M.R.O. 1—77,000—8-5-15.

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Reverender _____

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No. _____ Press Mis.

Dated _____ 18 .

Not to be folded or roughly handled

Read the following papers :—

No. 583. Circular from the Assistant Secretary to the Government of India, Public Works Department, (Civil Works—Agricultural), to the Secretary to the Government of Madras, Public Works Department, dated Simla, 12th September 1866, No. 25-2.

I am directed again to invite attention to Circular No. 25 of 1866, regarding the preparation of projects for irrigation works, and to request that the Governor General in Council may be favored with an early report on the subject.

No. 584. From the Secretary to the Government of India, Public Works Department, (Civil Works—Agricultural), to the Secretary to the Government of Fort Saint George, in the Public Works Department, dated Simla, 19th September 1866, No. 871C.

With reference to the Despatch No. 42, dated 25th August 1866, addressed by the Madras Government to the Secretary of State, pointing out the urgent necessity which exists for immediately carrying out the project for irrigating the plains around Bellary by means of a canal from the Toombuddra, I am directed by the Governor General in Council to suggest, that an establishment might be entertained, after due sanction, under the provisions of Public Works Department Circular No. 25 of 1866, to investigate *and* draw up an estimate for this project. Whether the work is allowed to be undertaken by the Madras Irrigation Company or not the information will be useful, and time will be saved in the construction of the work.

No. 585. From the Superintending Engineer, 1st Division, to the Secretary to Government, Public Works Department, dated Camp, Dowlaishwaram, 30th July 1866, No. 71.

1. With reference to G. O. No. 1,783, dated 6th ultimo, I have the honor to report that I am not personally aware of any scheme for the improvement of irrigation in the Vizagapatam or Ganjam Districts of the magnitude or beneficial and remunerative character contemplated in that Order, nor do the records of my Office afford any clue to any project of the kind having ever been thought of in either of those districts, nor have the Collectors of those districts as yet replied to applications from me for any information obtainable from the records of their Offices. No doubt such projects have been mooted, but if so, all record of these appears to be lost.

2. From what information I possess regarding that part of the country, it appears highly probable, indeed almost certain, that large reservoirs could be formed at a moderate rate in the upper part of the basin of the Rooshookoolya, above the junction of the Lokarkundy and Mahanuddy, and I strongly recommend Government to place two thoroughly efficient Surveyors at my disposal with a view to instrumental examination of the most likely sites.

3. Similar examination of the upper valleys of the rivers of Vizagapatam, especially of the Nangoolia would also, I feel convinced, be attended with success, there are besides one or two likely sites situated further from the hills which ought to be examined.

4. In most parts of the last named district, Government have no direct proprietary interest in the land, more than ordinary care will therefore have to be taken to avoid even a semblance of interference with existing water rights.

5. In the Godavery District we know of two or three very promising sites for large reservoirs; one of which has already been partially examined, and for the other I am in possession of sufficient data to show that it is a good site. Regarding the former I shall soon be in possession of sufficient data to submit a regular project to Government.

6. In this district, as well as in Ganjam and Vizagapatam, *further* examination of the local streams, would, I am sure, be attended with successful results.

7. With reference to the 2nd paragraph of the G. O., I beg respectfully to observe that, if the principle on which the funds raised for public works are to be allotted to different projects, is to obtain the largest increase of food produced, combined with the largest and most immediate profit per cent., then the completion of the Kistna and Godavery works should certainly take precedence of any other proposed or half completed irrigation project in India.

No. 586. From the Superintending Engineer, 2nd Division, to the Secretary to Government, Department Public Works, dated Masulipatam, 24th September 1866, No. 43.

1. As directed in G. O. No. 1,783, dated 6th June 1866, I have the honor to address you on the subject of irrigation schemes in this Division, which offer a fair promise of being rapidly and abundantly remunerative, or such as are calculated to prevent or mitigate the severity of drought or famine.

One sketch of Collair lake.

2 *With regard to the Kistna District.*—No works in this district can ever be more remunerative, and yield such a store of grain during periods of famine, as those already in progress in connection with the Kistna anicut at Bezwadah. On these at least thirty lacs remain to be expended to bring them to perfection, and I would very strongly advocate, that if it can by any possibility* be so arranged, money should be granted for this purpose in preference to all other works in the Division.

* With reference to paragraph 2 of G. O. No. 1,783.

3. No scheme for any other large and beneficial undertaking, besides this, has been matured or fairly examined, but there is one well worthy of investigation, which the present opportunity allows me to bring prominently to the notice of Government, viz., the reclamation of land now submerged by the Collair lake. Two projects have been suggested for the purpose; one by the Collector, Mr. Thornhill, the other by Captain Ryves. Mr. Thornhill proposed to embank the deep channels of the lake, and cause the whole flow of water to pass through them to the Ooputair, instead of spreading over the large area which is now submerged; the area thus reclaimed to be irrigated from the Kistna and Godavery channels. The objection to this plan seems to be that there would be no escape for a large portion of the draining which would settle upon the lower parts of the reclaimed land and swamp it; and further, that the irrigation ducts would have to be widened

at a heavy cost, in order that sufficient water might be given for the vast tract that would be brought under cultivation.

4. Captain Ryves' proposition is as follows:—

(1st.) To reclaim by embankments so much of the bed and margin of the lake as is above high water neaptides.

(2nd.) To make the embankments strong and high enough to retain water with its surface seven or eight feet above high water neaps.

(3rd.) That the escape into the Ooputair should be capable of discharging six million cubic yards per hour with 7½ feet on its sill; the sill to be level with neaptide high water.

(4th.) The local drainage from the reclaimed ground to be carried off in drains outside the embankments, (the excavation for the embankments,) and dropped into the Ooputair below the Cottada calingulah through tidal sluices.

(5th.) The land to be reclaimed, to be irrigated by the water stored in the lake.

5. Captain Ryves roughly estimates that eighty square miles might thus be reclaimed, and 300 million cubic yards stored for its irrigation, that the embankments would not cost more than six or seven lacs of Rupees, and that the annual value of half the ground reclaimed would be equal to more than 20 per cent. on that sum. I am of opinion that Captain Ryves' estimate will be found sufficient. I enclose a sketch showing approximately the length of the embankments, and the land likely to be reclaimed.

6. According to the Revenue Survey, the total extent of the lake is as follows:—

	Acres.	Commuted to square miles—
Area of water ...	101,160	= 158
Area of islands ...	35,240	= 53
Total ...	136,400	= 213

If two-thirds of the water area can be reclaimed, then at 5½ Rupees per acre (4 Rupees for irrigation and 1½ Rupees ground rent) a revenue would be derived of 3,70,920 Rupees per annum. So that if the cost of the work amounts even to ten lacs (I see no reason why it should be more than seven lacs) there would be a profit of 37 per cent.

