and the grounds on which we found our opinion, that greater economy and increased efficiency would follow the general introduction of building by contract.

12. Our own experience and the information we have sought has led us to the conviction that a serious, and extensive evil exists, in the possession of a monopoly by certain Natives of building materials, and an over-powering control over the Artificers, both at the Presidency and at Out-stations.

13. This has arisen out of certain rules adopted many years ago by Government, where works were executed by contract, great difficulty then existed in the provision of materials, and Government claiming the privilege of being first served, passed an order that no bricks or lime should be burned at Madras without a license from the Collector, and that such license should invariably contain a clause, that the contractor for buildings should have the first offer, as well as choice of materials; when contracts were given up, the privilege was continued to the public Executive Officer; Government being the principal consumer, the monopoly thus became established and sanctioned by authority.

14. We first became aware of the existence of this bar to improvement in the building department in the year 1827, and having represented the circumstance to Government, we were informed that the practice would be discontinued in the future issue of licenses. The persons however, who had before furnished supplies of bricks and lime, were already established in the possession of their monopoly, and we are assured continue to be the suppliers, from the circumstances they must have been for years, in hourly communication, (and it has been mentioned to us in direct connection) with the Native portion of the public Executive branch of the Engineer Department; and there having been no competition in the supply of materials previously, it was evident that any attempt to supplant them (the monopolists) so long as the supply and appropriation continued in the same hands, would be attended with an almost certainty of failure! The consequence was natural, they keep up their prices and retain their control.

15. The extent to which this influence is carried, is scarcely credible! We have received credible information that an individual who is obnoxious to the monopolists, (and all who attempt to work for Government by contract are so considered) finds the utmost difficulty in procuring materials, and even persons who are not viewed as inimical to established usage, are often obliged to have recourse to the agency of the Public Department, before they can procure supplies.

16. The principal evil of the combination to which we allude consists in its tendency to keep down all competition, and perpetuate the monopoly; it has been represented, and we have reason to believe with entire truth, that the moment a contract work is undertaken, every nerve is strained to cause either its failure, or by opposition to render it ruinous to the party undertaking it; thus it has occurred that, whilst the contractor, anticipating no interruption to his progress, has continued to engage his Artificers from day to day, he has found that when the people have been mustered for work, materials are not forthcoming—not that they existed any deficiency, but on a pretence that they were required for the Public Department, and as the suppliers are all bound by contract to the Public Officer they cannot sell till he is supplied; but this "contract" (as it is termed) is no more than a less objectionable name for the combination to which we are opposed, for every purveyor of lime, (with one single exception, who, we are informed is proscribed, because he undertook to supply a contractor) is "retained" (if we may apply the term) although an abundant supply could be obtained from one or two contractors properly so called were the market freely opened to the public.

17. The influence of the combination extends also to private works, with the same view of destroying competition; no sooner is a building undertaken, by an individual, than it is made known to him, that if he will employ a maistry, who is recommended, he will be able to execute the work much cheaper than any other professional person, can, and no doubt it is the case, for it is evidently the interest of those people to underwork all competitors at whatever cost, and their profits are so enormous that they can afford to sacrifice a great deal so long as they retain their influence over the supplies; as an instance of the means resorted to for the purpose of ruining competitors, we are credibly informed, that common workmen are employed, who engage themselves by the day until an opportunity offers, of laxity of supervision to mar the work, and thus bring discredit on the architect, and not only the lower class of workmen are so employed, but even the maistries are drawn into the combination. An instance was lately brought before the Police Magistrates, and so satisfactorily proved that the culprit was sentenced to punishment.

18. Another serious objection to the present system, arises from the delay which frequently occurs, in the completion of public works, and non adjustment of balances.

19. When an Estimate is passed, an advance of cash, to one-third the amount of it, is authorized to be taken up, it has often occurred that from many works being on hand at the same moment, delay has taken place in their execution. The Engineer by Regulations is prohibited, applying money granted on account of one Estimate to any other work whatever, and the consequence is, the account of the public money so issued remains unadjusted; it may be said, that it is in the hands of traders for supply of materials, but that is even worse, for if materials are supplied which from pressure of business elsewhere cannot be worked up, the public would have to bear any loss which might follow the delay.

20. Again, when works are executed by the public Officer, the risk of injury or failure from stress of weather is of necessity borne by the public; considerable loss has occasioned from this cause, particularly in buildings of great extent, which could not be finished in one season.

21. We look upon it to be totally impossible for Superintending Engineers (in the proper acceptation of that term, viz., as checks upon the Executive) efficiently to fulfil their duties, when they are also charged, with the supply of materials; a great portion of one or other of these duties must of necessity be entrusted to Natives, the combination to which our observations have reference, pervades the whole of this part of the department, and it requires no deep acquaintance with the Native character particularly that class, to determine, what would be, (and what we have no doubt is) the result of placing their interest in opposition to their duty.

