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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS DEPARTMENT

G.O. No. / ~~B.P. No.~~	1022 W	Press. / ~~Mis.~~
Dated	3. 4. 1883	~~198 .~~

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1022

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General, Account.

Read—the following letter from R. G. MACDONALD, Esq., Acting Examiner, Public Works Accounts, to the Secretary to Government, Public Works Department, dated Madras, 30th March 1883, No. 211 W. :—

I have the honor to submit, for the information and orders of Government, a report by Mr. George Brown, Senior Deputy Examiner, of an inspection made on the 20th March 1883 of the office of the Executive Engineer, Godávari Central Division, formed in November 1882.

2. As regards the advances of pay and outfit to Overseer Gunner Blake, Rs. 150, outfit allowance, have been included and passed in February's salary bill. Instructions have been issued as to the recovery of the balance.

3. The points requiring attention are—

(*a*) Greater care on the part of Mr. Walsh in preparing his imprest accounts.

(*b*) Neatness in writing up the register of works, and attention to the Chief Engineer's instructions as regards the preparation of the estimates for maintenance and repairs.

Enclosure.

Notes of Inspection by G. BROWN, Esq., Senior Deputy Examiner, Public Works Accounts, of the Office of the Godávari Central Delta Division on the 20th March 1883, dated Madras, 30th March 1883.

This is a new temporary division formed last November; the head-quarters are at Gannaram, and the Executive Engineer in charge is Captain A. R. F. Dorward. Ranganaickulu is the Accountant.

2. The Executive Engineer is the sole disburser. There are two sub-divisions—"Eastern" and "Western," respectively, in charge of Sub-Engineer, Conductor Sanderson, and Assistant Engineer, Mr. G. F. Handcock.

3. The following are the imprest-holders :—

	Rs.
Overseer Mr. Traish	400
Do. Mr. Walsh	1,000
Do. Mr. Blake	800
Delta Superintendent F. Venkata Rao	400
Total ...	2,600

4. *Cash-books.*—Divisional cash-book is up to date; totals "brought forward" as well as those "carried over" should be initialled by the Executive Engineer. Imprest accounts are generally well rendered, except those of Mr. Walsh, which show great carelessness.

5. *Treasury Pass Book* examined and found correct.

6. *Register of Works* is in arrears, entered up to 31st January 1883; more care is required in keeping this book. The expenditure on "Irrigation Productive Public Works, Maintenance Account, and Repairs" appears objectionable for want of the scheme of expenditure required by the Chief Engineer for Irrigation, which is now in preparation.

7. *Register of Tools and Plant* is up to date.

8. *Work Vouchers* are complete to end of January last; those for February are being prepared.

9. *Register of Buildings* is complete and up to date.

10. *Miscellaneous Advances* on 31st January 1883 amounted to Rs. 1,583-0-1; there is nothing objectionable, except certain advances of pay and outfit by Presidency Division to Overseer Gunner Blake, amounting to Rs. 321-10-10, which is under reference to the Examiner.

11. *Deposits* on 31st January 1883 amounted to Rs. 47-2-0, which is being adjusted.

12. *Establishment* amount audited and not paid on 31st January 1883. Rs. 218-8-7 will be shown adjusted in February's accounts.

13. *Service Books* are reported complete.

14. *General Remarks.*—The work of the office is not up to date; the accounts for February, which ought to have been despatched to the Examiner on the 15th instant, are not yet ready; this is owing to the Accountant having very recently returned to duty from sick leave. The Accountant, however, promises to bring up the arrears as soon as possible.

Order—dated 3rd April 1883, No. 1022 W., Public Works.

Communicated to the Superintending Engineer, First Circle, for the information and guidance of the Executive Engineer, Godâvari Central Division.

(True Extract.)

Major, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintending Engineer, First Circle.
„ Examiner, Public Works Accounts.

Exd. A. F. Goodall.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1883} Madras.

PUBLIC WORKS.

Dated April, 3rd.

Recd. *Encl.*

G.O., 3rd April 1883, No. 1022 W.

APRIL.

Inspection Notes

Passing orders on — of the Godávari Central Divisional Office submitted by the Examiner, Public Works Accounts.

1022
3

28TH AUGUST 1882, No. 2213 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

No. 184.

READ—the following Telegram from the Secretary to the Government of India, Public Works Department, Simla, to the Secretary to the Government of Madras, Public Works Department, Ootacamund, dated 19th August 1882 :—

Madras Government has authority to create new divisions. Temporary men on more than Rs. 250 per mensem require previous sanction of Government of India.—See Standing Order 168.

No. 185.

ORDER—dated 28th August 1882, No. 2213 W., Public Works.

Recorded, and communicated to the Examiner of Public Works Accounts.

2. Captain A. R. F. Dorward, R.E., has already been instructed * by the Chief Engineer for Irrigation to join the Godávari District for charge of the new Central Delta Division, the formation of which as a temporary division will now be immediately proceeded with, the limits being defined by the Chief Engineer for Irrigation.

* Vide telegrams dated 12th and 21st August 1882.

3. The Superintending Engineer, First Circle, is authorised to appoint at once such temporary clerks, &c., as may be needed for separating the records and making all requisite preliminary arrangements for starting the division, reporting as soon as possible—

(1) the temporary arrangements made with this object ;
(2) the proposed strength of the future establishment including office ;
(3) the individuals he would recommend for filling the vacancies in the different executive appointments.

4. As regards (3) it should be borne in mind that Mr. Assistant Engineer Dorman will return to duty next month, and that he, and such others of the permanent staff as can be spared, should be nominated to the new division.

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Examiner, Public Works Accounts.
„ Superintending Engineer, First Circle.
„ Chief Engineer for Irrigation.
„ Financial Department.

Exd. S. T. Austin.
Spare Copies

GENERAL
ESTABLISHMENT.

Gobt. of (1882) Madras.

PUBLIC WORKS.

Dated August, 28th.

Read. *Encl.*

G.O., 28th Aug. 1882, No. 2213 W.

AUGUST.

Nos. 184-185.

Central Delta Division, Godavari.

Creation of the new — and appointment of Captain Dorward, R.E., for charge of the same.

1022/4

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

No. 96.

READ—the following papers :—

From Colonel W. S. TREVOR, R.E., Secretary to the Government of India, Public Works Department, (General,) to the Secretary to the Government of Madras, Public Works Department, dated Simla, 24th July 1882, No. 1082 G.

I am directed to acknowledge your letter No. 1439 W., dated 9th June, making certain proposals for working new divisions proposed to be made in the Delta Irrigation Works, and to communicate the following remarks.

2. The plan proposed of engaging upper subordinates, after taking their pensions, as Executive and Assistant Engineers, is opposed to the regulations of the Civil Pension Code. It is moreover, in the opinion of the Government of India, not in the interests of Government to entrust such large responsibility to men whose previous training has been wholly in the Upper Subordinate Establishment.

3. But before any other method of increasing the strength of Engineers in Madras is considered, I am to request that the previous question may be considered whether any increase at all is required. The proposals just submitted by the Government of Madras point to the conclusion that the present staff is sufficient to meet all or nearly all requirements ; for those proposals, if carried out, would only lead to an increase of a few Overseers. The Government of India has all along considered the sanctioned strength of Engineers in Madras to be extravagant, and one reason which led to its acceptance of the proposals of the Madras Government in regard to the permanent staff of Engineers was that it was thought the same staff would be able to undertake extended work, when funds should be made available. After making due allowance for revenue work, it seems probable that the whole establishment charges in Madras are not much short of 40 per cent. on the outlay on works and repairs. This disproportion has more than once been commented on by the Secretary of State. I am to request therefore that the distribution and employment of the whole Engineer staff may be carefully reviewed, and that no consideration of mere territorial occupation or traditionary custom may be allowed to stand in the way of a stringent limitation of the use of members of the Engineer Establishment to work which demands the exercise of their higher training.

4. I am to state that it must be looked upon as fixed and settled that no increase will be made to the permanent sanctioned scale of Engineers in Madras. It would therefore seem advisable to provide the Executive Engineers for the new divisions from the existing permanent staff, and if it should be found, after careful view, that an increase to the engineering staff is absolutely necessary, that increase should be obtained either by transfer from other Provinces or by the engagement of temporary Assistant Engineers or Upper Subordinates.

No. 96-A.

From the same Officer, dated Simla, 25th July 1882, No. 1087 G.

In reply to your letter No. 1448 W., dated 10th June 1882, affirming the inadequacy of the provision made for absentees in the establishment sanctioned for the Madras Public Works Department, and requesting that the provision may be increased so as to be more in consonance with actual experience gained in the Province, I am directed to observe that when the present scale of establishment for the Madras Public Works Department was sanctioned, the Government of Madras was told, in paragraph 6 of Public Works Department letter No. 1250 G., of 23rd September 1881, that the scale must be regarded as the maximum, and that provision for the superintendence of any works that might hereafter be taken in hand must be made without any increase of the permanent staff. The Secretary of State was also so informed.

2. A comparison of the percentage of establishments to works in some of the larger Provinces show that the existing establishment in Madras is by far the most expensive. The Secretary of State has on more than one occasion commented on the extravagance of the Public Works Establishments in Madras, and the Government of India regrets that it is unable to meet the wishes of the Madras Government.

3. If the Public Works Department in Madras is short handed, the first obvious step, I am to point out, is to recall to duty the officers on special leave. If this should not suffice, I am to say that the permanent establishment should be supplemented by the entertainment of temporary establishment.

No. 97.

ORDER—dated 16th October 1882, No. 2695 W., Public Works.

Ordered that the following letter be despatched to the Government of India.

(Here enter, No. 2696 W., dated 16th October 1882.)

(True Extract.)

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

Exd. S. T. Austin
Spare Copies

1022
5

APPENDIX A.

PART I.

Statement showing the Numbers and Pay of Staff, Numbers and Cost of Works in each Public Works Division, and Percentage Charge under "Construction" arranged according to Superintending Engineers' Circles.