7. If half of the water area be reclaimed, the returns would be nearly 28 per cent. on the capital sunk.

8. The process of warping, now that the Kistna and Godavery river banks are maintained in efficient order, and the vast bodies of water heavily laden with silt which formerly entered the lake do so no longer, can scarcely be thought of, though doubtless means might be taken to force the silt which does enter (especially by the Boodmair) to deposit itself over a smaller space than at present, and thus recover small tracts of ground, but it would take hundreds of years to thus reclaim the eighty square miles above contemplated.

9. I would solicit that Government be pleased to grant me a Surveyor and establishment for the investigation of this project, for taking soundings, &c.

10. Another minor scheme, which may be worthy of investigation, is that for an anicut across the Mooneyaru (a river which joins the Kistna above twenty-five miles above Bezwadah) in the neighbourhood of the village of Pamidamchipralu. The fall of the river bed I believe to be about three feet per mile, and a channel led from the above point might, I think, be made at a moderate expense, and irrigate some excellent land, probably 7,000 or 8,000 acres returning a revenue of 20,000 or 30,000 Rupees on a probable outlay of perhaps two lacs, or about 11 or 15 per cent.

11. *With regard to the Nellore District.*—Besides the works connected with the Nellore anicut, which may, in my opinion, become eventually more remunerative than those of the Kistna, though the revenue can never nearly amount to the same sum, the area cultivated being so much less; the plan for another anicut across the Pennair at Sangum, as detailed in my letter No. 125, dated 30th December 1865, appended to G. O. No. 193 of 17th January 1866, is one worthy of much consideration. In that letter, to which I beg to refer you, I estimated the profit on the expenditure, required at about 35 per cent.; but if it be only 20 per cent., it is evidently disirable to carry out such a profitable undertaking. For the employment of a Surveyor, &c., to mature the scheme, I solicit the sanction of Government.

12. There are minor projects connected with the Nellore District, of which I have heard, which would probably be profitable, but I know too little of them to venture an opinion at present.

No. 587. From the Superintending Engineer, 5th Division, to the Secretary to Government, Department Public Works, dated Salem, 27th September 1866, No. 111.

1. I have the honor to forward the list of projects likely to be immediately and abundantly remunerative, called for in the Order of Government of the 6th of June 1866, No. 1,783.

1 List of projects.

2. A similar list was forwarded with reference to G. O. No. 3,208 of the 25th of October 1865, but four works in the South Arcot District, which were in that list, have now been omitted. Two of the projects after further examination were found to be unremunerative, and two were for the restoration of ruined tanks. One of the latter is being carried out from the "Reserve" of the current year, and the other may be sanctioned from the same source next year.

3. In the list now forwarded, the two most important projects are certainly the proposed anicut across the Manimoottahnuddy and the channel from the Pooniar anicut on the north bank. The first has been under consideration a sufficient length of time, for I made a report on it to the Civil Engineer of the Division in 1847, that is nineteen years ago. It is a work, the results from which are not at all a matter of doubt. Like the anicuts built of late years across the Coleroon, Vellaur, Guddellum and Pooniar, this is intended to increase and render more certain the supply of water to an existing system of channels and tanks, at present imperfectly supplied from the river.

4. The Pooniar anicut was built to turn the freshes into the Ragavian channel, and the numerous tanks supplied by it on the south bank. The estimate

in the accompanying list is for a channel on the north bank, to connect the Pombay with the Pooniar, and so give the former the benefit of the freshes in the Pooniar, which has its sources in the Salem District and Mysore, and in which there are often heavy freshes at a time when no rain falls in South Arcot. There are many channels and tanks which receive water from the Pombay.

5. The projects in the Salem District, are not of the same magnitude, but are likely to be beneficial to the district and remunerative.

6. As all the proposed works have been sanctioned by Government, I have not forwarded the plans and estimates, but the estimate for the Manimoottahnuddy anicut has been revised, and in consequence of the rise in the rates the amount has been increased.

Fifth Division, Department Public Works.

List showing the irrigation works which will prove greatly beneficial to the country and highly remunerative to the State, but have been held in abeyance for want of money.

Works.	Amount of Estimate.	No. and date of G. O. sanctioning Estimate.	Remarks.
South Arcot.			
Constructing an anicut across the Manimoottahnuddy, in the limits of Komaramungalam.	Rs. Revised amount 37,960	No. 193 of the 19th Jan. 1864. Original amount Rupees 34,750.	This anicut is to supply numerous tanks at present imperfectly supplied by a channel from the river. Increase of revenue estimated at 30 per cent.
Cutting the Pombay Channel from the north bank of the Poonair anicut (near Anicut).	45,400	No. 2,103 of the 21st July 1864.	The tanks on the south bank of the river supplied by an old channel. A new channel required for numerous tanks in the north bank. Increase of revenue estimated at 35 per cent.
Salem.			
Constructing two new tanks at Valayapatti.	5,510 2,312	Nos. 851 of the 4th May 1858, & 2,891 of the 3rd Dec. 1862.	
Do. an anicut across the Swaitha river at Kristnapuram.	5,150	No. 1,387 of the 5th Dec. 1863.	
Do. do. do. near Vellayoor.	8,650	Do. do.	
Restoring the Gudamalay Mathenaiken ruined anicut.	4,920	Do. do.	
Constructing a tank near Valayamandaivi.	8,670	Do. do.	

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

Salem,
27th September 1866.

No. 588. From the Superintending Engineer, 6th Division, to the Secretary to Government, Department Public Works, dated Tanjore, 15th September 1866, No. 721.

With reference to G. O. No. 1,783, dated 6th June, I have the honor to state that my letter No. 1,408, dated 18th November 1865, contains all the information I am capable of affording relative to projects for the improvement of the Division.

No. 589. From the Officiating Superintending Engineer, 8th Division, to the Secretary to Government, Department Public Works, dated Cuddalore, 18th September 1866, No. 946.

1. In reply to Memorandum No. 270 of the 11th instant, I have the honor to report that in this Division, there are three irrigation projects of magnitude, viz.,

Tinnevelly.—For building an anicut at Sreevigoondum, with main channels to Tuticorin and Trichendoor.

For constructing a reservior at Papanassum, as a reserve supply for the Tambrapoorney river.

Madura.—For diverting the waters of the Periyar into the valley of the Vygay river.

2. The first of these projects has for some years been sanctioned by Government, but the question has been raised, whether it would be preferable to raise the Murdoor anicut instead.—*Vide* G. O. No. 210 of the 18th January 1866. For the investigation of the comparative cost and advantages of the two schemes, the services of an experienced Officer are required, and Captain Payne is to take this in hand, as soon as he has furnished his report on the Periyar project in the Madura District. It has also been intended that, afterwards, Captain Payne should make the necessary survey and estimate for the Papanassum reservoir, but at the present time, documents are not in readiness to be submitted for the sanction of the Government of India.