22. In stating the above opinion regarding the inefficiency of superintendence of Engineers where that duty is combined with supply of materials, we beg to be distinctly understood, as not intending to impugn the official conduct of Superintending Engineers, we believe they are most zealous, able and attentive; but the evils to which we would point are beyond their control, and originate and have their support in the system which we have stated to be in our opinion, fundamentally erroneous in principle.

23. It may be argued that there exists other check than that of Superintending Engineers over buildings, viz., the Military Board and Committees for new works, and the Chief Engineer for repairs, but their inspections are only occasional, and are intended principally to watch the progress of works, as connected with advances of cash; until their completion when in reality they can only examine external measurement and finishing; the substance combining materials and workmanship is shut out from view, and it is in this point particularly that the evil is most clearly seen, viz., the Superintending Officer being the only check upon his own work, as Executive.

24. We shall now turn to the second proposed point of our enquiry, viz., whether adopting the contract system would not be productive of economy.

25. A contractor in framing the terms on which he shall make his tender, has to calculate the expense of Draughtsmen, Estimate-makers, Conocopolies, Peons, Superintendence, scaffolding and risk of injury or failure from stress of weather to which he must add security for the due performance of his contract and profit and loss.

Statement of expense of buildings and repairs for 5 years, 1825 to 29 inclusive, and Office and Executive Establishment of the Engineer Department, Presidency Division for 1 year, with the value of tools and implements expended in one year, taking on an average of 5 years as above.

Total expense on account of new buildings and repairs at the Presidency for 5 years, being from 1825 to 1829 inclusive.....	Rs. 10,82,114	
Average for 1 year.....	Rs 2,16,422	
Engineer's establishment for 1 year, exclusive of the Lascar establishment and Officer's allowances	Rs. 11,430	equal to 5¼ per cent.
Amount value of tools and other articles expended by the Engineer department Presidency from Nov 1824 to July 1829.....	Rs. 36,680	
Average for 1 year of expenditure.....	Rs. 7,722	equal to $3\frac{9}{16}$ per cent

26. On a calculation of the expences (to Government) attending the former of these charges at the Presidency (but omitting risk, and excluding the staff pay of the Superintending Engineer and his Assistant, as also 2 companies of Lascars,) taken for one year, and applying it to the expense of buildings and repairs for a similar period, taken on an average of 5 years, we find the establishment to be about 9 per cent. on the expenditure, but it has been shewn that the Engineer's and Contractor's charges are nearly on a par; consequently the existing system costs Government 9 per cent. more than the contract would do, without taking into account risk! 9 per cent. applied to the abovementioned average annual expense of building would give Rupeds 19,477 per annum as a saving at the Presidency.

27. But again, the risk, security and profit and loss which the Contractor is bound to provide for, cannot be assumed at less than 20 per cent. on the estimate, with any prospect of the undertaking being either safe or profitable; and thus it appears the Engineer's estimates when on a par only with those of the Contractor are 29 per cent. including establishments higher than they ought to be.

28. We believe our calculation to be below the reality, but assuming that it is not, it has been shown that Government pay for their buildings 20 per cent., which in a Contractor's estimate comes under heads for which the public estimates are not required to provide. Then who derives this profit? Government have the security of the Engineer's affidavit that he does not profit by the works he executes on account of the public. The conclusion is therefore obvious, and fully accounts in our opinion for the extreme hostility to the contract system which has always pervaded the public establishments in the building department.

29. We believe it is an established usage in all commercial transactions that the wholesale purchaser has a right to a reduction of price as compared with that charged to the retail buyer. But in the purchase of materials for the building department, no such advantage accrues to Government, though the consumption of materials by individuals will bear no comparison in extent with theirs! A reference to the comparative statement in the margin taken from the Acting Chief Engineer's periodical report of bazar rates, and the actual bill charges of the Superintending Engineer will bear us out in what we have stated.

				Retail prices as per Acting Chief Engineer's price list.			Prices as charged by the Superintending Engineer.		
1st Sort, wall bricks...	9 by 4½	by 2½	..per. 1,000	3	8	0..	3	8	0
2nd do. do.	9 „	4½ „	2½... „	1,100	3	8	0..	3	8	0
Arch bricks.....	10 „	4 „	2... „	810	3	8	0..	3	8	0
Terrace bricks.....	5 „	3½ „	1... „	2,050	3	8	0..	3	8	0
Flat tiles.....	6 „	4½ „	1... „	2,100	3	8	0..	3	8	0
Pan do	11 „	5 „	1... „	1,200	3	8	0..	3	8	0
Shell Chunam, including Cart hire per 14 parrahs.....					3	8	0..	3	8	0
Jaggery, per candy.....					25	0	0..25	0	0	

30. But although it is notorious that the number of buildings has so greatly increased of late years; and consequently the demand for materials, it is equally well known that the sale price of those materials remains nearly the same; and this we account for by the inonopoly before noticed; we may here mention that an individual may purchase the soil and make his own bricks at little more than half of what the public are to this day paying.

