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G.O No 536 W & 2.3.1886

G.O. No 536 PW D 2.3.188

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following papers :—

From the General Superintendent, Public Works Stores,						dated	5th	Aug.	1884,	No. 571 S.
Telegram from the Superintending Engineer,			IV	Circle,		„	11th	„	„	„
„	„	„	VI	„		„	11th	„	„	„
Letter	„	„	IV	„		„	11th	„	„	No. 292 C. / E.W.
Telegram	„	„	III	„		„	12th	„	„	„
Letter	„	„	V	„		„	13th	„	„	„ 1828.
Telegram	„	„	I	„		„	19th	„	„	„
From the Government of Bombay,						„	21st	„	„	„ 935 A.
„ Superintending Engineer,			V	„		„	22nd	„	„	„ 1966.
„ General Superintendent, Public Works Stores,						„	11th	Sept.,	1884,	„ 754 S.
„ Government of Bengal,						„	14th	„	„	„ 3326 A.
„ Superintending Engineer,			VI	Circle,		„	15th	„	„	„ 294 T.C.
Telegram from „	„		II	„		„	16th	„	„	„
„ „	„		III	„		„	16th	„	„	„
From the General Superintendent, Public Works Stores,						„	16th	„	„	„ 770 S.

Order—dated 7th November 1884, No. 2787 W., Public Works.

In drawing attention to certain provisions of the Famine Code for the Madras Presidency, the Chief Engineer, in paragraph 3 of his memorandum, No. 2453 C., dated 8th December 1881, pointed out the necessity for making preliminary arrangements for the provision of an ample supply of tools, and instructed Superintending Engineers to indent on the General Superintendent, Public Works Stores, for the balance of probable requirements, after ascertaining the quantities of each kind in stock in the several divisions.

2. The papers above recorded show the numbers of the various descriptions of famine tools which are in stock in Public Works Circles, and the demands for new tools submitted by Superintending Engineers. The figures have been tabulated in the statement printed with these Proceedings as Appendix A.

3. The Government, having reviewed the demands, and compared them with the supplies now available in store for use on emergency, have determined to eliminate, from the indents, articles which it is considered unnecessary to keep permanently in stock, and of which it is believed a sufficiency can be readily and rapidly procured in local or adjacent markets, when occasion arises. In view also of the fact that the spare tools available in one circle can be quickly transferred to another where the demand happens to be in excess of the supply in hand, the Government have resolved to reduce the quantities indented for, so as to provide sufficiently for emergent relief works, and to avoid encumbering the stores of the Presidency with stocks for which requisitions must be exceptional. The quantities and descriptions of tools to be now supplied are shown in Appendix B, and the General Superintendent, Public Works Workshops and Stores, will at once put in hand the manufacture of such of the articles as can be made up satisfactorily and cheaply at the workshops, and will frame a special indent on the Home Government for the remainder.

4. The tools, when supplied, will be kept in the Presidency Public Works Stores, being distributed nominally against the several circles. Superintending Engineers will be apprised, in due course, of the numbers standing against their respective circles; and it will be their duty, at the commencement of each financial year, to examine carefully the lists of relief tools at their disposal, and to bring to notice any deficiencies, whether in number, description, or quality, which, in view of possible contingencies, they consider should be made good.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Chief Engineer for Irrigation.
" Examiner, Public Works Accounts.
" Revenue Department.

Exd. A. Grubert.
Spare Copies

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GENERAL.
ACCOUNT.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated November, 7th.

Read. *Encl.*

G.O., 7th Nov. 1884, No. 2787 W.

NOVEMBER.

Famine Tools

Orders on correspondence showing the descriptions of — in stock in Public Works circles and the demands for new tools.

Appendix A to G.O., No. 2787 W., of 7th November 1884.

DETAILED STATEMENT of Famine Tools showing quantities in stock and demands made by Superintending Engineers.

Description of Articles.	I Circle.		II Circle.		III Circle.		IV Circle.		V Circle.		VI Circle.		Grand Total.
	Number Indented for.	Total.	Number Indented for.	Total.	Number Indented for.	Total.	Number Indented for.	Total.	Number Indented for.	Total.	Number Indented for.	Total.	
Axes, felling, 6 lb.	150	150	750	750	2,000	2,000	2,119	2,400	600	600			
Do. country			286	286	5,000	5,000	728	271					
Do. pick, 6 lb.			14	14	12,000	12,000		1,069					
Bars, lamping, brass, 6'-1½" hole	146	146	185	185	2,000	2,000		66,046	2,828	4,699	580	580	
Basket, wicker								400			5,400	5,400	
Bill-hooks, 2½ lb.			300	300	4,000	4,000	522	44,736					
Chest, cash, W.I., large, 4' × 3' × 2½'			27	27			2,461	2,699	240	240	550	550	
Chest, cash, W.I., small													
Crowbars, 14 lb.	30	30					61	61	16	16	66	66	
Do. 15 lb.	3,000	3,668			100	100	35	96					
Hammers, sledge, 10 lb.							6,484	26,795	4,200	4,960	2,750	2,750	
Do. do. 8 lb.					15,650	22,000	2,916	3,371			650	650	
Do. hand, 2 lb.					2,000	2,000	18,850	28,925		2,297	3,600	3,600	
Do. stone-breaking, 3 lb.	225	225			85,000	97,000		23,369		194	2,000	2,000	
Do. do. 2 lb.					6,000	6,000							
Jumpers, steel, 6'-1" hole					2,000	3,600	387	1,700		200			
Knives, country, for prickly-pear						2,000	1,118	1,920		1,000			
Do. do. for grass							1,920	4,000					
Mamoties, 5 lb.													
Do. 6 lb.							3,502	65,139	4,652	17,961	4,744	16,487	
Do. 7 lb.	377	6,377			119,000	139,000	3,503	72,144	4,650		4,743		
Molesnes, tin, for issuing food							384	384					
Do. one seer							60	96					
Do. half seer							96	96	60	60			
Do. do. quarter seer							96	96	60	60			
Needles, pruning; copper, 5 feet								960	60	60			
Picks, 5 lb.							675	4,825					
Rods, measuring, teak, 10 feet							3	578	60	60	110	110	
Hammers, cast-iron, 14 lb.	436	436	1,500	1,500	5,000	5,000	2,750	5,951	179	1,620	1,650	1,650	
Scales with chains and platform, 6 cwt.	30	30			50	50	102	102	13	13			
Scales to weigh Rs. 500 with weights							96	96					

Appendix B to G.O. No. 2737 W., dated 7th November 1884.

List of Famine Tools to be supplied.

—	I Circle.	II Circle.	III Circle.	IV Circle.	V Circle.	VI Circle.	Total.
Axes, felling, 6 lb.	500	500	1,000	1,000	500	500	4,000
Bill-hooks, 2½ lb.	500	500	1,000	1,000	500	500	4,000
Crowbars, 14 lb.	1,500	..	..	..	500	500	4,000
Hammers, stone-breaking, 3 lb.	1,000	1,000	..	..	1,500	1,500	4,500
Mamooties, 6 lb.	5,000	5,000	..	..	..	1,000	3,000
Picks, 5 lb.	1,500	1,500	..	..	5,000	5,000	20,000
Rammers, cast-iron, 14 lb. ..	500	1,000	2,000	1,000	1,500	1,500	6,000
					1,000	1,000	7,500

Detailed Statement of Famine Tools showing quantities in stock and demands made by Superintending Engineers—*cont.*

Description of Articles.	I Circle.		II Circle.		III Circle.		IV Circle.		V Circle.		VI Circle.		Grand Total
	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Total.	
Wedges, iron, 6 lb. ..	..	..	..	..	2,000	..	500	..	500	..	500	500	4,000
Do. do. 8 lb. ..	..	..	..	..	500	..	500	..	500	..	500	500	4,000
Do. do. 10 lb. ..	..	..	..	..	500	..	500	..	500	..	500	500	4,000
Wedges, cast-iron, 56 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 28 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 14 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 7 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 4 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 2 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 1 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. ½ lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. ¼ lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Master pass, 15" × 6" ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blue gauges	..	..	..	..	..	..	..	..	..	..	..	..	..
Instruments.													
Chains, iron, galvanized, measuring 100 feet ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Levels, Abneys, pocket ..	..	..	10	20	30	..	..	..	..	..	..	..	..
Levelling instrument, dumpy, 14"	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. do. 12" ..	..	..	4	4	30	..	..	..	..	..	..	..	..
Mathematical instruments, dab-ska case, small ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mathematical instruments box, third class ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Prismatic compass with stand ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Staves, levelling, telescopic ..	..	..	4	4	30	..	..	..	..	..	..	..	..
Tapes, metallic, measuring 100 feet	..	..	..	..	30	..	80	..	..	..	36	36	180
Tapes, metallic, measuring 50 feet	..	..	..	..	30	..	80	..	..	..	36	36	180
	..	..	..	..	100	..	80	..	..	..	36	36	180

Description of Articles.	I Circle.		II Circle.		III Circle.		IV Circle.		V Circle.		VI Circle.		Grand Total
	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Number in Stock.	Number Indented for.	Total.	
Wedges, iron, 6 lb. ..	500	..	500	..	2,000	..	500	..	500	..	500	500	4,000
Do. do. 8 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 10 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Wedges, cast-iron, 56 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 28 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 14 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 7 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 4 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 2 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. 1 lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. ½ lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Do. do. ¼ lb. ..	500	..	500	..	500	..	500	..	500	..	500	500	4,000
Master pass, 15" × 6" ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Blue gauges	..	..	..	..	..	..	..	..	..	..	..	..	..
Instruments.													
Chains, iron, galvanized, measuring 100 feet ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Levels, Abneys, pocket ..	..	..	10	20	30	..	..	..	..	..	..	..	..
Levelling instrument, dumpy, 14"	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. do. 12" ..	..	..	4	4	30	..	..	..	..	..	..	..	..
Mathematical instruments, dab-ska case, small ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mathematical instruments box, third class ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Prismatic compass with stand ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Staves, levelling, telescopic ..	..	..	4	4	30	..	..	..	..	..	..	..	..
Tapes, metallic, measuring 100 feet	..	..	..	..	30	..	80	..	..	..	36	36	180
Tapes, metallic, measuring 50 feet	..	..	..	..	30	..	80	..	..	..	36	36	180
	..	..	..	..	100	..	80	..	..	..	36	36	180

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Read—the following letter from T. W. HOLDERNESS, Esq., C.S., Officiating Secretary to the Government of India (Revenue and Agricultural Department—Famine), to the Secretary to the Government of Madras, dated Simla, 11th June 1883, No. 91 F:—

I am directed to reply to your letters marginally noted regarding the draft Famine Code for the Madras Presidency, framed by a Special Committee appointed for the purpose, and approved with certain alterations by the Government of Madras.

No. 1080 B of 5th October 1882 and No. 340 A of 6th March 1883.

2. His Excellency the Governor-General in Council has delayed expressing his opinion on the subject until the Provisional Famine Code, which has been under preparation by the Government of India, should be finally settled. This has now been done, and I am to invite attention to the accompanying Resolution and Code, in which the general policy of this Government in regard to Famine Relief is explained at length. It will be observed that the Resolution does not contemplate the extension of the Provisional Code to Madras, as the special Code prepared for that Presidency, which is the subject of the present communication, is considered by His Excellency in Council to be generally satisfactory, and subject to the following remarks is now sanctioned.

3. The Government of India has no objection to Section 3, which provides for the appointment under certain circumstances of a Famine Commissioner, as it is clear that the provision will be put in force only in the event of a great and exceptional calamity.

4. In regard to Relief Works, the leading idea of the Code is that the Ordinary Public Works in each district should be made to find employment for all able-bodied laborers as far as possible, and that these professional works should be supplemented by minor works under the control of the Civil authorities. The weakly and those unaccustomed to labor are to be excluded from the former class, and will find employment on the Civil Agency Works. On both classes of works payment by results, or piece-work, is to be introduced wherever it is possible. The laborers are to be classified in three grades, according as they are able to perform a full task, 75 per cent., or 50 per cent. of a full task, and they are to receive a money-wage calculated on the rates prescribed by Section 190 of the Code. Wilful failure to perform the specified task is punishable by a fine, but the fine is not to fall below the wage prescribed for the laborer of the lowest grade. These provisions closely correspond to the rules of the Provisional Code, and the only point which the Government of India would wish to be reconsidered, is the famine wage. Without pronouncing definitely on this difficult subject, the Government of India is inclined to think that the rates specified in Section 190 are somewhat higher than those prescribed in Chapter X of the Provisional Code. As other Governments have been asked in paragraph 28 of the Resolution to specially consider the question of the famine-wage, His Excellency in Council would be glad if the Government of Madras will also state its views on this point. It seems to His Excellency in Council that the fixed money portion of the Madras scale somewhat exceeds the margin which the Famine Commission recommend * for the purchase of condiments, firewood, &c., and that there is a fear lest the wage should prove unduly attractive.

* See note on famine-wage, paragraph 11.

6. In regard to gratuitous relief, the Government of India agrees with the Government of Madras that the village lists of persons entitled to relief should not be drawn up until the actual approach of famine. The principles on which the Code enables such relief to be given or refused are also in accord with the views of this Government. It is noticed, however, that the Code requires the appointment of a special officer, as Inspector, to each village relief circle on a salary of not less than Rs. 50 a-month with horse allowance. The Government of India would prefer the Code to be more elastic in this respect, so as to leave it with the Collector of the district to entertain or not extra men as Circle Inspectors, and to fix their pay within a maximum limit.

7. In respect to poor houses, the Code requires the occupants to be kept there compulsorily until the famine is at an end, and the Committee recommend that this provision should receive legislative sanction. I am to invite attention to paragraph 25 of the Resolution accompanying the Provisional Famine Code, and to say that the Government of India, as at present advised, is averse to legislation.

In regard to Section 92 of the Code, it is noted that the Government of Madras has directed the omission of the concluding lines on the ground that the subject of remissions does not appertain to a Famine Code. The Government of India thinks that the entire section might for the same reason be appropriately omitted. A hard-and-fast rule which would make suspensions of revenue dependent on the fact of borrowing is in the opinion of this Government to be deprecated, and it seems better to deal with the question of suspensions, as of remissions, apart from famine relief. The Government of India also thinks that Sections 31 and 93-94 are hardly in their proper place in a Famine Code, as they lay down a procedure for advancing loans which might be better prescribed by rules framed under an Act and having therefore the force of law; the question, however, is one of minor importance, and may be left to the Government of Madras.

In regard to Section 103, I am to invite attention to Chapter VII of the Provisional Code and paragraph 27 of the accompanying Resolution which deal with the subject of grazing reserves. And with reference to Sections 40 and 41 on the subject of stimulating or interfering with private trade, I am to say that paragraph 26 of the above Resolution fully states the views of Her Majesty's Government and of the Government of India, which are substantially in accord with those of the Government of Madras.

With these remarks, the Government of India sanctions the draft Code.

ENCLOSURES.

EXTRACT from the Proceedings of the Government of India, in the Revenue and Agricultural Department (Famine), under date Simla, 9th June 1883, Circular No. 44 F.

Read the following papers:—

Circular letter to the Local Governments and Administrations, Nos. 163—177, dated 18th November 1880.

Despatch to the Secretary of State for India, No. 4, dated 14th March 1881.

Letter from the Agent to the Governor-General, Central India, No. 321, dated 7th December 1880.

Letter from the Government of the North-Western Provinces and Oudh, No. 87, dated 13th April 1881.

Letter from the Secretary for Berar to the Resident, Hyderabad, No. 201, dated 25th May 1881.

Letter from the Government of Bombay, No. 3234, dated 6th June 1881.

Endorsement from the Foreign Department, No. 818 I.G., dated 9th July 1881, forwarding copy of a letter No. 230, dated 28th May 1881, from the Officer on special duty in Kashmir.

Letter from the Chief Commissioner, Central Provinces, No. 3211-179, dated 5th September 1881.

Endorsement from the Foreign Department, No. 1384 I.G., dated 9th November 1881, forwarding copy of a letter from the Agent to the Governor-General, Beluchistan.

Letter from the Government of Bengal, No. 2558-109 Famine, dated 19th November 1881.

Letter from the Agent to the Governor-General at Baroda, No. 9709, dated 25th November 1881.

Letter from the Chief Commissioner, Assam, No. 168 T., dated 21st January 1882.

Letter from the Chief Commissioner, British Burma, No. 12, dated 1st February 1882.

Letter from the Chief Commissioner, Ajmere-Merwara, No. 124, dated 20th February 1882.

Letter from the Agent to the Governor-General, Rajputana, No. 365 G., dated 20th February 1882.

Read also—

Despatch from the Secretary of State, No. 14 Revenue, dated 22nd February 1883.

RESOLUTION.

The Government of India is pleased to issue the following instructions regarding the adoption of a Code for Famine Relief.

2. In the 113th paragraph of the first part of their Report the Famine Commissioners suggested that the Government of India should issue a set of rules that would govern the administration of famine relief; and that the broad principles being therein fixed, it would be the duty of each Local Government to apply them by drawing up a Famine Code applicable to the special circumstances of its Province. They expressed their intention of appending to their report a draft of Imperial Rules, as well as a model of a Provincial Code. A draft Code, drawn up by the Secretary to the Commission, was received from England and was circulated in India with G.O., Nos. 163 to 177, dated 18th November 1880, for the opinion of Local Governments and Administrations. But the Famine Commission was dissolved without having had an opportunity either of drawing up the proposed rules, or of communicating their formal confirmation of the draft Code which had been circulated. This circumstance was not made known to the Government of India until a considerable period had elapsed after the circulation of the draft Code. Under these circumstances it was considered desirable to await an expression of the opinion of the various Local Governments which had been consulted on the draft Code before issuing any general instructions as to the principles which the Government of India desires to be embodied in the rules. Nor has this been without advantage, as it has enabled the Government to ascertain the opinions of responsible authorities on many important issues which the Report of the Famine Commissioners raised.

3. A Code revised in the light of these opinions and criticisms was ready for issue at the commencement of the rainy season of 1882. Its immediate promulgation was, however, rendered unnecessary by the early fall of rain throughout the greater part of India, which removed for the time any apprehension of famine during the current year. In the meanwhile those portions of the Code which related to local administration and public works were subjected to the criticism of special officers, and to further revision. It now remains to issue the Code and to explain the leading principles which should guide the administration of famine relief. These conclusions have been formed after a full consideration of the recommendations of the Famine Commission and of the opinions of Local Governments. But they are of course open to such modifications as further experience in working out the details of famine relief may suggest.

4. The first important principle on which both Her Majesty's Government and the Government of India are agreed is that the State cannot undertake to interfere in every isolated and individual case of distress. The Secretary of State has said that "what will justify the application of the general resources of the State to the relief of want and suffering is the occurrence of a natural calamity affecting a material portion of the population of any locality." But beyond this it is impossible to define the limits of Government interference, or to mark the precise point where scarcity commences, or where scarcity deepens into famine. It is equally impossible to say what is the smallest area in which the existence of scarcity or famine would justify measures of relief. If the approach of famine is thus gradual, if the area affected may thus expand from a few villages to a whole Province, the machinery for administering relief should be framed accordingly. In other words, the revenue staff of the Province should be such as to readily admit of expansion, and so arranged as to avoid the necessity of calling into existence an entirely new agency or department for the purpose of dealing with measures of famine relief. The real question therefore is whether the ordinary administrative arrangements in each Province are in this respect on a satisfactory footing. In proportion as they approach this ideal standard will it be possible to administer a famine or a scarcity by simply expanding or strengthening the normal district staff.

5. That such perfection has hitherto rarely or ever been attained in any Province is obvious. Recognising this as one of the leading difficulties of famine relief, the Famine Commission suggested many important administrative changes, some of which have, during the past year, been accepted by Local Governments and Administrations, while others are still

under the consideration of the Government of India. The drafters of the original Famine Code naturally assumed that in most Provinces the ordinary revenue staff was unable to cope with a great scarcity or famine. The Code was framed accordingly. It provided for the creation of a special Famine Department whenever the first note of alarm was sounded. Such a dislocation of the ordinary frame-work of administration will now, it is hoped, be gradually prevented by the adoption of permanent measures of reform. Pending, however, the development of these administrative arrangements, it is necessary to provide a Code of Famine Relief for guidance in the event of the early occurrence of famine. Accordingly the Government of India, while indicating generally the principles on which famine relief should proceed, has prepared a Provisional Code, which should for the present be adopted as far as possible in every Province for which no separate Code has been sanctioned.