No. 590. Order thereon, 24th October 1866, No. 3,402.

CIVIL WORKS, No. 109.

1. Resolved that application be made to the Government of India for the entertainment of the undermentioned establishments for the investigation and preparation of projects for irrigation works in the 1st, 2nd, 3rd, 4th, and 8th Divisions. These establishments will, in the first instance, be applied for two years, but they will be retained, where absolutely necessary, for a further period on special application.

1st	Division.	3 Surveyors and Levellers, at	150	Rs.
		3 Draughtsmen, at	60	,,
		12 Lascars, at	7	,,
2nd	Do.	Do. do	do.	,,
3rd	Do.	2 Surveyors and Levellers, at	150	,,
		2 Draughtsmen, at	60	,,
		8 Lascars, at	7	,,
4th	Do.	5 Surveyors and Levellers, at	150	,,
		5 Draughtsmen, at	60	,,
		20 Lascars, at	7	,,
8th	Do.	2 Surveyors and Levellers, at	150	,,
		2 Draughtsmen, at	60	,,
		8 Lascars, at	7	,,

Inclusive of travelling allowance.

2. Meanwhile, the Superintending Engineers concerned, having in view the orders contained in the Proceedings of Government, No. 1,783, dated 6th June 1866, will make such arrangements as may be necessary to prevent any loss of time in employing these establishments as soon as sanctioned on the preparation of the detailed plans and estimates of the projects which they have selected for investigation, and they will be careful, in submitting the several schemes for the consideration of Government, to adopt the clear and comprehensive form in which the project* for a tank at Erookh near Sholapore was laid before the Bombay Government.

* See Irrigation Series No. I, furnished to Superintending Engineers on the 24th April 1866.

3. The Superintending Engineer of the 7th Division will expedite the submission of such of the irrigation projects referred to in his letters noted in the margin as may be sufficiently matured to admit of their being transmitted to the Government of India for inclusion in the list of works to be executed under the proposed irrigation loan.

No. 310, 24th March 1866.
,, 79, 9th July 1866.

Ordered that the following letter be sent :—

(Here enter No. 3,403, dated 24th October 1866.)

(True Extract.)

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

To the Superintending Engineers, with copy of letter to Government of India.
,, Controller of Public Works Accounts.

Exd. E. C. Shunker.

PUBLIC WORKS DEPARTMENT.
FORT SAINT GEORGE,
24th October 1866.

No. 3,403.

No. 591.

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,
PUBLIC WORKS DEPARTMENT.

SIR,

CIVIL WORKS, No. 110.

Cir. of Govt. of India, No. 25, 22nd March 1866.
From do. 23rd June ,,
To Govt. of India, No. 2,293, 20th July 1866.
From do. 12th Sept. ,,
From do. No. 871C, 19th Sept. ,,

1. With reference to the correspondence noted in the margin regarding the preparation of projects for irrigation works in this Presidency, I am directed to state that the requisition of the Government of India for the plans and estimates for works of that description having been received without previous warning, this Government regret their inability to comply with the call in that full, detailed and satisfactory manner which is necessary to ensure sanction of the works. It has been explained in my letter No. 2,293, dated 20th July 1866, that many projects have been matured, but that having been laid aside for years they will require revision, and that numerous others which have been proposed or partially examined will require some time for fuller preparation. To enable the Superintending Engineers concerned to undertake the thorough investigation of these projects and to prepare the necessary plans and estimates in a complete form, I am to request the sanction of the Right Honorable the Governor General in Council to the entertainment of the temporary establishments noted in the accompanying tabular statement for two years, to be continued, on special application, where absolutely necessary, for a further period. The cost of these establishments is entered at Rupees 3,570 per mensem, but I am to state that they will be entertained only as their services are found to be required.

2. In reply to the call which was made upon them, the Superintending Engineers have named certain projects and have proposed to undertake the re-investigation of these and a search for others in the respective Districts of the Presidency, as shown below :—

District.	Project.	Probable amount of Estimate.	Remarks.
Ganjam ... } Vizagapatam }	.....	Rs.	No proposals for the improvement of irrigation in these Districts appear ever to have been brought forward, but the Superintending Engineer believes that large reservoirs could be formed at moderate cost in the upper parts of the basin of the Rooshkoolya above the junction of the Lokarkandy and Mahanuddy in Ganjam, and in the upper valleys of the rivers in Vizagapatam.