31. With regard to advances of cash, the contract system has advantages, in their being paid by quarters; the last of which is reserved till the contract has been fulfilled, whereas under Superintending Engineers, the advances are by thirds, and the total amount of the estimate may be taken up by the time the work has been two-thirds finished, and all risk arising from fortuitous causes falls upon the public.

32. We have before shewn, that the expense of establishments, or 9 per cent. would accrue as a bonâfide saving on estimates, if work is performed by contract; but we consider from what has followed competition in other trades, that prices of materials and labour would

also come down in the building department were the market free! It might and probably would occur that for the first year or two, the reduction would not be so decided, but so soon, as it became known that contract was to be the permanent system, we have no doubt, that many competitors would start up, and that instead of the builder combining in his own business, the trades of Bricklayer Carpenter, Painter, Plumber, Glazier, &c. &c., each would form a separate occupation.

33. It is universally known that Native builders, will work cheaper than others; this is partly owing to the high prices Government and the Europeans generally are required to pay, and partly to the Native Maistry not being at any expense, in keeping up a stock of materials, scaffolding, &c., and being satisfied with a very moderate profit, sufficient merely to keep them and their families in food, till they can procure further employment.

34. The difference of charges by Natives and others, is not so great at the Presidency; but an instance is within our knowledge, where a Native Maistry executed a work quite satisfactorily for Rupees 537-4-0, whereas the Superintending Engineer's Estimate amounted to Rupees 1,299-7-9 and the Maistry's work was more substantial than the plan provided, and we do not feel the least hesitation in stating our opinion that in a few years, the data for buildings would be reduced, at least 20 per cent. below its present standard.

Side wall of the Dragoon Fives Court to be rebuilt at Bangalore.

Engineer's Estimate.....Rs.	1,299 7 9
Work executed under the arrangement of the Officer Commanding the Regiment..Rs.	537 4 0
Difference . Rs.	762 3 9

35. We have only adverted to reduction in the office and working establishment of Superintending Engineers; but the expense of a great portion of stationary charges would also be saved, and probably the Pascar establishment also Presidency might be considerably reduced.

36. We have said that superior efficiency would follow the adoption of our suggestion.

37. Superintending Engineers being relieved from the provision of materials would be at liberty to devote their whole attention to the Executive; there would not exist the same opportunity of surreptitiously introducing inferior materials, and experience has sufficiently shewn at Madras, with what jealous, and scrupulous exactness every step a Contractor takes in the fulfilment of his work is watched.

38. To exemplify what we consider to be more efficient superintendence, we would instance the bridge built by contract over the Cooum river in place of Anderson's. An Officer of Engineers, aided by a Maistry was placed in superintendence of the work; his constant presence effectually prevented irregularity, and we feel fully assured that as regards materials and workmanship, no public edifice has been built superior in those respects; but had the Superintending Engineer been required to build that edifice, having at the period of its commencement, 15 new works and 39 buildings under repair on his hands at Madras, Palaveram, the Mount and Poonamallee; it needs no argument to prove, that a great proportion of superintendence and the principal examination of materials must of necessity have been left to Natives.

39. We do not mean to argue that it would be necessary or practicable to appoint an Officer of Engineers to superintend each separate work, but it is evident that the Superintending Officer as such being relieved from the provision of materials, must have more time disposable for his other duty.

40. Having endeavoured to prove that Government are paying most extravagantly for the performance of works in the building department having, we believe succeeded in showing the causes which produced such a result, and the evils arising therefrom, we consider it

to be our duty to recommend that the present system of building be abolished, and that all public works whatever shall be executed by contract

41. It may perhaps be proper that we should advert to the stability of works by contract which have stood the test of time, and we would therefore mention the palace for the ladies of Tippoo's family at Vellore, and the Banquetting Hall at Government House, as specimens which are highly in favour of the system.

42. We have no doubt that the introduction of building by contract will meet with great opposition from those interested in the continuance of the existing system; but feeling it to be fully practicable, and that public Officers will receive that degree of support from Government which such opposition will render necessary, we repeat, that we have no doubt whatever of its proving successful; and its introduction without distinction for all buildings and repairs, will very soon put an end to all hope of a renewal to the monopolists of present advantages.

43. Should our proposition meet the approval and sanction of Government, we shall be prepared to submit the general principles and subsidiary rules which we consider would most effectually secure the public interest in the department of buildings and repairs to be executed by contract.

Initialled J. P.

24th August 1830.

W. G. P.

Estimate of Works to be executed by Contract
for the Erection of a Bridge over the Creek
at Chittoor, in the District of North Arcot
to be completed on or before the 12th March 1839.

Approved

Examined

District North Arcot — Range No. 1 — Certificate No. 1.

Estimate No. 12.98

Construction of a Tank at Chittoor — Sanctioned 30th February 1838.