	STAFF.																WORKS.																	
	Engineer Establishment.						Upper Subordinate Establishment.								Petty, Office, Temporary Establishment, Contingencies and Travelling Allowances.	Total Construction.	Imperial.												Provincial.					
																	Military.						Other Services.											
	Executive Engineer.		Assistant Engineer.		Total.		Sub-Engineer.		Supervisor.		Overseer.		Total.				New Works.			Repairs.	Total.		New Works.			Repairs.	Total.		New Works.			Repairs.	Total.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	Amount.	Amount.	No.	Amount.	Reserve.	Total.	Amount.	Amount.	No.	Amount.	Reserve.	Total.	Amount.	Amount.	No.	Amount.	Reserve.	Total.	Amount.	Amount.
1	2		3		4		5		6		7		8		9	10	11				12	13	14				15	16	17				18	19
First Circle.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.
Ganjam	..	..	1	6,600	1	6,600	1	3,000	..	..	3	2,400	4	5,400	12,636	14,636	..	..	1,034	1,034	11,450	12,423	..	..	896	896	668	1,564	1	3,179	24,277	27,447	5,724	33,172
Vizagapatam ..	1	9,600	1	4,200	2	13,800	2	6,600	3	6,616	5	4,300	10	17,416	19,780	19,996	..	..	1,032	1,032	11,158	12,490	..	..	895	895	666	1,561	2	79,925	24,276	1,04,201	5,724	1,09,925
Godávari Eastern ..	1	7,800	2	10,800	3	18,600	..	..	4	8,316	8	7,560	12	15,876	17,210	31,686	1	3,568	1,032	4,600	11,458	16,058	..	..	895	895	666	1,561	4	44,724	24,276	69,000	5,724	74,724
Do. Western ..	..	..	1	5,400	1	5,400	1	3,000	1	2,400	6	5,280	8	10,680	15,904	31,984	..	..	1,032	1,032	11,458	12,490	..	..	895	895	666	1,561	1	1,450	24,276	25,726	5,724	31,450
Total ..	2	17,400	5	27,000	7	44,400	4	12,600	8	17,232	22	19,540	34	49,362	65,530	1,59,302	1	3,568	4,130	7,698	45,833	53,531	..	..	3,581	3,581	2,666	6,247	8	1,29,289	97,105	2,26,574	22,897	2,49,771
Second Circle.																																		
Kistna Eastern ..	1	7,800	3	13,800	4	21,600	1	3,600	2	4,116	5	4,080	8	11,796	17,956	51,352	..	..	1,378	1,378	15,277	16,655	..	..	1,195	1,195	890	2,085	2	21,850	32,368	54,218	7,632	61,850
Do. Western ..	1	7,800	2	9,600	3	17,400	..	..	2	4,800	5	4,560	7	9,360	15,712	42,472	..	..	1,376	1,376	15,277	16,653	..	..	1,193	1,193	888	2,081	1	14,520	32,368	46,888	7,632	54,520
Nellore	1	7,440	..	..	1	7,440	2	6,600	1	2,316	4	3,840	7	12,756	15,202	45,893	..	..	1,376	1,376	15,279	16,655	..	..	1,193	1,193	888	2,081	1	14,000	32,369	46,369	7,633	54,002
Sangam Project ..	1	10,800	3	15,300	4	25,800	2	7,800	..	..	9	12,948	11	19,848	15,088	60,736	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	4	33,840	8	38,400	12	72,240	5	18,000	5	11,232	23	24,528	33	53,760	63,958	1,50,953	..	..	4,130	4,130	45,833	49,563	..	..	3,581	3,581	2,666	6,247	4	47,370	97,105	1,44,475	22,897	1,67,372
Third Circle.																																		
Bellary	1	9,600	..	..	1	9,600	1	3,000	2	4,200	5	6,084	8	13,284	14,662	37,546	5	47,310	1,378	48,688	15,279	63,967	..	..	1,195	1,195	890	2,085	..	..	32,369	32,369	7,631	40,000
Cuddapah	1	6,600	..	..	1	6,600	..	..	1	1,800	5	4,300	5	6,100	14,220	28,920	..	..	1,376	1,376	15,277	16,653	..	..	1,193	1,193	888	2,081	..	..	32,368	32,368	7,632	40,000
Kurnool	..	..	..	..	..	..	1	6,600	2	4,200	4	3,600	7	14,400	17,690	31,990	..	..	1,376	1,376	15,277	16,653	..	..	1,193	1,193	888	2,081	1	30,000	32,368	62,368	7,632	70,000
Total ..	2	16,200	..	..	2	16,200	2	9,600	5	10,200	14	13,984	21	33,784	46,472	96,456	5	47,310	4,130	51,440	45,833	97,273	..	..	3,581	3,581	2,666	6,247	1	30,000	97,105	1,27,105	22,895	1,50,000
Fourth Circle.																																		
West Coast	2	16,080	..	..	2	16,080	3	12,720	1	2,316	7	8,988	11	24,024	19,218	59,322	4	35,488	1,034	36,522	11,459	47,981	1	13,527	896	14,423	668	15,091	5	69,370	24,277	94,147	5,724	99,872
Coimbatore	1	6,600	1	4,200	2	10,800	..	..	1	2,400	4	4,320	5	6,720	13,458	30,978	..	..	1,032	1,032	11,458	12,490	..	..	895	895	666	1,561	1	5,360	24,276	29,636	5,724	35,360
Salem	1	7,800	..	..	1	7,800	1	3,000	1	1,800	4	3,840	6	8,640	13,201	29,541	..	..	1,032	1,032	11,458	12,490	..	..	895	895	666	1,561	2	28,000	24,276	52,276	5,724	58,000
North Arcot	1	9,600	2	9,600	3	19,200	..	..	2	4,200	4	3,960	6	8,160	14,880	42,490	1	2,800	1,032	3,832	11,458	15,290	..	..	895	895	666	1,561	2	23,050	24,276	47,326	5,724	53,050
Total ..	5	40,080	3	13,800	8	53,880	4	15,720	5	10,716	19	21,108	28	47,544	59,757	1,62,134	5	38,288	4,130	42,418	45,833	88,251	1	13,527	3,581	17,108	2,666	19,774	10	1,26,280	97,105	2,23,385	22,897	2,46,282
Fifth Circle.																																		
South Arcot	1	11,796	3	13,800	4	25,596	2	9,516	2	6,316	11	11,724	15	26,556	16,258	68,674	..	..	1,031	1,031	15,278	16,309	..	..	1,193	1,193	890	2,083	2	18,250	32,368	50,618	7,682	58,300
Chingleput	..	..	1	6,600	1	6,600	2	6,000	2	4,200	6	3,840	10	14,040	14,580	35,470	2	50,335	1,034	51,369	15,278	67,147	..	..	..	12,000	..	12,000	..	..	..	..	..	..
Buckingham Canal ..	1	13,536	..	..	1	13,536	3	15,840	..	..	4	4,440	7	20,280	31,432	66,292	..	..	..	..	..	..	2	12,500	..	12,500	..	12,500	..	..	..	..	..	..
Presidency	1	14,868	..	..	1	14,868	3	15,960	3	6,996	5	7,176	11	30,132	26,560	71,560	8	57,680	2,068	59,748	15,279	75,027	1	4,840	1,195	6,035	890	6,925	8	81,840	32,370	1,14,210	7,684	1,21,844
Total ..	2	40,200	4	20,400	7	60,600	10	47,316	7	16,512	26	27,180	43	91,008	89,370	2,40,986	10	1,08,015	4,133	1,12,648	45,835	1,58,483	3	17,340	3,581	20,925	2,679	23,601	18	1,87,300	97,108	2,84,408	23,295	2,07,704
Sixth Circle.																																		
Trichinopoly ..	1	11,796	..	..	1	11,796	1	3,360	2	4,800	6	6,520	9	13,680	15,790	41,242	..	..	826	826	9,169	9,995	..	..	716	716	533	1,249	2	28,800	19,421	48,221	1,679	52,800
Tanjore	1	6,600	2	10,800	3	17,400	1	4,800	3	3,120	6	10,080	10	18,000	13,920	50,080	..	..	826	826	9,166	9,992	1	3,600	716	4,316	533	4,849	5	1,06,330	19,421	1,25,751	1,679	1,27,430
Nagapatam	1	9,480	1	5,400	2	14,880	2	3,600	2	3,600	3	3,120	6	10,080	13,920	38,880	..	..	826	826	9,166	9,992	..	..	716	716	533	1,249	7	66,946	19,421	74,425	1,679	78,047
Madura	1	6,600	2	10,800	3	17,400	1	4,800	3	3,120	6	10,080	10	18,000	13,920	34,080	..	..	826	826	9,166	9,992	1	3,600	716	4,316	533	4,849	1	50,000	19,421	69,421	1,679	74,000
Tinnevelly	1	7,800	3	12,600	4	20,400	..	..	3	5,400	4	3,840	7	9,240	15,480	45,079	..	..	4,130	4,130	45,833	49,963	1	3,600	3,581	6,581	2,666	9,247	16	2,19,225	97,105	3,37,380	22,897	3,60,227
Total ..	5	42,276	6	28,800	11	71,076	4	14,880	12	25,032	23	22,080	39	61,992	76,294	2,09,303	..	..																

N.B.—The Staff is as it stood on the 1st July 1882. The Provincial undistributed Reserve has been assigned ratably to each division.

Statement showing the Numbers and Pay of Staff, Numbers and Cost of Works in each Public Works Division, and Percentage Charge under "Construction" arranged according to Superintending Engineers' Circles—cont.

	Irrigation Productive Public Works.													Irrigation and Navigation and Agriculture Ordinary.																	
	Capital Account.		Revenue Account.						Total.				Works for which Capital and Revenue Accounts are kept.				Irrigation and Navigation.										Agricultural Works.					
	Works.		Extension and Improvement.			Maintenance and Repairs.			Works.	Repairs.	Total.		Capital.	Revenue.			Works for which neither Capital nor Revenue Accounts are kept.										Works for which neither Revenue nor Capital Accounts are kept.					
													Works.	Extension and Improvements.	Maintenance and Repairs.		Works.				Repairs.						Works.				Repairs.		
	No.	Amount.	No.	Amount.	Reserve.	Total.	Amount.	Reserve.	Total.								No.	Amount.	Reserve.	Total.	Amount.	Reserve.	Total.				No.	Amount.	Reserve.	Total.	Amount.	Reserve.	Total.
	20		21				22			23	24	25	26				27		28													
First Circle.		Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.			Rs.	Rs.	Rs.		Rs.	Rs.			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Ganjam	..	..	..	..	306	306	..	709	709	..	306	709	1,015	..	..		..	..	..	..	8,728	8,728	18,000	14,458	32,458	..	..	1,250	1,250	1,000	691	1,691
Vizagapatam	..	..	..	..	306	306	..	708	708	..	306	708	1,014	..	..		..	..	..	..	8,728	8,728	7,000	14,458	21,458	..	..	1,250	1,250	500	691	1,191
Godávari Eastern	..	..	13	1,21,405	2	8,000	307	8,307	95,000	708	95,708	15	1,29,712	95,708	2,25,420	..	..		..	..	..	..	8,729	8,729	12,000	14,459	26,459	6	57,000	1,250	58,250	13,000	892	13,892
Do. Western	..	..	5	40,000	1	15,000	306	15,306	65,000	708	65,708	6	55,306	65,708	1,21,014	..	..		..	..	..	..	8,728	8,728	8,000	14,458	17,458	2	18,426	1,250	20,676	8,000	691	8,691
Total ..	18	1,61,405	3	23,000	1,225	24,225	1,65,000	2,833	1,62,833	21	1,85,630	1,62,833	3,48,463	..	..		..	..	..	..	34,913	34,913	40,000	57,833	97,833	8	76,426	5,000	81,426	22,500	2,766	25,266
Second Circle.																															
Kistna Eastern	..	..	7	1,55,643	1	6,000	307	6,307	75,000	709	75,709	8	1,61,950	75,709	2,37,659	..	..		..	..	..	..	11,637	11,637	7,000	19,277	26,277	1	20,000	1,666	21,666	3,200	922	4,122
Do. Western	..	..	3	1,01,000	1	4,000	306	4,306	53,000	708	53,708	4	1,09,306	53,708	1,62,914	..	..		..	..	..	..	11,637	11,637	..	19,277	19,277	..	..	1,666	1,666	3,000	922	3,922
Nellore	..	..	..	..	1	3,000	306	3,306	15,000	708	15,708	1	3,306	15,708	19,014	1	41,673		..	..	..	..	11,639	11,639	30,000	19,279	49,279	..	..	1,668	1,666	2,200	922	3,122
Sangam Project	..	..	3	3,74,580	..	..	306	306	..	708	708	3	3,74,886	708	3,75,594	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	13	6,35,123	3	13,000	1,225	14,225	1,43,000	2,833	1,45,833	16	6,19,318	1,45,833	7,95,181	1	41,673		..	..	..	..	34,913	34,913	37,000	57,833	94,833	1	20,000	5,000	25,000	8,400	2,766	11,166
Third Circle.																															
Bellary	..	..	..	..	..	..	408	408	..	944	944	..	408	944	1,352	..	..		..	..	1	15,000	11,637	26,637	20,000	19,277	49,277	..	..	1,666	1,666	..	922	922
Cuddapah	..	..	..	..	..	..	409	409	..	945	945	..	409	945	1,354	..	..		..	..	..	..	11,639	11,639	20,000	19,279	39,279	1	8,000	1,668	9,668	1,000	922	1,922
Kurnool	..	..	..	..	..	..	408	408	..	944	944	..	408	944	1,352	..	..		..	..	..	..	11,637	11,637	10,000	19,277	29,277	..	..	1,666	1,666	..	922	922
Total ..	..	..	..	..	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	..	..		..	..	1	15,000	34,913	49,913	50,000	57,833	1,07,833	1	8,000	5,000	13,000	1,000	2,766	3,766
Fourth Circle.																															
West Coast	..	..	..	..	..	..	306	306	..	708	708	..	306	708	1,014	..	..		..	..	..	..	8,728	8,728	2,000	14,458	16,458	..	..	1,250	1,250	..	691	691
Coimbatore	..	..	..	..	..	..	306	306	..	708	708	..	306	708	1,014	..	..		..	..	1	10,000	8,728	18,728	60,000	14,458	74,458	..	..	1,250	1,250	10,000	691	10,691
Salem	..	..	..	..	..	..	306	306	..	708	708	..	306	708	1,014	..	..		..	..	2	32,680	8,728	41,408	20,000	14,458	34,458	..	..	1,250	1,250	..	691	691
North Arcot	..	..	..	..	..	..	307	307	..	709	709	..	307	709	1,016	..	..		..	..	..	..	3,729	8,729	55,000	14,459	69,459	..	..	1,250	1,250	..	695	695
Total ..	..	..	..	..	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	..	..	1	7,000	20,000	..	..	34,913	77,593	1,37,000	57,833	1,94,833	..	..	5,000	5,000	10,000	2,766	12,766
Fifth Circle.																															
South Arcot	..	..	..	..	..	..	409	409	..	945	945	..	409	946	1,354	2	15,618	1	1,500	10,000	..	..	11,639	11,639	65,000	19,279	84,279	..	..	1,668	1,668	16,000	922	16,922
Chingleput	..	..	..	..	..	..	408	408	..	944	944	..	408	944	1,352	..	..		500	2,500	1	48,520	11,637	60,157	40,000	19,277	59,277	..	..	1,666	1,666	..	922	922
Buckingham Canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Presidency	..	..	..	..	..	..	408	408	..	944	944	..	408	945	1,352	..	..		..	..	..	..	11,637	11,637	3,000	19,277	22,277	..	..	1,666	1,666	..	922	922
Total ..	..	..	..	..	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	2	15,618	2	2,000	12,500	1	48,520	34,913	83,433	1,08,000	57,833	1,65,833	..	..	5,000	5,000	16,000	2,766	18,766
Sixth Circle.																															
Trichinopoly	..	..	..	..	245	245	..	567	567	..	245	567	812	..	..		..	..	..	..	6,982	6,982	50,000	11,567	61,567	..	..	1,000	1,000	23,000	554	23,554
Tanjore	..	..	2	18,067	245	18,252	39,000	567	39,567	2	18,252	39,567	48,819	..	..		..	..	1	8,720	6,982	15,702	10,000	11,567	21,567	1	75,000	1,000	76,000	11,000	554	12,554
Negapatam	..	..	1	10,000	245	10,245	39,000	567	39,567	1	10,245	39,567	49,812	..	..		..	..	..	..	6,982	6,982	11,200	11,567	22,767	..	..	1,000	1,000	38,000	554	38,554
Madura	..	..	..	..	245	245	..	567	567	..	245	567	812	..	..		..	..	..	..	6,982	6,982	40,000	11,567	51,567	..	..	1,000	1,000	..	554	554
Tinnevelly	..	..	2	30,478	1	2,000	248	2,248	15,000	567	15,567	3	32,726	15,567	..																