District	Project.	Probable amount of Estimate.	Remarks.
		Rs.	
Godavery ...	Completing the irrigation of the Godavery Delta.	30,00,000	
Kistna	Completing the irrigation of the Kistna Delta including the reclamation of land from the Colair Lake.	30,00,000	
Do. ...	Anicut across the Mooneyaru river.	2,00,000	Promises to be highly remunerative, the expected return being 14 or 15 per cent. per annum upon the outlay.
Nellore ...	Anicut across the Pennair river at Sungum.	4,00,000	The returns from this work are said to be likely to reach 33 per cent. per annum on the outlay.
Bellary ...	Anicut across the Huggry river near Yaparal for the irrigation, by a series of channels, of certain lands belonging to Canakul, Streedaragutta and other villages in the neighbourhood.	.....	This work was investigated before the suspension of Public Works in 1857. The discharge of the Huggry has recently been ascertained to be uncertain and comparatively small, and as the contemplated closing of the Mainri Canavey gap will arrest it all, this work will not be remunerative, and will not be further examined.
Do. ...	Improving supply of Bookacherla and several other tanks by the construction of an anicut across the bed of the river Pennair near the village of Tiramanny, in the Mysore country, and by the excavation of a spacious canal.	7 or 8 lacs.	Doubts being felt of the sufficiency of the estimate of this work and of the correctness of the Revenue returns on which its remunerative capabilities were calculated, it is under re-investigation.
Do. ...	Restoring the Godloor tank.	39,400	It is reported that this work will yield a revenue of Rupees 10,693 per annum.
North Arcot ...	Reservoirs at different points near the upper parts of the valley of the Palar.	Unknown.	Of doubtful value.
Do. ...	Anicut across the Cheyaur river near Trivettore.	Do.	Will probably be very remunerative.
Do. ...	Dam across the Cheyaur river at Conjeveram, and sundry new channels from that river.	Do.	Do. do. do.
South Arcot ...	Anicut across the Mahinmuttanadi.	37,960	To supply numerous tanks and channels at present imperfectly fed from the river. The revenue from this work is said to be likely to reach 30 per cent. per annum upon the outlay.
Do. ...	Cutting the Pombay channel from the north bank of the Poonar Anicut.	45,400	The tanks on the south bank of the river are supplied by an old channel. A new channel is very much required for the supply of the numerous tanks in the north bank. This latter work is expected to return a revenue of 35 per cent. per annum upon the outlay.
Tanjore ...	.....	10,00,000	There are no large new irrigation projects in this District, but a scheme is now under investigation for the better regulation and distribution of the water of the Cauvery by the construction of regulating dams, &c.
Coimbatore ...	Restoration of the Nerinjepett Anicut and excavation of channels for the irrigation of parts of the Salem and Coimbatore Districts.	Rs. 3,20,000	This project was under examination some years, but as it was found that water could not be spared for it without detriment to existing irrigation in Tanjore, its consideration was deferred, pending the investigation of the question of constructing reservoirs on the sources of the Cauvery to supplement the supply of water to the Delta.
Do. ...	Reservoirs amongst the hills in the valleys of the Bhowany, Moyaur, Noyel, Cauvery, and Ambravutty rivers.	Unknown, but probably from 20 to 30 lacs.	The object of these reservoirs is to regulate the discharge of the Cauvery, and, while preventing floods, to store water to supplement the supply of the river in droughts and when its waters are low.
Do. ...	Cutting a new channel from the Kaniempolliem Anicut above its junction with the Moyaur river on the right bank.	Unknown.	This is a small work, but promises a good return in a few years.
Do. ...	Restoration of the Terumalagherry Anicut.	30,000	It is expected that 3,000 acres of dry and waste land will be brought under cultivation by this work.
Madura ...	Diverting the waters of the Perryaur into the Soorolyaur.	From 15 to 20 lacs.	This is a project for diverting the never failing and abundant waters of the Perryaur, from their course to the westward through the Travancore States, into the Soorolyaur, a hill affluent of the Vygay, which flows eastward through the Cumbum valley of Madura. The work, if practicable, will be most beneficial and probably sufficiently remunerative.
Tinnevelly ..	Reservoir at Paupanassum.	Unknown.	The object of this work is to retain a sufficient quantity of water to ensure existing crops during bad years, and to increase the area of land under cultivation from the Tambrapoorney river.
Do. ...	Anicut at Streeviguntum across the Tambrapoorney river, with channels to Trichengode.	3,85,000	The estimate for this work was prepared and sanctioned several years ago, but doubts having since been entertained as to whether the anicut would re-pay the cost of its construction, the project has been ordered to be re-investigated.

3. It will be observed that if the sole right to construct canals from the Toongabuddra for the irrigation of Bellary is to be considered as having been conceded to the Madras Irrigation and Canal Company, there are few works of magnitude in this Presidency, except in the large deltas, which can be specifically recommended for special investigation under the terms of the Circular of the Government of India quoted in the margin of paragraph 1. Numerous small irrigation projects from minor streams and many proposals for the construction, restoration, and improvement of tanks are from time to time pressed upon the attention of this Government, but, individually, these do not require large outlays for their execution, and few of them are entirely original, but form more or less extensions or additions of existing systems of irrigation.

4. I am to add that the Superintending Engineers have been instructed to make arrangements for losing no time, after the receipt of the sanction of the Government of India, in putting the establishments now asked for to work in the investigation of the projects named by them, but the Government do not expect that it will be practicable to submit any of these for some time. Meanwhile, the works which have already been sanctioned by this Government and are in progress will be proceeded with from the funds which may be annually placed at their disposal.

5. As regards the project for the construction of a canal from the Tungabuddra at Wullabahpooram through the plains of Bellary for the irrigation of that District, I am to state, in reply to your letter No. 871 C, under date the 10th September 1866, that a large establishment, costing upwards of 2,000 Rupees per mensem, has been employed since 1863 by the Madras Irrigation and Canal Company in surveying and levelling for this work and in collecting information regarding it, and it is understood that a very complete and thorough scheme has been drawn up. Under these circumstances, it would appear to be a waste of labor and money to institute measures for the preparation of fresh surveys and levels and the collection of data which must already be in the possession of the Irrigation Company. It seems better, in the event of that Company being unable to undertake the work immediately and agreeing to hand it over to Government, to trust to their transferring, all the plans and estimates which they have ready for commencing the work at once, together with the surveys and other information which are necessary to determine the financial bearings of the undertaking. This the Company may be induced to do on fair terms.

I have the honor to be,
Sir,
Your most obedient servant.
(Signed) CHARLES A. ORR, Colonel, R.E.,
Secretary to Government.

Ed. S. T. Augustin.

TABULAR STATEMENT of Establishments proposed to be entertained for the investigation of Irrigation Projects in the Madras Presidency.

No.	Extract from Home Department of Government of India.	Office to which the proposition refers.	Nature of Charge.	Present Scale.	Proposed Scale.		Proposition. Permanent. Increase per month.	Permanent. Decrease per month.	Temporary. Period.	Temporary. Increase per month.	Temporary. Period.	Temporary. Decrease per month.	Casual or Extraordinary.	Grounds of proposition.	Local Government's recommendation.	Orders of the Government of India. Remarks.	Financial Department. Remarks.	Financial Department. Orders.
		Supg. Engr. 1st Division.			3 Surveyors and Levellers ...	Rs. 150	Rs. ...	Rs. ...	...	Rs. 450								
					3 Draughtsmen...	60	...	...	...	180								
					12 Lascars	7	...	...	...	84								
					Total...	...	...	...	...	714								
		Supg. Engr. 2nd Division.			3 Surveyors and Levellers ...	150	...	...	...	450								
					3 Draughtsmen...	60	...	...	...	180								
					12 Lascars	7	...	...	...	84								
					Total...	...	...	...	...	714								
		Supg. Engr. 3rd Division.			2 Surveyors and Levellers ...	150	...	...	...	300								
					2 Draughtsmen...	60	...	...	...	120								
					8 Lascars	7	...	...	...	56								
					Total...	...	...	...	...	476								
		Supg. Engr. 4th Division.			5 Surveyors and Levellers ...	150	...	...	...	750								
					5 Draughtsmen...	60	...	...	...	300								
					20 Lascars	7	...	...	...	140								
					Total...	...	...	...	...	1,190								
		Supg. Engr. 8th Division.			2 Surveyors and Levellers ...	150	...	...	...	300								
					2 Draughtsmen...	60	...	...	...	120								
					8 Lascars	7	...	...	...	56								
					Total...	...	...	...	...	476								
					Grand total...	...	...	...	...	3,570	Two years.			*Vide* letter to the Govt. of India, No. 3,402, dated 24th October 1866.				

NOTE.—No special Establishments are required in the 5th, 6th, and 7th Divisions.

FORT SAINT GEORGE,
24th October 1866.