Quantity	Description	Rate	Total of Work		Executed as per last Certificate		Executed as per this Certificate		Total executed inclusive of this Certificate		Remaining to be executed		Extra work		Remarks
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
1	2	3	4		5		6		7		8		9		
							L.		L						
10,000 C.F.	Earthwork	One Anna	10,000	625 0 0			2000.	125.0.0	2000	125 0 0	8000.	500.0.0.			
400 C.F.	Rough Stone	Seven Annas	80	175 0 0							400	175 0 0			
121 C.F.	Rough Stone in Chunam	Thirty Annas	121	189 0 0							121	189.0.			
12	Ujegahd Stone	Thirty Annas	12	18 0 0							12	18.0.0.			
26 C.F.	Brick in Chunam	Thirty Annas	26	58 0 0							26	58 0 0			
				855 0 0			125 0 0		125.0.0.		927	140.			

Advances have been made as follows

	200 0 0	200 0 0.
		on Account 75.0.0.

Difference

District North Arcot.

Range № 1 / Certificate № 2

Estimate № 99.

Construction of a Tank at Chittoor

Sanctioned 30th February 1859.

Quantity.	Description.	Rate.	Total of Work:	Executed as per last Certificate.	Executed as per present Certificate.	Total executed inclusive of this Certificate.	Remaining to be executed.	Extra Work.	Remarks.
			Quantity Value.	Quantity Value.	Quantity Value.	Quantity Value.	Quantity Value.	Quantity Value.	
1	2	3	4	5	6	7	8	9	
10000 C.Y.	Earth work:	One anna	10,000 625.0.0	2000 125.0.0.	3000 187.8.0	5000 312.8.0.	5000 312.8.0		
400 C.Y.	Rough Stone.	Seven annas	400 175.0.0		200 87.8.0	200 87.8.0	200 87.8.0		
121 C.Y.	Rough Stone in Chunam:	1 Rupee 6 annas	121 176.6.0				121 176.6.0		
12	Upright Stones.	1 Rupee 8 annas	12 18.0.0				12 18.0.0		
26 C.Y.	Brick in Chunam:	2 Rupees 4 annas	26 58.8.0				26 58.8.0		
			1052.14.0	125.0.0.	275.0.0.	400.0.0	652.14.0.		

Advances have been made as follows ..... 200.0.0 250.0.0 450.0.0.

Difference. ..... in hand. 50.0.0.

Appendix

Enclosure in Proceedings of Government for Investigating Public Establishments dated 12 March 1859

No 648/59

/ No. 7279. /

157

Extract from the Proceedings of the Chief Engineer
Under date the 22nd. January 1859.

Read the following

Memorandum.

From the Superintending Engineer Southern Circle
/ S.E. dated 22nd. Jany 1859 /

Although not now in charge of the Central Circle I think it necessary to record my belief that some strict enquiry is necessary into the accounts of the works connected with the Palaur Annicut and its dependencies in North Arcot, as I have little doubt that hereafter it will be found impossible to complete that project within the sanctioned Estimate.

2. I strongly recommend this subject to the notice of the Chief Engineer in order that the accounts may be examined and that responsibility may not be fixed on me of having as either Officiating Chief or Superintending Engineer neglected to ascertain

Ex

ascertain the state of the expenditure.

Supt Engr's Office Sn Circle
Fort St George
22d January 1859.

/Signed/ E. Lawford Lt Col
Supt Engr Sn Circle

To,

The Chief Engineer
Fort St George

Resolved to refer the
within Memo of the 22d Instant to
the Commission for enquiring into
the state of Public Establishments
for their obliging early consideration
previous to any final closure
of their investigations into the
Accounts of the North Arcot
District.—

Resolved also that a
copy of this Extract Proceedings
and of the Memo by Lieutenant
Colonel Lawford be forwarded
for

for the information of the District
Engineer Mr Dopping

/ True Extract /

Colonel
Chief Engineer

To,

The Commission
for enquiring into the state of
Public Establishments.—

Appendix J

Enclosure in Proceedings of Government for investigating Public Establishments dated 12th March 1859

OO 848/59

PUBLIC WORKS DEPARTMENT.

Public.

No. 354.

Extract from the Minutes of Consultation under date the 9th February 1859.

Read the following Extract from the Proceedings of the Government of India, dated Fort William, 18th January 1859, No. 238.

Read the following Extract from the Proceedings of the Honorable the President of the Council of India in Council, dated Fort William, 18th January 1859.

Read the following paragraphs of Despatch No. 2 from the Secretary of State for India, dated 29th September 1858.

Para. 21. "The immediate occasion of Captain Grindall's removal was the report of a Committee appointed to investigate his conduct, which showed that his mismanagement had caused a loss of Rupees eighty-five thousand (85,000) to Government, but abundant proof had been given previously of his disregard of departmental regulations and of the orders of his superiors, his indifference to the responsibility connected with the charge of public money, and his inaptitude for accounts and office work.