Statement showing the Numbers and Pay of Staff, Numbers and Cost of Works in each Public Works Division, and Percentage Charge under "Construction" arranged according to Superintending Engineers' Circles—cont.

WORKS—*cont.*

—	Irrigation and Navigation and Agriculture Ordinary—*cont.*						Provincial.				Excluded Local.			Incorporated Local.					Grand Totals.					Percentage of Establishment	Remarks.
	Total.						Navigation Works.				Original Works.			Original Works.											
	Totals.						Capital.		Revenue.	Total.	Port Fund.	Educational.	Total.	Local Funds.	Canal and Ferry.	Total.	Repairs, Local Funds.	Totals.	New Works.		Ratable share of Reserve.	Repairs.	Grand Total, Works, Repairs.		
	Works.				Repairs.	Total.	Works.		Repairs.	Total.															
	No.	Amount.	Reserve.	Total.	Amount.	Total.	No.	Amount.	Amount.	Amount.	Amount.	Amount	Amount	Amount	Amount.	Amount.	Amount.	Amount.	No.	Amount.	Amount.	Amount.	Amount.	Amount.	
	33				34	35	36		37	38	39	40	41	42	43	44	45	46	47		48	49	50	51	52
First Circle.		Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	
Ganjam	..	..	9,978	9,978	34,149	44,127	..	..	..	..	271	630	901	645	930	1,575	537	2,112	1	3,170	38,967	53,247	95,384	25·82	Full Divisional Staff here needed, as the district in its urgent need of improved communications. The great Rushikulya Irrigation Project has been submitted for sanction. Ganjam Gopalpore Tidal Canal project nearly ready.
Vizagapatam	..	..	9,978	9,978	22,649	32,627	..	..	..	..	273	633	905	648	931	1,579	539	2,118	2	79,925	38,971	41,744	1,60,640	31·74	Improved communications in all the ghât portions of this district greatly needed. Full Divisional Staff necessary. Lapsed Grant in this Division. Owing to the enhanced work due to the late sanction for the completion of the Delta Works, a proposal for a third Executive (the Central Godâvari) Division has been submitted to the Government of India.
Godâvari Eastern.. ..	6	57,000	9,979	66,979	40,152	1,07,131	..	..	..	..	271	630	901	645	930	1,575	537	2,112	26	2,34,597	38,963	1,54,245	4,27,907	12·07	
Do. Western ..	2	19,426	9,978	29,404	26,149	55,553	..	..	..	..	271	630	901	645	930	1,575	537	2,112	9	75,876	38,963	1,10,242	2,25,081	14·21	
Total ..	8	76,426	39,913	1,16,339	1,23,099	2,39,438	..	..	..	..	1,085	2,523	3,608	2,583	3,721	6,304	2,150	8,454	38	3,93,668	1,55,866	3,59,478	9,09,012	17·52	
Second Circle.																									
Kistna Eastern	1	20,000	12,303	32,303	30,399	62,702	..	..	..	..	271	630	901	645	930	1,575	537	2,112	11	2,03,493	51,027	1,30,444	3,84,964	13·33	Owing to the enhanced work due to the late sanction for the completion of the Delta Works a proposal for a third Executive (the Central Kistna) Division has been submitted to the Government of India.
Do. Western	..	..	13,303	13,303	23,199	36,502	..	..	..	..	271	630	901	645	930	1,575	537	2,112	5	1,23,420	51,032	1,01,241	2,75,693	15·40	
Nellore	1	41,673	13,307	54,908	52,401	1,07,381	..	..	..	..	272	633	905	648	931	1,579	539	2,118	3	55,573	51,035	92,448	1,99,156	17·77	Full Divisional Staff necessary for large irrigation works of the Pennâr System, &c. The Sarvapalle Project now framing is in this division.
Sangam Project ..											271	630	901	645	930	1,575	537	2,112	3	2,74,580	2,782	1,245	3,78,607	16·04	Full Divisional Staff assembled.
Total ..	2	61,673	39,913	1,01,586	1,05,999	2,07,585	..	..	..	..	1,085	2,523	3,608	2,583	3,721	6,304	2,150	8,454	22	7,57,166	1,55,866	4,25,378	12,38,410	15·33	
Third Circle.																									
Bellary	1	15,000	13,303	28,303	50,199	78,502	..	..	..	..	363	841	1,204	861	1,241	2,102	718	2,820	6	62,310	51,959	75,563	1,89,932	19·76	In addition to Military Cantonment, irrigation works, &c., the investigation of projects for famine much needed. Full Staff necessary. Do. do. Local Fund Works also included in charge.
Cuddapah	1	8,000	13,307	21,307	41,201	62,508	..	..	..	..	361	841	1,202	861	1,240	2,101	716	2,817	1	20,000	51,931	55,656	1,27,607	23·24	
Kurnool	..	..	13,303	13,303	36,199	49,502	..	..	..	..	361	841	1,202	861	1,240	2,101	716	2,817	1	20,000	51,931	55,656	1,27,607	23·24	
Total ..	2	23,000	39,913	62,913	1,21,599	1,84,512	..	..	..	..	1,085	2,523	3,608	2,583	3,721	6,304	2,150	8,454	8	1,00,310	1,55,816	1,97,978	4,54,154	21·24	*N.B.*—Kurnool Canal having lately been taken over is being organised as a separate division with a full Staff.
Fourth Circle.											272	633	905	648	931	1,579	539	2,118	10	1,18,855	38,975	36,243	1,94,108	30·56	This having been found too large for a single division has been broken up. Even with this arrangement Staff insufficient.
West Coast	..	..	9,978	9,978	17,149	27,127	..	..	..	..	271	630	901	645	930	1,575	537	2,112	2	15,380	38,963	1,04,242	1,58,565	19·53	Part above separated from the West Coast has been added to this division, but owing to large numbers of irrigation and other works doubtful if Staff will be sufficient.
Coimbatore	1	10,000	9,978	19,978	85,149	1,05,127	..	..	..	..	271	630	901	645	930	1,575	537	2,112	4	60,680	38,963	54,242	1,53,885	19·26	Full Staff required. In addition to ordinary irrigation work the large Bâreur Tank Project will probably soon have to be carried out here.
Salem	2	32,680	9,978	42,658	35,149	77,807	..	..	..	..	271	630	901	645	930	1,575	537	2,112	4	28,850	38,965	1,00,246	1,77,061	23·82	In addition to ordinary works special duties here connected with scheme of tanks crossing the line of railway. Full Staff necessary.
North Arcot	1	3,000	9,979	12,979	90,152	1,03,131	..	..	..	..	1,085	2,523	3,608	2,583	3,721	6,304	2,150	8,454	20	2,23,775	1,55,866	3,03,978	6,83,619	23·72	
Total ..	4	45,680	39,913	85,593	2,27,599	3,13,192	..	..	..	..															
Fifth Circle.											361	841	1,202	861	1,241	2,102	716	2,818	7	54,328	51,612	1,36,663	2,42,602	28·36	Most important irrigation works in addition to ordinary duties claim constant attention. Full Staff necessary.
South Arcot	3	17,118	13,307	30,425	1,11,201	1,41,626	..	..	..	..	361	841	1,202	861	1,241	2,102	716	2,818	7	1,18,105	51,610	88,159	2,57,874	13·75	
Chingleput	2	43,020	13,303	62,323	62,699	1,25,022	..	..	..	..	..	..	..	..	..	..	..	..	2	1,72,943	..	68,635	2,41,578	27·02	Canal crosses all the drainage of the country; is 259 miles in length and claims constant attention for Staff.
Buckingham Canal ..	..	..	..	..	..	..	1	1,60,443	68,635	2,29,078															
Presidency	..	..	13,309	13,303	23,199	36,502	..	..	..	..	363	843	1,206	863	1,243	2,106	718	2,824	17	1,44,360	52,656	48,664	2,45,680	20·66	Full Divisional Staff for military buildings of Bangalore, to this area all the military and civil buildings of Madras; strong and military Staff needed.
Total ..	5	66,138	39,913	1,06,051	1,97,099	3,03,150	1	1,60,443	68,635	2,29,078	1,085	2,525	3,610	2,585	3,725	6,310	2,150	8,460	24	2,89,736	1,55,878	3,42,120	9,87,734	24·89	
Sixth Circle.											217	507	724	519	745	1,264	430	1,694	2	23,800	31,178	1,09,399	1,80,377	25·21	In addition to irrigation and other work, including military, the Local Fund Works are likewise executed. The largest irrigated tract probably in India.
Trichinopoly	..	..	7,982	7,982	85,121	93,103	..	..	..	..	217	504	721	518	743	1,260	430	1,690	10	3,05,107	31,173	1,23,826	5,48,175	14·59	Very special staff essential.
											217	504	721	518	743	1,261	430	1,691	2	13,600	31,171	1,04,307	1,48,743	22·13	Besides the special works at Madura and ordinary work in the district there are here, a number
Tanjore	2	33,720	7,982	41,702	63,621	1,05,323	..	..	..	..	217	504	721	518	744	1,260	430	1,690	7	55,045	31,171	67,998	1,53,214	22·13	
Negapatam	..	..	7,982	7,982	59,321	67,303	..	..	..	..															
Madura	..	..	7,982	7,982	52,121	60,103	..	..	..	..															
Tinnevelly	6	82,331	7,986	90,317	87,121	1,77,438	..	..	..	..	217	504	721	518	744	1,262	430	1,692	33	4,03,151	1,55,870	3,56,089	11,25,317	18·01	
Total ..	11	1,16,051	39,913	1,55,964	3,47,303	5,03,270	..	..	..	..	1,085	2,523	3,608	2,583	3,721	6,304	2,150	8,454	53	7,08,196	1,55,866	5,26,225	14,90,287	19·51	The Provincial undistributed Reserve has been assigned ratably to each division.

N.B.—The Staff is as it stood on the 1st July 1862.

Abstract of Statement showing the Numbers and Pay of Staff, Numbers and Cost of Works in each Public Works Division, and Percentage Charge under "Construction" arranged according to Superintending Engineers' Circles—cont.