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

Circular No. 25/2 Public Works.

Government of India
Public Works Department.
Civil Works.
Agricultural

To
The Secretary to the Govt. of Madras
Public Works Department.

Simla, 12th September 1866.

Sir,

I am directed again to invite attention to Circular No. 25 of 1866 regarding the preparation of projects for irrigation works, and to request that the Governor General in Council may be favored with an early report on the subject.

I have the honor to be,
Sir,
Your most obed.t Servant,
W. Brereton Capt.n R.E.
Offg Secretary to the Govt. of India

Post

No. 871C

Government of India
Public Works Department
Civil Works
Agricultural.

To

The Secretary to the Govt. of Fort St. George
in the Public Works Department

Simla, 19th September 1866.

Sir,

With reference to the despatch, No. 42 dated 25th August 1866, addressed by the Madras Government to the Secretary of State pointing out the urgent necessity which exists for immediately carrying out the project for irrigating the plains around Bellary by means of a Canal from the Toombuddra, I am directed by the Governor General in Council to suggest that an establishment might be entertained, after due sanction, under the provisions of Public Works Department Circular No. 25 of

No. 71.

Supdt. Eng. 2nd Official Dr
Camp Dowlaishweram
30th July 1866.

From

Captain J. G. Haynes R.E.
Superintending Engineer 1st Dr

To

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

Sir,

With reference to G.O. No. 1783 dated 6th Ultimo, I have the honor to report that I am not personally aware of any scheme for the improvement of irrigation in the Vizagapatam or Ganjam Districts of the magnitude or beneficial and remunerative character contemplated in that Order - nor do the records of my office afford any clue to any project of the kind having ever been thought of in either of those Districts - nor have the Collectors of those Districts as yet replied to applications [illegible] from me for any information obtainable from the records of their Offices. No doubt such projects have been mooted, but if so all record of them appears to be lost.

2.

2. From the information [illegible] regarding that part of the country [illegible] appears highly probable, under about certain, that large reservoirs could be formed at moderate cost in the upper part of the basin of the Godavery above the junction of the Pakhandy and Kadamcully and Pakangly and recommend Government to direct two thoroughly qualified surveyors may depute such a work to undertake the examination of the said Objects.

3. [illegible] examination of the upper valley of the Pain Ganga would also be undertaken, to attended with success there are hopes of two likely sites situated further from the hills which ought to be examined

4. In regard to the Local Government has an direct property interest in the land, more than ordinary care will therefore have to be taken to avoid even a suspicion of interference with existing water-rights

5. In the Godavery District we know of two or three very promising sites for large reservoirs; one of which has already been partially examined, and of the other I am in possession of sufficient data to show that it is a good site. Regarding the former I shall soon be in possession of sufficient data to submit a regular project to Government.

6. In this District as well as in Ganjam and Vizagapatam, further examination of the Local Means, would I am sure be attended with successful results.

7. With reference to the 2d para of the G.O. I beg respectfully to observe that if the principle on which the funds raised for Public Works are to be allotted to different projects is, to obtain the largest increase of food produced, combined with the largest and most immediate profit per cent, then the completion of the Kistna and Godavery works should certainly take precedence of any other proposed or half completed Irrigation project in India.

I have the honor to be, Sir,
Your most obedient servt.

A. R. Cotton Capt. R.E.
Superintending Engineer

Superintending Engineers Office
2nd Division
Masulipatam
29th September 1866

From

Lieutenant Colonel G. F. Hanscom RE
Superintending Engineer 2nd Div.

To

Colonel C. A. Orr. RE
Secretary to Government Pub. Wks.

Sir

As directed in G.O. No. 1783 dated 6th June 1866, I have the honor to address you on the subject of Irrigation schemes in this Division, which offer a fair promise of being speedily and abundantly remunerative, or such as are calculated to prevent or mitigate the severity of drought or famine.

With regard to the Kistna District.

2 No Works in this District can ever be more remunerative and yield such a store of grain during Periods of famine, as those already in progress in connection with the Kistna Anicut at Bezwada. As this should have remain to be expended to bring them to perfection, I would very strongly advocate that if it can by any possibility be so arranged, money should be granted for this purpose in preference to all other Works in the Division.

With reference to para 2 of G.O. No. 1783

3 I beg to submit for any other large & beneficial undertaking, besides the two I have mentioned, but there is one well worthy of investigation, which

the

The present opportunity should not be lost permanently to the Colony of preventing the reclamation of land now submerged by the Clear Lake. Two projects have been suggested for the purpose; one by the Colonist Engineer the other by Captain Pyres — the Engineer proposing to embank the deep channels of the lake & cause the whole flow of water to set through them to the Coputas instead of spreading over the large area which is now submerged. The area thus reclaimed to be irrigated from the water stored in the channels. The objection to this plan seems to be that there would be no escape for a large portion of the drainage which would still flow over the shallow parts of the reclaimed land & through it. Further, that the irrigation ditches would have to be widened at a heavy cost, in order that sufficient water might be given for the small duty that would be brought under cultivation.

4. Captain Pyres' proposal is as follows

1st To reclaim by embankments so much of the bed & margin of the lake as is above high water mark Lake.

2d To make the embankments strong & high enough to retain water with its surface 7 or 8 ft. above high water marks.

3d That the escape into the Coputas should be capable of discharging 8 million Cubic Yards per day with 1½ ft. on its sill. the sill to be level with mean tide high water.

4th The local drainage from the reclaimed ground to be carried off in drains outside the embankments (the excavation for the embankments), & dropped into the Coputas below the Cotton da Calinguba through tidal sluices.

5th The land to be reclaimed, to be irrigated by the water stored in the lake.

5 Captain Pyres roughly estimates that 80 Square miles might thus be reclaimed & 200 million Cubic yards stored for the irrigation. That the embankments would not cost more than 6 or 7 lacs of Rupees & that the annual value of half the ground reclaimed would be equal to more than 20 per cent on that sum. I am of opinion that Captain Pyres estimate will be found sufficient. I enclose a sketch showing approximately the lengths of the embankments, & the land likely to be reclaimed.

6 According to the Revenue Survey the total extent of the Lake is as follows.

	acres		Converted to Square miles
Area of water	101,760	=	158
Area of Islands	35210	=	53
Total	136,400	=	213

⅔rds of the water area can be reclaimed, then at 5½ Rs per acre (4 Rs for Irrigation & 1½ Ground Rent) a revenue would be derived of 3,70,920 Rs per

per annum. So that if the cost of the work amounts even to 40 per cent (which is more than it should be more than 3 years) there would be a profit of 27 per cent

7. If 1/2 of the water area be reclaimed the returns would be nearly 25 per cent on the Capital sunk

8. The proof of working has been that the Retira & Godavery River Banks are breached in different under the most lowering circumstances, heavily laden with the silt which formerly made the lake do so no longer, can scarcely be thought of, though the most strenuous efforts be taken to force the silt which they carry (especially by the Godavery) to deposit itself over a smaller space than at present, they recover small tracts of ground, but it will take hundreds of years to thus reclaim the 80 sq.re miles above contemplated.