72, 73. Removal of Captain R. F. Grindall, from the post of Executive Engineer in charge of the 7th Division, Grand Trunk Road.

Para. 23. "Of the Rupees eighty-five thousand (85,000) lost by his remissness, about Rupees sixty-two thousand (62,000) consist of irrecoverable advances to defaulting Contractors, and the remainder of sums embezzled by Overseers. When Contractors, to whom advances had been made, failed to perform their engagements, long periods were suffered to elapse without the institution of proceedings against them or their sureties, and the latter were invariably found either to have had in the first instance no property to pledge, or to have made away with it as soon as they discovered that the result of a suit was likely to be adverse to them. At the same time, frauds on the part of Overseers were encouraged by the absence, even of that ordinary check which would have been afforded by periodical inspection of their books.

Para. 24. "Of course, for the disorders which took place in consequence, Captain Grindall is more immediately responsible. It was his duty to ascertain that the security offered by Contractors was real and tangible, and to take care that their work was regularly measured, and that both their accounts and those of Overseers were regularly and effectively audited.

Para. 25. "But if these were the duties of the Executive Engineer, it was equally the duty of the Superintending Engineer to see that they were properly discharged, and if careful supervision had been exercised by the latter, the irregularities permitted by the former could not have remained undetected. Again, remissness on the part of the Superintending Engineer, implies proportional remissness in the Chief Engineer, whose scrutiny of the Reports rendered to him must otherwise have discovered their unsatisfactory character. Similar deficiency of energetic control is apparent throughout the whole chain of responsibility, from the highest to the lowest link. Captain Grindall took charge of his Division without any regular transfer, and the same thing occurred with the Assistant Executive Officers, and again with their subordinates, whatever deficiences might previously have existed and whatever questionable debts of Contractors might be outstanding, being allowed to remain and to pass on unobserved or unnoticed. The Committee call this state of things "a bad system," but it is not the system, whether good or bad, which is here in fault. The best and most skilfully devised system can be of no use if its regulations are suffered to remain a dead letter! neglect of rule then becomes the rule, and inattention to duty derives an appearance of sanction from established precedent and general practice. What is now really wanted is a rigorous enforcement of existing regulations. The Chief Engineer, who is directly accountable to you for the state of the department, should be held regularly and strictly to account. He would then be compelled to exercise corresponding watchfulness over Superintending Engineers, and they in turn over Executive Engineers, and the several gradations of Office would then become what they were intended to be, a series of really

effective checks, instead of serving, as at present, merely as a blind, and tending to prolong the time during which delinquency may remain unperceived."

Order.—Ordered that the foregoing Extract be forwarded to the Local Governments and Administrations under the Government of India for information and guidance.

(True Extract.)

R. STRACHEY, *Major*,
Offg. Secy. to the Govt. of India.

Copy forwarded to the Government of Madras for information and guidance.

(Signed) R. STRACHEY, *Major*,
Offg. Secy. to the Govt. of India.

Ordered to be communicated to the Chief Engineer for his information and for circulation to the Officers of his Department.

2. The Governor in Council regrets to remark that instances have occurred to show that the censures and admonitions of the Secretary of State will not be out of place as addressed to the Members of the Madras Public Works Department. He trusts that they will have due effect.

(A true Extract.)

(Signed) J. D. BOURDILLON,
Secretary to Government.

To the Chief Engineer.

Exd. Geo. Fonecca.

Appendix K.

Enclosure to Memorandum of Comments
for investigating Public Establishments
dated 12 March 1859

000648/59

Lieut

24.th Ult in the
Dispatches inclosing Sr.
Lachlan and in the
2d. the day for
the Deputed Embarkation
the last as the Other
Dispatches in the
undersigned Returns
the 1st Inst
[illegible]

Lt Colonel

Lt. Genl

No. 811. P.W.D.

Extract from the Minutes of Board
Ordered the 5th April 1839.

Read the Report
having Proceedings
of the Commissioners
for investigating Public
Works Establishments
&c.

Referred to Mr Walker 12 March 39

In this Report
the Commissioners for
investigating Public
Establishments report
the result of their
enquiries into the
conduct of the
D.W.D in the Dis-
trict of South
Lincoln

Sir

2. In a letter to Government of date the 5th June 1858 the late Acting Chief Engineer brought under notice the large unadjusted advances in North Arcot, then amounting to about four lacks of Rupees; and requested that special assistance might be allowed the Acting District Engineer to adjust them. In a subsequent letter of the 6th September the same Officer asked permission to employ an establishment for the purpose, at a charge not to exceed on the whole 1 per cent on the advanced outstanding

outstanding. This proposal was referred to the Commissioners for the investigation of establishment, who in their proceedings of the 10th August 1858 recommended that the accounts of the North Arcot District should be subjected to a strict investigation, a suggestion which the Government adopted in their resolution of the 7th October 1858.