	IRRIGATION PRODUCTIVE PUBLIC WORKS.												IRRIGATION AND NAVIGATION AND AGRICULTURE ORDINARY.																	
	Capital Account.		Revenue Account.						Total.			Irrigation and Navigation.										Agricultural Works.							
												Works for which Capital and Revenue Accounts are kept.				Works for which neither Capital nor Revenue Accounts are kept.						Works for which neither Revenue nor Capital Accounts are kept.							
	Works.		Extension and Improvement.				Maintenance and Repairs.			Works.	Repairs.	Total.	Capital.		Revenue.		Works.				Repairs.				Works.				Repairs.		
													Works.		Extension and Improvements.	Maintenance and Repairs.													
	No.	Amount.	No.	Amount.	Reserve.	Total.	Amount.	Reserve.	Total.	No.	Amount.	Amount.	Amount.	No.	Amount.	Amount.	No.	Amount.	No.	Amount.	Amount.	No.	Amount.	Reserve.	Total.	Amount.	Reserve.	Total.	No.	Amount.	Reserve.	Total.	Amount.	Reserve.	Total.
	20		21				22			23	24	25	26		27	28	29				30				31				32						
		Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
No. I Circle	18	1,01,405	3	23,000	1,225	24,225	1,50,000	2,833	1,52,833	21	1,85,636	1,52,833	3,38,469	..	..	..	..	..	..	..	..	8	76,426	5,000	81,426	22,500	2,766	25,266							
,, II do.	18	6,25,123	3	12,000	1,225	14,225	1,43,000	2,833	1,45,833	16	6,49,848	1,45,833	7,95,181	1	41,673	..	..	..	..	34,913	34,913	40,000	57,833	97,833	8	76,426	5,000	81,426	22,500	2,766	25,266					
,, III do.	..	..	..	..	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	..	..	..	..	..	..	34,913	34,913	37,000	57,833	94,833	1	20,000	5,000	25,000	8,400	2,766	11,166					
,, IV do.	..	..	..	..	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	..	..	..	1	15,000	34,913	49,913	60,000	57,833	1,17,833	1	8,000	5,000	13,000	4,000	2,766	6,766					
,, V do.	..	..	..	..	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	..	..	1	3,000	20,000	3	42,680	34,913	77,593	1,37,000	57,833	1,94,833	..	..	5,000	5,000	10,000	2,766	12,766				
,, VI do.	2	30,478	4	30,997	1,225	1,225	..	2,833	2,833	..	1,225	2,833	4,058	2	15,518	2	2,000	12,500	1	48,520	34,913	83,433	1,08,000	57,833	1,65,833	..	..	5,000	5,000	16,000	2,766	18,766				
Architect	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	52,777	34,914	87,691	1,81,200	57,835	2,39,035	3	1,18,274	5,000	1,18,274	1,05,500	2,770	1,08,270					
Total ..	38	8,27,006	10	66,997	7,353	73,360	3,78,000	17,000	3,95,000	43	9,00,366	3,95,000	12,95,366	3	57,191	3	5,000	32,500	12	1,56,977	2,09,479	3,69,456	5,53,200	2,47,000	9,10,200	13	2,17,700	30,000	2,47,700	1,55,400	16,800	1,80,000					

Abstract of Statement showing the Numbers and Pay of Staff, Numbers and Cost of Works in each Public Works Division, and Percentage Charge under "Construction" arranged according to Superintending Engineers' Circles—cont.

WORKS—*cont.*

—	Irrigation and Navigation and Agricultural Ordinary—*cont.* Totals. Totals. Works. No.	Works. Amount.	Works. Reserve.	Works. Total.	Repairs. Amount.	Totals. Total.	Provincial. Navigation Works. Capital. Works. No.	Capital. Works. Amount.	Revenue. Repairs. Amount.	Total. Total. Amount.
	33				34	35	36		37	38
		RS.	RS.	RS.	RS.	RS.		RS.	RS.	RS.
No. I Circle	8	76,426	39,913	1,16,339	1,23,099	2,39,438	..	..	..	..
,, II do.	2	61,673	39,913	1,01,586	1,05,999	2,07,585	..	..	..	..
,, III do.	2	23,000	39,913	62,913	1,21,599	1,84,512	..	..	..	..
,, IV do.	4	45,680	39,913	85,593	2,27,599	3,13,192	..	..	..	..
,, V do.	5	66,138	39,913	1,06,051	1,97,099	3,03,150	1	1,60,443	68,635	2,29,078
,, VI do.	10	1,66,051	39,914	2,05,965	3,47,305	5,53,270	..	..	..	..
Consulting Architect ..	..	..	..	..	..	..	..	..	..	..
Total ..	31	4,38,968	2,39,479	6,78,447	11,22,700	18,01,147	1	1,60,443	68,635	2,29,078

—	Excluded Local. Original Works. Port Fund. Amount.	Educational. Amount.	Total. Amount.	Incorporated Local. Original Works. Local Funds. Amount.	Canal and Ferry. Amount.	Total. Amount.	Repairs, Local Funds. Amount.	Total. Amount
	39	40	41	42	43	44	45	46
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
No. I Circle	1,085	2,523	3,608	[illegible]	3,721	6,304	2,150	8,454
,, II do.	1,085	2,523	3,608	[illegible]	3,721	6,304	2,150	8,454
,, III do.	1,085	2,523	3,608	2,583	3,721	6,304	2,150	8,454
,, IV do.	1,085	2,523	3,608	[illegible]	3,721	6,304	2,150	8,454
,, V do.	1,085	2,525	3,610	[illegible]	3,725	6,310	2,150	8,460
,, VI do.	1,085	2,523	3,608	[illegible]	2,721	6,304	2,150	8,454
Consulting Architect	..	..	..	..	..	..	..	..
Total	6,510	15,140	21,650	[illegible]	22,330	37,830	12,900	50,730

—	Totals. New Works. No.	New Works. Amount.	Ratable share of Reserve. Amount.	Repairs. Amount.	Grand Total, Works, Repairs. Amount.	Percentage of Establishment (under "Construction") to "Works" Amount.	Remarks.
	47		48	49	50	51	52
		RS.	RS.	RS.	RS.	RS.	
No. I Circle	38	3,93,663	1,55,866	3,59,478	9,09,012	17·52	As this Table only shows the Establishment Charges under "*Construction*" the pay of Superintending Engineers and their Offices has been omitted. For charges under all other heads see the General Table in Appendix E.
,, II do.	22	7,57,166	1,55,866	3,25,378	12,38,410	15·53	
,, III do.	8	1,00,310	1,55,866	1,97,978	4,54,154	21·24	
,, IV do.	20	2,23,775	1,55,866	3,03,978	6,83,619	23·72	
,, V do.	24	4,89,736	1,55,878	3,42,120	9,87,734	24·39	
,, VI do.	33	4,69,761	1,55,870	4,98,686	11,24,317	18·61	
Consulting Architect	8	1,86,792	..	..	1,86,792	19·30	
Total	148	26,21,208	9,35,212	20,27,618	55,84,038	19·56	

APPENDIX B.

Statement showing the Number, the Area irrigated, and the Revenue derived from Irrigation Works under the charge of the Public Works Department.

Districts.	Productive Public Works.					Irrigation and Navigation Works for which Capital and Revenue Accounts are kept.					Irrigation and Navigation Works for which Continuous Record of Expenditure is kept.					Other Imperial Works.					Total.					Remarks.
	Number of Anicuts.	Number of Channels.	Number of Tanks.	Area Irrigated.	Revenue.	Number of Anicuts.	Number of Channels.	Number of Tanks.	Area Irrigated.	Revenue.	Number of Anicuts.	Number of Channels.	Number of Tanks.	Area Irrigated.	Revenue.	Number of Anicuts.	Number of Channels.	Number of Tanks.	Area Irrigated.	Revenue.	Number of Anicuts.	Number of Channels.	Number of Tanks.	Area Irrigated.	Revenue.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
				Acs.	Rs.				Acs.	Rs.				Acs.	Rs.				Acs.	Rs.				Acs.	Rs.	
Ganjam	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	85	87	54,898	2,26,717	..	85	87	54,898	2,26,717	The figures in columns showing area and revenue may be accepted as fairly accurate, those relating to Productive Public Works and Irrigation and Navigation Works for which Capital and Revenue Accounts are kept are taken from the latest returns by Mr. W. Wilson, Special Officer in charge of Irrigation Accounts, and the others from the latest Proceedings of Government. The numbers of works given are in some cases only approximate. This remark particularly applies to channels under the Productive Public Works systems other than the Godávari and Kistna where lists of component works are yet incomplete. As regards numbers of tanks these are correct for those districts for which lists of Imperial and Minor Works have been completed, for a few districts these lists are incomplete, and in these cases the numbers are only approximate.
Vizagapatam	..	..	..	..	..	..	..	..	..	..	10	..	..	8,207	42,714	..	81	31	26,086	1,05,835	10	81	31	34,293	1,48,549	
Godávari	1	(a) 503	..	* 551,044	* 25,06,445	..	..	..	..	..	..	..	..	..	..	..	..	85	26,645	1,26,284	1	608	85	577,689	26,32,729	
Kistna	1	(b) 466	..	† 284,374	† 12,90,105	..	..	..	..	..	..	..	..	..	..	..	..	44	18,661	51,669	1	466	44	303,035	13,41,774	
Nellore	1	18	72	57,162	2,73,597	..	..	..	..	..	..	..	..	..	..	..	..	14	205	163,246	6,72,482	1	32	277	220,408	9,46,079	
Cuddapah	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38	89	53,962	2,40,815	..	38	89	53,962	2,40,815	
Kurnool	..	..	..	..	..	..	..	..	..	..	..	..	1	5,994	38,359	..	..	62	16,914	95,257	..	..	63	22,848	1,33,616	
Bellary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	151	82,147	4,33,998	..	..	151	82,147	4,33,998	
Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	94,524	..	..	74	532	240,423	8,06,669	3	79	537	293,128	10,43,855	
North Arcot ..	..	..	..	..	..	1	3	2	‡ 33,153	‡ 1,42,662	2	2	3	19,536	1,32,421	..	17	143	31,010	1,91,376	3	169	673	83,399	5,01,838	
South Arcot ..	..	..	..	..	..	1	4	270	41,943	1,78,042	2	88	260	20,448	7,31,962	..	..	187	84,535	3,32,196	11	85	313	216,970	10,81,652	
Salem	..	..	..	..	..	1	16	14	3,948	16,494	10	69	112	148,487	1,730	..	11	94	28,357	1,61,763	..	11	97	29,090	1,63,493	
Coimbatore ..	..	..	..	..	..	..	..	..	..	..	..	..	3	732	3,40,869	..	21	40	28,001	1,46,367	16	46	41	75,043	4,87,256	
Tanjore	..	..	..	..	..	..	..	..	..	..	16	25	1	47,022	..	..	..	69	30,257	1,00,525	1	89	69	858,367	35,65,025	
Trichinopoly ..	1	89	..	838,197	34,86,593	Cauvari Delta.			..	..	..	..	..	..	..	..	..	44	62	110,855	4,83,499	1	45	62	153,655	7,00,999	
Madura	1	1	..	42,800	2,17,500				..	..	..	..	..	..	..	..	..	40	191	102,188	4,52,961	..	40	191	102,188	4,52,961	
Tinnevelly	1	33	22	17,856	1,81,107	..	..	..	..	..	7	7	158	46,513	6,34,824	..	18	126	51,828	3,64,070	8	63	306	116,229	11,80,001	
Total .. (c)	6	1,215	94	1,781,336	79,33,254	3	23	286	79,044	3,37,198	47	191	568	298,036	20,17,423	..	438	2,138	1,130,013	49,93,482	56	1,867	3,116	3,287,329	1,52,81,357	

	Main Canal.	Distributaries.
(a) Eastern Section ..	7	148
Central do. ..	6	158
Western do. ..	11	278
	24	534
		24
Total ..		608

	Main Canal.	Distributaries.
(b) Eastern Section ..	9	174
Western do. ..	4	279
	13	453
		13
Total ..		466

(c) Excluding Sungum Anicut now under construction.

	Area.	Revenue.
		Rs.
Godávari Delta ..	535,477	25,49,871
Kistna do. ..	15,567	56,574
Total ..	551,044	25,06,445
Kistna Delta ..	276,081	12,63,096
Godávari do. ..	8,293	27,009
Total ..	284,374	12,90,105

	Area.	Revenue.
		Rs.
‡ Chembrambaukam Tank ..	12,625	69,377
Pálér Anicut System ..	20,528	73,285
Total ..	33,153	1,42,662

APPENDIX C.

Statement showing the Number, the Area irrigated, and Revenue derived from Irrigation Works under the charge of Collectors.