9. I would solicit that Government be pleased to grant me a Passage & Establishment for the investigation of the proposed Irrigation Schemes &c.

10. Another minor scheme, which may be worthy of investigation is that for an Anicut across the Inconjaram River which joins the Kistna above 25 miles above Bezwada) in the neighbourhood of the Village of Pamarthum chipraly. The fall of the river bed is I believe to be about 3 ft. per mile, & a channel cd from the above point might I think be made at a moderate expense, & irrigate some excellent land, probably for 8000 acres returning

11. Besides the works connected with the Nellore Anicut which may, in my opinion, become eventually more remunerative than those of the Kistna tho' the revenue can never nearly amount to the same sum, the area cultivated being so much less; the plan for another Anicut across the Pennaur at Sangum as detailed in my letter No 225 dated 16th December 1852 & forwarded by G.O. No 198 of 17th January 1856 is one worthy of much consideration. In that letter to which I beg to refer you, I estimated the profit on the reparations required, at about 35 per Cent, but if it be only 20 per cent, it is evidently a desirable to carry out such a profitable undertaking. For the employment of a surveyor to mature the scheme, I solicit the sanction of Government.

12. There are minor projects connected with the Nellore District of which I have heard, which would probably be profitable, but I know too little of them to venture an opinion at present.

I have the honor to be
Sir
Your most obedient Servant

Geo. Thomas Lieut. R.E.
Superintending Engineer

No 111.

Superintending Engineer's Office &c.
Salem 27th September 1866.

From

The Superintending Engineer,
5th Division,

To

The Secretary to Government,
Department of Public Works.

Sir,

I have the honor to forward the list of Projects likely to be immediately and abundantly remunerative called for in the Order of Government of the 6th of June 1866. No 1783.

2 A similar list was forwarded with reference to G. O. No 3208 of the 25th of October 1865, but four works in the South Arcot District which were in that list have now been omitted. Two of the projects after further examination were found to be unremunerative, and two were for the restoration of ruined tanks. One of the latter is being carried out from the "Reserve" of the current year, and the other may be sanctioned from the same source next year.

3 On the list now forwarded the two most

Enclosure
List of projects

Recd 3402-3403 - 21st Oct 1866

important projects are certainly the proposed anicut across the Manimoo Mahmuddy and the channels from the Poniar Anicut on the north bank. The first has been under consideration a sufficient length of time, for I made a report on it to the Civil Engineer of the Division in 1854, that is nineteen years ago. It is a work, the results from which are not at all a matter of doubt. Like the anicuts built of late years across the Coleroon, Vellaur, Guddelum and Ponnier, this is intended to increase and render more certain the supply of water to an existing system of channels and tanks, at present imperfectly supplied from the river.

4. The Poniar Anicut was built to turn the freshes into the Ragavain channel and the numerous tanks supplied by it on the south bank. The estimate in the accompanying list is for a channel on the north bank to connect the Pondy with the Poniar and so give the former the benefit of the freshes in the Poniar which has its sources in the Salem District and Mysore, and in which there are often heavy freshes at a time when no rain falls in South Arcot. There are many channels and tanks which receive water from the Pondy.

5. The projects in the Salem District are not of the same magnitude, but are likely to be beneficial to the District and remunerative.

6. As all the proposed works have been sanctioned by Government I have not forwarded the plans and Estimates, but the estimate for the Manimoottahmuddy Anicut has been revised, and in consequence of the rise in the rates the amount has been increased.

I have the honor to be
Sir,
Your most obedient servant.
Edward Lieut. Co. R. E.
Superintending Engineer, 5th Division.

Washington, D.C.
September 29, 1910.

Subject: Sending Congressional Directory.

Sir:

Referring to previous correspondence relative to the Congressional Directory, I have the honor to inform you that the 27th edition of the Directory will be published on or about December 1st next.

Enclosure 1

Forwarding a list of projects likely to be immediately remunerative.

3402-3403-2456-5/16

S. C. No. 39 of 66.

List showing the Irrigation works which will prove greatly beneficial to the country and highly remunerative to the State but have been held in abeyance for want of money.

Works	Amount of Estimates	No. and date of G.O. sanctioning Estimates	Remarks
South Arcot.			
Constructing an Anicut across the Manimuttar Creek in the limits of Komarapuram	Rs. 37,960.	No. 1990 of the 11th January 1864. Reg. of Accounts.	This Anicut is to supply numerous tanks by a feeder imperfectly supplied by a channel from the River. Increased ground bunds to be erected
Cutting the Pombay channel from the north bank of the Pennar, Anicut to near Anicut	45,600	No. 2103 of 21st July 1864.	The tanks on the South bank of the river are supplied by an old channel. A new channel required for numerous tanks on the north bank. Channel measurements estimated at 30 feet
Salem.			
Constructing 2 New Tanks at Valayapatti	5,510	No. 1801 of 4th December 1862	
——— Do ——— an Anicut across the Swetha river at Kristnapuram	2,813	3 May 1858 & 2491 of 4th December 1862	
——— Do ——— Do ——— Do ——— near Vellayoor	5,130	No. 1387 of 4th December 1863	
Restoring the Gudamalay Mattiar near named Anicut	8,650	——Do——Do	
Constructing a Tank near Valayanadaivi	4,920	——Do——Do	
	8670	——Do——Do	

Superintending Engineer's Office, Salem 27th September 1866.

To The Secretary to Government, D. No. 3077.

2nd Lieut. & A. C. E. Superintending Engineer, 5th Division.

Sept Engrs Office 0.A.G.
Longford 10 September
1866

Sir,

Captain R.F. Parker R.E.
Sept Engineers 6th Division

Lieut. Col. A. Orr R.E.
Secretary to Government &c &c

Sir,

With reference to C.O. letter
dated 2 & 18th December 1865 Enclosing
all the information I have called
for respecting relative to
projects for the improvement of
the Division -

I have the honor to be
Sir
Your most obedient Servant

R.F. Parker Captain R.E.
Sept Engineers 6th Division

Received in Office
the 13th September 1866
Registered

Lieut. Col. A. Orr R.E.
Secretary to Government &c &c

Sir,

I have the honor to acknowledge the receipt of your letter No 1408 dated 10th instant, with which will please
find a Quarterly Return of Expenditure in the
County and Township Longford
= two = to the 30th June last
from which it appears that there
remains of unexpended
Balance of Grant

£ 2 0 0

Sept Engrs Office 0.A.G.
Longford 13 September
1866

Sir,

Captain R.F. Parker R.E.
Sept Engineers 6th Division

Lieut. Col. A. Orr R.E.
Secretary to Government &c &c

Sir,

With reference to C.O. letter
dated 2 & 18th December 1865 Enclosing
all the information I have called
for respecting relative to
projects for the improvement of
the Division -

I have the honor to be
Sir
Your most obedient Servant

R.F. Parker Captain R.E.
Sept Engineers 6th Division

No. 946 Superintg. Engineer's Office 8th D.
Courtallum 18th September 1866

From

Captain H. L. Prendergast R.E.
Offg. Superintending Engineer 8th D.