6. The Code is based upon the draft received from England, but has followed in many respects the Code recently prepared for the Madras Presidency, under the orders of the Government of Madras with the concurrence of this Government. The Code is distinctly provisional, and the Government of India recognises that to some provinces many of its provisions are more or less inapplicable. If therefore other Local Governments should prefer to follow the example of Madras and prepare Provincial Codes, the Government of India has no objection to their doing so. But until this is done, the Provincial Code should be accepted, and in any case the broad principles embodied in it should not be departed from without a previous reference to this Government.

7. It will be seen that the present Code is less definite and less precise than the draft Code already circulated. Its comparative incompleteness requires explanation. In advising the preparation of a Famine Relief Code, the Famine Commissioners found themselves in a difficult position. They were brought when dealing with famine into contact with almost every question of revenue administration, and found themselves under the obligation of suggesting many important reforms of a permanent character. But it was impossible for them to predict either how far or how soon the general reforms which they recommended would be accepted. Their draft Code, however, was modelled on the assumption that their recommendations would be carried out. It was therefore definite and precise as well as elaborate. The Code of the Government of India, on the contrary, has had to accept existing facts, and is restricted to providing a provisional system of famine relief. Being strictly provisional, the Code can hereafter be enlarged or altered in keeping with the progress of administrative reform.

8. The Agricultural Department, for example, which forms so prominent a feature in the Report of the Famine Commissioners and in the draft Code, finds little or no place in the Provisional Code. This is due to two reasons. In the first place, Agricultural Departments do not exist in every Province, or where they exist have not as yet been fully organised. Secondly, the Government of India does not think that the creation of an Agricultural Department in a Province should materially affect existing administrative arrangements, or that it should be exclusively charged with the organisation of famine relief. The Government of India, it is true, has fully accepted the policy that Agricultural Departments should by their inquiries and investigations endeavour to meet the agricultural wants of the country so as to enable the Government with increasing facility to cope with famine, scarcity, and rural distress. But this policy does not contemplate the creation of *quasi*-independent departments, or the lessening in any way the existing responsibilities of revenue officers. Least of all should this be the case on the occasion of famine. It thus becomes possible to codify the duties of all officials who are likely to be brought into contact with famine without specially mentioning those which might hereafter be assigned to Agricultural Departments, when more fully organised than at present.

9. It need hardly be said that the Government of India fully agrees with the Famine Commission that the administration of each Province should be such as will enable the revenue officials of all grades to be fully acquainted with its agricultural condition. On this point the views of the Government of India have already been communicated to Local Governments and Administrations. In the Provisional Code it has been assumed that in the different Provinces this essential requisite to efficient administration is more or less to be found. The Code therefore passes lightly over the ordinary duties of the revenue staff, and assumes that among them that of obtaining prompt information of the existence or the probability of distress is included.

10. It may, however, be noted that the Code contemplates the association of non-officials, where possible, with the district officer in the works both of obtaining early information of the existence of distress and also of relieving it. The extent to which this can be done will depend on local circumstances, but the general principle is one which will be readily assented to, and which has not been unrecognised in past famines. It presumes that the leading men of such districts should be invited to assist in providing information and in investigating the condition of the poorer classes, and also in superintending the administration of famine relief. The Government of India has accordingly made provision in the Code for imposing, where practicable, the two important duties of providing prompt and continuous information of the agricultural circumstances of the season, and of assisting in the organisation of local relief, upon local committees and their representatives under any local self-government arrangements which may be established.

11. In framing the definition of "district authority," the Government of India has also had in view the probability of the district officer being assisted in carrying out the duties of famine relief by Local Boards constituted by law. This the Government of India has attempted to effect by adopting an elastic definition of the term "district authority." The definition, it will be clearly understood, contemplates in every case the maintenance of the district officer as the responsible head and director of famine operations within his own district, but allows also for the possible association with him of district committees or other bodies under the local self-government schemes of the various Provinces. It is left to Local Governments and Administrations to decide how far this principle shall be carried out, and whether the district officer shall alone, or in conjunction with others, be the "district authority."

12. So, again, the sections of the Code regarding circle inspectors have been framed to provide for two cases—(1) where a permanent agency is already in existence; (2) where it has to be created. The description given in the Code of the class of officers who may come within the meaning of "a permanent agency" is sufficiently clear to require no further explanation. In the temporarily settled Provinces the subordinate revenue staff at the disposal of the district officer is obviously the best agency for the work of circle inspectors.

13. Other portions of the Code which deal with unofficial assistance will doubtless require to be revised with reference to local circumstances. The Code is so framed as to leave its provisions in this respect very elastic. The term "local area" used in the Code may, for instance, be of any extent which will fit in with local arrangements; it may be one village or it may be a group of several villages. So, too, the "circle" referred to in Section 9 of the Code may be a kanungo's circle, or it may be a sub-division of a district. In the same way full liberty is left to the Government of the Province to appoint lambardars, headmen, local committees, or, in towns, municipal committees, as the authorities responsible for the duties prescribed by local officers.

14. While, however, the principle of connecting the general public with the duties of famine relief should be recognised, the whole of the official machinery at the disposal of Government should also be utilised. Nor should any responsibility which may be thrown upon the community weaken that of the Government and its officers. Indeed the Government of India would like to feel assured that in every Province the subordinate revenue staff, whether kanungos, kurnams, or revenue inspectors, was equal to the duties sketched out in the Code. The decay of this class of officers in parts of India may be fully accounted for on historical or other grounds, but it is none the less to be regretted. The Government of India, however, has recently expressed its views at length on the subject, and is glad to know that much has already been done in many Provinces to restore an office on which native administrations set such store.

15. Among these officers the putwari, or village accountant, where such an officer exists, is no doubt the most important functionary. The area assigned to him is usually so limited that he may be held responsible for supplying full and timely information as to the character of the season or the condition of the agricultural population. He possesses too, or is expected to possess, sufficient skill to be able to provide information in a form in which it will be intelligible to Government officials, or in prescribed statements of a statistical character which will admit of easy collation; on the other hand, he will be a useful agent in providing information to, or receiving information from, local bodies where they exist.

16. Where the village accountants are grouped in circles, the supervising officers of such circles would naturally form the next channel through which information will pass. A much greater responsibility can be placed upon them than upon the village accountants. The latter are, from their position, the servants of two masters, and are exposed to great temptations. The former owe exclusive allegiance to Government, and are at all times particularly entrusted with the duty of providing correct information. It may not be possible to require all such officials invariably to reside within their respective circles, but the Government of India believes that the principle is one which should, as far as possible, be enforced.

17. Where village and circle organisation of this nature and of a permanent character exists, its efficiency greatly depends upon the district officer and his staff. The Government of India entirely agrees with the Famine Commission that the assistants to the district officer, whether covenanted civilians or not, should be required to maintain a thorough personal knowledge of the areas under their charge; that they ought to visit all parts of their charge once at least within some stated period, and might be permitted to travel or reside within their sub-divisions at all seasons of the year, and should be directed to continue in an intelligible form the annals of each estate of which the settlement officials have already recorded the initial history. It is to be feared that from various causes these important duties have in some parts of India hardly received the attention they deserve, and to this has been ascribed much of the local ignorance of the near approach of famine which has been displayed in some remarkable instances.

18. The Provisional Code assumes that the real responsibility for carrying out the rules and for adopting efficient measures within his district rests upon the officer in charge of it.

The position of the district officer is too well known to require special notice, and, so far as it concerns the relief of famine, it is sufficiently secured in the Code. A chapter has been added on the duties of Commissioners of divisions, with the view both of maintaining their recognised powers of direction and supervision, and of indicating that to these high officers the Government ought to primarily look for information and action. The Government of India need hardly express its conviction that not only in years of scarcity, but also at all other times, the Commissioner of a division should keep his Government acquainted with the condition of his districts, and should be held strictly responsible for this duty. His position eminently enables him to study the agricultural requirements of the country, as the larger area over which he has jurisdiction offers greater facilities than a single district for ascertaining the extensive measures of protection against famine which can properly be undertaken or encouraged by Government. Of these, the extension of irrigation, the establishment of fodder reserves and fodder plantations, and the improvement of communications are among the most important. Whoever the officers may be by whom such schemes are ultimately carried out, the Commissioner is undoubtedly the person upon whom the primary duty of securing the better protection of his division against famine naturally falls.

Another duty of equal importance is that of assisting the agricultural population to recover from the after-effects of famine. The timely grant of such assistance is of almost as much importance as the actual relief of the people during the drought itself. The Government of India is not satisfied that this has always received the attention it deserves, and the duty of Commissioners of divisions in this respect is obvious, and should be strictly enforced.

19. Thus far as regards the duties of revenue officials before or after the period of extreme famine. When the administration of famine relief actually begins, the system on which the Department of Public Works should be utilised becomes the matter of primary importance. This depends greatly upon the settlement of a question which has perhaps caused more division of opinion in connection with famine relief than any other. This question is whether the weaker section of a famine-stricken population should be relieved in their homes by house-to-house visitation, or should be brought on to public works and made to labor for their wage. The former plan has found strong advocates on the ground that it prevents confusion and wandering; that it demands a smaller contribution from public funds, inasmuch as a weekly person resting in his own house requires a smaller ration than when set to labor on a public work; that the addition to a public work of a large number of weakly persons unaccustomed to the class of labor required from them makes the results very costly; that regular workmen are demoralised by the spectacle of gangs of inferior workmen receiving a proportionately higher wage than themselves, and finally that agricultural labor is divorced from the villages. The arguments on the other side are—that the people who receive assistance in their homes become themselves demoralised; that they are forced into the position of alms-fed paupers, and that having once become accustomed to that position they are unwilling to give it up and work for their bread; that the authorities have no real control over them except under an almost impossible scheme of costly supervision; that panics are therefore not likely to occur.

20. This question has been fully discussed by the Famine Commission, and their conclusion that labor commensurate with the laborer's powers should be exacted from all applicants for relief * is accepted by the Government of India.

* Famine Commission Report, Part I, paragraph 111.

The Famine Commission further recommended that the needful provision of labor should be made by the Public Works Department; that the works should be of permanent utility and capable of employing a considerable number of persons; that the immediate management of relief works should be entrusted to the Public Works Department, subject to the control of the local revenue authorities; that small subsidiary works for the purpose of giving employment to persons not yet strong enough to be drafted off to the regular relief works might be carried on by civil officers; and that the old, the infirm and other persons incapable of work should be gratuitously relieved in their own villages. In regard to wage and other labor tests the Famine Commission recommended that all laborers should be divided into several classes according to their strength and ability to work; that task work and not piece-work should as a rule be required, and that the wage should be little, if at all, more than a bare subsistence wage. To provide for the case of skilled and able-bodied laborers who might be discontented with the task-work wage, and who might work better if employed by themselves, the Famine Commission suggested that to each large relief work one or more piece-work gangs should be attached, and paid at rates so fixed as to give a little more than the ordinary daily wage.

21. While accepting this scheme as the only way by which relief can be afforded in severe famine, when work has to be offered to the needy as a test of their necessity, and irrespective of how far their labor may be remunerative, the Government of India considers that in the first stage of a scarcity, sufficient relief can be given by the extension of the ordinary system of public works, especially those of a local or municipal character. Labor would here ordinarily be paid for in proportion to the work performed with a certain allowance to enable persons, destitute but unskilled, to earn enough to prevent their falling into a weakly condition. But as soon as distress has declared itself in an unmistakable manner, and there is a clear probablity that it will deepen into actual famine, then the only way of adequately meeting the emergency is to adopt the Famine Commission's system in its entirety, reserving the smaller Civil Agency Works for the employment of those who are weakly, and as depôts for the receipt and passing on of all others who may come to them in search of employment, placing the other Civil Agency Works under the professional management of the Public Works Department (without prejudice to the financial interests of Municipal or Local Bodies involved, if any) and opening new Professional Agency Works of adequate magnitude in suitable localities.

22. The Famine Code broadly distinguishes between Civil Agency Works and Professional Agency Works, and may seem to assign to the former a more important place than is consistent with the above remarks. The explanation is that the distinction made in the Code between the two classes of works is of a financial rather than an administrative character, as the term "Civil Agency Works" includes works professionally managed if they are controlled or paid for by the district authority. Recent administrative changes have made it probable that the "district" in the future may in some cases have larger funds at its disposal and heavier responsibilities in respect to public works than has hitherto been the case. It has been impossible in framing the Code to estimate the measure of these responsibilities or the extent to which the financial resources of a district will be available for the purposes of famine relief. But it may, at all events, be assumed that in some cases the ordinary public works of a district will afford considerable employment to laborers in the first stage of a famine. For this reason the Code gives precedence to "Civil Agency Works," meaning by the term all works, whether under professional or civil supervision, which are under the control of the "district authority." Such works, whenever they are of any magnitude, will ordinarily be under the professional management of the district or municipal engineers; and if they are utilised as relief works it would probably be desirable to strengthen the professional staff. The Code in treating of this class of works in Chapter III lays down instructions as to the classification of laborers, their remuneration, hutting, supply of food and market arrangements, hospital accommodation, children's kitchens and labor camps which are equally applicable to the larger relief-works of the second class, or Professional Agency Works, so-called. Section 40, it will be observed, enables able-bodied laborers accustomed to labor to be transferred to Professional Agency Works. In regard to the question of wage, Section 43 merely states the general principle that piece-work should be preferred to task-work in the earlier stages of distress, as already explained.

Chapter III also mentions in Section 30 another kind of employment under the title of "Supplementary Works," which requires some particular notice. At the beginning of a scarcity a large amount of agricultural labor is often thrown out of employment through the employers of such labor curtailing their expenses to the utmost. In such seasons, especially where an absolute failure of the crops is not anticipated, liberal advances of public funds to the land-owing classes for the digging of temporary wells, the repair and construction of tanks, and the purchase of seed and cattle, may enable them to find work for the agricultural laborers of their villages, and so to prevent the latter from wandering aimlessly about in search of food or work. The subject is one that merits more attention than it has generally received, and the Code suggests accordingly that it might be investigated by the Agricultural Department, where one exists, of the Province. The Code contemplates that the agricultural works entered on the supplementary list should ordinarily be set in motion through recoverable advances to landholders or village communities, and not directly by the district authority as a Civil Agency Work. But circumstances may arise—as, for example, the absence of other kinds of labor suitable for the infirm and weakly—which might justify the expenditure in the early stages of a scarcity of the local funds on Supplementary Works. In the foot-note to the 30th Section of the Code a proposal is experimentaly suggested which might, where circumstances are favorable, be tried. In Northern India, to which the Code is chiefly applicable, the soil, as a rule, is rendered more fertile by being dug or ploughed in anticipation of rain. This is especially the case when, as in 1877, a rain-crop which has failed is still on the ground, and can be dug into the soil. The occupiers or owners of such lands might possibly be willing to allow them to be tilled in the manner suggested by famine relief gangs, and might possibly agree to pay to the State some return for the benefit at the next harvest. This, however, is a question which it is desired that Agricultural Departments should work out.

Again, in many parts of Northern India it has been discovered by the people themselves that the carrot crop is the most speedy supply of food which can be grown when the ordinary autumn crops have failed. The crop is one, however, which demands continual irrigation. It may be found possible to increase largely the area or outturn of the carrot crop by employing agricultural labor in the autumn months in the irrigation from rivers or otherwise of this crop, which will produce a supply of food some months before the spring crop is ready. In this case the labor would be paid for either directly under the famine scale of wages, or indirectly by taccavi advances to landholders and tenants. The latter course is preferable, but the former might possibly, under special circumstances, as already said, be permissible.

23. The above instances will sufficiently indicate the policy regarding supplementary works suggested in Section 30. In the early stages of a scarcity the advantages anticipated are—

First.—That the agricultural laborers are kept near the villages, and can at any moment betake themselves to their ordinary avocations if a fall of rain demands their return, which, under such circumstances, should be as speedy as possible.

Secondly.—That the work is such as to increase the outturn of the immediately ensuing harvest, which is an important object at a time when the food-supply is deficient. The fulfilment of this object, indeed, is the leading principle which should guide the choice of supplementary works by the Agricultural Department.

Thirdly.—That employment can thus be given to every kind of inferior labor. Weeding, for instance, can be effected by women and children of the weakest class, while hoeing, or disturbing the surface of a field, is fit employment for laborers of all kinds who are not equal to the harder work of digging.

24. In regard to Chapter IV., Professional Agency Works, attention is first invited to Sections 65, 66, which require a programme of famine relief works of a large and important character to be prepared and kept up by the Public Works Department. In any serious famine, such works, affording as they would employment to very large bodies of sufferers under efficient professional control, will be the backbone of the system of relief. The Government of India is fully sensible of the evils attending the withdrawal of the people from their homes and their concentration in huge relief camps. For these reasons the Government of India is willing to see district and local works utilised to the utmost in the early days of a scarcity. But these are obviously inadequate to cope with an actual famine, and therefore large public works under Professional Agency must be resorted to. When such projects are taken up as relief works, the Code provides that all skilled able-bodied workmen shall be segregated from the rest, and treated under the ordinary rules for the conduct of Public Works. Unskilled or weakly laborers, who constitute classes (*b*) and (*c*), are, according to the Code, to be "treated under the rules for the conduct of Civil Agency Works," so far as they may be applicable. Section 73 allows the Commissioner of the Division to appoint a Civil Officer to control such works. But ordinarily it will be sufficient to associate with the Engineer in charge a Civil Officer, and to assign to the latter duties ancillary to the immediate professional management of the work.

25. No further explanation appears necessary of the principles involved in the chapters relating to public works. The Code is sufficiently explicit. Nor is it necessary to discuss the rules for the management of a poor-house. Certain proposals, however, have been made for special legislation, which, affecting as it would the treatment of labor on public works and poor-house, may be noticed. It has been proposed that able-bodied laborers, who refused to work, should be made liable to punishment under the criminal law; and that officers should be legally empowered to retain weakly persons in poor-houses until the scarcity is over. The Government of India, as at present advised, is not convinced of the necessity of legislation. It believes that the evil, which has, in some parts of India, been a very prominent one on former occasions, will become under the more complete organisation contemplated by the new Code a matter of minor importance. The question should, however, receive very careful consideration in any future famine or scarcity of a serious character, and any cases which appear to show the necessity for legislation might be brought to notice.

26. The question of food-supply and storage requires a few words. On this point the Government of India fully accepts the policy advocated by the majority of the Famine Commission. The Government of India believes that there will always be available in India a sufficient food-supply in unaffected tracts to feed the inhabitants of any area visited by famine, provided that the state of the communications admits of such food being transported. The prohibition of exports can scarcely be justified in any conceivable circumstances, and the importation or storage of grain, or other similar measures are, as a general rule, unnecessary. In particular localities difficult of access, or where dealers combine to withhold grain from sale, or where arrangements must be made for the food-supply of relief laborers, some intervention may be unavoidable. But it should be applied *pro re natâ* to meet the particular emergency, and not permanently and in advance as by storage on a great scale. Where temporary markets have to be set up to supply food on relief works, it will often be necessary both to regulate the price of the food and to exercise the strictest supervision over its quality, and over the supply of the market. The broad policy thus indicated, the Government of India leaves its application in particular instances to Local Governments. The Code allows grain-contractors to be appointed if they are required (1). It allows gratuitous relief (2) and relief wages (3) to be paid in grain where food would be difficult to obtain in the open market. It requires the officer in charge of a relief work to supervise the market arrangements, whenever a market for the supply of food at a relief work is established (4). These provisions will, it is anticipated, be found sufficient for all practical purposes.

(1.) Sections 12-14.
(2.) Section 5.
(3.) „ 54.
(4.) Section 68.

27. The next matter which deserves some notice is that of the treatment of cattle. The Code itself is sufficiently clear as to the course which the Government of India would like to see adopted; and as the same question has been lately made the subject of a Resolution No. 16A., dated 1st March 1883, it is unnecessary to enter into any detailed explanation of the chapter which provides measures for the protection of cattle, or of the reasons which led the Government of India to introduce it into the Code. It is sufficient to say that the question deserves more prominent notice than it has hitherto received in famine literature. Apart from all questions of humanity, the extreme importance from an economic point of view, of sustaining the labor upon which the harvests of the immediate future depend, is sufficiently apparent. While, therefore, the Government of India has taken special care, by the wording of Section 99, that the Code shall not tie down any local authorities to the adoption of measures which may be unsuitable to the province or the locality in which the distress may occur, it trusts that each Local Government will pay earnest consideration to this portion of the Code. The sympathy of many sections of the Native community may, it is thought, be enlisted in devising and carrying out practical measures which will prevent the wholesale destruction of cattle. The provision of tanks, the establishment of grazing reserves, and other measures of this kind will perhaps be willingly undertaken by native proprietors when the object of them has been thoroughly explained. For, unless reserves, tanks and pasture grounds are available, the provisions of the Code will be of little effect.