Districts.	Number of		Area Irrigated.	Revenue.	Remarks.
	Channels.	Tanks.			
1	2	3	4	5	6
			ACRES.	RS.	
Ganjam ...	...	2,661	213,237	3,18,459	*N.B.*—The figures for columns 2 and 3 have been taken from the Revenue Board's Proceedings, No. 1763 of 19th November 1880. The figures for columns 4 and 5 have been obtained by deducting, from the figures shown in the Revenue Board's Proceedings, No. 1724 of 6th July 1882, the totals for works under the charge of the Public Works Department as shown in Appendix B; but in the case of the Godávari District the figures have been got by deducting the figures in columns 20 and 21 of Appendix B. from those shown in G.O., No. 68 I. of January 1881 for the non-delta works in the Godávari District. The amount of revenue due to the Godávari Delta system as calculated by Mr. Wilson is more than that included in the amount shown by the Board of Revenue for the whole District, and therefore the former cannot be adopted to deduce the amount of revenue due to works under the charge of Collectors.
Vizagapatam ...	...	370	120,776	1,55,907	
Godávari ...	...	928	81,093	1,22,635	
Kistna ...	...	406	44,926	75,359	
Nellore ...	...	537	104,910	1,44,813	
Cuddapah ...	396	906	181,650	6,12,983	
Kurnool ...	103	248	16,896	58,682	
Bellary ...	...	675	88,535	2,79,963	
Chingleput ...	...	1,474	198,749	3,66,431	
North Arcot ...	675	1,897	215,187	8,68,892	
South Arcot ...	...	2,201	193,567	8,05,386	
Salem ...	...	1,338	81,527	3,21,903	
Coimbatore ...	38	79	27,275	1,47,283	
Tanjore ...	...	398	138,830	2,32,476	
Trichinopoly ...	...	651	54,994	98,682	
Madura ...	...	1,878	71,161	1,34,533	
Tinnevelly ...	...	2,038	104,271	2,85,915	
Total ...	1,212	18,685	1,936,684	59,29,402	

1022/10

APPENDIX D.

Public Works Divisions sanctioned under the Normal Scale (See Appendix A, G.O., 14th July 1881, No. 1729 W.,) with the corresponding Civil Districts.

Superintending Engineers' Circles.	Public Works Divisions.	Corresponding Civil Districts or parts of Districts.
No. I ...	1. Ganjam	Certain works in parts of the Ganjam District.
	2. Vizagapatam	Do. Vizagapatam District.
	3. Eastern Godávari ...	Only the irrigated portion of the Godávari District and the river with banks as far up as Dumagudiem.
	4. Western do. ...	
	5. A. Project Division ...	Headquarters at present in Ganjam, but will soon move elsewhere.
No. II ...	6. Eastern Kistna ...	Only the irrigated portion of the Kistna District.
	7. Western do.	
	8. Nellore	Certain works in parts of the Nellore District.
	9. Sangam Project ...	Also in the Nellore District.
No. III ...	10. Bellary	Certain works in parts of the Bellary District.
	11. Cuddapah	Do. Cuddapah do.
	12. Kurnool	Most of the Kurnool District, the department here being still in charge of Local Fund Works.
	13. Kurnool Canal Division.	Certain works in parts of the Kurnool and Cuddapah Districts.
	14. C. Project Division ...	Do. Bellary and Cuddapah Districts at present.
No. IV ...	15. West Coast	Till lately work extended over Malabar, Canara, and Nilgiri Districts, and portion of Cochin.
	16. Coimbatore	Till lately occupied part of the Coimbatore District.
	17. Salem	Certain works in part of the Salem District.
	18. North Arcot	Do. North Arcot District.
	19. B. Project Division ...	Till lately engaged in Salem and is now in Coimbatore.
No. V ...	20. South Arcot	Most of the South Arcot District.
	21. Chingleput	Do. Chingleput do.
	22. Buckingham Canal ...	Runs through the Chingleput, Nellore, and Kistna Districts.
	23. Presidency and Bangalore.	Part in the Madras District and part in Mysore.
No. VI ...	24. Trichinopoly	Most of Trichinopoly District, as the department here still retains Local Fund Works.
	25. Tanjore	Certain works in part of the Tanjore District.
	26. Negapatam	Do. do. do.
	27. Madura	Do. Madura do.
	28. Tinnevelly	Do. Tinnevelly do.
Chief Engr....	29. Consulting Architect ...	Chiefly in Madras District.
	30. D. Project Division ...	In office of Chief Engineer for Irrigation.

Remarks.

Of the sanctioned thirty Public Works Divisions, it will be observed that only two (Kurnool and Trichinopoly) are quite conterminous with the Civil Districts; others occupy parts as required by the works in hand, and others again, *e.g.*, Nos. 5, 13, 14, 15, 19, 22, 23, and 29, have work extending over parts of two or more Civil Districts.

Quite lately much of the work belonging to the West Coast in the Canara and Malabar Districts and the Native State of Cochin has been transferred to Coimbatore, and the size of the West Coast Division reduced to the Nilgiris and parts of Wynaad. None of the three newly proposed divisions, *e.g.*, the Central Godávari, Central Kistna, and Cauvery Regulators occupy any but fractional parts of Civil Districts, and their limits have been solely decided by the requirements of the works.

It may also be noticed that in letter to the Government of India, No. 1697 W., dated 9th July 1881, on the subject of the new normal scale, after showing how certain Superintending Engineers' Circles were to be formed, it was added, paragraph 11, that "all the other circles have been made out strictly with reference to the actual works in progress and proposed." No other principle has in fact been observed in the distribution of the charges, whether Superintending Engineers' Circles or Executive Engineers' Divisions.

APPENDIX E.

Memorandum on the Percentage Charge for Establishment in the Madras Public Works Department as compared with Outlay on Works.

To all acquainted with the varying conditions under which the work of a department like that of this Presidency, where operations of every conceivable character, large and small, concentrated and scattered, have to be provided for by a single establishment, the difficulties of applying the percentage charge as a test of economical and efficient management are such as call for great caution in application.

2. Where work is concentrated, funds supplied abundantly and all the conditions are favourable, the percentage charge is, or ought to be, small, and where to such ordinary advantages there is the additional facility of obtaining the materials to be employed in construction in a finished manufactured form from England or elsewhere, as generally is the case with railway work, iron bridges, pipes for water-supply works, &c., the charges for superintendence should be reduced to a minimum.

3. It has been shown for instance that on the work of the State Railways under the Government of India, the charge for establishment is not much more than nine per cent. The Madras Harbour Works affords even a more marked example. Here as proved by the figured statement which will be found lower down, the establishment charge for construction was only 6·8 per cent. in 1878-79, 4·3 in 1879-80, 4·9 in 1880-81. In 1881-82 with the self same establishment but owing to diminished outlay, the charge rose to 10·7 per cent., and in this year from a continuance of the same cause, the charge may very probably be as high as 20 per cent.

4. With an establishment, the strength and pay of which must in great measure remain unavoidably fixed, this question of the supply of funds is vital as affecting the percentage charge, as may at once be seen from what has occurred here in the last and present years. In 1881-82, the outlay on works being only Rs. 42,47,430, the unreduced charge was 39·6 per cent., though the cost of establishment owing to previous reductions was only Rs. 16,85,442, but in the current year, although from the late sanction of the increased normal scale of establishment the cost has risen to Rs. 20,99,314, the incidence is much less, being only 34·7 per cent. from the fact that it has been found possible to raise the outlay on works to Rs. 60,45,290.

5. The mere fact of difference in price of labor prevailing in one part of India as compared with another will of itself "*pro tanto*" alter the incidence of establishment charge. Where labor costs two, three or four times more in one place than it does in another, the percentage charge for the self same kind of work must necessarily be in inverse ratio to these numbers; *e.g.*, if in Burma, where labor is probably three times as dear as in Madras, the fair charge for the supervision of any specific operation be 15 per cent., it follows that 45 per cent. would be the correct equivalent in Madras, as the pay of members of the establishment does not vary with the province.

6. As regards the concentration or otherwise of the work, the Government of India has in Circular XX, P.W., dated 29th September 1881, fully recognised the effects on the incidence of the establishment charge. Here (paragraph 33) it is observed that "experience and inquiry show incontestably that petty and scattered works of the general nature of local works entail expense in respect of supervision if supervised professionally from three to six times as great as works that are concentrated or in large stations, however great the professional skill that the latter may demand."

7. In other words, if 9 per cent. as shown to prevail on the highly concentrated and otherwise favourably placed work of State Railways be accepted as fair in the one case, from 27 to 54 per cent. would be the corresponding rate in the case of scattered works.

8. But quite apart from these and other considerations of a general character, which more or less affect all branches of the department in India, there are special duties devolving on members of the department in Madras which places its establishment in a class by itself.

9. The first of these is the need for the development of irrigation and other works, suitable for either prevention of famine or for execution during famine. It is needless after all that has been said and written by the Famine Commission, by this Government and by the Government of India, to prove the absolute necessity for special arrangements being made as regards projects of this kind, Madras having notoriously suffered more than any other province in India from destructive famines. Suffice it to say that in full recognition of the requirements in this respect four full divisions of officers and subordinates (some not as yet however completely manned, See Appendix A) have throughout a great portion of the past year been engaged exclusively in the preparation of projects of the above character. Colonel Hasted's services were for several months similarly engaged, in bringing up the completion estimates for the Godávari system. Major Pennycuick has for the past three months been on special duty, in the preparation of the Perryaur Project—a protective work of great importance. Mr. Nordmann and a Sub-Engineer were also for a large portion of last year engaged in reconnoitring and surveying the country between Vizagapatam and Raipur, in view to the location of the proposed famine protective line of railway in this direction.

10. In these and all similar cases while there is a very heavy charge under Establishment there is absolutely no outlay under the head of "Works." Comparison is thus out of the question, as the percentage charge would here be infinitely large. To mix up the cost of all establishment so employed is in fact misleading; yet from the method by which the charges are shown in the departmental accounts, this is what actually occurs in determining the percentage charges.

11. As shown by the correspondence in regard to famine works, the establishment thus specially set apart must yet for several years be engaged on the preparation of projects. Not only so; hardly a single Superintending or Executive Engineer but has some special work of a similar character to think of and devote some of his time to.

12. The next and much more important consideration in regard to the special duties devolving on the Madras Establishment, has reference to the care and maintenance of the existing irrigation works.

13. In this Presidency no less than 5,196,279 acres are classed as "Wet" land, the revenue under which is all dependent on irrigation works, of which the following are the numbers, omitting many very minor works:—

	Numbers.
Tanks.	
Irrigating below 200 acres each	18,685
Do. above do.	3,116
Total ...	21,801
Channels.	
Irrigating below 200 acres each	1,212
Do. above do.	1,867
Total ...	3,079
Anicuts.	56

14. In Appendices B and C other details are given showing more particularly the distribution of the works under the Public Works and Civil Officers, respectively, but the mere enumeration of so many thousands of tanks, channels or other works can by itself convey but little real appreciation of the duties devolving in practice on the establishment. No one whose service has not been devoted to the care of these works, or whose attention has not been called daily to their requirements, can form any adequate idea of the practical effects of such a charge in reference to establishment.

15. This condition of matters has, it may be said without exaggeration, no approach to a parallel in any other part of the world; consequently deductions made from the experiences in Northern India or anywhere else where the conditions are entirely different are altogether inapplicable.

16. It is in the discharge of duties, often apparently of the most trivial description in maintaining the irrigation works, that the value of a trained and efficient establishment is best shown, though for that very reason least demonstrable by figures.

17. An establishment of this kind costing a large amount per annum, may by the careful and intelligent expenditure of only a very small amount on repairs, prevent the loss of enormous amounts of revenue, while on the other hand an inefficient and comparatively costless establishment may after expending large sums, fail to prevent large remissions of assessment. An establishment whose percentage charge is perhaps as high as 100 may in other words, if thoroughly efficient, prove infinitely more economical than one whose cost is only 25 per cent. Nowhere is this truth more clearly shown than in this Presidency.

18. Where as in the case of the delta works it has been found feasible to maintain a moderately large and efficient establishment the results have as well known been most encouraging, and the profits far in advance of any of the irrigation works in Northern India.

19. Nothing has in greater degree struck the Engineers accustomed to the unpretentious but much more effective works of Madras, than the great expenditure incurred in the designs of such schemes as the Ganges Canal, the Sone works, and others of a kindred character; but a little reflection will show that the system of judging the value of an establishment by its small percentage charge, directly leads to such results. The officer who carries out "grand" works regardless of expense is enabled of necessity to show the smallest percentage charge on his "works" outlay, and a direct premium is thus held out to lavish expenditure of all kinds. In Bombay these results are even more marked.