To

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

Sir,

In reply to Memo No. 270 of the 11 Instant, I have the honor to report that in this Division there are three Irrigation Projects of magnitude viz.

Tinnevelly

For building an Anicut at Areeagoondum, with main Channels to Tuticorin and Trichendoor.

For constructing a reservoir at Papanasum, as a reserve supply for the Tambrapoorney river.

Madura

For diverting the waters of the Perryaur, into the valley of the Vyggay river.

2. The first of these projects has for some years been sanctioned by Government, but the question has been raised, whether it would be preferable to raise the Murdoor

Anicut

Nos. 3402-3403 24th Octr/66

Pro: 24th October/66 No. 597.

I have the honor to be &c. &c. &c.
of the 18th January 1826 to the Secretary
of the Commander in Chief and that of
the two Sebastian Hawkins Esquires
Officers serving with Captain Lyon
to take this in hand; and have to be
furnished this day for the Information
Report to the Admiralty Office
that you have intended that Captain
Captain Lyon should make the necessary
enquiries for the Purpose of
ascertaining if the Vessel there alluded
was not in readiness to be shipped for
the service of the Government of Sierra Leone

Thomas Ly

Lieutenant Governor

Captain

Officer Commanding Engineers

Sussex Cricket
Club Ground, Hove
Sussex

Hove 2nd

Sussex

Sussex Nat Hospital
Investigation Department
Registered in the Division
List that for the reason assigned
the documents mentioned on this
Form are not in readiness for the
Committee to Grant

Ex 3402 - 6 3403 - 24 Oct 1854

Tabular Statement of Establishments proposed to be entertained for the investigation of Irrigation Projects in the Madras Presidency

No.	Date	Office to which the proposition refers	Nature of Charge	Rate	Present: Amount per month	Present: Amount per annum	Present: Period	Proposition (Temporary): Amount per month	Proposition (Temporary): Period	Proposition (Temporary): Amount per annum	Period for which necessary	Grounds of proposition	Local Government's recommendations	Remarks	Remarks, Financial Department	Orders of the Government of India
			Present Scale													
			Proposed Scale													
		Supdg Engr 1st Dvn	3 Surveyors & Levellers	150				450								
			3 Draughtsmen	60				180								
			12 Lascars	7				84								
			Total					714								
		Supdg Engr 2nd Dvn	3 Surveyors & Levellers	150				450								
			3 Draughtsmen	60				180								
			12 Lascars	7				84								
			Total					714			Two years	Vide letter &c. dated October 18..				
		Supdg Engr 3rd Dvn	2 Surveyors & Levellers	150				300								
			2 Draughtsmen	60				120								
			8 Lascars	7				56								
			Total					476								
		Supdg Engr 4th Dvn	5 Surveyors & Levellers	150				750								
			5 Draughtsmen	60				300								
			20 Lascars	7				140								
			Total					1190								
		Supdg Engr 8th Dvn	2 Surveyors & Levellers	150				300								
			2 Draughtsmen	60				120								
			8 Lascars	7				56								
			Total					476								
			Grand Total					3570								

Note – No special establishments are required in the 5th, 6th & 7th Divisions.

Dep. 26 Oct.

P.W.D.

No 3402

Proceedings of the Madras Government
Under date the 24th Oct 1866
Read the following.

From the Chief Engineer Port
" the Superintending Engr
" Supg Engr of the 1st Div
" do do 2nd Div
" do do 3rd Div
" do do 4th Div
" do do 5th Div

(Nos 12th Sept 1866 No. 25)
(No. 19th " " " 26)
(No. 30 Sept " " No. 11)
(No. 21st Sept " No. 43)
(No 27th " No 111)
(No 15th " " " 721)
(No 18th " " " 946)

Resolved that appropriations be made to the Superintendent of Studies for the undertakings of the undermentioned establishments for the investigation and preparation of projects for irrigation works in the Nos 1, 2, 3, 4, 5 and 6 Divisions. That Establishments will, in the first instance, be applied for two years and they will be continued, unless absolutely necessary, for a further period on special application

applications.

1st Division — 3 Surveyors, 3 Draftsmen, 12 Clerks (Calcutta)

2nd —— Do. ——

3rd Do. — 2 Surveyors, 2 Draftsmen, 8 Clerks (Lucknow)

4th Do. — 5 Surveyors, 5 Draftsmen, 20 Clerks (Lucknow)

5th Do. — 2 Surveyors, 2 Draftsmen, 8 Clerks (Lucknow)

Assamboles, &c.

Superintending Engineers

Concerned, having in view the orders contained in the Proceedings of Government No. 1783, dated 6 June 1866, will make such arrangements as may be necessary to present any

Copy

* Lucknow

* See Registered Nos 2 of 1866 Cypher on the 26 April 66.

* No 310 24 March 1866
" 79 9th July 1866.

loss of time in employing these establishments as soon as instructions on the preparation of the details, plans and estimates of the projects which they have selected for investigation, and they will be careful, in submitting the several schemes for the consideration of Government, to adopt the clear and comprehensive form in which the project for a tank at Broach near Ahmedabad was laid before the Bombay Government.

The Superintending Engineer of the 5th Division will expedite the submission of such of the irrigation projects referred to in his letter noted in the margin as may be

be sufficiently matured to admit of their being transmitted to the Government of India for inclusion in the list of works to be executed under the proposed irrigation loan

Ordered that the go Covering letter be sent

To

P.D. 3/103

The Secretary to the

Govt of India P.W.D.