In accordance with a subsequent suggestion by the Commissioners, Government ordered on the 12th October 1858 that Captain Francis the Superintending Engineer

Engineer of the Circle, and Mr. Peachey their Secretary to the Commission should jointly investigate and adjust the accounts. Those Gentlemen accordingly entered on the task on the 5th November 1858; but shortly after on the 25th December 1858 Captain Fraser was compelled by ill health to retire from this duty, and Mr. Peachey was left alone to complete it.

The

3. The Report consists of two parts. In the first place the Commissioners state the result of the investigation of the outstanding advances on account of Public Works, under the Resident Engineers, the latter to those by the late Government Department under the Collectors. The total amount

~~Captain Fraser~~ ~~Mr. Peachey~~ This occupies only a single Paragraph (Para 3) of the Report itself, the details being given in appendices A & B; the former relating to the advances by the present Department of Pub. Works, under the Resident Engineers, the latter to those by the late Government Department under the Collectors.

of arrears included in
them to be recalled
amounting to Rupees 3,14,561-13-3;
of which the amount
of the aforesaid six
hundred and 3,15,251-2-3, and shall be
effected by Bonds to 3,15,232-5-11.
4. The number of
the advances of the
months to be recalled
and shall specify examin-
ed, and the fractions
bars and figures in the
hundred aforesaid. The
whole number of
months in aforesaid six
A. D. 418; the total
unadjusted advances
Rupees 3,15,251-2-3, as
already said. In
adjustment of these
advances bills to
the aggregate amount

of

of Rupees 3,16,31[illegible]-13-1,
were prepared,
being Rupees 1063-11-10
in excess of the
advances; the
expenditure
having exceeded
the advance
in 60 cases, to
the total amount
of Rupees 16,960-4-3;
and fallen short
of it in 10 4/8
cases, to the ag-
gregate amount
of Rupees 15,896-9-5.

The outstand-
ing advances in

made under the old Financial Department was Rs 56,232-10-11, on 233 works. Bills were prepared to the aggregate amount of Rs 54,913-2-10, leaving Rupees 1,315-8-1 less than the amount advanced. The expenditure exceeded the advances in four cases, by the sums of Rupees 77-14-8, and fell short of it in 29 cases by Rupees 1,393-6-9.

On the whole, 606 Bills to the amount of Rupees 3,71,234-15-2 were prepared, including excess over the advances to the amount of Rupees 17,038-2-11 which the Commissioners recommend to be allowed; while the expenditure fell short of the advances by Rupees 17212-1-6 which sums are to be recovered.

5. In accordance with the recommendation of the Commissioners the Governor in Council allows the sums of Rupees 17038-2-11 in excess of the advances in certain cases. The present District Engineer will be instructed to take special care that the sums comprising this total duly reach the persons to whom they are respectively due.

With respect to the sums of Rupees 17212-1-6 recoverable on 65 works,

The

the Commissioners recommend (Paras 20 of Appendix A) that with the view of closing the accounts all their outstanding advances shall be written off at once, leaving the District Engineer however to recover them so far as he may be able, and bring to account the sums so recovered. The Governor in Council considers that this will be, on the whole, the best course: and he directs that it shall be adopted. The estimates for all the works will be closed, and new estimates will be prepared and sent in for completing the works, where still unfinished.

The Governor in Council cannot close his review of this part of the Report without passing on acknowledgement to the skill and perseverance of Mr Beachy, which brought orders out of the maze of confusion which the former accounts were before the Board. Them in hands.

6 But by far the larger part of the Report, viz Paras 4 to 60 inclusive, is taken up with the investigations into the causes which brought the Public Works Department in North Arcot into the state in which the Commissioners found it. The subject is ably handled, and many valuable suggestions are offered. The Governor in Council now proceeds to consider that part of the paper, but it is so clearly drawn up, and in general has so entirely his concurrence, that it will not be necessary to record more than brief remarks and orders upon it.

7. In Para 6 the Commissioners enumerate eleven principal points in the practice

of this Department as administered in North Street, which they consider to call for special notice. These will be remarked on in order.

8. The first is the frequent changes in the Engineer and subordinate grades.

In the course of forty months the number of changes in the charge of the District was nothing two, not reaching the average appointments of Executive Officers and Agents thirty, and of Upper and Lower Subordinates fifty five.

In the course of the same forty months one person was changed eight times, one five times, one four times, and five three times.

Paras 10 to 16 of the Report contain some very just remarks on the very injurious effects of these constant changes.

The Governor in Council would earnestly press on the Chief Engineer, as well as on District Engineers to whom the duty of distributing their subordinates respectively has now been entrusted, of making as few transfers as possible. The magnitude of the evil of these changes does not seem to have been at all realized as yet by the Officers of the Department; but it is hoped that this Report will make them more sensible of it.