20. The only valid test must, it is thought, be that of useful effect, and to ensure true economy we must *first* ascertain precisely the work to be done; *second*, train up the most efficient establishment for its execution.

21. Efficiency and whatever it may cost to reach the needful standard is in fact the only true test, and by so much as the establishment fails in reaching that, must the Presidency pay by loss of revenue. As well expressed by a very able predecessor, the late General Charles Orr, cheap establishment means dear work.

22. Here it may not be out of place to observe that no efforts have been spared to place the Madras branch of the General Public Works Department on a satisfactory footing. Its Code, forms of account and system of control have all been improved and are believed to be quite on a par with any other in India. The reductions effected in 1879-80 had a very beneficial effect on the "*personnel*" of the establishment (though leaving it too weak numerically), and the late arrangement of the Superintending Engineers' Circles leaves little to be desired.

23. All now needed is (1) a more ample allowance than is at present admitted to provide against casualties from sickness, leave, &c., and (2) the gradual increase of the establishment under the head "Construction" "*pari passu*" with the enhanced means which it is hoped may soon be placed at disposal.

24. Improvements are needed to the curriculum of the Civil Engineering College, and the lower grades of the department and some of the office establishments require both reorganization and strengthening. The details of these improvements have been carefully worked out, but it is needless to dwell on these matters further here.

25. Turning now to the actual cost of the establishment of this department as shown in figures, the following table gives all the available information for five years including that now current :—

Statement of Percentage Charge of Establishment, Madras Public Works Department, based on actuals for the Years 1878-79 to 1881-82 and in the Budget Estimate for Current Official Year.

Columns.	Description.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83. Estimated.	Remarks.
		Rs.	Rs.	Rs.	Rs.	Rs.	
(1)	Total outlay on works under all heads of service, Imperial, Provincial, Local excluding Harbour Works.	61,89,539	47,40,415	37,43,891	35,83,572	57,43,290	Figures in columns (1) to (9) inclusive have been given by the Examiner of Public Works Accounts, except (*a*) which has been assumed on the applications made to Government of India on account of the Harbour Works. Figures in column (10) from a return furnished by Mr. W. Wilson. Figures in column (12) assumed from information in the Office of the Chief Engineer for Irrigation.
(2)	Madras Harbour Works ..	7,78,029	11,66,211	13,84,164	6,53,858	(*a*)3,05,000	
(3)	Total Outlay Works only ..	69,67,568	59,06,626	51,28,055	42,47,430	60,48,290	
(4)	Total Outlay on Establishment under all heads of service, excluding Harbour Works.	28,74,373	23,09,770	14,43,218	16,14,357	20,38,478	
(5)	Do. Madras Harbour Works.	53,020	50,295	68,632	71,085	60,836	
(6)	Total Outlay Establishment only.	29,27,393	23,60,065	15,11,850	16,85,442	20,99,314	
(7)	Percentage charge for Establishment without deductions of any kind.	42·0	39·9	29·4	39·6	34·7	
	Deductions.						
(8)	Direct Revenue under Imperial, Provincial, Local.	8,91,890	4,12,153	5,06,283	6,23,147	4,28,971	
(9)	Ten per cent. on same ..	89,189	41,215	50,628	62,314	42,897	
(10)	Indirect Revenue Productive Works (Irrigation).	36,00,221	39,38,917	48,24,022	37,59,614	35,18,015	
(11)	Six per cent. on the same ..	2,19,613	2,36,334	2,89,441	2,25,545	2,11,080	
(12)	Indirect Revenue on Irrigation and Navigation Works other than Productive.	70,00,000	70,00,000	70,00,000	70,00,000	70,00,000	
(13)	Three per cent. on the same..	2,10,000	2,10,000	2,10,000	2,10,000	2,10,000	
(14)	Total Deductions, columns (9) + (11) + (13).	5,18,802	4,87,549	5,06,069	4,98,454	4,63,977	
(15)	Correct Establishment charge, columns (6)—(14).	24,08,591	18,72,516	10,05,781	11,86,988	16,35,337	
(16)	Correct percentage charge of Establishment, column (15) on (3).	34·5	31·7	19·6	27·9	27·6	

26. In order to meet the financial rules of the Government of India the establishment charges have hitherto been distributed at certain fixed percentages over Imperial and Local works. This has had the effect of always leaving a large residuum to be met from "Provincial" funds, which thus at times have had to bear disproportionately heavy charges.

27. The system is a purely artificial one, and quite untrue in fact, as from there being no separation of duties among the members of the department work of all classes, whether Imperial, Provincial, or Local (now only very few), is, and has always been, carried out by one and the same establishment.

28. This being the case it has been considered advisable to set aside the artificial element in the above table, and by bringing together works under all heads of service, to show the true percentage ratably distributed over all equally.

29. It will be observed that without taking into account any deductions which have to be made the highest percentage charge in the five years, including "Direction," "Construction," and "Accounts," has been 42·0 and the lowest 29·4.

30. In the matter of deductions discussions with the Government of India have continued now over some years, and have as yet been only partially concluded.

31. As a provisional arrangement the Government of India has ruled that, ten per cent. of *direct* revenue of all kinds claimable by the department may be shown as a contribution towards the cost of establishment; also that six per cent. may similarly be credited on the *indirect* revenue of Productive irrigation works.

32. There has been no difficulty in deciding on the amounts of *direct* revenues for the years dealt with; but as regards the *indirect* revenue the matter has been otherwise. Here from the different system of land tenure prevailing in this Presidency from that in Northern India, it has only been found possible after long inquiry by a specially qualified Civil Officer (Mr. W. Wilson) to decide, first as to what portion of the total revenue collection could fairly be considered as the profits, or increase of revenue, due to the several Productive works carried out by the department, and second the share of enhanced land revenue, apart from the value of the water also due to them.

33. Mr. Wilson has only quite lately been enabled definitely to settle under both the above heads, the amount of profits claimable by the Godávari, Kistna, Cauvery, Pennér, and Srivaikuntham, works, and column 10 in the table gives the total figures ascertained for these systems.

34. This Government has also claimed that three per cent. should for analogous reasons be credited on account of the *indirect* revenue due to Imperial works of navigation and irrigation not classed as Productive, but as yet the Government of India have not been enabled to convey their assent, owing chiefly to the difficulties experienced in deciding on the precise amount of the revenue involved. It is not understood that any difference of opinion exists as to the propriety of the contribution, but merely as to its amount. The local Revenue authorities have as yet been unable to give the precise figures, but from the available evidence the amount cannot it is thought be approximately fixed at less than 70 lakhs per annum, which is accordingly the figure adopted provisionally in the table, as that on which the three per cent. may fairly be calculated, as a credit towards the cost of the Public Works establishments engaged on maintenance of the works.

35. Making the deductions above adverted to it will be observed that the maximum percentage cost of establishment in the five years has been 34·5 and the minimum 19·6.

36. It must not be supposed that the deductions as above claimed have been realized in the accounts of the several years to which they relate. As a fact they have not been so, and the figures given therefore merely indicate (excepting in the last official year, when a small instalment has been adjusted) how under a more equitable system than has hitherto prevailed the accounts should have stood, and that in defect of this Provincial has lost and Imperial gained not less than 22 lakhs of rupees in the period comprised. See column (14.)

37. Again it must not be thought that such adjustments and deductions are in any way exceptional or unrecognized in the other provinces of the empire. The reverse is in fact the case. Not only have such contributions been admitted in the provinces of Northern India, but to a very much greater extent than has ever been even claimed in Madras.

38. From the following statement supplied by the late Inspector-General of Irrigation, it appears that on averages of the years 1875-76 to 1879-80 there has yearly been admitted as a charge against the revenue of the following works the sums below mentioned in addition to the 25 per cent. on works charged in the Public Works Department for establishment, viz. :—

Averages for Years 1875-76 to 1879-80 inclusive.

Canals.	Outlay on Works.	Establishment.		Revenue.	Percentage of Column 4 on Column 5.	Percentage of Total Establishment Charges Columns 3 + 4 : if charged against Works only Column 2.
		25 per Cent. on Works.	Remainder.			
1	2	3	4	5	6	7
Permanent.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Ganges Canal ...	3,94,011	98,503	5,12,446	31,36,781	16·3	155·0
East Jumna ...	89,520	22,380	95,946	9,15,350	10·5	132·2
West Jumna ...	1,38,165	34,541	2,29,631	13,47,306	17·0	191·3
Baree Doab ...	2,41,562	60,391	1,99,783	9,00,359	22·2	107·7
Inundation.						
Upper Sutlej Canal...	49,268	12,317	30,684	1,08,817	28·2	87·1
Indus	1,55,126	38,781	54,359	1,92,964	28·2	60·0

APPENDIX F.

Statement showing the probable loss of Revenue consequent on the neglected condition of Tanks and other Irrigation Works from 1863-64 *to* 1880-81.

N.B.—All areas and values are expressed in Lakhs.

—	1863-64.		1864-65.		1865-66.		1866-67.		1867-68.		1868-69.		1869-70.		1870-71.		1871-72.		1872-73.		1873-74.		1874-75.		1875-76.		1876-77.		1877-78.		1878-79.		1879-80.		1880-81.		Total.		Remarks.
	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	Extent.	Assessment.	
	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS.	RS.	ACS. In Lakhs.	RS. In Lakhs.	
(a) Entire cultivable wet area in the Presidency..	52·6	244·9	52·6	244·8	52·6	244·9	51·1	237·1	51·1	237·2	51·1	237·2	51·1	237·2	51·1	237·2	51·0	237·1	51·0	237·1	51·0	237·1	51·0	237·1	51·0	237·1	51·0	237·1	51·9	248·2	51·9	248·2	51·9	248·2	51·9	248·2	927·8	4247·1
(b) Deduct Inam wet..	8·3	38·9	8·3	38·9	8·3	38·9	9·4	41·5	9·4	41·5	9·4	41·5	9·4	41·5	9·4	41·5	9·6	43·2	9·6	43·2	9·6	43·2	9·6	43·2	9·6	43·2	9·6	43·2	9·6	42·8	9·6	42·8	9·6	42·8	9·6	42·8	167·9	784·2
Cultivable wet area belonging to Government.	44·3	206·0	44·3	206·0	44·3	206·0	41·7	195·6	41·7	195·7	41·7	195·7	41·7	195·7	41·7	195·7	41·4	193·9	41·4	193·9	41·4	193·9	41·4	193·9	41·4	193·9	42·3	205·4	42·3	205·4	42·3	205·4	42·3	205·4	42·3	205·4	759·9	3692·9
Wet area under occupation according to Jamabandy statements.	34·9	173·0	32·8	165·0	35·8	174·5	35·7	173·0	35·7	172·9	35·7	172·4	36·0	172·4	36·4	173·4	36·0	169·3	36·5	170·5	36·8	168·6	37·3	169·8	37·4	170·3	37·4	169·3	38·3	172·6	38·0	172·9	38·9	173·2	38·0	171·6	698·0	3084·1
(c) Land not brought under cultivation apparently for want of supply of irrigation.	9·4	33·0	11·5	41·0	8·5	31·5	6·0	22·6	6·0	23·8	6·0	23·3	5·7	25·3	5·3	22·3	5·4	24·6	4·9	23·4	4·6	25·3	4·1	24·1	4·0	23·6	4·9	30·1	4·0	32·5	3·7	32·5	3·6	32·2	4·3	33·8	101·9	505·5	
Of the lands occupied, *i.e.*, remissions granted owing to bad seasons or deficient water-supply, &c.	..	14·9	..	17·9	..	18·6	..	9·5	..	34·3	..	24·6	..	12·3	..	8·1	..	10·8	..	6·0	..	12·5	..	5·3	..	* 24·8	..	* 54·3	..	13·	..	12·9	..	10·5	..	9·1	..	268·2	
Total Loss ..	..	47·9	..	58·9	..	50·1	..	32·1	..	57·1	..	47·9	..	35·6	..	30·4	..	35·4	..	29·4	..	37·8	..	29·4	..	45·4	..	90·4	..	47·	..	46·4	..	42·7	..	42·9	..	867·0	Lakhs of rupees.

(a) Possibly some of the land thus classed as "wet" would require considerable outlay being covered with stones "reh" &c.
(c) Most of this land will probably be brought under Irrigation when proper facilities are supplied.