28. The final matter to which the Government of India thinks proper to attach prominence is one which has given rise to much controversy. This is the question of wage. The principle upon which the Government of India has framed the scale of wages embodied in the Code is that the wage should be the lowest amount sufficient to maintain healthy life under given circumstances. While the duty of the Government is to save life, it is not bound to maintain the laboring community at its normal level of comfort. To do so would be unjust to other sections of the community, besides prolonging the period for which the laboring population would cling to the relief works. The scale laid down in Chapter X is believed to be sufficiently liberal. On this point, however, the opinion of Local Governments is asked, and attention is invited to the appendix to this Resolution, in which are given the various scales of wages which have from time to time been adopted or preferred by various authorities.

29. The Code contains no provisions for accounts. In regard to this, Local Government should frame rules under Chapter XI of the Code in conformity with Provincial arrangements.

30. The Government of India desires that the Code now issued shall be adopted, as far as may be possible, from the 1st July next in all Presidencies, Provinces, and Administrations, except Madras, for which a separate Code has been already framed. In case any Local Government wishes to revise, correct, or add to the Provisional Code, the proposals should be submitted in the form of definite rules incorporated in a revised Code, accompanied by such explanations as may be necessary. The Government of India will be glad to learn the views of the Local Governments at an early date.

Order.—Ordered that the above Resolution be communicated to the Local Governments and Administrations noted in the margin for information and guidance.

Ordered also, that copies be forwarded to the Foreign, Finance and Commerce, Home and Public Works Departments, for information and record.

Government of Bombay.
„ of Bengal.
„ of the North-Western Provinces and Oudh.
Government of the Punjab.
Chief Commissioner, Central Provinces.
Chief Commissioner, British Burma.
Chief Commissioner, Assam.
„ „ Coorg.
„ „ Ajmere.
Secretary for Berar to Resident, Hyderabad.

(True Extract.)

(Signed) T. W. HOLDERNESS,
Offg. Secretary to the Government of India.

Note on the relief-wage in the Madras, Bombay and North-Western Provinces and Oudh Famines.

The materials for this note are—(1) the report on the scarcity and relief operations in the North-Western Provinces and Oudh during the years 1877—79; (2) a note by the Secretary to the Famine Commission on the practical effects of the reduced or Temple wage in Madras, and in Bombay; (3) Report of the Indian Famine Commission, Part I; (4) Appendix II to the Report of the Indian Famine Commission. Evidence of Sir Richard Temple, His Grace the Duke of Buckingham, and Sir Michael Kennedy.

I.—The relief-wage in the North-Western Provinces and Oudh.

In May 1878, when the North-Western Provinces and Oudh Government sent up the Code issued by it on the subject of the administration of relief in those Provinces, the Government of India, while fully approving generally the principles on which it was based, suggested a

modification of the relief-wage prescribed, and recommended that the following scale should be substituted for that given in the Code:—

	Special gangs of people in a reduced condition.	Ordinary gangs doing within 25 per cent. of a full task.	Minimum wage below which reduction on account of short work should not go.
Adult male	10 chittacks flour + 9 pie	10 chittacks flour + 3 pie	10 chittacks flour + 3 pie
Woman or child above 10 years.	10 ,, ,, + 6 ,,	8 ,, ,, + 6 ,,	8 ,, ,, + 3 ,,
Small child	6 ,, ,, + 3 ,,	4 ,, ,, + 3 ,,	4 ,, ,, + 1 ,,

2. The above had only been in operation about two months when the North-Western Provinces and Oudh Government reported that complaints had been received that the rates prescribed by the Government of India were too liberal, and consequently had the effect of keeping the people on the works, thereby causing Government to enter into competition with the employers of field labor. On the strong representations of the Local Government, therefore, it was agreed that the rates should be reduced, and in August of that year the following scale was then prescribed:—

	All persons performing their allotted task to receive the value of	All persons failing to perform their allotted task to receive their value of
Adult male	14 chittacks flour + 6 pie	10 chittacks flour + 3 pie
Woman or big child	7 ,, ,, + 4½ ,,	5 ,, ,, + 2½ ,,
Small child	3 ,, ,, + 2 ,,	2 ,, ,, + 1 ,,

3. The amount of wage was to be calculated without fractions of a pice, thus, if the value of 10 chittacks of flour *plus* 6 pies represented 17 pies, 6 pice were to be allowed, and so on.

The scale as reduced was maintained throughout the period the scarcity lasted.

II.—The relief-wage in Madras.

4. In January 1877, on the recommendation of Sir Richard Temple, the following rates of wage were laid down:—

	Under supervision by the Public Works Department, or where task-work not less than 25 per cent. below ordinary task-work, is enforced.	Under non-professional supervision, and where not less than 50 per cent. below ordinary task, is enforced.
For a man	Value of 1 lb. of grain + 1 anna.	Value of 1 lb. of grain + ½ anna.
For a woman	Value of 1 lb. of grain + ½ anna.	Value of 1 lb. of grain + ¼ anna.
For a boy or girl	Value of ½ lb. of grain + ½ anna.	Value of ½ lb. of grain + ¼ anna.

5. In May 1877, the Government of Madras decided that the reduced wage (Scale No. II) should be given up, "the weight of the direct evidence being decidedly averse to the continued maintenance of the lower rate." Scale No. I was made "of general application to all famine works, the task to be exacted being not less than 50 per cent. of a full task, estimated according to the physical capability of the individual laborer in his normal condition." "Laborers unable to perform this amount of task should not be in the labor-gangs at all, but should be on specially light work, or in a relief camp." Full rates were to be paid for Sundays, but no work exacted. Children under 7 years old to get 3 pie a-day, and wages to be paid not less frequently than once in three days.

III.—The relief-wage in Bombay.

6. The following is a short statement of the different orders passed from time to time on this subject by the Bombay Government:—

A. For able-bodied laborers on Public Works Department works doing 75 per cent. of an ordinary task:—

4th November 1876—

Men	2 annas.
Women	1½ ,,
Children	1 anna.

15th November 1876.—When grain rises to be dearer than 16 lb. per rupee (the scale was made universal for all prices on 13th December)—

Men	price of 1 lb. *plus* 1 anna.
Women	,, 1 lb. ,, ½ ,,
Children	,, 1 lb.

19th December.—No work to be done and no wages paid on Sundays.

26th December.—Infants under 7 years of age to get ¼ anna daily.

29th December.—Grain means the medium quality of the cheapest variety.

17th March 1877.—Fractions of a pound to be given in the laborer's favor in computing wages.

13th June.—When work is stopped by rain, laborers to get civil agency rates.

B. For non-able-bodied laborers on civil agency works doing 50 per cent. of an ordinary task—

19th January—

Men	price of 1 lb. *plus* ½ anna.
Women	,, 1 lb. ,, ¼ ,,
Children	,, ½ lb. ,, ¼ ,,

29th May 1877.—When grain is dearer than 16 lb. per rupee, the price of ¼ lb. to be given to infants, instead of ¼ anna.

10th August 1877.—When the price of grain reaches 9 lb. per rupee, an increase of ¼ to be made to the daily wage so as to *provide for Sunday*, but no work to be exacted on that day.

7. In his evidence before the Famine Commission Sir Richard Temple delivered the following opinions on the subject of relief wages:—

ANSWER TO QUESTION 222: GENERAL STRACHEY.

Speaking with the general concurrence of my advisers and coadjutors in the Bombay Presidency, I have to say that the scales of rations which prevailed in this Presidency have been found sufficient, not more than sufficient indeed, but still sufficient, and no more. In connection with this point, the strictness on supervision must be taken into account. If Government can rely on the relief people obtaining all that they are entitled to, then these rations are sufficient; but Government cannot be confident of this, unless ample supervision is ensured. If, from any circumstances, the affair of relief passes out of control, if the numbers of people on relief multiply faster than the supervision, then we may be quite sure that these people will not get all that they require, and under such circumstances there is great danger of a ration which is barely sufficient, being stinted by various sorts of peculations, and thus becoming insufficient. In a ration restricted to bare sufficiency, no margin exists for peculation, and the ration becomes condemned because it never was fully doled out. Unless, therefore, Government is quite sure of keeping relief thoroughly under control, unless abuses can be rendered next to impossible, it may be prudent for a time to allow a somewhat larger ration than would otherwise be allowed, upon the plain ground that if perchance poor people do not get all they are entitled to, still they will receive enough to sustain life. If, under any circumstances, I were to find that relief people were crowding upon me beyond my power of immediate management, I would allow for a time something over the ration allowed in Bombay, simply as a margin for safety; but as soon as the affair was brought under control, I would gradually introduce the Bombay ration. If, on the other hand, the affair was thoroughly under my control from the beginning, I would advocate the Bombay ration. This, however, is a matter upon which I am unwilling to dogmatise. If there be any reasonable doubt, I would give it in favor of the people, and would rather incur the additional cost of the enhanced ration than run any risk of endangering life. In the Madras Presidency the controversy which arose was recorded at the time. I have only now to say that when serious doubts were raised by the local Sanitary authorities, I obtained from the Government of India the services of the then highest Sanitary Officer in India; and after he had carefully conducted extensive examinations of the relief laborers, his written opinion was received in detail, and my recommendations were guided thereby. Subsequently, the opinions of this high medical authority were endorsed by the Sanitary officers in the Bombay Presidency. So far, then, as medical authority went, it was amply in support of the recommendations which I made.

MR. CAIRD:—*Q.* 223.—Did the high authority confirm the Bombay ration?

A.—Yes, he did. But always, both in the Madras Presidency and in the Bombay Presidency, we provided that there should be extra allowance made for those who required special treatment. This provision was carefully carried out in the Bombay Presidency. How far it may have been carried out in the Madras Presidency, I can hardly say.

MR. SULLIVAN:—*Q.* 224.—Did you not modify your original recommendation in Madras, and allow something extra for young children attending along with their parents in relief?

A.—My original recommendation was open to some misapprehension on this head, which misapprehension I rectified by a supplementary recommendation. At one time the Sanitary Commissioner of Madras appeared to consider that my ultimate recommendation, on the ration generally, very nearly went as far as his own. But be that as it may, shortly after I left that Presidency, the Madras Government, according to their own judgment, early in May I think, adopted some slightly increased ration.

GENERAL STRACHEY :—*Q.* 225.—Referring to the question of ration with work and without, I suppose the intention of your answer is that you adhere to the ration fixed for Bombay?

A.—Yes, subject to the reservation mentioned above.

MR. CUNNINGHAM :—*Q.* 226.—Could the apparent difference between the experience in the Bombay and Madras Presidencies as to the sufficiency of the wage be accounted for by the fact that in Madras it was paid in rice, and in Bombay it was paid in wheat, or other substantial grain?

A.—I think not.

GENERAL STRACHEY :—*Q.* 227.—On the whole, did the Bombay ration succeed in the Madras Presidency, or fail—so far as you know?

A.—I cannot say whether it succeeded or failed, for it was tried only for a short period of about 2½ months, and that not universally. In the month of May 1877, the Madras Government reverted to the more liberal ration, which ration was, as I believe, in full operation throughout the brunt of the famine in that Presidency. Whether the lesser ration would have proved sufficient or not, had it been persevered in, is a question which cannot now be answered. It never was brought to the test of proper experience.

8. His Grace the Duke of Buckingham, in his evidence before the Famine Commission, spoke as follows on the subject :—

"As to a ration, I think I went too low in approving the Temple ration, 1 lb. + 6 pie. In May it was abandoned; possibly the raised diet was too large for the second member of a family, though not for single persons. It is true vegetable food was wanting; leaves, &c., all dried up in the beginning of the year. Afterwards these revived, and may have caused an improved condition of people. During the first period, too, people ate roots, bark, fibres, which may have hurt them. The lowest safe minimum at one period might not be safe at another, and it is hard to make a comparison for that reason. I watched certain gangs for four weeks, who were on the lower ration, and saw a marked loss of condition. In Nellore some gangs kept up condition apparently on the ration, but they also ate, we ascertained, lizards and snakes, which abounded in the jungles close by, and which they spent the nights in catching."

9. In evidence taken by the Famine Commission, Sir Michael Kennedy says :—

"I consider a bare subsistence wage to be 1 lb. of grain and ½ an anna in money for adult males, and on this scale a family, such as that above referred to (*i.e.*, a man, his wife, two children over 7 years and two under 7 years of age) could gain Rs. 7-11½ per month."

10. From the evidence which the Famine Commission had been able to gather as to the working of the Temple wage in Madras and Bombay, it was of opinion that "a rate as low as that enforced in the Bombay Presidency could not safely be prescribed for general use." The Commission considered that "a somewhat higher wage should be given than one which affords strictly a bare subsistence to the laborer, in order to cover any loss which may be inflicted on him by administrative errors, or peculation on the part of subordinates, or other analogous cause."—(*Note by Secretary, Famine Commission, of 18th July* 1879.) "In Bombay," the note continues, "the weight of opinion is given with almost complete unanimity in favor of the ration. The following reasons seem chiefly to have conduced to its success :—

"(*a*) The clearness and precision with which the order was given, and the absence of subsequent modifications fixed it in the minds of the officers and made it easy to carry out.

"(*b*) The smallness of the numbers to which it was applied admitted of personal inspection of the laborers and supervision of the working of the rule.

"(*c*) The officers who administered it were for the most part thoroughly efficient and carried out the entire system with discrimination, working this rule in connection with those for the special treatment of the feeble and for village relief.

"(*d*) The laborers in some cases had resources of their own; in some districts prices were much cheaper than in the Madras famine tract, and in none (except Kaladgi and Sholapur) was the pressure of famine so severe. "In Madras," the note goes on, "the evidence is more conflicting, and the information is so incomplete that it is impossible to deduce from it any definite conclusion as to the sufficiency or insufficiency of the wage."

11. The conclusion which the Famine Commission have arrived at in their Report (Part I) on the subject of the amount of food required by workers and non-workers is :—

"That on an average a ration of about 1½ lb. per diem of the meal or flour of the common coarser grain of the country suffices for an ordinary working adult male. In the rice-eating countries an equal weight of rice may be accepted in lieu of flour, and in any case the ration should include a suitable proportion of pulse. A man doing light work would require about 1¼ lb.; and the ration which consists of 1 lb. of flour with a little pulse has been found sufficient to support life in numerous relief-houses, where no work is exacted, all over the country. On these bases the diet scale should be built up, it being understood that a female requires a little less than a male, a child below 12 years of age about half the allowance of an adult male, and a non-working child below 6 or 7, about half as much as a working child. On relief-works, however, where a money wage is given, the rate of pay should be such as to leave a slight margin above the actual cost of the flour, so as to allow for the purchase of salt, pepper, and other condiments and firewood, and to avoid the risk of the wage being insufficient to purchase the full ration of food. Whenever it is necessary to supply people with a kind of food to which they are unaccustomed, the result should be carefully watched, and endeavor should be made to counteract, by some adjustment of the dietary, the unfavorable results which will probably arise from the change."

12. The scale proposed in the Madras Famine Code, which has lately been drawn up under the orders of the Madras Government and submitted to the Government of India, is :—

	First class (*i.e.*, healthy, skilled laborers).	Second class (*i.e.*, capable of a 75 per cent. task).	Third class (*i.e.*, capable of from 50 to 75 per cent. task).
Men including boys above 12 years and nursing mothers	Value of 1½ lb. of grain + 1½ anna.	Value of 1½ lb. of grain + 1 anna.	Value of 1¼ lb. of grain + ¾ anna.
Women including girls above 12 years	Value of 1¼ lb. of grain + 1 anna.	Value of 1¼ lb. of grain + ¾ anna.	Value of 1¼ lb. of grain + ½ anna.
Working children below 12 years	Value of ¾ lb. of grain + ¾ anna.	Value of ¾ lb. of grain + ½ anna.	Value of ¾ lb. of grain + ¼ anna.

NOTE.—Non-working children will receive cooked food in the children's kitchens attached to works.

All payments are to be made in cash as long as grain is readily procurable in the local markets. By "grain" is meant the grain of medium quality and of the description in ordinary use at the time of payment, and the price to be taken is the retail price ruling at the headquarters of the Sub-division during the previous week.

13. In the Provisional Famine Code prepared by the Government of India, the wage is to be a money wage, capable at current prices of purchasing the rations laid down in the following scale :—

	Maximum rate.				Minimum rate.			
	For a man.		For a woman.		For a man.		For a woman.	
	lb.	oz.	lb.	oz.	lb.	oz.	lb.	oz.
Flour of the common grain used in the country, or cleaned rice	1	8	1	4	1	0	0	14
Pulse	0	4	0	4	0	2	0	2
Salt	0	½	0	½	0	½	0	½
Ghi or oil	0	1	0	½	0	½	0	½
Condiments and vegetables	0	1	0	1	0	½	0	½

For children not being infants below 14, ¾, ½, and ¼ rations according to age and requirements; infants and other children unfit for work being fed in kitchens attached to the works.

14. On Civil Agency Works, where payment is made not by piece-work but according to tasks, the wage is not to exceed 75 per cent. of the maximum wage.

15. The minimum wage is the wage below which no deductions on account of short work are allowable.

Mis. No. 2599.

Referred to the Surgeon-General with the Government of Madras for report on the question of the famine wage referred to in the latter part of paragraph 4 of the Government of India letter.

(True Extract.)

(Signed) E. F. WEBSTER,
Secretary to Government.

23rd June 1883.

READ—the following letter from W. R. CORNISH, Esq., F.R.C.S., C.I.E., Surgeon-General with the Government of Madras, to the Secretary to Government, Revenue Department, dated Octacamund, 26th July 1883, No. O-213 :—

With reference to your Memorandum No. 2599 of 23rd June 1883, I have the honor to remark that the Committee which drew up the Madras Famine Code gave great consideration to the question of the famine wage, and their conclusions were embodied in the report submitted by them. These conclusions had my full concurrence.

2. I have no fear that famine relief, in whatever shape it may be given, will ever be "unduly attractive" to an Indian population. Experience in Madras, on a scale of extreme magnitude, showed that as soon as the prospects of the country held out any hope of food and work in their own homes, the people ceased to be applicants for State relief. The idea so generally entertained before the late famine that State relief would perpetuate a class of pauper poor, has been proved to be absolutely erroneous.

3. With the exception of a few "waifs" and "strays" of orphan children collected together by Missionaries, neither the Government nor Local Boards are at present supporting any of the people by public charity. But for the benevolent (and as I conceive mistaken) interference of charitable persons, even the few orphans alluded to would have found homes in accordance with the usages of the people.

4. The Committee which drew up the Madras Famine Code felt that it was impossible to put an actual money-value on those necessaries of life which are not named as a part of the daily ration, inasmuch as prices would fluctuate with the severity of scarcity, but they had all experience that in the late famine the money allowance was too small.

5. When evidence is produced in support of the sufficiency of this or that scale of famine wage or ration, it should not be forgotten that the Madras Census of 1881 disclosed a most deplorable wasting of the population in the districts which were exposed to the severity of famine. In spite of everything the Government could do in famine relief, millions of the people perished. I trust that with the Madras Code to guide them, the administrators of the next famine period may be more successful in saving the people than we were in 1877.

ORDER—dated 18th August 1883, No. 1006, Revenue.

Miscellaneous.

The Government of India having in their letter read above sanctioned, with certain observations, the Draft Famine Code for the Madras Presidency as approved * by this Government last year, the Right Honorable the Governor in Council now directs the issue and publication of the Code, subject to the following modifications and remarks.

*G.O., 5th October 1882, No. 1030-A.

2. In the first sentence of Section 58, the word "may" will be substituted for "will" and the words "not exceeding 60 rupees" for "of not less than 50 rupees." The object of prescribing a minimum salary was to indicate the necessity of employing trustworthy men; but this is equally well attained by the statement of a maximum, as desired by the Government of India.

3. Sections 31, 92, 93 and 94 will be struck out, the subject-matter therein dealt with, not strictly appertaining to a Famine Code. The matter, however, will receive consideration separately.

4. In regard to the question of compulsory retention of homeless wanderers and of recalcitrants in a poor-house until the famine is at an end, the Right Honorable the Governor in Council observes that as the Government of India is not prepared to legislate in the matter, sanction for the compulsion is wanting. The following will accordingly be omitted from the Code :—

I. Section 59 wholly.
II. The words "or who will not work" and the last sentence of Section 78.
III. The sentence—"If the refusal to work is persisted in, the recusant laborer shall be sent to a poor-house"—in Section 136.

The question, however, is one of great importance and should receive the special attention of every Famine Relief Officer in any future famine or scarcity of a serious character, and any cases which demonstrate the necessity for legislation, should be brought to the notice of Government.