Paras 15 to 19 will be noticed below under the fourth head.

9. The third point noticed is the inconvenience resulting from the removal of office establishments with the heads of offices. This evil which was not peculiar to North Street, had already

already attracted the attention of Government [x] ~~has been peremptorily prohibited in~~ second ~~an~~ order of 8th February 1859 No. 330.

[x] it was prohibited in an order of the 21 Aug.t/58 and that order has recently been made absolute and the caption in a

10 The fourth point is the irregular method of transferring charges. This too is a matter which has already attracted the notice of Government. The practice in this respect described in Para 20 as prevailing in the Department ought never to have been permitted; and it will now immediately cease. An Officer of whatever rank, making over charge of an Executive range or work, will do it in the mode described in Para 21, & will not be allowed to draw the pay of any new post to which he may be appointed till he shall have received a formal receipt & discharge in the form there prescribed. It will be the duty of the Civil Auditor to enforce this rule. An Officer of any rank taking over charge will be held responsible for all that is contained in the Certificate. District Engineers allowing any laxity of practice in this matter, will incur the severe displeasure of Government.

Sec Mem Corn.
15 March/59 ch 595

11. The fifth point is the dependent position of the subordinates of the Department, & the abuse of secret Reports. The Govt. have already directed the abolition of the Confidential Reports on subordinates, being convinced that they have done more harm than good. The subordination of the inferior members of the Dept. to their local head is not free from evil under an injudicious Officer; but the Governor in Council is satisfied that the disadvantages of making them independent of

him

kind, & dependent only on a distant
officer, are seen greater, both as
respect the parties themselves and
the public service. For this reason
the Govt., while abolishing the se-
-cret reports, has rather placed the subor-
-dinates more under the authority
of the District Engineer than they were
before. This system is found necessary
to efficiency in the Revenue, Judicial,
& Police Departments; & the Governor
in Council believes it to be not less
so in that of P. W.

12. The practice unfor-
-tunately adopted by the late Acting
District Engineer of North Arcot, of
readily listening to secret represen-
-tations against respectable & esteemed
members of the Dept., is one which
must have had consequences
under-mining system & in any Dept.
It appears to be this cause,
in a great measure, which
has led to the entire
disorganization & failure

Ind Para 14

of the Department in
North Arcot. It is this
which deprived the
District of the many
valuable services enu-
-merated in Para 16 of
the Report, and which
subjected four of the
most efficient of the
Upper Subordinates in
it to charges which have
in every case turned
out to be false.

13. The Governor
in Council must also
remark on the very
reprehensible conduct
of certain Officers of
the Department, enu-
-merated in the latter
part of Para 17, viz
that of treating with
indignity men who
had

Rank by virtue of superior merit passed themselves in the scale of society. The Commissioner have not thought it necessary to record the names of the Officers so offending, and the Government will follow their example, but those Officers will remember that future offences of this nature will not be overlooked.

14. Captain Mayne, now Executive Engineer of Bangalore and Captain Barker will now be called on to afford full explanation as to the part taken by him in the transaction detailed in Paras 25 and 26 in connection with the Pallavanthinny Calingee Cah. Capt Barker is not now connected with the Dept of Works.

15. The next point touched on in the correspondence with which Bills and Certificates have been signed by Officers in this District while in utter ignorance of their contents. This practice, addicted to which on instances is noticed in the foregoing Paras indicates a blunting of moral feeling which cannot but make the Govt Mahratta as to the trustworthiness of the same Officers in still more important matters. An Officer who can deliberately

1855

take bribe or do dishonorable act cannot be too severely punished and ⊗

deliberately require of
subordinate to falsify a
bill, must be regarded
as capable of any false-
-hood, and as quite un-
-worthy of trust. This is
a [illegible] which
the Governor in Council
must attribute in a great
degree to the want of real
and effective control on
the part of the Audit
Office. The Governor in
Council desires that
it may now be clearly
understood that Officers
are prohibited from
signing or countersigning
bills, or vouchers, or certi-
-ficates, without satis-
-fying themselves of
their substantial correct-
-ness; and that any

Para 31

Officer committing a
breach of this rule will
incur the severe displea-
-sure of Government. He
calls on the Chief Engineer
to aid the Post heartily
in checking the very
culpable practice under
notice.

16. Captain Shaw Stewart
and Assistant Superviser
Wratten will be called on
respectively to give any
explanation of the very
extraordinary transactions
detailed in Para 29, viz
the submission of two dis-
-tinct bills, carefully
vouched in date and other
details, for the very same
expenditures.

17. The next subject
is the incompleteness of
Bills. The means pro-
-posed to ensure uniformi
and

and regularity in this particular appears to Govt. appropriate and simple; and it has the advantage of being drawn from actual experience. The Chief Engineer will however be pleased to state his opinion upon it at an early date, after consulting those whom he may think best qualified to advise him on the subject.