Sir

With reference to the correspondence noted in the margin regarding the preparation of projects for irrigation works in this Presidency, I am directed to state that the requisition of the Government of India for the plans and estimates for works of that description having

To the Supt Engineer Central Circle

Letter

Govt of India P.W.D. 23 June 1866

Govt of India No 2293 dated 20 July 1866

Govt do dated 15 Aug 1866

Govt do dated 29 Aug 1866

having been received without previous warning, this Government regret their inability to comply with the call in that full detailed and satisfactory manner which is necessary to ensure sanction of the works. It has been explained in my letter No 2293 dated 20th July 1866, that many projects have been matured but that having been laid aside for years they will require revision, and that numerous others which have been proposed or partially examined will require some time for fuller preparation. I enable the Superintending Engineer concerned to undertake the thorough investigation of these projects and to prepare the necessary plans and estimates in a complete form. I am to request.

request the sanction of the Right Honorable the Governor General in Council to the entertainment of the temporary establishments noted in the accompanying tabular statement for two years to be continued, on special application, where absolutely necessary for a further period. The cost of these establishments is entered at Rupees 3,570 per mensem, but I am to state that they will be entertained only as their services are found to be required.

So it is doubtful whether proposals for the extension of existing irrigation works or for the construction of partially completed irrigation projects, like that of the Ristnah Delta

Delta, are eligible for inclusion in the list of works for the execution of which it is intended to raise money by loans, and am to request the orders of the Government of India upon this point before ~~the~~ a commencement is made to the entertainment of Engineers.

In reply to the [illegible] which was made upon them, the Superintending Engineers have named certain projects and have proposed to undertake the re-investigation of these and a search for others in the respective Districts of the Presidency as shown below.

District	Project	Probable Amount of Estimate	Remarks.
Ganjam & Vizagapatam			No proposals for the improvement of irrigation in these Districts appear ever to have been brought forward, but the Superintending Engineer believes that large reservoirs could be formed at moderate cost in the upper parts of the basin of the Boorkhoda above the junction of the Lotlakunty and Mahanuddy in Ganjam, and in the upper valleys of the rivers in Vizagapatam.
Godavery	Completing the irrigation of the Godavery Delta	10,00,000	
Kistna	Completing the irrigation of the Kistna Delta including the reclamation of land from the Colair Lake	30,00,000	
Do	Anicut across the Moonegaree river	200,000	Promises to be highly remunerative, the expected return being 14 or 15 per cent per annum upon the outlay.
Nellore	Anicut across the Pennair river at Sungum	400000	The returns from this work are said to be likely to reach 33 per cent per annum on the outlay
Bellary	Anicut across the Huggry river near Gaparal for the irrigation by a series of channels, of certain lands belonging to Tanabul, Sreedaragutta and other villages in the neighbourhood	— " —	This work was investigated before the suspension of Public Works in 1857. The discharge of the Huggry has recently been ascertained to be unlimited and comparatively small, and as the contemplated closing of the Maeri Canaway gap will prevent it all, this work will not be remunerative and will not be further examined.
Do	Improving supply of Bootkachera and several other Tanks by the construction of an anicut across the bed of the river Pennair near the village of Trianamany in the Mysore Country and by the excavation of a spacious Canal	for 8 Lacs	Doubts being felt of the sufficiency of the estimate of this work and of the correctness of the Revenue Returns on which its remunerative capabilities were calculated, it is under re-investigation.
Do	Restoring the Goodloor Tank	39,600	It is reported that this work will yield a revenue of Rs 10,098 per annum.

North Arcot	Reservoirs at different points near the upper parts of the valley of the Palar	Unknown	Of doubtful value
—Do—	Anicut across the Cheyaur river near Trivettore	—Do—	Will probably be very remunerative
—Do—	Dam across the Cheyaur river at Conjeveram and sundry new channels from that river	—Do—	—Do— —Do— —Do—
South Arcot	Anicut across the Makinmuttanadi	37,900	To supply numerous tanks and channels at present imperfectly fed from the river - The revenue from this is said to be likely to reach 30 per cent per annum upon the outlay
—Do—	Cutting the Pombay Channel from the North bank of the Toomar Anicut	45,600	The tanks on the south bank of the river are supplied by an old channel - It is now proposed to carry a new channel from the anicut to supply the numerous tanks on the south bank - The latter work is expected to result in a revenue of 35 per cent per annum upon the outlay
Tanjore		10,00,000	There are no large remunerative projects in this district
Coimbatore	Restoration of the Sereinpeth Channel and repairs to the river bank for the irrigation of lands of the Sultan and Coimbatore Districts	12,000	The proposed new anicut on the Cauvery is very much wanted but will not prevent that water would not be found for the cultivation of the country unless the river banks be repaired for the purpose of conducting the water to the fields - Reservoirs on the course of the Cauvery might meet the supply of water to the fields
—Do—	Reservoirs are suggested in the hills in the vicinity of the Bhowany, Moyar, Noyel, Cauvery, and Amaravathy Rivers	Unknown but probably from 20 to 30 Lacs	The object of these reservoirs is to regulate the discharge of the Cauvery, and other rivers, & to supplement the supply of the rivers in draughts and when its waters are low
—Do—	Cutting a new channel from the Kavirumpolliam Anicut above its junction with the Moyar river on the right bank	Unknown	This is a small work, but promises a good return in a few years

It will be observed that if the sole right to construct canals from the Toongabudra for the irrigation of Bellary, has been conceded to the Madras Irrigation and Canal Company there are four works of magnitude in this Presidency, except in the Carge Delta, which can be specifically recommended for special investigation under the terms of the Circular of the Government of India quoted in the margin of para 1— Numerous small irrigation projects from minor streams and many proposals for the construction, restauration and improvement of tanks are from time to time pressed upon the attention of this Govt but individually these do not require large outlays for their execution, and few of them are entirely original, but for the most part more or less extensive additions of existing systems of irrigation—

I am to add that the Superintending Engineers have been instructed to make arrangements for having

no time, after the receipt of the sanction of the Government of India, in putting the establishment, now asked for, to work in the investigation of the projects named by them, but the Government do not expect that it will be practicable to submit any of those for some time. Meanwhile the works which have already been sanctioned by this Govt. and are in progress will be proceeded with from the funds which may be annually placed at their disposal.

As regards the proposal for the construction of a Canal from the Tungabuddra at Kullabelgi, down thro' the Raichur Doab for the irrigation of that District, I am directed in reply to your letter No 870 C, under date the 19th September 1866, that a large establishment, costing upwards of 2,000 Rupees per annum, has been employed since 1863 by the Madras Irrigation and Canal Company in surveying and levelling for this work and in collecting information regarding it, and it is understood that a very complete and thorough scheme has been drawn up. Under these circumstances, it would appear to be a waste of labor and money to institute measures for the preparation of fresh surveys and levels and the collection of data which must already be in the possession of the Irrigation Company. It seems better in the event of their having unduly delayed the work unnecessarily and ignoring the Government, to insist on their transferring to Government, all the plans and estimates which they have ready for commencing the work at once, together with the surveys and the information which are necessary to determine the financial bearing of the undertaking. The Company may be dispensed with as soon thereafter as may be found convenient.

Grant St George
2nd March 1866

Dept 25th Feb.