5. Except as regards the maintenance of a cattle register, Section 103 may include all that is laid down in Chapter VII of the Provisional Code of the Government of India. It is less specific and necessarily so, there being as yet no fodder reserves in this Presidency to be thrown open; but it appears to the Right Honorable the Governor in Council to be sufficiently comprehensive and will be allowed to stand.

6. Sections 40 and 41 on the subject of stimulating or interfering with private trade are substantially in accord with the views expressed at paragraph 26 of the Government of India resolution read above, and will therefore be left intact.

7. The last and the most important question remaining is the rate of famine wage which the Government of India desire shall be reconsidered by this Government. They remark that the fixed money portion of the scale laid down in the Madras Code "somewhat exceeds the margin which the Famine Commission recommend for the purchase of condiments, firewood, &c.," the rates on the whole being a little higher than those prescribed in the Provisional Code, and express a fear that the wage might prove "unduly attractive." According to the Provisional Code, the wage is to be a sum of money capable at current prices of purchasing the rations therein prescribed, and the *rates* of wage are to be altered every time there is a fluctuation of not less than 10 per cent. in prices. The Madras Code Committee considered it desirable to fix the equivalent of condiments in money once for all, in view to leaving as little room for peculation as possible, and avoiding frequent changes in the rates of wage and consequent uncertainty. Surgeon-General Cornish whose opinion, owing to his wide experience of the late famine in Madras, is entitled to great weight, strongly deprecates any reduction of the rate recommended by the Committee. The bulk of the famine laborers will come under the 2nd and 3rd Classes, and the wage fixed for them is by no means in excess of that prescribed in the Provisional Code. The slightly higher rate allowed in the case of the 1st-class laborers is intended to leave them a small margin for the maintenance of temporarily disabled relatives who cannot be safely separated from them and is also fixed in consideration of the fact that a full task is exacted from them. There is certainly, in the opinion of His Excellency in Council, no reason to apprehend that the proposed famine wage will prove unduly attractive or will induce the agricultural population to cling to the relief works after the advent of rain makes cultivation possible. The Government accordingly resolve to adhere to the rates provided in the Draft Code.

8. The observation in paragraph 4 of letter from the Government of India to the effect that the fine to be imposed upon a recusant laborer is "not to fall below the wage prescribed for the laborer of the lowest grade," is not quite accurate. The Draft Code provides that the wage may go down to the village-relief rate, or even further, payment being proportioned to the actual outturn of work in aggravated cases of refusal to work—*vide* Section 136 (131, as altered).

9. The Code, as now passed, will be published as a supplement to the *Fort St. George Gazette*, for general information.

(True Extract.)

(Signed) H. E. STOKES,
Ag. Secretary to Government.

To the Board of Revenue.
" Director of Revenue Settlement and Agriculture.
" Public Works Department.
" Public Department for communication to the Medical Department.
" Judicial " " " Jail and Police Departments.
" Financial Department.
" Secretary, Rent Recovery Bill Committee, with copy of G.O., 5th October 1882, No. 1080.
" Members of the Famine Code Committee.
" Superintendent, Government Press.
" [illegible]

Erd. J. Henricus.

300 Copies.

13

Govt. of {1883} Madras.

REVENUE.

Issued

Recd. *Encl.*

G.O., 18th August 1883, No. 1006.

AUGUST.

Madras Famine Code.

Directing the issue and publication of the —, with certain modifications.

APPENDICES.

APPENDIX A.

Distribution Statement of Reorganized Department Public Works, Madras.

Superintending Engineers' Circles.	Executive Divisions.	Sub-Divisions.	Establishment: Executive Engineers.	Establishment: Assistant Engineers.	Establishment: Upper Subordinates.
No. I ...	1. Ganjam	2	1	1	4
	2. Vizagapatam	2	1	1	4
	3. Eastern Godâvari	3	1	2	4
	4. Western do.	3	1	3	7
	5. (A) Project Division	2	1	2	3
No. II ...	6. Eastern Kistna	3	1	3	6
	7. Western do.	2	1	2	7
	8. Nellore	2	1	1	7
	9. Sungam Project	2	1	2	6
No. III ...	10. Bellary	2	1	...	4
	11. Cuddapah	2	1	1	6
	12. Kurnool	1	1	1	4
	13. Madras Irrigation and Canal Company's Canal	2	1	2	6
	14. (C) Project Division	2	1	2	3
No. IV ...	15. West Coast	3	1	2	12
	16. Coimbatore	2	1	1	5
	17. Salem	2	1	1	5
	18. North Arcot	2	1	2	5
	19. (B) Project Division	2	1	1	4
No. V ...	20. South Arcot	1	1	1	5
	21. Chingleput	2	1	1	6
	22. Buckingham Canal	3	1	1	4
	23. Presidency and Bangalore	2	1	2	7
No. VI ...	24. Trichinopoly	2	1	1	8
	25. Tanjore	2	1	2	8
	26. Negapatam	2	1	2	7
	27. Madura	2	1	1	8
	28. Tinnevelly	2	1	2	7
Supt. of Works ...	29. Consulting Architect	...	1	...	2
Chief Engr. for Irrigation.	30. (D) Project Division	...	1	...	...
	Secretariat	...	...	1	...
	Guaranteed Railways	...	1	...	*
	Superumeraries ...	...	2	4	18
	Totals ...	50	36	47	185

* Includes two for Workshops.

APPENDIX B.

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, under sanction accorded in letter from the Government of India, No. 681 G., dated 5th May 1881.

Present Scale. No.	Designation.	Amount of Pay.	Proposed Scale. No.	Designation.	Amount of Pay.	Increase. No.	Increase. Amount of Pay.	Decrease. No.	Decrease. Amount of Pay.	Grounds of Proposition.	Remarks.
				ENGINEER ESTABLISHMENT.							
				Chief Engineers.							
		Rs.			Rs.		Rs.		Rs.		
1	Chief Engineer, 1st Class.	2,500	1	Chief Engineer, 1st Class.	2,500	..	...	...	...		
1	Chief Engineer, 2nd Class.	2,000	1	Chief Engineer, 2nd Class.	2,500	...	...	...	...		
2	Chief Engineers ...	4,500	2	Chief Engineers ...	5,000	...	...	...	...		
				Superintending Engineers.							
3	Superintending Engineers, 1st Class, at 1,600.	4,800	3	A Superintending Engineers, 1st Class, at 1,600.	4,800	...	...	...	...		
1	Superintending Engineer, 2nd Class.	1,350	2	Superintending Engineers, 2nd Class, at 1,350	2,700	1	1,350	...	...		
1	Superintending Engineer, 3rd Class.	1,100	2	Superintending Engineers, 3rd Class, at 1,100	2,200	1	1,100	...	...		
5	Superintending Engineers.	7,250	7	Superintending Engineers.	9,700	2	2,450	...	...		

A Includes the appointment of the Consulting Engineer for Guaranteed Railways, which is at present held by Colonel Shaw-Stewart, R.E., Chief Engineer, 3rd Class.

The number (7) of Superintending Engineers suggested by the Government of India in letter No. 681 G., dated 5th May 1881, paragraph 5, has been divided into the scale of 3, 2 and 2, with reference to paragraph 66, Chapter I., Madras P. W. D. Code.

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale			Proposed.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				EXECUTIVE ENGINEERS.							
		Rs.			Rs.		Rs.		Rs.		
7	Executive Engineers, 1st Grade, at 950.	6,650	10	Executive Engineers, 1st Grade, at 950.	9,500	3	2,850	...	...		B Includes the two Deputy Consulting Engineers and one Superintendent of Works. In Government of India letter, No. 681 G., dated 5th May 1881, quoted above, the scale proposed for Executive Engineers is 9, 10, 10, 3 = 32; to this has been added the four additional Executive Engineers, *viz.*: For Madras Irrigation and Canal Company ... ... 1 For Sungum Project ... 1 Omission from the scale submitted by Madras Government to Government of India, in not putting down the proper number of Executive Engineers. For 10 per cent. required to take the place of absentees, only 1 being given instead of 3. 2 Total ... 4
8	Executive Engineers, 2nd Grade, at 800.	6,400	11	Executive Engineers, 2nd Grade, at 800.	8,800	3	2,400	...	...		
7	Executive Engineers, 3rd Grade, at 650.	4,550	11	Executive Engineers, 3rd Grade, at 650.	7,150	4	2,600	...	...		
4	Executive Engineers, 4th Grade, at 550.	2,200	4	Executive Engineers, 4th Grade, at 550.	2,200	...	...	...	...		
B 26	Executive Engineers ...	19,800	B 36	Executive Engineers ...	27,650	10	7,850	...	...		
				ASSISTANT ENGINEERS.							
20	Assistant Engineers, 1st Grade, at 450.	9,000	26	Assistant Engineers, 1st Grade, at 450.	11,700	6	2,700	...	...		To the scale of 24 and 19 = 43, suggested by the Government of India, in letter No. 681 G., quoted above, has been added 2 and 2 = 4, viz.:
16	Assistant Engineers, 2nd and 3rd Grades, at 350 and 250.	5,400	21	Assistant Engineers, 2nd and 3rd Grades.	7,050	5	1,650	...	...		For Madras Irrigation and Canal Company ... ... 2 For Sungum Project ... 2 Total ... 4
36	Assistant Engineers ...	14,400	47	Assistant Engineers ...	18,750	11	4,350	...	...		
69	Total Engineer Establishment.	45,950	92	Total Engineer Establishment.	60,600	23	14,650	...	...		The 21 Assistant Engineers of the 2nd and 3rd Grades, now proposed, have been divided into 18, 2nd Grades, and 3, 3rd Grades.
				UPPER SUBORDINATE ESTABLISHMENT.							
				SUB-ENGINEERS.							
5	Sub-Engineers, 1st Grade, at Rs. 400.	2,000	9	Sub-Engineers, 1st Grade, at 400.	3,600	4	1,600	...	...		
4	Sub-Engineers, 2nd Grade, at Rs. 300.	1,200	9	Sub-Engineers, 2nd Grade, at 300.	2,700	5	1,500	...	...		
9	Sub-Engineers, 3rd Grade, at Rs. 250.	2,250	17	Sub-Engineers, 3rd Grade, at 250.	4,250	8	2,000	...	...		
18	Sub-Engineers	5,450	35	Sub-Engineers	10,550	17	5,100	...	...		
				SUPERVISORS.							
14	Supervisors, 1st Grade, at 200.	2,800	22	Supervisors, 1st Grade, at 200.	4,400	8	1,600	...	...		
22	Supervisors, 2nd Grade, at Rs. 150.	3,300	36	Supervisors, 2nd Grade, at 150.	5,400	14	2,100	...	...		
36	Supervisors	6,100	58	Supervisors	9,800	22	3,700	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.,—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				OVERSEERS.							
		Rs.			Rs.		Rs.		Rs.		
32	Overseers, 1st Grade, at 100.	3,200	28	Overseers, 1st Grade, at 100.	2,800	...	...	4	400		The distribution into 1st, 2nd, and 3rd Grades of the 92 Overseers has been made as follows:— 1st Grade $\frac{3}{10}$ of total No. of Overseers ... ... 28 2nd Grade $\frac{3}{10}$ of total No. of Overseers ... ... 28 3rd Grade $\frac{4}{10}$ of total No. of Overseers or remainder ... 36 Total ... 92
32	Overseers, 2nd Grade, at Rs. 80.	2,560	28	Overseers, 2nd Grade, at Rs. 80.	2,240	...	...	4	320		
42	Overseers, 3rd Grade, at Rs. 60.	2,520	36	Overseers, 3rd Grade, at Rs. 60.	2,160	...	...	6	360		
106	Overseers	5,280	92	Overseers	7,200	...	...	14	1,080		
160	Total Upper Subordinate Establishment.	19,880	185	Total Upper Subordinate Establishment.	27,550	39	8,800	14	1,080	Net increase Rs. 7,720.	The total number 185 of Upper Subordinates has been divided amongst the several grades in accordance with Code proportions—*vide* Government of India, P.W.D. Code, Chap. I, paragraphs 51 to 54, as amended by S.O. No. 110 of 2nd Feb. 1881. See also Government of India Resolution No. 1789 G., dated 15th October, 1880.
				SURVEYORS RANKING AS UPPER SUBORDINATES.							
...	.....	...	4	Surveyors, at 200 ...	800	4	800	...	...		These Surveyors have been provided for the four Project Divisions which are to be formed for the preparation of projects for famine relief works, &c.—*vide* paragraph 7 of Government of India letter, No. 681 G., dated 5th May 1881. Amounts noted as pay include travelling allowances.
...	.....	...	4	Do. at 150	600	4	600	...	...		
...	.....	...	4	Do. at 100 ...	400	4	400	...	...		
...	.....	...	4	Do. at 80 ...	320	4	320	...	...		
...	Surveyors	...	16	Surveyors ...	2,120	16	2,120	...	...		
160	Grand Total Upper Subordinates.	19,880	201	Grand Total Upper Subordinates.	29,670	55	10,920	14	1,080		

LOWER SUBORDINATE ESTABLISHMENT.

5	Sub-Overseers, 1st Grade, at 60.	300	5	Sub-Overseers, 1st Grade, at 60.	300	...	...	...	...		The numbers and amounts entered in column "Present Scale" represent the Establishment of the Trichinopoly, Kurnool and Vizagapatam Districts at the close of last official year 1880-81. Since then the Local Fund works and establishment of the Vizagapatam District have been transferred to Local Fund Boards. The numbers 5 and 14 shown in column "Proposed Scale" represent the actual existing Lower Subordinate Establishment in Trichinopoly and Kurnool Districts.
...	Sub-Overseers, 2nd Grade.	...	...	Sub-Overseers, 2nd Grade.	...	...	...	...	...		
15	Sub-Overseers, 3rd Grade, at Rs. 20.	300	14	Sub-Overseers, 3rd Grade, at Rs 20.	280	...	...	1	20		
20	Total Lower Subordinate Establishment.	600	19	Total Lower Subordinate Establishment.	580	...	...	1	20		

PETTY ESTABLISHMENT.

STORE-KEEPERS.