18. The remaining remarks of the Commissioners on this head, as well as those on the two next following, appear to Government to be valuable; but they abstain from making any observation or orders upon them at present, deeming it better to wait for the more complete

Report of the Commissioners on the accounts and audit of the Department, after a full investigation of the Central office.

19 Paras 41 to 44 relate to the mode of drawing advances. The system of dealing with advances as equivalent to expenditure in the Accounts and Statements of the Dept.t is undoubtedly wrong and criminal but led to much confusion. The Government direct that it shall be immediately abandoned wherever it exists, and that the transactions be invariably described correctly.

20. With regard to the rule referred to in Para 42, it was adopted with the view of making the comparison and adjustment of the accounts of the Collector and the District Engr

Engineer more easy. It is represented to have caused the balances in the hands of the subordinate executives to be larger than they would otherwise have been. The Government do not see how it can have had this effect, since it could never be proposed that money should be drawn by those officers above three or at most four times a month, but they will be quite prepared to abrogate the rule, if after full consideration, it is thought expedient to do so. Large balances in the hands of the executives are a great evil, and the Govt. have repeatedly called the attention of the Chief Engineer to the subject. The expedient proposed in Para 44 might be useful, but in its present form the suggestion calls for no more remark than that the advantages it seems to hold out would for the most part be secured by the existing rules, if duly adhered to.

Para

21 Para 45 notices the long delays in the submission of Bills, even tho' in many cases they were actually ready for submission. The Governor in Council agrees with the Commissioners that a large part of the blame for this state of things must rest with the Audit Department of the Central Office.

22. Paras 46 to 50 treat of the cost of superintendence in North Arcot, and the proper way of ascertaining the real cost. This subject too will properly form a part of the Commissioners' report on the central office, but the Government resolve to direct the attention of the Chief Engineer at once to the character of the North Arcot Progress Reports, as noticed in Para 45, in view to their early correction by the present newly appointed District Engineer.

J

23 The closing paragraphs of the Report relate to contracts and contain some valuable remarks on the subject. The manner in which contractors have been treated in North Street, as described in Para 58 goes far to explain the general failure of the contract system. The most scrupulous maintenance of good faith with contractors is a chief requisite to the success of that system. If liable to such treatment as that described no respectable man will come forward as a contractor; and no contractor can be secure from it, under the frequent changes of District Engineers, until the letting of contracts has been brought under regulation by the Central Office. The attention of the Chief Engr has been recently called to this subject on more than one occasion.

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24 The Government have already removed Mr Dopping from his Post as acting District Engineer of North Area which he had held for a period of thirteen months. He has much merit as an executive Engineer, but his movement of the District he has been known to be [illegible] at present of the judgement, the temper, the business habits & the knowledge of native character, essential to such a charge. The Governor in Council considers it expedient on various account to remove him from a District where his present subordinate position cannot

cannot but be irksome to
himself.

25 Ramanjoolo Pillay
whose behaviour is
brought forward so unfavourably
by the Commissioners Para 22
cannot be allowed to
remain in the District.
He will be transferred
immediately to Circuit,
and the Executive
Engineer of that District
will be requested to
transfer to North Circuit
a competent Subordi-
nate of similar or nearly
similar rank in his
place.

Captain Ford
will ascertain Ramanjoolo
Pillay's professional
qualifications by personal
examination, & report
on
them thro' the Chief
Engineer for the infor-
mation of Government.
He will employ him
on such duty suited
to his position in the
Department, as he deems
fittest.

26 The Governor in
Council directs also
that Captain Prender-
gast be called on to
furnish a list of all
Ramanjoolo Pillay's
relations now employed
in the Public Works
Department in North
Circuit, stating the posts
they hold, their ages, dates
of appointments & previous
position. This list
should be laid before
Government without delay.

27 In closing these
observations

observations, which together with the Commissioner's Report will be circulated for the information of the Officers of the Public Works Department; & the Governor in Council has to observe that although conscious that there are various irregularities and abuses in the Public Works Department more particularly in certain Districts, yet he is well aware also that the Department contains many laborious, able, and high minded Officers who not only would never countenance such irregularities, but are doing their utmost to eradicate them. Counting confidently on the efficient co-operation of such Officers, he trusts that the Department will shortly become as valuable a means of improvement to the country as it was designed to be at its formation -

meeting in by Para 24 of this order;

1 Copy to the Chief Engr Dist 5-6
9 do do do
4 — Comrs for investigating Public Establishments
1 — Civil Auditors
1 — Audit Clerks

Copy in a Letter to Engr
of 6th June 1859 No. 15.

Public Works 1859 Despr 10.
Comrs 5th April.

No 811.

Extract Mins of Comrs
of 5th April 59.

Present Capt W Barker
Lieut Colonel Engrs &
27 May 1861 Col 1198.

(Passing) orders on the
Report of the Commissioners
for investigating Public
Establishments.

No 54 & 55.