(b) The whole of this must not be eliminated as on the creation of improved facilities of water-supply some of the Inam lands may become liable to water-tax.
* Famine Year.

1022
13A

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

No. 98.

LETTER—from

COLONEL R. H. SANKEY, R.E., C.B.,
Secretary to Government, Public Works Department,

To

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

SIR,

In your letters marginally noted the attention of this Government is drawn to what is held to be the extravagantly large Establishment of this Department as proved by the percentage which its cost bears to works compared with the results in other Provinces.

No. 1082 G., dated 24th July 1882.
„ 1887 G., „ 25th „ „

2. Since the receipt of the above communications, proposals have been made in my letter No. 2592 W., dated 4th October 1882 for organizing the establishment of the three new temporary divisions marginally noted on a basis which has been approved by the Government of India; my present communication will therefore, I am desired to say, be confined to dealing with the more important question above adverted to.

Godávari, Central.
Kistna, do.
Cauvery and Vennár Regulators.

3. The first point requiring attention is that contained in paragraph 3 of your letter No. 1082 G., calling for a review of the distribution and employment of the whole of the Engineer staff, and observing that "no consideration of mere territorial occupation or traditionary custom may be allowed to stand in the way of a stringent limitation of the use of the members of the Engineer Establishment.

4. To elucidate, as far as possible, this portion of the subject, I am to solicit a reference to Appendices A, B, and C, as also to the annexed index map showing the Civil Districts of this Presidency and their respective areas.

5. In Appendix A will be found the distribution of the establishment as existing on the 1st July 1882 (which is the most convenient date with reference to the returns), the proposed outlay on works under all heads of service, including the undistributed reserve for each division in the current official year, and the percentage cost of establishment as thus shown under "Construction."

6. To admit of an opinion being formed as to the actual duties performed by the divisional staff, Appendices B and C must also be consulted. The first shows, as far as possible, the irrigation works classified under—

(*a*) Large "Productive works."
(*b*) Smaller systems consisting, mainly of tanks and channels irrigating over 200 acres each, and provisionally classed as "Imperial."

Appendix C, exhibits the Minor Irrigation Works irrigating each less than 200 acres.

7. Broadly speaking, all works (*a*) and (*b*) fall to the charge of the officers of this Department, who have likewise to maintain all tanks, whether great or small, composing the chains or series crossed by lines of railway. They have, moreover, the duty imposed on them of grouping all reservoirs, irrespective of size, shown in Appendix C—a work of considerable labor.

8. The minor irrigation works not having in all cases been grouped, the returns do not at present admit of giving accurately in detail the numbers, acreage, and revenue of works falling within the charge of the several Public Works Divisions under the reorganization of last year; it has only therefore been found practicable to give the figures according to the Civil Districts. The following however may be taken as affording a fair general view of the distribution of the works and of the interests involved:—

Description.	Number of Works.	Acreage.	Net Revenues.
			Rs.
I.—Under Public Works Officers. (See Appendix B.)			
Productive Works (six Irrigation Systems) * ...	1,315	1,781,336	79,33,254
Navigation and Irrigation Works other than Productive	3,724	1,505,993	73,48,103
Total Public Works Officers ...	5,039	3,287,329	1,52,81,357
II.—Under Civil Officers. (See Appendix C.)			
Minor Irrigation Works	19,897	1,936,684	50,29,402
Grand Total under both Departments ...	24,936	5,224,013	2,03,10,759

9. The vast amount of work involved in the proper maintenance of these works and their enormous importance will be more clearly recognized from remarks which will be found further on; but here it may suffice to observe that, in order to estimate even approximately the duties devolving on the several divisional officers, weight must be given to the area over which the works are spread, to their numbers, and to the revenue dependent on them.

10. It may however be doubted whether, in the absence of special local acquaintance with the works, any really correct idea of the duties involved in their maintenance can be formed, as it is needless to say that nothing even approaching to a comparison with the system of water storage in Southern India can be found in any other part of the world; deductions and experiences drawn from other Provinces are in fact wholly inapplicable to the case.

11. It will subsequently be shown that, far from being in adequate strength, the Department is altogether undermanned if due consideration be given to the interests of the irrigation works.

12. Regarding the observations as to the undesirability of allowing considerations of "territorial occupation or traditionary custom" to weigh in deciding the distribution of the establishment, I am to request a reference to Appendix D, which affords detailed explanations on this point.

13. No such considerations as those supposed were allowed to weigh in the arrangement of divisions under the last sanctioned normal scale, and there is not, I am to observe, any desire on the part of this Government to permit the perpetuation of any arrangement not wholly regulated by the requirements of the works.

14. Whatever advantages may have been derived from a territorial arrangement of divisions, so long as the Local Fund works were executed by this department, have

* Excluding Sangam Anicut now under construction.

now in nearly all instances ceased to exist, owing to the disconnection with the works which followed on the reduction of establishment in 1879-80.

15. The second point calling for attention is that adverted to in paragraph 2 of your letter No. 1087 G., where it is observed, that a comparison of the percentage of establishment to works in some of the larger Provinces shows that the existing establishment in Madras is by far the most expensive, adding that "the Secretary of State has, on more than one occasion, commented on the extravagance of the Public Works Establishment in Madras."

16. Before dealing with the percentage charge I am desired to submit, in reference to the above quotation, that this Government had previous to the receipt of your letters under reply only on one occasion been made aware of the Secretary of State's opinion, and this, as will immediately be shown, was based on a misconception of the facts of the case.

17. In a despatch* of 1881, his Lordship observed, that an examination of the figures of the Public Works Budgets showed a percentage charge of 84·4 on works, but in the reply of this Government (despatch No. 41 of 16th July 1881) it was pointed out that had the full and correct figures been before his Lordship he would have seen that the percentage was about 47, and that even this apparently high rate was due, not so much to excessive numbers as to the curtailment of grants for works for this Presidency, to the great area over which works have to be supervised, and to the system adopted in Madras for debiting the charges which did not correspond with that followed in other Provinces under the Government of India.

* No. 14 of 2nd June.

18. As no rejoinder has been received from the Secretary of State, either to this despatch or to another connected with the same subject, No. 50-2017 W., dated 17th August 1881, it is only reasonable to conclude that his Lordship was satisfied with the explanations afforded. Both despatches were communicated to the Government of India, and special attention was drawn to the subject in my letter No. 2473 W., dated 8th October 1881.

19. In turning now to the point on which the Government of India lay most stress, viz., the high percentage charges for Establishment, I am desired to invite attention to Appendix E, which has been drawn up by the Chief Engineer for the information of this Government.

20. As the Government of India are aware that, for cogent reasons, the force of which has been admitted, it has never been found practicable to create separate branches for the Establishment, viz., for Irrigation, Military Works, General and Local; the result is that artificial arrangements connected with the method of showing the establishment charges, have for convenience in the matter of accounts been adopted under sanction of the Government of India. To avoid the complications inseparable from this method of dealing with the question, and to which previous misapprehensions may readily be traced, the establishment and work charges are now treated for five years, including that now current, as if no separate branches of the Department existed. The work as a whole, is taken as having been carried out by one undivided establishment, an assumption which in the case of this Presidency corresponds in every way with the facts. Any other method would be artificial and quite untrue.

21. The highest percentage in any of the five years examined has been found to be 42·0 without deductions of any kind, and the lowest 29·4. Taking however into account the contributions already conceded by the Government of India, and those which will in all probability be eventually granted on account of percentage due to indirect revenue of Irrigation and Navigation Works, not classed as Productive, the percentages are found to be reduced to 34·5 and 19·6 respectively.

22. Were precisely the same terms, as regards contributions on account of the indirect revenue of the irrigation works, conceded to this Presidency as are understood to prevail in Northern India, and further were the charges for establishments wholly engaged on the projection of famine works struck out of the accounts, as the individuals concerned have no executive duties chargeable to works, His Excellency the

Governor in Council sees no reason to doubt the correctness of the conclusions arrived at by the Chief Engineer, that the charge for the establishment would, as against "works," not exceed 20 per cent.

23. Considering the much more scattered character of the works in Southern India than elsewhere, the percentages as thus worked out would appear to compare not unfavorably with those of other Provinces so far as known, but as the Government is satisfied that a test of this description must prove fallacious and misleading, and only serving to divert attention from the real requirements of this Presidency, they now desire to place before the Government of India the following observations bearing upon this vital point.

24. Hitherto, I am to observe, the facts upon which the strength of the establishment of this department has been decided have mainly been (1) the sums which, after meeting other exigencies, could be conveniently spared to Madras; (2) the percentage charge which, under experience derived from other Provinces, it was held would suffice for an establishment to expend the sums thus placed at disposal.

25. His Excellency in Council, after a careful review of the Finance and Revenue Accounts of India, has been confirmed in the general conclusions submitted for the consideration of the Government of India in my letter No. 337 W., as to the measure meted out to Madras in the matter of assignments from the Imperial Revenue compared with those conceded to other Provinces; and while quite prepared to admit that there have been at times political reasons of sufficient weight to justify the occasional departure from what might appear to be a strictly rateable distribution of the general funds at the disposal of the Government of India, he feels it incumbent on him to submit that such reasons no longer exist, and that the time has arrived for conceding to this Presidency its fair rateable share of the available surplus.

26. His Excellency is fully persuaded that the Government of India will, on consideration, be prepared to admit the justice of a request of this character, for which there are, moreover, very special reasons connected with the peculiar circumstances of this Presidency, to which I am now to invite attention.

27. The first and chief of these is the well-recognized fact that Madras has from time immemorial suffered in a greater degree from destructive famines than any other part of India, while, unlike the Northern Provinces, it has been denied by nature the advantages of internal water communications, afforded by such rivers as the Indus, Ganges, and Brahmaputra with their navigable tributaries.

28. The facts in this connection are, however, too well known and recognized to call for further remark, and I am therefore now to submit, as the second special reason, for consideration the following remarks as to the actual condition of the ancient systems of irrigation works, on the proper maintenance of which the land revenue, and indeed the whole prosperity of the Presidency, mainly depends.

29. In the tours which His Excellency the Governor has since his arrival been enabled to make through various parts of the Presidency, no subject has more constantly been brought to notice in the addresses presented to him, than the need of greater outlay and attention in regard to the minor irrigation works. A précis of the evidence previously taken on the subject and other information of a specific character will, it is hoped, ere long be submitted, with definite proposals, to the Government of India; but, in the meanwhile, I am to solicit attention to Appendix F, which shows in concise form the entire cultivable area of the Presidency, and the losses which have been sustained in the form of remissions of revenue from the year 1863-64 to 1880-81, both inclusive.

30. Not to overburthen the statement, areas and assessment are expressed in lakhs of acres and rupees respectively. All the land as shown in the statement has at one time or another been classed as "wet," *i.e.*, had means of irrigation afforded, but as will be observed from the remarks appended to the statement reasons exist in some cases for supposing that the classification is not strictly accurate: making however all desirable reductions on this account the facts revealed are almost startling.

31. Here it will be seen that year after year enormous areas of land which, were the works in order, should be under irrigation and bear wet assessment, are shown to have been thrown out of cultivation from the neglected condition of the tanks and channels. The aggregate losses each year in the opinion of the Revenue officers of Government amount to not less than 40 lakhs. The statement gives the aggregate loss in the 18 years recorded at 807 lakhs, but making all due deductions as above the actual amount, which, had means existed for bestowing proper attention on the works, should have been saved, cannot be estimated at less than 700 lakhs.

32. From the statements before Government the following was the reported condition of the irrigation works in the Presidency in 1879:—

—	In Repair.	Out of Repair.	Total No.	Remarks.
Tanks	29,208	6,826	36,034	The figures here given were reported before the lists (Appendix B and C) were compiled and include the many very minor works there omitted.
River Channels	10,160	801	10,961	
Spring Channels	5,893	1,008	6,901	
Anicuts	1,836	515	2,351	
Wells	378,236	58,918	437,154	

33. It is impossible to test in all cases the accuracy of the returns on which these statements have been compiled, but it may generally be assumed that a very large proportion of the works are out of repair; and in regard to this it is necessary to bear in mind that, even where in so-called "repair," but very few tanks or channels are really doing at all the amount of effective work which, under proper scientific investigation and management they should be capable of. The Board of Revenue considered that the term "in repair" merely meant that the works "were not in an absolutely useless state."