4	Store-keepers, at 30 ...	120	4	Store-keepers, at 30 ...	120	...	...	...	...		The numbers entered in the column "Present Scale" are those for which provision was made in the Provincial Budget for 1881-82 (G.O., No. 1204 W., dated 20th May 1880). To these numbers have been added 5 additional Store-keepers for the 5 new Divisions, the grading of each being given with reference to the classification of the new Divisions.
6	Do. at 25 ...	150	7	Do. at 25 ...	175	1	25	...	...		
7	Do. at 20 ...	140	8	Do. at 20 ...	160	1	20	...	...		
3	Do. at 15 ...	45	6	Do. at 15 ...	90	3	45	...	...		
20		455	25		545	5	90	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition	Remarks
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				MEDICAL ESTABLISHMENT.							
		Rs.			Rs.		Rs.		Rs.		
1	Assistant Apothecary ...	62½	1	Assistant Apothecary ...	62½	...	...	...	...		The amounts entered in columns "Present" and "Proposed Scale" represent contributions by the Public Works Department for the pay of the Medical Establishment at Bezwáda, Dowlaishwaram and Vizagapatam—*vide* G.Os., Nos. 1346 W., 1382 W., 1935 W., dated 8th and 14th June 1880 and 12th August 1880.
4	Hospital Assistants with Jeypore allowance for one at Rs. 25 per mensem. 1 at 60=60 1 at 40=40 2 at 25=50		4	Hospital Assistants with Jeypore allowance for one at Rs. 25 per mensem. 1 at 60=60 1 at 40=40 2 at 25=50							
	Jeypore allowance Rs. 25.	175		Jeypore allowance Rs. 25	175	...	...	...	...		
11	Lascars, Tortas, Cook, &c., of the Medical Establishment. 1 at 7 = 7 3 at 6 =18 1 at 4 = 4 1 at 3½ = 3½ 4 at 2½=10 1 at 2 = 2	44½	11	Lascars, Tortas, Cook, &c., of the Medical Establishment. 1 at 7 = 7 3 at 6 =18 1 at 4 = 4 1 at 3½ = 3½ 4 at 2½=10 1 at 2 = 2	44½	...	...	...	...		
1	Gumastah	5	1	Gumastah	5	...	...	...	...		
17		287	17		287	...	...	...	...		
1	Maistry	40	1	Maistry	40	...	...	...	...		For the Cuddapah Division, specially sanctioned by G.O., No 1882 W., dated 7th August 1880.
410	Lascars, at 6	2,460	495	Lascars at 6	2,970	85	510	...	...		The number (495) entered in the column "Proposed Scale" has been arrived at as follows:— 6 Superintending Engineers' Offices at 4 each ... 27 24 Divisions at 3 each ... 24 1 Consulting Architect ... 2 50 Sub-Divisions at 3 each ... 150 182 Detached officers viz., 6 Assistant Engineers, 84 Sub-Engineers and Supervisors, and 92 Overseers, at 1 each. 182 Buckingham Canal Division —*vide* G.O., No. 1081, dated 25th April 1881 ... ... 5 Public Works Stores ... 12 Examiner's Office ... ... 3 Total ... 450 Add 10 per cent. for Contingencies ... ... 45 Total ... 495
448	Total Petty Establishment.	3,242	538	Total Petty Establishment.	3,842	90	600	...	...		
				OFFICE ESTABLISHMENT.							
				FOR CHIEF ENGINEER AND SECRETARY TO GOVERNMENT, PUBLIC WORKS DEPARTMENT.							
1	Chief Assistant ...	600	1	Chief Assistant ...	600	...	...	...	...		
1	Second Assistant ...	300	1	Second Assistant ...	300	...	...	...	...		
1	Clerk, I Class, 3rd Grade.	295	1	Clerk, I Class, 3rd Grade.	295	...	...	...	...		
2	Clerks, II Class, 2nd Grade, at 140.	280	2	Clerks, II Class, 2nd Grade, at 140.	280	...	...	...	...		
1	Clerk, II Class, 3rd Grade.	110	1	Clerk, II Class, 3rd Grade.	110	...	...	...	...		
5	Clerks, III Class, 2nd Grade, at 70.	350	5	Clerks, III Class, 2nd Grade, at 70.	350	...	...	...	...		
3	Clerks, III Class, 3rd Grade, at 55.	165	3	Clerks, III Class, 3rd Grade, at 55.	165	...	...	...	...		
1	Clerk, IV Class, 1st Grade.	45	1	Clerk, IV Class, 1st Grade.	45	...	...	...	...		
2	Clerks, IV Class, 2nd Grade, at 35.	70	2	Clerks, IV Class, 2nd Grade, at 35.	70	...	...	...	...		
1	Clerk, IV Class, 3rd Grade.	25	1	Clerk, IV Class, 3rd Grade.	25	...	...	...	...		
18		2,170	18		2,170	...	...	...	...		
2	Draughtsmen, 1st Class, at 60.	120	2	Draughtsmen, 1st Class, at 60.	120	...	...	...	...		
1	Draughtsman, 2nd Class.	42½	1	Draughtsman, 2nd Class.	42½	...	...	...	...		
3		162½	3		162½	...	...	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale			Proposed Scale			Increase		Decrease		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No	Amount of Pay.	No.	Amount of Pay.		
				OFFICE ESTABLISHMENT—*cont.*							
				For Chief Engineer and Secretary to Government, Public Works Department—*cont.*							
		Rs.			Rs.		Rs.		Rs.		
2	Muchis, at 13 and 14 ...	27	2	Muchis, at 13 and 14 ...	27	...	...	...	...		
2	Head Messengers, at 9 and 12.	21	2	Head Messengers, at 9 and 12.	21	...	...	...	...		
7	Messengers, 3 at 7 and 4 at 8.	53	7	Messengers, 3 at 7 and 4 at 8.	53	...	...	...	...		
11		101	11		101	...	...	...	...		
32	Total P. W. Secretariat Office Establishment.	2,433½	32	Total P. W. Secretariat Office Establishment.	2,453½	...	...	...	...		
				Lithographic Establishment.							
1	Superintendent ...	250	1	Superintendent ...	250	...	...	...	...		
1	Head Draughtsman ...	120	1	Head Draughtsman ...	120	...	...	...	...		
1	2nd do. ...	100	1	2nd do. ...	100	...	...	...	...		
1	3rd do. ...	80	1	3rd do. ...	80	...	...	...	...		
1	4th do. ...	60	1	4th do. ...	60	...	...	...	...		
1	5th do. ...	40	1	5th do. ...	40	...	...	...	...		
1	6th do. ...	30	1	6th do. ...	30	...	...	...	...		
1	7th do. ...	25	1	7th do. ...	25	...	...	...	...		
1	8th do. ...	20	1	8th do. ...	20	...	...	...	...		
1	9th do. ...	15	1	9th do. ...	15	...	...	...	...		
1	10th do. ...	10	1	10th do. ...	10	...	...	...	...		
1	Tracer & Record-keeper.	25	1	Tracer & Record-keeper.	25	...	...	...	...		
1	Tracer and Muchi ...	16	1	Tracer and Muchi ...	16	...	...	...	...		
1	Head Printer ...	20	1	Head Printer ...	20	...	...	...	...		
1	2nd do. ...	12	1	2nd do. ...	12	...	...	...	...		
1	3rd Do.	12	1	3rd Do.	12	...	...	...	...		
2	Pressmen, at 9	18	2	Pressmen, at 9	18	...	...	...	...		
6	Do. at 8	48	6	Do. at 8	48	...	...	...	...		
2	Do. at 7	14	2	Do. at 7	14	...	...	...	...		
2	Do. at 5	10	2	Do. at 5	10	...	...	...	...		
28	Total Lithographic Establishment.	925	28	Total Lithographic Establishment.	925	...	...	..	...		
				For Chief Engineer and Joint Secretary to Government, Irrigation Branch.							
						...	...	...	...		
1	Clerk, I Class, 3rd Grade.	225	1	Clerk, I Class, 3rd Grade.	225	...	...	...	...		
1	Do. II do. 2nd do. ...	140	1	Do. II do. 2nd do	140	...	...	...	...		
1	Do. II do. 3rd do. ...	110	1	Do. II do. 3rd do. ...	110	...	...	...	...		
1	Do. III do. 1st do. ...	90	1	Do. III do. 1st do. ...	90	...	...	...	...		
1	Do. III do. 2nd do. ...	70	1	Do. III do. 2nd do. ...	70	...	...	...	...		
1	Do. III do. 3rd do. ...	55	1	Do. III do. 3rd do. ...	55	...	...	...	...		
2	Do. IV do. 1st do. at 45.	90	2	Do. IV do. 1st do. at 45.	90	...	...	..	...		
3	Do. IV do. 2nd do. at 35.	105	3	Do. IV do. 2nd do. at 35.	105	...	...	...	...		
1	Do. IV do. 3rd do. ...	25	1	Do. IV do. 3rd do. ...	25	..	...	..	...		
12		910	12		910	...	...	...	...		
1	Draughtsman, 1st Class,	60	1	Draughtsman, 1st Class,	60	...	...	...	...		
2	Do. 2nd do, at 42-8-0.	85	2	Do. 2nd do., at 42-8-0.	85	...	...	...	...		
3		145	3		145	...	...	...	...		
2	Draughtsmen, 3rd Class, at 25.	50	2	Draughtsmen, 3rd Class, at 25	50	...	...	...	...		
5		195	5		195	...	...	...	...		
1	Reference Picker ...	10	1	Reference Picker ...	10	...	...	...	...		
1	Muchi	10	1	Muchi	10	...	...	...	...		
1	Head Messenger ...	8	1	Head Messenger ...	8	...	...	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				OFFICE ESTABLISHMENT.—*cont.*							
				For Chief Engineer and Joint Secretary to Government, Irrigation Branch.—*cont.*							
		Rs.			Rs.		Rs.		Rs.		
2	Messengers, at 7 ...	14	2	Messengers, at 7 ...	14	...	...	...	...		
2	Do. at 6 ...	12	2	Do. at 6 ...	12	...	...	...	...		
3	Lascars, at 7 ...	21	3	Lascars, at 7 ...	21	...	...	...	...		
10		75	10		75	...	...	...	...		
27	Total Office Establishment for Chief Engineer for Irrigation.	1,180	27	Total Office Establishment for Chief Engineer for Irrigation.	1,180	...	...	...	...		
				For Superintending Engineers.							
1	Clerk, II Class, 3rd grade.	110	1	Clerk, II Class, 3rd Grade.	110	...	...	...	...	The one additional Clerk, IV Class, 3rd Grade, provided for in current year's (1881-82) Budget for each Superintending Engineer's Office has been added in the column "Proposed Scale," and allowed for the three additional Superintending Engineers' Offices also.	
1	Do. III do. 2nd do.	70	1	Do. III do. 2nd do.	70	...	...	...	...		
1	Do. IV do. 1st do.	45	1	Do. IV do. 1st do.	45	...	...	...	...		
1	Do. IV do. 2nd do.	35	1	Do. IV do. 2nd do.	35	...	...	...	...		
1	Do. IV do. 3rd do.	25	2	Do. IV do. 3rd do.	50	1	25	...	...		
1	Draughtsman, 1st Class.	60	1	Draughtsman, 1st Class.	60	...	...	...	...		
1	Do. 2nd do.	42½	1	Do. 2nd do.	42½	...	...	...	...		
1	Messenger, at 8 ...	8	1	Messenger, at 8	8	...	...	...	...		
3	Do. at 6 ...	18	3	Do. at 6	18	...	...	...	...		
11		413½	12		438½	1	25	...	...		
22	Add similar establishment for two more Superintending Engineers.	827	24	Add similar establishment for two more Superintending Engineers.	877	2	50	...	...		
			36	Add similar establishment for three additional Superintending Engineers' Offices.	1,315½	36	1,315½	...	...		
33	Total Office Establishment of Superintending Engineers	1,240½	72	Total Office Establishment of Superintending Engineers.	2,631	39	1,390½	...	...		
				For Presidency Division.							
1	Clerk, III Class 2nd Grade.	70	1	Clerk, III Class, 2nd Grade.	70	..	...	...	...	The numbers and amounts shown in column "Present Scale" represent the scale for a 1st-Class Division as laid down in Appendix C, No. 5, to G.O., No. 3674 W., dated 18th September 1878. To these have been added the additional establishment provided in the Provincial Budget for the current year 1881-82, and the totals thus obtained have been shown in the column "Proposed Scale."	
1	Do. IV do. 1st do ...	45	1	Do. IV do. 1st do.	45	...	...	...	...		
1	Do. IV do. 2nd do ...	35	2	Do. IV do. 2nd do. at 35.	70	1	35	...	...		
1	Do. IV do. 3rd do ...	25	3	Do. IV do. 3rd do. at 25.	75	2	50	...	...		
	Do. V do. 1st do ...	...	2	Do. V do. 1st do. at 17½.	35	2	35	...	...		
1	Draughtsman, 1st Class.	60	1	Draughtsman, 1st Class.	60	..	..	...	...		
	Do. 2nd do ...	...	1	Do. 2nd do.	42½	1	42½	...	...		
1	Do. 3rd do ...	25	3	Do. 3rd do. at 25.	75	2	50	...	...		
1	Messenger, at 7 ...	7	1	Messenger, at 7 ...	7	...	...	...	...		
1	Do. at 6 ...	6	1	Do. at 6	6	...	...	...	...		
8	Total Office Establishment, Presidency Division.	273	16	Total Office Establishment, Presidency Division.	485½	8	212½	...	...		
				For Godavari Eastern and Kistna Eastern Divisions.							
1	Clerk, III Class, 2nd Grade.	70	1	Clerk, III Class, 2nd Grade.	70	...	...	...	...	The above remark applies equally to this Establishment.	
1	Do. IV do. 1st do.	45	1	Do. IV do. 1st do.	45	...	...	...	...		
1	Do. IV do 2nd do.	35	1	Do. IV do. 2nd do.	35	..	...	...	...		
1	Do. IV do. 3rd do.	25	3	Do. IV do. 3rd do. at 25.	75	2	50	...	...		
1	Draughtsman, 1st Class.	60	1	Draughtsman, 1st Class.	60	...	...	...	...		
1	Do. 3rd do.	25	1	Do. 3rd do.	25	...	...	...	...		
1	Messenger, at 7 ...	7	1	Messenger at 7 ...	7	...	...	...	...		
1	Do. at 6 ...	6	1	Do. at 6 ...	6	...	...	...	...		
8		273	10		323	2	50	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				OFFICE ESTABLISHMENT—cont.							
				For Godavari Eastern and Kistna Eastern Divisions.—*cont.*							
		Rs.			Rs.		Rs.		Rs.		
8	Add similar establishment for one more Office.	273	10		323	2	50	...	...		
16	Total Office Establishment, Godávari Eastern and Kistna Eastern Divisions.	546	20		646	4	100	...	...		
				For 7 * 1st-Class Divisions.							
1	Clerk, III Class, 2nd Grade.	70	1	Clerk, III Class, 2nd Grade.	70	...	...	...	...	...	The foregoing remark applies equally to this Establishment. To the existing number (6) excluding Godávari Eastern and Kistna Eastern, of 1st-Class Executive Divisions, has been added the "Madras Irrigation and Canal" Division, which has also been ranked as 1st-Class.
1	Do. IV do. 1st do.	45	1	Do. IV do. 1st do.	45	...	...	...	...		
1	Do. IV do. 2nd do.	35	1	Do. IV do. 2nd do.	35	...	...	...	...		
1	Do. IV do. 3rd do.	25	2	Do. IV do. 3rd do. at 25.	50	1	25	...	...		
1	Draughtsman, 1st Class.	60	1	Draughtsman, 1st Class.	60	...	...	...	...		
1	Do. 3rd do.	25	1	Do. 3rd do.	25	...	...	...	...		
1	Messenger, at 7 ...	7	1	Messenger at 7 ...	7	...	..	...	...		
1	Do. at 6 ...	6	1	Do. at 6 ...	6	...	..	...	...		
8		273	9		298	1	25	..	...		
40	Add similar establishment for five more 1st-Class Divisions.	1,365	45	Add similar Establishment for five more 1st-Class Divisions.	1,490	5	125	...	...		* 1. Godávari Western. 2. Kistna Western. 3. Madras Irrigation and Canal. 4. South Arcot. 5. Buckingham Canal. 6. Tanjore. 7. Tinnevelly.
			9	Add similar establishment for one additional office (Madras Irrigation and Canal).	298	9	298	...	...		
48	Total Office Establishment 6, 1st-Class Divisions.	1,638	63	Total Office establishment for 7, 1st-Class Divisions.	2,086	15	448	...	...		
				For 9 2nd-Class Divisions.*							
1	Clerk, III Class, 2nd Grade.	70	1	Clerk, III Class, 2nd Grade.	70	...	...	...	...		The Establishment for 2nd-Class Executive Divisions remains in accordance with the scale laid down in Appendix C., No. 6, to G.O., No. 3674 W., dated 18th September 1878, no additional Establishment having been provided in current year's Budget.
1	Clerk, IV Class, 2nd Grade.	35	1	Clerk, IV Class, 2nd Grade.	35	...	...	...	...		To the existing number (8) of 2nd-Class Divisions has been added the "Sungum Project Division," which has also been ranked as 2nd Class.
2	Clerks, IV Class, 3rd Grade, at 25.	50	2	Clerks, IV Class, 3rd Grade, at 25.	50	...	...	...	...		
1	Draughtsman, 1st Class.	60	1	Draughtsman, 1st Class.	60	...	...	...	...		
1	Do. 3rd do.	25	1	Do. 3rd do.	25	...	...	...	...		
1	Messenger, at 7 ...	7	1	Messenger, at 7 ...	7	...	...	...	...		
1	Do. at 6 ...	6	1	Do. at 6 ...	6	...	...	...	...		
8		253	8		253	..	...	...	...		
56	Add similar Establishment for 7 more 2nd-Class Divisions.	1,771	56	Add similar Establishment for 7 more 2nd-Class Divisions.	1,771	...	...	...	...		* 1. Nellore. 2. Cuddapah. 3. West Coast. 4. Coimbatore. 5. North Arcot. 6. Chingleput. 7. Trichinopoly. 8. Negapatam. 9. Sungum Project Division.
			8	Add similar Establishment for one 2nd-Class additional division (Sungum Project Division).	253	8	253	...	...		
64	Total Office Establishment for 8 2nd-Class Divisions.	2,024	72	Total Office Establishment for 9 2nd-Class Divisions.	2,277	8	253				
				For 5 3rd-Class Divisions.†							
1	Clerk, III Class, 3rd Grade.	55	1	Clerk, III Class, 3rd Grade.	55	...	...	...	...		The Establishment for the 3rd-Class Divisions also remains in accordance with the scale laid down in Appendix C., No. 7, to G.O., No. 3674 W., dated 18th September 1878. To the existing number (2) of 3rd-Class Divisions have been added the following three new Divisions, which have been ranked as 3rd Class:— Ganjam, Bellary, Madura.
1	Clerk, IV Class, 2nd Grade.	35	1	Clerk, IV Class, 2nd Grade.	35	...	...	...	...		
2	Clerks, IV Class, 3rd Grade, at 25.	50	2	Clerks, IV Class, 3rd Grade, at 25.	50	...	...	...	...		
1	Draughtsman, 2nd Class.	42½	1	Draughtsman, 2nd Class.	42½	...	...	...	...		
1	Do. 3rd do.	25	1	Do. 3rd do.	25	...	...	...	...		
1	Messenger, at 7 ...	7	1	Messenger, at 7 ...	7	...	...	...	...		
1	Do. at 6 ...	6	1	Do. at 6 ...	6	...	...	...	...		
8		220½	8		220½	...	...	...	...		† 1. Ganjam. 2. Vizagapatam. 3. Bellary. 4. Salem. 5. Madura.

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				OFFICE ESTABLISHMENT—*cont.*							
				For 5 3rd-Class Divisions—*cont.*							
		Rs.			Rs.		Rs.		Rs.		
8	Add similar Establishment for one more 3rd-Class Office.	220½	8	Add similar Establishment for one more 3rd-Class Office.	220½	...	...	...	...		
			24	Add similar Establishment for 3 additional 3rd-Class Division Officers.	661½	24	661½	...	...		
16	Total Office Establishment for 2 3rd Divisions.	...	40	Total Office Establishment for 5 3rd-Class Divisions.	1,102½	24	661½	...	...		
				For the Consulting Architect.							
1	Clerk, IV Class, 1st Grade.	45	1	Clerk, IV Class, 1st Grade.	45	...	...	...	...		
1	Draughtsman and Estimator.	145	1	Draughtsman and Estimator.	145	...	...	...	...		
1	Draughtsman, 2nd Class	42½	1	Draughtsman, 2nd Class.	42½	...	...	...	...		
1	Do. 3rd do.	25	1	Do. 3rd do.	25	...	...	...	...		
1	Messenger, at 7 ...	7	1	Messenger, at 7 ...	7	...	...	...	...		
1	Do. at 6 ...	6	1	Do. at 6 ...	6	...	...	...	...		
6	Total Office Establishment of Consulting Architect.	270½	6	Total Office Establishment of Consulting Architect.	270½	...	...	...	...		
				For Public Works Stores.							
1	Clerk, II Class, 2nd Grade	140	1	Clerk, II Class, 2nd Grade	140	...	...	...	...		
1	Clerk, III Class, 2nd Grade.	70	1	Clerk, III Class, 2nd Grade.	70	...	...	...	...		
80	Total Sub-Divisional Office Establishment.	1,240	100	Total Sub-Divisional Office Establishment.	1,550	20	310	...	...		
	Grade.			Grade.							
1	Messenger	8	1	Messenger	8	...	...	...	...		
2	Do. at 7	14	2	Do. at 7 ...	14	...	...	...	...		
2	Do. at 6½ ...	13	2	Do. at 6½ ...	13	...	...	...	...		
9	Total Office Establishment, P.W. Stores.	305	9	Total Office Establishment, P.W. Stores.	305	...	...	...	...		
				Office Establishment for 2 Superintendents of Works (Godavari and Kistna).							
1	Clerk, III Class, 2nd Grade.	70								The offices close under the new arrangements and therefore no provision for it has been made.	
1	Clerk, IV Class, 1st Grade.	45									
1	Clerk, IV Class, 2nd Grade.	35									
1	Clerk, IV Class, 3rd Grade.	25									
1	Draughtsman, 1st Class.	60									
1	Do. 3rd do.	25									
1	Messenger, at 7 ...	7		*Nil.*							
1	Do. at 6 ...	6									
8		273									
8	Add similar Establishment for one more Superintendent of Works office.	273									
16		546				...	...	...	16	546	
				For the 4 new Project Divisions.							
	Nil.		2	Draughtsmen, 1st Class, at 60.	120	2	120	...	...		
			2	Draughtsmen, 2nd Class, at 42½.	85	2	85	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				OFFICE ESTABLISHMENT—*cont.*							
				For the 4 New Project Divisions—*cont.*							
		Rs.			Rs.		Rs.		Rs.		
			1	Clerk, IV Class, 2nd Grade.	35	1	35	...	...		
			1	Clerk, V Class, 1st Grade.	17½	1	17½	...	...		
			1	Messenger, at 7 ...	7	1	7	...	...		
			1	Do. at 6 ...	6	1	6	...	...		
	Nil.		8	Total for each office ...	270½	8	270½	...	...		
			24	Add similar Establishments for 3 more such office.	811½	24	811½	...	...		
			32	Total Office Establishment, Project Divisions.	1,082	32	1,082	...	...		
				For 50 Sub-Divisional Offices.							
1	Clerk, IV Class, 3rd Grade.	25	1	Clerk, IV Class, 3rd Grade.	25	...	...	...	...	To the existing number (40) of Sub-Divisions have been added the 10 additional Sub-Divisions as follows:—	
1	Messenger	6	1	Messenger	6	...	...	...	...	For Sungam Project ... 2	
2	Total for one office ...	31	2	Total for one office ...	31	...	...	...	...	„ Madras Irrigation and Canal ... 2	
78	Add similar Establishment for 39 more Sub-Division Offices.	1,209	78	Add similar Establishment for 39 more Sub-Division Offices.	1,209	...	...	...	...	„ Ganjam 2	
			9	Add similar Establishment for 9 more Offices.	310	20	310	...	...	„ Bellary 2	
1	Public Works Stores ...	305	1	Public Works Stores ...	305	...	...	...	...	„ Madura 2	
										Total ... 10	
1	Clerk, IV Class, 2nd Grade.	35	1	Clerk, IV Class, 2nd Grade.	35	...	...	...	...	And Office Establishment provided for each in accordance with the scale given in Appendix C, No. 10, to G.O., No. 3674 W., dated 18th September 1878.	
1	Clerk, IV Class, 3rd [illegible]	[illegible]	1	Clerk, IV Class, 3rd	25	...	...	...	...		
				For 88 Detached Officers.							
1	Clerk' Apprentice, 1st Grade, now called 5th Class, 1st Grade.	17½	1	Clerk, IV Class, 3rd Grade.	25		7½	...	...		
39	Add similar Establishment for 39 more detached officers (Upper Subordinates above the grade of Overseer).	682½	39	Add similar Establishment for 39 more detached Offices.	975		292½	...	...		
			48	Add similar Establishment for 48 additional detached officers, viz., Officers and Upper Subordinates above the rank of Overseer who are not in charge of Sub-Divisions.	1,200	48	1,200	...	...		
40	Total Office Establishment, detached Officers.	700	88	Total Office Establishment, detached Officers.	2,200	48	1,500	...	...		
				For 92 Overseers.							
	Nil.		1	Clerk, IV Class, 1st Grade.	17½	1	17½	...	...	A provision of one Clerk, V Class, 1st Grade, has been made for each Overseer.	
			91	Add similar Establishment for 91 more Overseers.	1,592½	91	1,592½	...	...		
			92	Total Office Establishment for Overseers.	1,610	92	1,610	...	...		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				OFFICE ESTABLISHMENT—*cont.*							
				Office [Toll] Establishment, Buckingham Canal.							
		Rs.			Rs.		Rs.		Rs.		
72	Clerks, &c.	761	72	Clerks, &c.	761	...	...	...	...		
				Abstract of Office Establishment.							
32	Chief Engineer and Secretary to Government, Public Works Department.	2,433½	32	Chief Engineer and Secretary to Government, Public Works Department.	2,433½	...	...	...	...		
28	Lithographic Establishment.	925	28	Lithographic Establishment.	925	...	...	...	...		
27	Chief Engineer for Irrigation.	1,180	27	Chief Engineer for Irrigation.	1,180	...	...	...	...		
53	Superintending Engineers' Offices.	1,240½	72	Superintending Engineers' Offices.	2,631	30	1,390½	...	...		
8	Superintendent of Works, Presidency.	273	16	Presidency Division ...	485½	8	212½	...	...		
16	Godávari and Kistna Eastern Divisions.	546	20	Godávari and Kistna Eastern Divisions.	646	4	100	...	...		
48	Six 1st-Class Executive Divisions.	1,638	63	Seven 1st-Class Executive Divisions.	2,086	15	448	...	...		
64	Eight 2nd-Class Executive Divisions.	2,024	72	Nine 2nd-Class Executive Divisions.	2,277	8	253	...	...		
16	Two 3rd-Class Executive Divisions.	441	40	Five 3rd-Class Executive Divisions.	1,102½	24	661½	...	...		
69	Consulting Architect's	270	6	Consulting Architect's ment for 10 additional offices.	270½	...	...	...	...		
16	Office Establishment, Superintendent of Works, Godávari and Kistna.	546	...	...	...	...	...	16	546		
...	...	...	32	Office Establishment, Project Divisions.	1,082	32	1,082	...	...		
80	Sub-Divisional Offices ...	1,240	100	Sub-Divisional Offices ...	1,550	20	310	...	...		
40	Office Establishment, Detached Officers.	700	88	Office Establishment, Detached Officers.	2,200	48	1,500	...	...		
...	...	...	92	Office Establishment for Overseers.	1,610	92	1,610	...	...		
72	Office (Toll) Establishment, Buckingham Canal.	761	72	Office (Toll) Establishment, Buckingham Canal.	761	...	...	...	...		
495	Total Office Establishment.	14,523½	769	Total Office Establishment.	21,545	290	7,567½	16	546		
				Irrigation Establishments.							
	Water Regulation ...	7,528		Water Regulation ...	7,528	...	...	...	...		
	Navigation	2,462		Navigation	2,462	...	...	...	...		
	River Conservancy ...	260		River Conservancy ...	260	...	...	...	...		
	Total Irrigation Establishment.	10,250		Total Irrigation Establishment.	10,250	...	...	...	...		
				Abstract of Executive Branch.							
69	Engineer Establishment.	45,950	92	Engineer Establishment.	60,600	23	14,650	...	...		
160	Upper Subordinate ...	19,830	201	Upper Subordinate ...	29,670	55	10,920	14	1,080		
20	Lower do. ...	600	19	Lower do. ...	580	...	...	1	20		
448	Petty Establishment ...	3,242	538	Petty Establishment ...	3,842	90	600	...	...		
495	Office do. ...	14,523½	769	Office do. ...	21,545	290	7,567½	16	546		
...	Irrigation do. ...	10,250	...	Irrigation do. ...	10,250	...	...	...	...		
	Total Executive Branch.	94,395½		Total Executive Branch.	1,26,487	...	33,737½	...	1,646		

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

Present Scale.			Proposed Scale.			Increase.		Decrease.		Grounds of Proposition.	Remarks.
No.	Designation.	Amount of Pay.	No.	Designation.	Amount of Pay.	No.	Amount of Pay.	No.	Amount of Pay.		
				ACCOUNTS BRANCH.							
				Examiners.							
		Rs.			Rs.		Rs.		Rs.		
1	Examiner, 3rd Class ...	1,100	1	Examiner, 3rd Class ...	1,100	...	...	...	...		The number of officers at present attached to this Presidency has been taken as the "Present Scale," to which has been added one to Deputy Examiner, 1st Grade, and the totals thus arrived at have been shown as the "Proposed Scale." The provision of the extra Deputy Examiner has been made in view to the more frequent inspection of the Executive Engineer's Officers, considered to be absolutely essential with the introduction of the new forms of account, and also in view to the proposed large increase to the operations of the department.
1	Deputy Examiner, 1st Grade.	550	2	Deputy Examiners, 1st Grade, at 550.	1,100	1	550	...	...		
1	Assistant Examiner, 2nd Grade.	250	1	Assistant Examiner, 2nd Grade.	250	...	...	...	...		
3	Total Examiner Establishment.	1,900	4	Total Examiner Establishment.	2,450	1	550	...	...		
				Accountants.							
1	Accountant, 1st Grade ...	400	1	Accountant, 1st Grade.	400	...	...	...	...		The numbers entered in column "Proposed Scale" have been arrived at thus :—
3	Accountants, 2nd Grade, at 295.	885	3	Accountants, 2nd Grade, at 295.	885	...	...	...	...		
4	Accountants, 3rd Grade, at 200.	800	6	Accountant, 3rd Grade, at 200.	1,200	2	400	...	...		
10	Accountants, 4th Grade, at 115.	1,150	15	Accountants, 4th Grade, at 115.	1,725	5	575	...	...		
34	Accountants, 5th Grade, at 57½.	1,955	31	Accountants, 5th Grade, at 57½.	1,782½	...	...	3	172½		
52	Total Accountant Establishment.	5,190	56	Total Accountant Establishment.	5,992½	7	975	3	172½	Net increase Rs. 802½.	

	Accountants.
For 25 Executive Divisions	25
For Central Office, one Accountant for every 3 Divisions, and one for any fraction ⅔ or	9
Extra	1
Total ...	35

and this total has been distributed with reference to P. W. D. Code, Chapter I, paragraph 77, as follows :—

1st and 2nd Grades ⅛ 4 (omitting fraction less than half) 2nd Grade to be always more than 1st Grade, *i.e.*,

		Rs.
1st Grade	= 1 at 400	= 400
2nd do.	= 3 at 295	= 885
3rd do.	= 9 at 200	= 1,800
4th do. (remainder).	= 22 at 115	= 2,530
(adding 1 for fraction more than half).		
Total ... 35	Costing	5,615

Recasting the above to bring in the 5th-Grade Accountants the Establishment will be—

		Rs.
1st Grade.	1 at 400	= 400
2nd do.	3 at 295	= 885
3rd do.	6 at 200	= 1,200
4th do.	13 at 115	= 1,495
5th do.	29 at 57½	= 1,667½
	52 Costing	* 5,647½

* The small excess difference of Rs. 32½ is due to the redistribution.

Add—one Accountant each for Presidency and Dowlaishweram Workshops, one for Madras Harbour Works, and one for Central Office = 4, *i.e.*

2, 4th Grades at 115	=	230
2, 5th do. at 57½	=	115
Total ... 56	Costing	5,992½

Statement showing the proposed changes in the Establishment of the Public Works Department, Madras Presidency, &c.—*cont.*

No.	Present Scale. Designation	Present Scale. Amount of Pay.	Proposed Scale. No.	Proposed Scale. Designation	Proposed Scale. Amount of Pay.	Remarks. Grounds of Proposal.
		Rs.			Rs.	
	ACCOUNTS BRANCH—*cont.*					
	Office Establishment—*cont.*					
1	Clerk, II Class, 2nd Grade.	140	1	Clerk, II Class, 2nd Grade.	140	To the present number of Clerks have been added four Clerks (2, III Class, 2nd Grade, at 70 each, and 2, III Class, 3rd Grade, at 55 each) on account of the four Project Divisions for which no Accountants have been provided. A small addition of two Clerks (1, IV Class, 1st Grade, at 45, and 1, IV Class, 2nd Grade, at 35) has also been made to the existing establishment on account of the increase in number from 20 to 25 of Executive Divisions, which necessarily will entail an increase in the clerical work of the Central Office.
1	Clerks, III Class, 1st Grade.	90	1	Clerks, III Class, 1st Grade.	90	
1	Clerks, III Class, 2nd Grade, at 70.	70	3	Clerks, III Class, 2nd Grade, at 70.	210	
3	Clerks, III Class, 3rd Grade, at 55.	165	5	Clerks, III Class, 3rd Grade, at 55.	275	
5	Clerks, IV Class, 1st Grade, at 45.	225	6	Clerks, IV Class, 1st Grade, at 45.	270	
6	Clerks, IV Class, 2nd Grade, at 35.	210	6	Clerks, IV Class, 2nd Grade, at 35.	210	
10	Clerks, IV Class, 3rd Grade at 26.	260	11	Clerks, IV Class, 3rd Grade, at 26.	275	
3	Clerks, V Class, 1st Grade, at 17½.	52½	3	Clerks, V Class, 1st Grade, at 17½.	52½	
36	Total Clerks ...	1,202½	36		1,532½	
1	Moodi	103½	1	Moodi at 10 ...	10	
	Do.		1	Do. at 8 ...	8	
	Head Messenger		1	Head Messenger	10	
	Do.		1	Do.	3	
4	Messengers, at 7		4	Messengers, at 7	28	
5	Do. at 6		6	Do. at 6	36	
2	Rollers, at 5		2	Rollers, at 5	10	
16			16		110	
52	Total Office Establishment.	1,305½	52	Total Office Establishment.	1,632½	

Abstract of Accounts Branch.

4	Examiners	1,000	4	Examiners	2,450	
66	Accountants	5,190	66	Accountants	5,992½	
52	Office Establishment ...	1,305	52	Office Establishment ...	1,632½	
	Total Accounts Branch.	8,395		Total Accounts Branch.	10,075	

ABSTRACT.

			Rs.
Executive Branch ...	1,26,487		
Accounts Branch ...	10,075		
Grand Total ...	1,36,562	per mensem or per annum ...	16,38,744
Add.—Approximate amount on account of Military pay and allowances of Military officers, per mensem ...	Rs. 8,000		
Approximate amount on account of Military pay and allowances of Military subordinates, per mensem ...	1,500	or per annum	1,14,000
	9,500		
Sub-divisional allowance for 15 Upper Subordinates at 30.	450	or per annum.	5,400
Local allowances, approximate, Upper Godávari allowance per mensem ...	50		
Wynaad allowance per mensem ...	200		
Potinghy Ghât or Jeypore allowance per mensem	600		
	850		10,200
Charge allowance for 5th-Grade Accountants recommended in letter No. 241 W., dated 19th March 1881, from the Examiner, Public Works Accounts, to the Local Government	400		4,800
Do. do. Presidency allowance, and Presidency house-rent, Executive Branch	1,200		
Accounts Branch	1,650		
	2,850		34,200
Total Permanent Establishment salaries ...			18,07,344
Travelling allowance, Executive Branch *	16,666⅔		
Do. Accounts Branch	400		
	17,066⅔		2,04,800
Contingencies.— Executive Branch ...	4,000		
Accounts ,, ...	400		
	4,400		52,800
Total Permanent Establishment ...			20,64,944

Temporary Establishment.

Executive Branch.

	Per mensem. Rs.	Per annum. Rs.
Irrigation Survey ...	1,250	15,000
Special Revenue Investigation Establishment ...	1,000	12,000
Temporary Executive Branch ...	2,083⅓	25,000
	4,333⅓	52,000

Accounts Branch.

Temporary Establishment for the preparation of Capital and Revenue Accounts of Irrigation Works ...	800	9,600
	5,133⅓	61,600
Grand Total Establishment ...		61,600
		21,26,544

EXECUTIVE BRANCH.

DEDUCT—	Per mensem. Rs.	Per annum. Rs.	
Pay and allowances of Consulting Engineer and two Deputy Consulting Engineers for Railways chargeable to Imperial ...	4,023	48,276	
Moiety of pay and allowance of Superintendent of Public Works Stores and Workshops chargeable to Workshops	335	4,020	
Pay of two Upper Subordinates chargeable to Workshops ...	400	4,800	
ACCOUNTS BRANCH.			
Pay and allowances of four Accountants chargeable to Public Works Workshops (Dowlaishweram and Presidency) and Madras Harbour Works ...	445	5,340	
			62,436
Net Total Establishment, Permanent and Temporary, including travelling allowances and contingencies			20,64,108

* Per mensem to give in round numbers 2,00,000 for the year.

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APPENDIX C.

GRADATION LIST as proposed under the new organization with effect from 1st August 1881.

Name.	Date of first Appointment to the Department.	Present permanent grading in the Department of those Officers who are to be promoted.
CHIEF ENGINEER, 1ST CLASS, (1.)		
Colonel R. H. Sankey, C.B., R.E. ...	May 1850.	
CHIEF ENGINEER, 2ND CLASS, (1.)		
Colonel J. Mullins, R.E.	February 1852.	
CHIEF ENGINEER, 3RD CLASS, (1.)		
Colonel J. H. M. Shaw-Stewart, R.E., (A.I.C.E.)	January 1854.	
SUPERINTENDING ENGINEERS, 1ST CLASS, (2.)		
Lieut.-Colonel J. Beatty, R.E.	March 1855.	
„ J. O. Hasted, R.E. ...	January 1856.	
SUPERINTENDING ENGINEERS, 2nd CLASS, (2.)		
Lieut.-Colonel H. L. Prendergast, R.E.	November 1857.	
Lieut.-Colonel W. Chrystie, R.E.	October 1855 ...	Superintending Engineer, 3rd Class.
SUPERINTENDING ENGINEERS, 3RD CLASS, (2.)		
Major H. R. Mead, R.E.	January 1858.	
Mr. J. W. Rundall, M.I.C.E.	August 1855 ...	Executive Engineer, 1st Grade.
EXECUTIVE ENGINEERS, 1ST GRADE, (9+1=10.)		
Major C. J. Smith, R.E.	January 1858.	
Mr. R. F. Chisholm, F.R.I.B.A.	February 1859.	
Lieut.-Colonel J. N. Hunter, R.E. ...	March 1855.	
Major H. Smalley, R.E.	July 1869.	
„ P. Montgomerie, R.E.	November 1866.	
Lieut.-Colonel W. H. Burton, R.E. ...	May 1858.	
Major H. M. Vibart, R.E.	September 1861.	
„ J. Pennycuick, R.E.	April 1862.	
Lieut.-Colonel Ross Thompson, R.E. ...	August 1863.	
Major J. L. L. Morant, R.E.	January 1864.	
EXECUTIVE ENGINEERS, 2ND GRADE, (10+1=11.)		
Mr. G. T. Walch, M.I.C.E.	February 1866.	
Major A. T. Fraser, R.E.	March 1860.	
„ S. C. Clarke, R.E.	October 1862.	
Captain R. R. E. Drake-Brockman, R.E.	November 1864.	
„ W. H. Conker, R.E.	April 1866.	
Mr. T. D. Harris	August 1855.	
Captain A. C. Smith, R.E.	September 1864.	
„ A. Awdry, R.E., A.I.C.E. ...	January 1868.	
Mr. K. F. Nordmann	June 1862.	
„ E. H. Pringle	January 1868.	
Captain D. McNeil Campbell, R.E. ...	April 1869 ...	Executive Engineer, 3rd Grade.
EXECUTIVE ENGINEERS, 3RD GRADE, (10+1=11.)		
Mr. J. Hannan	July 1866.	
Mr. R. W. Norris	„ 1867 ...	Re-appointment.
Captain R. F. Morris, R.E.	March 1864.	
Mr. G. D. Wybrow	July 1867.	
„ J. W. Martin	December 1867.	
„ J. D. Grant, A.I.C.E.	July 1868.	

Graduation List as proposed under the new organization, &c.—*contd.*

Name	Date of first Appointment to the Department	Present permanent grading in the Department (if these Officers will be promoted).
EXECUTIVE ENGINEERS, 3RD GRADE—*contd.*		
Mr. C. J. Peters	July 1867 ...	Executive Engineer, 4th Grade.
" W. Hughes B.A.	" 1868 ...	Do.
" J. C. Inverarity	March 1869 ...	Do.
" J. M. Bell	December 1867 ...	Do.
Captain A. W. Stuart, R.E. ...	March 1871 ...	Do.
EXECUTIVE ENGINEERS, 4TH GRADE, (3+1=4.)		
Captain C. C. Rawson, R.E. ...	June 1871. ...	
" A. T. F. Dorward, R.E. ...	August 1871. ...	
Mr. J. Grimes	June 1861 ...	Assistant Engineer, 1st Grade.
Lieutenant C. B. Henderson, R.E. ...	April 1873 ...	Do.
Mr. Wilks	... ...	Temporary Probationary Appointment.
ASSISTANT ENGINEERS, 1ST GRADE, (24+2=26.)		
Lieutenant O. V. Boddy, R.E. ...	April 1873.	
" D. Langley, R.E. ...	" "	
" F. G. Romilly, R.E. ...	" "	
Captain W. Jackson	September 1872...	Counted as an Upper Subordinate.
Mr. C. H. T. Norfor	August 1870. ...	Deputy Consulting Engineer for Railways.
Lieutenant H. E. Hamilton, R.E. ...	June 1875 ...	
" W. L. C. Baddeley, R.E. ...	July " 1874. ...	
Mr. W. B. De Winton	October " ...	Counted as an Upper Subordinate.
Lieutenant S. C. Plummer ...	January 1855 ...	
Mr. C. Vincent	October 1874. ...	
" A. H. Garrett	" " ...	
" J. F. Davidson	February " 1873. ...	
" J. C. Johnson	October " 1875. ...	
" H. S. Taylor	" " ...	
" A. S. Russell	" " ...	
" C. M. Smith	May " 1865. ...	
S. Subroya Chariar, B.C.S. ...	October 1874 ...	Assistant Engineer, 2nd Grade.
Mr. W. C. De Morgan	" 1875 ...	Do.
" W. E. Bird	February " 1876 ...	Do.
" J. E. Paul	October 1874 ...	Do.
" G. F. Curtes	" 1875 ...	Do.
" J. Trail	" 1877 ...	Do.
" C. H. B. Burton	" " ...	Do.
" H. K. G. Evans	" " ...	Do.
" C. Ussher	" " ...	Do.
" G. E. Monson	" " ...	Do.
" A. A. G. Maltè	" " ...	Do.
" W. Jopp	" " ...	Do.
ASSISTANT ENGINEERS, 2ND AND 3RD GRADES, (19+2=21.)		
Mr. B. H. Young	October 1877.	
" G. B. Lambert	" "	
" H. H. O'Connell	September 1878.	
" A. E. Boyle	October 1880.	
" A. M. Hayes	" "	
" F. J. Wilson	" "	
" E. B. Hanson	" "	
" A. M. Ford	September 1879.	
" R. H. Dorman	October 1880.	
" H. E. Clerk	" "	
" S. D. Pears	April 1874.	
N. Rathnasabapathy Pillay, B.C.S.	September 1880.	
S. Gopalakrishna Iyengar, B.C.S. ...	July 1870 ...	Counted as an Upper Subordinate.
Lieutenant D. Falvey		

N.B.—Those officers shown in italics will receive promotion.

APPENDIX D.

Protective Works Projects now in hand or proposed, paragraph 8, Government of India letter, No. 681 G, dated 5th May 1881.