34. And this leads to the third point for special consideration as to the claims of this Presidency, viz., the construction of new and extension of the area commanded by old irrigation works, were an adequate engineering staff and enhanced funds placed at the disposal of Government.

35. The following table, taken from page 106 of Sir John and General R. Strachey's late work on the Finances and Public Works of India, amply proves the truth of the observation made by a previous writer (Mr. Buckley) that the Madras works much "more than recoup all the deficiencies" of others of a similar character in India:—

Provinces.	Capital.	Net Revenue.	Interest at 4½ per Cent.	Surplus.	Excess Charge.
	£	£	£	£	£
Bengal	4,989,000	18,000	220,000	...	202,000
North-West Provinces ...	5,346,000	269,000	237,000	32,000	...
Punjab	3,544,000	170,000	155,000	15,000	...
Madras	1,720,000	427,000	77,000	350,000	...
Bombay	1,333,000	10,000	59,000	...	49,000
Total ...	16,933,000	894,000	748,000	146,000	...

36. Not only have the Madras works languished year after year for want of funds and through insufficient strength of establishment, but, as here shown, ten times the amount have elsewhere been expended, too often with the result of heavy loss to the State. The table however only shows actuals of outlay down to 1879-80, and does not disclose the enormous amount of funds which has been sanctioned for outlay or sunk in lost interest on many of the works in Northern India, which it is

submitted have by no means as great a claim as the Madras works viewed either as Productive or Protective undertakings. It is believed that, in addition to the Capital outlay shown, not less than 15 millions sterling have been lost in interest or sanctioned for the completion of such works as the Sutlej Canal, Lower Ganges Canal, Sone works, &c., whereas Madras past, present and prospective will not have had 2½ millions assigned for its great and highly remunerative works. Some 25 millions sterling have thus been spent or assigned from the Imperial exchequer without, it is believed any probability of the works producing anything approaching to the same results, either as paying schemes or as safeguards against famine as would have been produced from a smaller sum expended in Southern India.

37. From information in possession of the Irrigation Branch there are the best grounds to conclude that the irrigated area of the Presidency might be increased by 1,500,000 acres were the needful means afforded, and with every prospect of returns, which if not quite on a par with those derived from the productive works constructed at an earlier period, would in all probability prove much more remunerative than works of a corresponding class in other parts of India.

38. With a thoroughly trained and sufficiently strong establishment there is thus a well-founded hope that much of the sufferings due to famine might in future be counteracted, that 40 lakhs of annual remissions of revenue might be saved, and that some 1½ millions of acres, with a revenue value of 60 lakhs per annum, might be added to the irrigated area.

39. There are other objects of a special character of hardly less importance to be attained, if the Government is to fulfil in any adequate sense the duties imposed on it. Chief among these stands the need of works of water-supply and drainage for certain large centres of population which are quite beyond the local means to execute. In reference to this the Secretary of State has lately, at the instance of the Army Sanitary Commission, pressed on the serious attention of this Government the necessity of coming to the aid of the Madras Municipality which is unable to complete from its own resources the needful works. The condition of matters at the Presidency town is little short of a disgrace to any civilized Government, and matters in other large centres are if anything in a worse condition. As the papers in connection with Madras will ere long be submitted through the Government of India for the information of the Secretary of State, His Excellency the Governor-General in Council will be enabled to see how very pressing is the need for action.

40. If it be inquired how sufficient ways and means are to be provided for meeting all the demands as above set forth for this Presidency, I am to state that nothing further is needed in the opinion of His Excellency in Council than such a readjustment of the Imperial charges as will throw upon Madras only its ratable share. From the Finance and Revenue Accounts, 1863-64 to 1879-80, it can be shown that this Presidency has hitherto contributed more than 22 per cent. of the Imperial charges —a disproportion so marked, whether judged from the stand point of Provincial receipts, land revenue or population, as to call for most careful consideration.

41. That such is also clear from the assignments made under the late decentralization scheme, it has only to be stated that, whereas 38·48 of the land revenue has been conceded to Bengal, 43·29 to the Punjab, 48·46 to the Central Provinces, 49·82 to Assam, 33·61 to British Burma, and no less than 58·55 to Bombay,* only 28·9 per cent. has been granted to this Presidency.

42. If the inequalities in the incidence of the public burdens which have hitherto obtained, and which in the opinion of His Excellency the Governor in Council, there is no sufficient reaso. for continuing be removed, and further, if powers be granted for the needful increase of Provincial establishments adequate for the growing demands,

* The percentage is in fact very much higher, as from the manner in which inam lands are included in the Bombay land revenues, these in the last 17 years have been swelled by an anomalous asset of no less than 745·7 lakhs, or on an average of 43·8 lakhs per annum. The true amount assigned to Bombay is much more nearly 66·3 of its land revenue.

there should apparently be no difficulty in future in providing for all the most pressing wants of this Presidency or in largely swelling the Imperial revenue derived from many portions of its territory.

I have the honor to be,
Sir,
Your most obedient servant,

(Signed) R. H. SANKEY, Colonel, R.E.,
Secretary to Govt., P.W.D.

1022
16

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GENERAL.
ESTABLISHMENT.

Gobt. of {1882} Madras.

PUBLIC WORKS.

10222

Dated October, 16th.

Recd. *Encl.*

16th Oct. 1882, No. 2696 W.

OCTOBER.
No. 98.

Public Works Establishment of the Madras Presidency.

Regarding the scale of the —.

FROM THE EXAMINER P.W. ACCOUNTS,

MADRAS.

TO THE SECRETARY TO GOVERNMENT,

PUBLIC WORKS DEPARTMENT.

NO. 211W. MADRAS, 30th MARCH 1883.

SIR,

I HAVE THE HONOR TO SUBMIT FOR THE INFORMATION AND ORDERS OF GOVERNMENT A REPORT BY MR. GEORGE BROWN, SENIOR DEPUTY EXAMINER OF AN INSPECTION MADE ON THE 20TH MARCH 1883 OF THE OFFICE OF THE EXECUTIVE ENGINEER GODAVARI CENTRAL DIVISION FORMED IN NOVEMBER 1882.

2. AS REGARDS THE ADVANCES OF PAY AND OUTFIT TO OVERSEER GUNNER BLAKE, RS. 150 OUTFIT ALLOWANCE HAVE BEEN INCLUDED AND PASSED IN FEBRUARY'S SALARY BILL. INSTRUCTIONS HAVE BEEN ISSUED AS TO THE RECOVERY OF THE BALANCE.

3. THE POINTS REQUIRING ATTENTION ARE:-

(A) GREATER CARE ON THE PART OF MR. WALSH IN PREPARING HIS IMPREST ACCOUNTS.

(B) NEATNESS IN WRITING UP THE REGISTER OF WORKS, AND ATTENTION TO THE CHIEF ENGINEER'S INSTRUCTIONS AS REGARDS THE PREPARATION OF THE ESTIMATES FOR MAINTENANCE AND REPAIRS.

I HAVE THE HONOR TO BE,

SIR,

YOUR MOST OBEDIENT SERVANT,

AG. EXAMINER P.W. ACCOUNTS.

29.3.83

Go. 12150 d/25.8.82
2695W - 16.10.82
2696W - 16.10.82

Gal
Sent

A No 1022 Wdy 3rd April 83

Communicated to the Supt Engineer Rent-Circle for the information and guidance of the Executive Engineer Godavari Central Division.

2
2/4

FROM THE EXAMINER P.W.ACCOUNTS,

MADRAS.

TO THE SECRETARY TO GOVERNMENT,

P.W.DEPARTMENT.

NO. 211 W.

DATED 30th MARCH 1883.

RECD.

Dep 20
1/4
7

To The S.E. Rent Circle
a Examiner P.W. Accts
13
21

ENCLOSURE 1.

NOTES OF INSPECTION BY MR. GEORGE BROWN, DY. EXAMINER OF THE OFFICE OF THE EXECUTIVE ENGINEER GODAVARI CENTRAL DIVISION- ---
FORWARDS THE-----WITH REMARKS.

withorder

1022
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NOTES OF INSPECTION BY GEORGE BROWN ESQRE, SENIOR DEPUTY EXAMINER PUBLIC WORKS ACCOUNTS OF THE OFFICE OF THE CENTRAL DELTA DIVISION ON THE 20TH MARCH 1883.

THIS IS A NEW TEMPORARY DIVISION FORMED LAST NOVEMBER, THE HEAD QUARTERS ARE AT CANNARAM AND THE EXECUTIVE ENGINEER IN CHARGE IS CAPTAIN A.R.P.CORFARD — RUNGANAICKULU IS THE ACCOUNTANT.

2. THE EXECUTIVE ENGINEER IS THE SOLE DISBURSER. THERE ARE 2 SUB-DIVISIONS "EASTERN" AND "WESTERN" RESPECTIVELY IN CHARGE OF SUB ENGINEER, CONDUCTOR SANDERSON AND ASSISTANT ENGINEER MR G.P.HANDCOCK.

3. THE FOLLOWING ARE THE IMPREST HOLDERS

OVERSEER MR THAISH.....	RS 400
DO MR WALSH	RS 1000
DO MR BLAKE.....	RS 800
DELTA SUPERINTENDENT P.VEN-KATARAO.....	RS 400
TOTAL	RS 2600.

4. CASH BOOKS DIVISIONAL CASH BOOK IS UP TO DATE, TOTALS "BROUGHT FORWARD" AS WELL AS THOSE "CARRIED OVER" SHOULD BE INITIALLED BY THE EXECUTIVE ENGINEER. IMPREST ACCOUNTS ARE GENERALLY WELL RENDERED EXCEPT THOSE OF MR WALSH' WHICH SHEW GREAT CARELESSNESS.

5. TREASURY PASS BOOK EXAMINED AND FOUND CORRECT.

6. REGISTER OF WORKS IS IN ARREARS, ENTERED UP TO SEPT JANUARY 1883, MORE CARE IS REQUIRED IN KEEPING THIS BOOK. THE EXPENDITURE ON "IRRIGATION PRODUCTIVE PUBLIC WORKS MAINTENANCE ACCOUNT AND REPAIRS" APPEARS OBJECTIONABLE FOR

WANT

WANT OF THE SCHEME OF EXPENDITURE REQUIRED BY THE CHIEF ENGINEER FOR IRRIGATION WHICH IS NOW IN PREPARATION.

7. REGISTER OF TOOLS AND PLANT IS UP TO DATE.

8. WORK VOUCHERS ARE COMPLETE TO END OF JANUARY LAST, THOSE FOR FEBRUARY ARE BEING PREPARED.

9. REGISTER OF BUILDINGS IS COMPLETE AND UP TO DATE.

10. MISCELLANEOUS ADVANCES ON 31ST JANUARY 1883 AMOUNTED TO RS 1583-0-1, THERE IS NOTHING OBJECTIONABLE EXCEPT CERTAIN ADVANCES OF PAY AND OUTFIT BY PRESIDENCY DIVISION TO OVERSEER GUNNER BLAKE AMOUNTING TO RS 321-10-10 WHICH IS UNDER REFERENCE TO THE EXAMINER.

11. DEPOSITS ON 31ST JANUARY 1883 AMOUNTED TO RS 47-2-0 WHICH IS BEING ADJUSTED.

12. ESTABLISHMENT AMOUNT AUDITED AND NOT PAID ON 31ST JANUARY 1883 RS 218-8-7 WILL BE SHEWN ADJUSTED IN FEBRUARY'S ACCOUNTS.

13. SERVICE BOOKS ARE REPORTED COMPLETE.

14. GENERAL REMARKS THE WORK OF THE OFFICE IS NOT UP TO DATE, THE ACCOUNTS FOR FEBRUARY WHICH OUGHT TO HAVE BEEN DESPATCHED TO THE EXAMINER ON THE 15TH INSTANT ARE NOT YET READY, THIS IS OWING TO THE ACCOUNTANT HAVING VERY RECENTLY RETURNED TO DUTY FROM SICK LEAVE. THE ACCOUNTANT HOWEVER PROMISES TO BRING UP THE ARREARS AS SOON AS POSSIBLE.

Geo Brown

MADRAS
20TH MARCH 1883. BY EXAMINER P.W. ACCOUNTS.

2755

Govt. of (1883) Madras.

PUBLIC WORKS.

6/14

Dated

Rect. Encl.

G. O., 3d April 1883, No. 1022 W

Nos.

Inspection Notes

Passing orders on the — of the Sarvey Warrants of the Godavari Central Division Office submitted by the Sarvey Warrants

41/3

Ex. Ind. to the Accts Dr