Name of Project.	Division and Circle.	Brief explanation of each.	Probable amount of Estimate.	Forecast of provision to be made in the Budgets of the current and following years.		
				1881-82.	1882-83.	1883-84.
			LAKHS.	LAKHS.	LAKHS.	LAKHS.
(*a*) Ganjam, Gopaulpore, Tidal Canal.	A Project Division, 1st Circle.	During the last famine a tidal canal, 9 miles in length, was completed from Ramba at south end of the Chilka Lake to Ganjam, thus with the system of canals to the north connecting the latter place with Cuttack, Midnapur, &c. It is now absolutely essential that this canal should be extended southwards about 12 miles to the port of Gopaulpore, the most important emporium of the district, thus securing the means of distributing food grains in case of famine and of creating for ordinary seasons a highly promising artery of trade. A detailed estimate for a high level fresh water canal, amounting to Rs. 1,72,000, was framed some years since, but late information appearing to show that a tidal canal will be preferable, arrangements are being made for completing the estimate, which should be ready for submission in six or eight months	2·10	Nil.	Nil.	1·00.
(*b*) Road from Salur in the Vizagapatam Division, *viâ Potinghy Ghaut* to Korapatt and Jugdulpore in Bustar.	Do.	The primary link in this, the first cart road leading from the littoral of Vizagapatam to, and through the country above the ghauts in Jeypore and Bustar, as yet attempted to be made, is the "Potinghy Ghaut," on which such small sums (altogether inadequate however for securing proper progress) have hitherto been spent from Provincial funds as could be spared. While grain has been at famine prices in the low country, it has always been cheap above the ghauts, where the rainfall seems to be abundant and certain, and where land is apparently to be obtained for emigrants, the country being but sparsely populated. Of the revised estimate amounting to 3·40 lakhs for the Potinghy Ghaut now under examination (which will, if necessary, be forwarded to the Government of India) about one-third has already been spent, and it is thought that probably nine lakhs more would be needed to take the line 70 miles on to Jugdulpore (new Bustar). No estimate has been framed for this latter portion, but with the new establishment, one should be ready a year hence in time for entry in the budget of 1883-84	10·50	0·75	1·00	2·00

Protective Works Projects now in hand or proposed, paragraph 8, Government of India letter, No. 681 G, dated 5th May 1881—*cont.*

Name of Project.	Division and Circle.	Brief explanation of each.	Probable amount of Estimate.	Forecast of provision to be made in the Budgets of the current and following years.		
				1881-82.	1882-83.	1883-84.
			LAKHS.	LAKHS.	LAKHS.	LAKHS.
		N. B.—Other roads suitable for cart traffic, *e.g.*, for linking Korapútt with Raigurh and others leading towards Sumbalpore north-east and through Kalahandy north-west will be certainly required in course of time as protective works, but need not be further adverted to here				
(*c*) Buckingham Canal.	At present Buckingham Canal Division, 1st Circle.	From the early part of the century, a tidal canal connecting the backwaters of the east coast north of Madras was considered feasible and partially carried out. The scheme was more fully developed in the late famine by so far completing the works as to make a tidal communication, now known as the "Buckingham Canal," extending nearly 200 miles north, and about 50 south of Madras. The total outlay from the commencement to date has been nearly 37·4 lakhs, of which 27·1 lakhs may be considered normal. The completion estimates, now far advanced, amount to about 29 lakhs, so that the normal outlay will, for the finished work, be approximately 56 lakhs. For the distribution of food grain during famine a safe interior line of coastal communication will be invaluable, while for ordinary trade purposes, its importance is daily on the increase. Already boats from Cocanada come laden to Madras 400 miles, and it can hardly be doubted that eventually the whole line of coast will be similarly connected. A work of this character is wholly beyond the unaided Provincial resources, and as it is essentially "Protective" in its character, it is here included. The estimates should be ready for submission six months hence	56·00	* Nil.	5·00	5·00
(*d*) Buckingham Canal south of Markanum.	...	The extension southward of the above canal through the French territory (18 miles) and as far as Point Calimere has been regarded not merely as desirable for completing a much needed link in the coast communications, but as holding in readiness a work which is considered to be extremely well suited for execution during famine. The details of a considerable portion of the estimate were worked out some years ago, but its entire revision will be needed to allow of its being sanctioned by the Government of India. At the present moment, however, there is no very pressing necessity for the work, the time named for its submission may be for the budget of 1884-85	30·00	Nil.	Nil.	Nil.
(*e*) Baroor Tank.	B Project Division, 2nd Circle.	This work was commenced for relief in last famine. The project provides for an anicut across the Poonjar river-supply channel to Surur Taluk, enlargement of the tank irrigation channels and head-sluices to existing channels. The increase of cultivation is expected to be 5,610 acres, and of revenue, 22,137 rupees. The work is considered valuable as a famine protective work. Plans and estimates have been prepared and submitted to the Government of India, but were returned for revision. They will probably be resubmitted by the end of official year.	8·10	Nil.	1·00	2·00
(*f*) Marandahully.	B Do. 2nd Circle.	Work was commenced for famine relief. The project provides for an anicut across Sumadakumara river-supply channel to Sungambasavan tank, enlarging this and Jairy Talab, and channels from tanks. Provides for the storage of 667 millions of cubic feet of water. Increase of cultivation and revenue expected not yet known. It is understood that estimates are nearly ready for submission. This work is likely to be of value as a protective work	3·90	Nil.	1·50	2·00
(*g*) Vaniar ...	Do. ...	Work was commenced for famine relief, but probably the project cannot be carried out so as to utilize all the work then done. The project provides for the formation of a reservoir by damming the valley of the Vaniar river. Increase of cultivation expected is 9,500 acres, and of revenue 33,250 rupees. Plans and estimates have yet to be drawn up, and further enquiry made regarding the returns. It is not certain that the work will prove productive though it may be valuable as a protective work. The estimates might be ready by the end of the official year ...	8·50	Nil.	Nil.	Nil.
(*h*) Hindupur ...	C Do. 3rd Circle.	The project provides for constructing an anicut across the Penniar river for the supply of 11 tanks with head-sluices and channels. The district of Bellary having very little irrigation, the work would be of value as a protective work. Plans and estimates were prepared many years ago, but the project will need complete revision. Existing cultivation is expected to be improved, and 356 acres of waste land cultivated. Increased revenue expected, 10,908 rupees. Estimates may be submitted by the end of official year	2·00	Nil.	1·50	0·50
(*i*) Roddam ...	Project Division, 3rd Circle.	The project provides for an anicut across the Pennér to supply Roddam large tank, and would, like the work above, be useful as a protective work. Plans and estimates were prepared many years ago, but the project needs complete revision Existing cultivation is expected to be improved, and 1,344 acres of waste land cultivated. Increased revenue expected 9,105 rupees. Estimates may be submitted by the end of the official year ...	1·40	Nil.	Nil.	1·00

* *N.B.*—No outlay is shown in 1881-82 against the Buckingham canal above, as the funds for the current year are being found for "Provincial." At the same time it is much to be desired that a portion if not the whole of the current year's assignment may be charged against "Imperial Protective" so as to liberate Provincial Funds most urgently needed for other purposes.

Protective Works Projects now in hand or proposed, paragraph 8, Government of India letter, No. 681 G, dated 5th May 1881—*cont.*

Name of Project.	Division and Circle.	Brief explanation of each.	Probable Amount of Estimate.	Amount of provision to be made in the Budgets of the current and following Years.		
				1881-82.	1882-83.	1883-84.
			LAKHS.	LAKHS.	LAKHS.	LAKHS.
(*j*) Complete revised project for the Godávári Delta Works.	D Project Division, 3rd Circle.	The work to be done is the revision of certain of the estimates already sanctioned, the examination of estimates submitted, and framing one complete estimate. Beyond those already submitted, there will probably be estimates amounting to 24,00,000 rupees required. It is thought that under special arrangements now being made, the estimates will be ready for submission in five or six months	60·00	Nil.	5·00	5·00
(*k*) Complete revised project for the Kistna Delta Works.	Do. ...	The same work has to be done as above. Estimates have been prepared and but little revision is expected to be necessary. Revenue returns have to be obtained. These estimates may be expected to be ready for submission by the end of the year or a little after	140·00	Nil.	5·00	5·00
(*l*) Perryaur ...	Do. ...	The project provides for constructing a concrete dam of 170 feet in height and turning the water of the Perryaur river, which now runs into Travancore, into the Madura District. It will it is thought prove invaluable as a protective work. The net return expected from the work is 5,15,000 rupees per annum, constituting it also a "Productive." The out-door surveying, &c., has been done, and the project has only to be put into shape and may be submitted by the end of the year ...	70·00	Nil.	1·00	5·00
(*m*) Pungalur Channel.	Do. ...	The project provides for improving an existing channel, and work was commenced for famine relief, 95,057 rupees having been spent on it. The existing irrigation is expected to be improved, and 5,100 acres additional land cultivated; the increase of revenue expected is 48,000 rupees. The estimates have been submitted and returned for revision, and may probably be ready by the end of the year	3·70	Nil.	1·00	2·00
(*n*) Rooshikoolia ...	Do. ...	The project provides for an anicut across the Korakory river in the Ganjam District, improving and constructing channels and embanking a natural lagoon in a part of the country where protective works are much needed. Provision is made for 64 miles of navigable canal and for two reservoirs. The area to be irrigated is 1,20,000 acres, and a return of 4 per cent. on the total outlay is expected. The plans and estimates have been prepared, and may be put into shape for submission without delay	26·00	Nil.	2·00	2·00
(*o*) Pálár Anicut ...	Unassigned as yet.	The project is for improvements to existing channels under the anicut on the south side. Plans and estimates have been prepared, but not yet submitted, and information is needed as to cultivation and revenue expected.	2·50	Nil.	Nil.	Nil.
(*p*) Atur Anicut ...	Do. ...	This project provides for an anicut on the Guddebum in South Arcot District. The estimate has been submitted and returned for revision. Information regarding cultivation, &c., is as yet not available. The estimates might be completed in three or four months	0·54	Nil.	Nil.	Nil.
(*q*) Lower Coleroon Anicut.	Do. ...	This project provides for the improvement of existing irrigation under the Lower Coleroon Anicut in South Arcot; the subject has not yet been taken up, but it seems certain that great improvements can be made, and the cultivation extended. The estimates could be prepared within a year ...	6·50	Nil.	Nil.	Nil.
(*r*) Bhaváni Reservoir.	Do. ...	This is a project for forming a large reservoir on one of the tributaries of the Cavari river with a view to storing some portion of the flood waters which now run to waste. Preliminary investigations have been made, and it is thought that by the construction of the reservoir, not only would the supply for the Tanjore Delta be thus improved, when occasionally deficient, but over 300,000 acres of additional direct irrigation be secured.	40·00	Nil.	Nil.	Nil.
		Totals ...	425·84	0·75	25·00	35·00

37

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

14th July 1881, No. 1729 W.

General.
Establishment.

Read the following papers:—

No. 17. From A. B. SAMPSON, Esq., Under Secretary to the Government of India, Public Works Department (General), to the Secretary to the Government of Madras, Public Works Department, dated Simla, 5th May 1881, No. 681 G.

I AM directed to acknowledge your letter, No. 337 W., dated 8th February 1881, again recommending for sanction the establishment proposed in your previous letter, No. 2277 W., dated 1st October 1880.

2. The total amount of all establishment charges under those proposals is estimated at 18½ lakhs against a total grant for the year 1881-82 of 63½ lakhs, or excluding the Madras Harbour Works of 56½ lakhs.

3. The Government of India still retains the objections that the appointment of five Superintendents of Works, each drawing Rs. 100 per mensem as a special allowance, would make the normal pay of Executive Engineer, 1st Grade, quite exceptional, and that some of the charges do not appear to be of sufficient importance to justify the appointment of a special supervising officer; I am to suggest, for the consideration of the Madras Government, the following alternative. Instead of a Superintendent of Works for each of the four circles—

(1) Vizagapatam and Ganjam,
(2) the Godávari Delta,
(3) the Kistna Delta,
(4) the Buckingham Canal,

it is proposed for consideration that there might be two circles each under a Superintending Engineer, viz.:—

(1) Vizagapatam, Ganjam, and the Godávari Delta;
(2) the Buckingham Canal and the Kistna Delta,

each circle consisting of three executive divisions.

4. The objections to linking the Buckingham canal to any other circle of superintendence are stated to be its great length (250 miles) and unfinished condition and also the work involved in controlling the traffic arrangements over so great a length of channel. The details of traffic arrangements should, however, devolve on the Executive Engineer, only a general control being exercised by the Superintending Engineer. As to the extent of the superintendency, it is not nearly so great as the Scinde Circle in Bombay, which is controlled by one Superintending Engineer.

5. If the foregoing suggestion is adopted, the following figures would show the difference between the resulting staff and that proposed by the Madras Government:—

	Proposed by the Madras Government.	Suggested by Government of India.
Chief Engineers	2	2
Superintending Engineers	5	7
Executive and Assistant Engineers	*79	†75

* Including five Superintendents of Works. † Including one Superintendent of Works.

The expense would be somewhat less on the latter scale.

6. The distribution of Executive and Assistant Engineers into classes and grades would be—

	As proposed by Madras Government.	As suggested by the Government of India.
Executive Engineer, Grade 1	8	9
Do. do. 2	10	10
Do. do. 3	11	10
Do. do. 4	5	3
Assistant Engineer, Grade 1	25	24
Do. do. 2, &c.	20	19

The Government of India is prepared to give provisional sanction to either of the schemes, expressing, however, a strong preference for the latter. The number of Upper Subordinates proposed is accepted.

7. It is observed that ten Executive and Assistant Engineers are intended exclusively for the preparation of projects for famine relief works, and it is assumed that some portion of the time of the regular divisional staff will also be so occupied. It appears fair to estimate that nearly one-eighth of the whole energies of the staff will be devoted for some time to this object. Under these circumstances the Government of India is prepared to contribute that proportion of the estimated cost of the Madras establishment charges, *i.e.*, 2½ lakhs, from the general grant for Protective Public Works.

8. The assignment of this contribution from the special grant for Protective Public Works makes it necessary that the Government of India should be kept informed of the objects on which it is expended. I am to request therefore that a list of projects of protective works now under preparation and of those it is proposed to prepare during 1881-82 may be submitted at once with a brief explanation of each, and that when the budget estimate for 1882-83 is submitted a brief indication may be given of the progress made on each and a further list submitted of the new projects, the preparation of which will be commenced during that year.

9. The cost of the establishment required for the normal operations of the department may therefore be taken at * 16 lakhs against a total grant of 61 lakhs. Of the latter sum, 7 lakhs appertain to the Madras Harbour Works, which are carried out by special establishment, leaving 54 lakhs for the normal public works. The relative cost therefore of works and establishment will be—

* 18½ — 2½

	Lakhs.
Works	38
Establishment charges	16

i.e., the establishment charges are 42 per cent. on the outlay on works. This is still an extremely high percentage.

10. A large proportion of the establishment, however, appears to be required for the supervision of the distribution of water for irrigation and other revenue purposes. In paragraph 27 of your letter now acknowledged it is stated that it is the intention of the Government of Madras to address the Government of India, on the subject of debiting a portion of the Public Works Establishment to Revenue, in a separate communication. I am to state that the Governor-General in Council will be glad to receive the views of the Government of Madras on this point.

11. In sanctioning this large addition to the sanctioned scale of Engineers, it is necessary to consider the question of filling up the vacancies in it. The Government of India has no wish to retard promotion in Madras as compared with other provinces, but it is obvious that to fill up the vacancies in the higher grades altogether from the lower grades of the staff now in Madras would lead to inordinately rapid promotion. Moreover it is likely that the Government of India will very shortly have Engineers thrown on its hands without employ owing to completion of works in the railway

branch. Before, then, working up to the new scale, I am to request that a nominal roll may be submitted of the Engineers as they now stand, and a statement of the promotions the Madras Government considers due to length and nature of service, and an endeavour will be made to supply the balance from elsewhere.

12. I am to request that the exceptional arrangement regarding promotions in the place of Superintending Engineers on furlough may cease on the receipt of this letter.

13. The increase now sanctioned to the number of Upper Subordinates will probably enable the Madras Government to find room for those transferred from Madras to Mysore and for men whose home is in Madras who are no longer needed in Mysore, owing to the transfer of the administration of the country to His Highness the Maharajah.

14. I am finally to request that it may be understood that the Government of India cannot admit a higher rate than 25 per cent. on the expenditure on Imperial works as a charge for Imperial establishments exclusive of the establishment employed on Revenue work; that is, one-fifth of the entire Imperial grant shall not be exceeded on account of establishment charges exclusive of what is charged to Revenue work.

From Colonel R. H. SANKEY, R.E., Secretary to the Government of Madras, Public Works Department, to the Secretary to the Government of India, Public Works Department, dated 9th July 1881, No. 1697 W.

I am desired, in reply to your letter, No. 681 G., dated 5th May 1881, having reference to the normal strength of establishment for the Public Works Department in this Presidency, to state that the Government very thankfully accept the scale and the general arrangement into six Superintending Engineers' Circles as suggested by the Government of India, though as regards the former some additions have recently shown themselves to be necessary, and as regards the latter, local circumstances require slight modifications which will be immediately explained.

2. There is now, I am to observe, no further discussion as to the appointment of Superintendents of Works for—

(1) Vizagapatam and Ganjam Divisions,
(2) the Godávari Delta, do.
(3) the Kistna Delta, do.
(4) the Buckingham Canal,
(5) the Presidency including Bangalore;

but one officer of this class will still remain, viz., the Consulting Architect assented to under paragraph 3 of your letter, No. 1918 G., dated 4th November 1880.

3. It is also a matter of question with this Government whether the important station of Bangalore should not again be formed into a separate division, in case the new Army Organization Scheme be carried into effect, as it would then in all probability become Army Head-quarters for the Presidency. For the present, however, no immediate change seems necessary.

4. With reference to the additions required to the scale as originally sent up, I am in the first place to note that (1) the Madras Irrigation Company's Canal (soon about to be taken over) and the Sungum Project sanctioned by the Government of India in their letter, No. 188 I., dated 6th May 1881, in Nellore (the arrangements for prosecuting which have already been commenced by appointing the officers and several of the subordinates, &c.) must be included.

5. To these requirements must further be added two officers in the grades of Executive Engineers omitted by a clerical error in the "Distribution Statement" which accompanied my letter, No. 2277 W., dated 1st October 1880, where it will be observed that under the head "Supernumeraries" calculated at 10 per cent. only *one* officer has by oversight been shown in the grade of Executive Engineer instead of *three*.

6. The additions to the scale will therefore stand as under:—

	Executive Engineers.	Assistant Engineers.	Upper Subordinates.
For the Madras Irrigation and Canal Company, see Government of India letter, No. 207 I., dated 16th May 1881.	1	2	6
For the Sungum Project sanctioned by the Government of India letter, No. 188 I., dated 6th May 1881.	1	2	6
To rectify error in the previous Distribution Statement ...	2	...	...
Total ...	4	4	12

7. If the four additional Executive Engineers be distributed in the strength of one to each of the sanctioned grades and the Assistant Engineers be divided equally between the 1st grade and the 2nd and 3rd grades combined, the modified normal establishment would then stand as follows (paragraphs 5 and 6 of your letter under reply):—

Chief Engineers.

1st Class	1
2nd ,, ...	1
3rd ,, ...	1
	3

Superintending Engineers.

1st Class	2
2nd ,, ...	2
3rd ,, ...	2
	6

Executive Engineers.

1st Grade	10
2nd ,, ...	11
3rd ,, ...	11
4th ,, ...	4
	36

Assistant Engineers.

1st Grade	26
2nd and 3rd Grades	21
	47
Upper Subordinates of all grades	185

8. The attached Distribution Appendix **A** shows the circles and divisions, and Appendix **B** the cost in prescribed form, both in substitution of those originally submitted for sanction.

9. As regards **A**, the distribution, it will be observed, differs somewhat from that suggested by the Government of India, though No. I Circle is the same as that given in paragraph 5 of your letter. No. II Circle will now consist of the two Kistna Divisions, the Sungum Project and Nellore instead of the Buckingham Canal, which latter will much better fit into No. V Circle.

10. The Nellore Division with the Sungum Project will be a sufficient addition to the Kistna Delta works, and should the completion estimates for the latter be sanctioned as may be early looked for, the Superintending Engineer will have quite as much if not more than he can satisfactorily administer.

11. All the other circles have been made out strictly with reference to the actual works in progress and proposed, so as at once to give each Superintending Engineer ample employment and the best centre from which to supervise the operations of that portion of the department under his charge.

12. To three of these circles have also been assigned such of the new project divisions as fall naturally within their respective limits; the 4th of these, Division (D), being, however, reserved specially for personal supervision by the Chief Engineer for Irrigation for reasons subsequently to be explained.

13. Turning to Appendix **B** it will be noted that the total annual charge for establishment is raised from 16·13 (the total present charge) to 20·64 lakhs; but as the outlay on both Protective and Productive works increases annually till the total expenditure by the department more than doubles what it is at present (a little over 50 lakhs), the high percentage now apparent will disappear in course of time.

14. It being the intention of Government to initiate the redistribution of charges, &c., under the new scale from the 1st August, the total outlay on establishment for the current year would generally stand as follows:—

	At per Annum. LAKHS.	LAKHS.
To four months, April to July (both inclusive) 1881, as per Part iii, Budget of Provincial Services for 1881-82	16·13	5·38
To eight months from 1st August 1881 as per Appendix **B**	20·64	13·79
Total for Current Official Year		19·17

15. This amount cannot, however, be worked up to as it will take time to fill all vacancies in the Engineer and Subordinates grades.

There are moreover several modifications to be introduced later on when it is more accurately known how the vacancies in the Gradation List are to be filled up, and when instructions have been received as to the incidence of the charges affecting the Imperial and Provincial Budgets.

16. In regard to the latter point, your letter (paragraph 7) lays down that 2½ lakhs will be contributed during the current year from the general grant for "Protective" Public Works; and again in paragraph 10 an intimation is understood to be conveyed that the Government of India would not be indisposed to consider the advisability of debiting a portion of the charge for Irrigation Establishment against the revenue of the works on which they are engaged.

17. The subject of the latter proposal has already been submitted for the consideration of His Excellency the Governor-General in Council in G.O. of 12th April 1881, Nos. 269 and 270 I., and on receipt of a reply it will be possible to deal with the mode of distributing the charges among the different budgets.

18. With reference, however, to the contribution from Imperial of the 2½ lakhs, I am to state that this Government propose to appropriate at once Rs. 75,000 for pushing on as a "Protective" work the Potinghy Ghât in Vizagapatam (to be adverted to further on), setting free a corresponding amount which is most urgently needed for the execution of a number of buildings, &c., which, as will be seen from Part B of the Provincial Budget for the current year, cannot otherwise be met for years to come, and to reserve the remaining Rs. 1,75,000 as a contribution towards the general establishment charges of the current year.

19. I am now to advert to the subject-matter of paragraph 11 of your letter under reply, and, in so doing, to submit for approval the Gradation List Appendix **C** containing the promotions which it is intended to give effect to from the 1st August, as being the date from which it is desired by this Government to constitute, as far as may be possible, the new divisions and circles of superintendence, and for which all the requisite arrangements are being made.

20. In reference to your remark that it would lead to inordinately rapid promotion to fill up the vacancies in the higher grades altogether from the lower grades of the present Madras staff, it may at once be stated that, owing to the number of Royal

Engineers in the higher grades who went to England on the special furlough on the occasion of the late reductions, and who will shortly return to duty (Lieutenant-Colonel Burton, R.E., has been telegraphed for to take up the Presidency Division, and will be here by 1st August), as also to other causes unnecessary to detail, there will practically be no promotions to speak of till the 3rd-grade Executive Engineer is reached, and only nine vacancies in the combined 2nd and 3rd grades Assistant Engineers to make up.

21. Among the Chief Engineers there is no promotion, while in the three classes of Superintending Engineers the first promotion is that of Colonel W. Chrystie from third to second class. This officer will not only have nearly twenty-six years' service in the department on the 1st August, but has frequently, during several years past, acted as Superintending Engineer, 2nd Grade, in both Mysore and Madras. The second promotion is that of Mr. Rundall from 1st-grade Executive Engineer to 3rd-class Superintending Engineer. He has likewise twenty-six years' service in the department, and has for some time acted, with great credit to himself, as Superintending Engineer.

22. These are both excellent officers of great experience, and could not possibly with any considerations of justice be superseded by an officer introduced from another province.

23. It is also especially to be observed with reference to this that the insertion of a fresh officer in any of the classes of Superintending Engineer would cause an excess of one in the number of 1st-grade Executive Engineers. This latter is now full and there will be no promotions.

24. In the 2nd grade, owing to the late introduction of Major A. T. Fraser from the Mysore Department, and the return of Major S. C. Clarke from the Railway Department under the Government of India, there is only one promotion from the 3rd grade—Captain D. McNeil Campbell, a very promising officer with twelve and-a-quarter years' service in the department.

25. Among the Executive Engineers, 3rd Grade, on the new scale there will be one officer re-instated, Mr. R. W. Norris, and five promotions from the 4th grade, viz., Messrs. Peters, Hughes, Larminie, Bell, and Captain Smart, R.E., all of whom have service in the department ranging from fourteen to over ten years.

26. Mr. Norris' case is peculiar. His name was included in the late reductions, and after retirement he accepted employment as Local Fund Engineer, North Arcot; but as he is a specially trained Irrigation Officer whose services would be very valuable, this Government have considered it desirable to re-instate him, and he has been directed to report himself for duty on 1st August. It is not considered desirable in the interests of the public service that any other of the officers previously reduced should now be re-instated.

27. The list shows two promotions from 1st-grade Assistant Engineer to 4th-grade Executive, viz., Mr. Grimes (an old officer who commenced as a military subordinate) and Lieutenant C. B. Henderson, R.E., who has more than eight years' service in the department.

28. In addition to these four officers who would complete the scale, it has been thought desirable to enter the name of Mr. Wilks as temporary Executive Engineer.

29. This officer is now second on the staff of the Madras Irrigation and Canal Company, and although, as previously reported (*vide* letter, No. 202 I., dated 18th March 1881), it would be inexpedient to place him in the position of a Superintendent of Works for the canal on the work being taken over from the Company, it is thought that, owing to his local knowledge and experience as an Engineer, he may very possibly be quite capable of remaining in charge as Executive Engineer under the immediate direction of the Superintending Engineer of the Circle. In any case, I am to say, this Government is prepared to make the experiment, and as the best means of doing so would wish Mr. Wilks, during his term of probation (a year), to be borne on the strength of the department in the manner now proposed, should he be willing to accept the position.

30. If he subsequently gives satisfaction, his permanent grading will not occasion any serious difficulty, as in all probability before the time comes one or more vacancies in the higher grades will almost certainly occur.

31. Proceeding to the Assistant Engineers, it will be observed that there are eleven promotions from 2nd to 1st grade, the junior, Mr. W. Jopp, having very nearly four years' service in the department on 1st August. As the senior, Lieutenant O. V. Boddy, has a little over eight years' service, it is believed that these limits correspond very closely to the lengths of service in this grade, which it is the desire of the Government of India to secure for future working.

32. It was the original intention of this Government to promote into this grade, on precisely the same honorary footing as military subordinates, Sub-Engineers S. Ottmann and J. W. Ellis, whose cases were submitted specially (see margin) for the consideration of the Government of India, and even now the Government were prepared, failing this arrangement, to bring them permanently on the strength of the Engineer Establishment; but their promotion having lately been definitely barred by the orders contained in your letter, No. 797 G., dated 10th June 1881, their names have been removed from the list. I am, however, to submit that this Government still entertains a strong conviction that it would be both advantageous to the public service to promote these very deserving subordinates, and in every way politic to do so, especially at this juncture, when their advancement can be effected with much less hardship to others than would at any other time be possible.

This department letter, No. 1134 W., dated 2nd May 1881.

33. I am therefore to solicit further consideration on this point, and to state that, if the Government of India sees fit to grant the concession, their names might be introduced immediately below that of Mr. H. E. G. Evans.

34. At the bottom of the list there are nine vacancies in the combined 2nd and 3rd grades of Assistant Engineers, and as it is unlikely that officers in these grades would care to be transferred from other provinces, this Government desires to be given complete freedom of selection within, of course, code rules.

35. Should any Royal or Cooper's Hill Engineers, however, desire to enter, they could at once be posted according to length of service. Otherwise the Honorable the Governor in Council would be disposed to select one or two of the most promising youths who have of late years passed out of the Civil Engineering College, Madras, with certificates as Assistant Engineers, and fill up the remaining vacancies as opportunity offers.

36. In concluding this part of the subject, I am in the *first* place to observe that a comparison of the respective lengths of service of the officers in the Madras Department with those in other provinces more immediately under the Government of India as shown by the published classified lists, has established so clearly the fact that, the former have in all grades been hitherto unduly retarded in promotion, that the Honorable the Governor in Council would strongly deprecate the introduction, (certainly in any of the grades above Assistant Engineers) of officers from other provinces; and in the *second*, that a very early acceptance of the Gradation List by the Government of India as now sent up is so desirable (with a view to the promotions being gazetted by the 1st August) that, I am to solicit the favor of sanction to the same being telegraphed as soon as possible after receipt of the present communication.

37. In reference to the desire expressed, paragraph 13 of the letter under reply, that room should be found among the Upper Subordinates for those of this class who were originally transferred from Madras to Mysore, I am to state that this has already been done, and the three who could alone be spared from Mysore (see margin) have already joined this department.

Conductor FitzGibbon, Sub-Engineer, 2nd Grade.
Sergeant Heinig, Sub-Engineer, 3rd Grade.
Conductor Keenan, do. do.

38. I am now to invite attention to the four Divisions which it is proposed, in accordance with the original programme, to constitute with the object of preparing

such projects as mainly fall within the class of *Protective* works, to be executed from the Imperial grant under this head.

39. As a convenience the information called for regarding this subject (paragraph 8 of your letter) giving the list of projects under preparation, and those which it is proposed to prepare during 1882-83, is shown in the Appendix D, regarding which the following general observations will, it is hoped, suffice.

40. Of the four divisions to be formed, one will be exclusively for *Roads and Buildings*, and the rest *Irrigation*, thus :—

Superintending Engineer's Circle.	Designation.	Branch of Department.	Class.	Names of Projects.
First Circle ...	A. Project Division.	Roads and Buildings.	(Imperial) Protective.	(*a*) Ganjam-Gopálpur Canal. (*b*) Road from Sálúr *viâ* Potinghy Ghât to Jagdalpore. (*c*) Buckingham Canal from end of Commamur Canal north to Merkanum south. (*d*) Do. south of Merkanum.
Fourth Circle ...	B. Project Division.	Irrigation ...	(Imperial) Protective.	(*e*) Baroor Tank. (*f*) Marandahully. (*g*) Variar.
Third Circle ...	C. Project Division.	Irrigation ...	(Imperial) Protective.	(*h*) Hindupur Reservoir. (*i*) Roddam do.
Immediately under Chief Engineer for Irrigation.	D. Project Division.	Irrigation ...	(Imperial) Productive and Protective.	(*j*) Complete revised project for Godávari Delta. (*k*) Completion project for the Kistna Delta. (*l*) Perryaur Project. (*m*) Pugadur do.

N.B.—(*c*) and particularly (*d*) will, when the time comes for completing the estimates, be transferred to the Superintending Engineer, Fifth Circle.

41. As regards (A) Division there can be no question, I am to observe, first that the works included in it are each and all of a strictly "*Protective*" character; and, second, that however urgently required, no sums which would allow of their making any adequate progress, can be assigned from unaided Provincial Funds, either during the current or in future years.

42. Allusion has already been made to the Potinghy Ghât (paragraph 18) and its extension westwards through Jeypore towards Bustar and the Central Provinces. The want of a trunk road through all this tract, hitherto inaccessible to carts which nevertheless could, if opened out, supply the littoral districts with cheap grain in famine, is acknowledged to be a pressing necessity in a protective sense, and stands much on a par with the proposed railway from Bimlipatam *viâ* Vizianagrum and Raigurh to Raepore. Both will open up vast tracts of country for the supply of cheap grain to the coast, and cannot fail to prove of the highest value for purposes of administration, as also, in all probability, for the encouragement of emigration in the manner advocated by the Finance Minister. It may here be observed parenthetically that no better employment could probably be found for the staff of Railway Engineers which, as stated in paragraph 11, the

Letter to the Government of India, No. 564 W., dated 21st February 1881.

Government of India will very shortly have thrown on its hands without employ, than by utilizing these officers in preparing the estimate for the line of railway here adverted to (see also the correspondence noted in the margin).

Letter to the Government of India, No. 564 W., dated 21st February 1881.
Do. No. 150 R., dated 15th February 1881.

43. To allow of the works which are in progress on the Potinghy Ghât being pushed on during the current official year, Rs. 75,000 will now, as before observed, be transferred from "Provincial," which cannot afford the amount to "Imperial Protective," the remainder of the $2\frac{1}{2}$ lakhs being taken as a grant for establishment required for investigating the projects specified.

44. As regards the Buckingham Canal and the future extension of the work south of Merkanum, its character as a famine work has been too clearly demonstrated during the last calamity to need any remark here.

45. The works in (B) and (C) Project Divisions also call for no remark, as they strictly come within the classification of "*Protective*."

46. Regarding those included under the (D) Division it may be safely affirmed that they may be classed as Protective in addition to being Productive, the two last on the list belonging more particularly to the former class. It is needless to observe that, however remunerative the Godávari and Kistna Delta Works have proved, the chief incentive under which they were commenced was the necessity, which presented itself to the Government of the day, to do all that lay in its power to counteract the evils of frequently recurring famines in these tracts.

47. Until the Protective works project (with the exception of that for the Potinghy Ghât, which is ready and under execution) have been sanctioned by proper authority it would be out of place to name any specific sum in excess of the $2\frac{1}{2}$ lakhs granted for the current official year from Imperial; but the Honorable the Governor in Council desires to take this opportunity of pressing on the attention of the Government of India the necessity for making assignments in future years, not merely in direct proportion to the contributions of this Presidency towards the Imperial Exchequer, but also in compensation for the long years of neglect under which it has most undeservedly been compelled to suffer, owing to the undue outlay conceded to other more favored provinces.

48. This subject has been already submitted for the consideration of the Government of India in my letter, No. 337 W., dated 8th February 1881, and it will therefore suffice here to observe that this Government consider themselves fully justified in looking for an assignment for Protective works from Imperial of 15 lakhs (to include $2\frac{1}{2}$ or 3 lakhs for establishment) in 1882-83 and an addition of 10 lakhs in each succeeding year till a maximum of 80 lakhs per annum has been attained, as the least that can be given with reference to the large proportion of net revenue ($5\frac{1}{2}$ millions sterling per annum) which Madras has been shown to contribute to Imperial income, and as affording some substantial means towards guarding the Presidency in future against the horrors of famine.

49. In general connection with the subject of the normal scale of establishment for this department, I am in conclusion to solicit the decision of the Government of India as to the agency by which the Local Fund Boards' projects are to be supervised so far as concerns the larger class of works for which the machinery at present possessed by them or by the Revenue Board (which deals with their budgets and ordinary assignments for establishments and works) is at present inadequate.

50. Adverting to the correspondence on this subject concluding with my letter, No. 1,034 W., dated 22nd April 1881, I am desired to say that this Government are prepared to accept the arrangement suggested in paragraph 5 of your letter, No. 1,639 G., dated 17th September 1880, by which, in return for a general contribution on the part of Local Fund Boards of Rs. 21,250 per annum, this department would undertake the duties in question without, however, making any personal allowance to the officers to whom such duties may be assigned. The agency now placed at the disposal of the department will admit of the duty being performed in a manner satisfactory alike to Government and the Local Fund Boards.

No. 18. Order thereon, 14th July 1881, No. 1729 W.

The scale and general arrangement into six Superintending Engineers' Circles sanctioned by the Government of India in the letter above printed have been accepted by the Honorable the Governor in Council.

2. For the reasons explained in the letter to the Government of India, No. 1697 W., dated 9th July 1881, the following should be added to the scale thus sanctioned :—

Executive Engineers	4
Assistant do.	4
Upper Subordinates	12

3. The modified normal establishment will then stand as follows :—

Chief Engineers.

First class	1
Second ,, ...	1
Third ,, ...	1
	*3

Superintending Engineers.

First class	2
Second ,, ...	2
Third ,, ...	2
	†6

Executive Engineers.

First grade	10
Second ,, ...	11
Third ,, ...	11
Fourth ,, ...	4
	36

Assistant Engineers.

First grade	26
Second and third grades	21
	47
Upper Subordinates of all grades	185

4. The circles, divisions and sub-divisions with the scale of executive establishment allotted thereto are shown in Appendix A attached to these Proceedings and the financial result of the new organization with the classes of divisions and details of upper subordinate, lower subordinate, petty, and office establishments, are exhibited in Appendix B.

5. Protective works projects now in hand or proposed under paragraph 8 of the letter from the Government of India are shown in Appendix D, which is circulated for information and guidance.

6. Appendix C (not circulated) contains proposals specially referred to the Government of India.

7. Should the final orders of the Government of India be received in time, the new arragements will, as regards sanctioned scale, come into force with effect from the 1st August, and the redistribution of executive charges will be carried out as soon after that date as practicable.

8. The proposal of the Government of India (paragraph 7) to contribute towards the cost of establishment a sum of $2\frac{1}{2}$ lakhs from the general grant for Protective Public

* Includes one Chief Engineer with personal rank. † Excludes one for the excess in Chief Engineer's class.

Works, as also the question (paragraph 10) of debiting a portion of the charge for Irrigation Establishment against the revenue of the works on which they are engaged are under discussion in separate proceedings.

9. The subject matter of paragraph 11 of the Government of India letter in regard to filling up the vacancies in the new scale is also being separately considered and discussed.

10. As regards the agency by which the larger class of Local Fund projects is to be supervised, the Government have intimated their readiness to accept the arrangement suggested in paragraph 5 of the letter from the Government of India, No. 1639 G., dated 17th September 1880, by which, in return for a general contribution on the part of Local Fund Boards of Rs. 21,250 per annum, the Public Works Department would undertake the duties in question without, however, making any personal allowances to the officers to whom such duties may be assigned. The special allowance hitherto paid will therefore cease on the revised arrangements coming into force.

(True Extract.)

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

To Superintending Engineers.
,, Superintendents of Works.
To the Consulting Architect to Government.
,, General Superintendent of Public Works Stores.
,, Chief Engineer for Irrigation.
,, Examiner, Public Works Accounts.
,, Consulting Engineer for Railways.
,, Financial, &c., Departments.
,, Revenue Department.
,, Military do.

Exd. E. Fernandez.

GENERAL.
ESTABLISHMENT.

Govt. of {1881} Madras.

PUBLIC WORKS.

Dated July, 14th.

Recd. *Encl.*

G.O., 14th July 1881, No. 1729 W

JULY.

RE-ORGANIZATION of the Public Works Department of the Madras Presidency.

39

MEMO.

In the management of famine works under the Department Public Works, it is accepted that as in ordinary times the unit for administration must be the Executive Division under the orders of either an Executive Engineer or an Assistant Engineer with similar powers.

2. To admit of an opinion being formed as to the Establishment of Public Works Officers essential for providing work for all able-bodied labourers capable of doing 75 per cent. and upwards of the normal, who may require employment in case of the recurrence of a famine as severe as the last in this Presidency, replies to the following questions are requested at an early date :—

What, in your opinion, would be a suitable establishment of

(1) Assistant Engineers.
(2) Upper Subordinates,

and what is the total number of able-bodied labourers that could be safely employed without such establishment being overwhelmed by the duties of setting out, measuring up, and paying for the work done in each of the following classes of Divisions ?

CLASS I.

Work of the largest type, so concentrated as to admit of the Executive Engineer inspecting portions of it daily, and the whole every three or four days,

a. Where all the conditions for economising the establishment exist, *e.g.*, the presence of reliable contractors who only need to have their work measured up and settled for, not oftener than once a month,

b. Where from the absence of large contractors, resort has to be had to execution by piece-work under departmental agency, the labourers after the first few days falling into groups under headmen of their own selection, and requiring the work to be measured up and paid for not oftener than once a week or ten days.

c. Where instead of employing either contractors or piece-work resort must be had to working by tasks under departmental agency requiring at first, that the work should be measured up and the labourers settled either daily, the periods for such being, however, extended as circumstances admit to every three or four days or a week if possible.

CLASS II.

Division, consisting of three or four works individually less than the above, each, however, requiring the special attention of a Sub-Division Officer (usually an Assistant Engineer) and which can be visited by the Executive Engineer once each week or ten days.

a. Where there are contractors and all other conditions are favorable for economising departmental supervision as before stated.

b. Where piece-work has to be resorted to under departmental supervision ditto.

c. Where task work ditto.

CLASS III.

Division, consisting of mixed works, large and small, the whole more or less scattered, but still within such distance of the Executive Engineer's head-

Numbers on Relief Works during certain months of 1877, contrasted with total population.

Districts.	Population of		Daily average numbers on Relief Works in the worst months of 1877.						Remarks
	Census of 1871.	Census of 1881.	January.	February.	March.	April.	May.	June.	July.	August.	September.
Ganjam	1,520,088	1,548,676	...	...	...	...	...	...	...	...	...
Vizagapatam	1,169,139	2,893,277	...	...	...	...	...	...	...	...	...
Godavari	1,592,089	1,792,806	...	...	...	...	...	...	...	...	...
Kistna	1,192,974	1,548,501	2,384	3,187	2,122	2,230	1,848	2,320	3,761	12,246	9,906
Nellore	1,876,811	1,320,385	65,619	53,281	41,302	24,627	26,871	28,503	18,913	30,820	32,348
Cuddapah	1,351,191	1,120,118	191,425	100,358	64,863	67,873	73,225	106,394	137,032	145,161	133,476
Bellary	1,068,906	1,339,763	360,597	309,381	225,295	227,070	259,539	250,807	210,240	296,962	170,676
Kurnool	939,640	711,527	298,768	236,324	198,685	211,583	205,306	206,813	212,456	218,545	120,676
Chingleput	993,184	925,534	10,919	11,226	8,627	10,713	7,618	27,703	20,044	26,345	25,203
Madras	897,569	406,117	387	3,996	6,056	7,989	6,693	11,649	14,298	19,472	21,169
North Arcot	2,016,278	1,817,661	22,109	20,206	20,219	30,790	46,030	52,720	53,401	62,578	76,485
South Arcot	1,763,817	1,815,151	...	...	741	602	1,559	210	79	863	2,225
Tanjore	1,978,781	2,140,585	...	...	...	...	...	...	...	...	3,231
Trichinopoly	1,200,408	1,519,306	...	632	615	...	...	...	...	...	...
Madura	2,266,615	2,167,381	5,383	7,178	7,112	10,406	12,826	...	238	4,199	7,785
Tinnevelly	1,693,959	1,700,910	1,727	1,229	1,405	1,388	487	10,422	16,669	24,606	21,961
Coimbatore	1,768,274	1,628,667	20,159	23,229	23,890	22,903	21,169	25,875	20,628	29,211	30,330
Salem	1,960,995	1,599,425	24,629	36,980	46,120	54,115	55,824	48,501	42,211	51,317	47,109
Totals ...	28,052,054	27,425,600	907,481	807,128	641,937	678,289	722,020	808,482	807,996	919,712	712,988

Variation of Public Works as above classified.

Class I.		Class II.		Class III.	
Establishment required.		Establishment required.		Establishment.	
Assistant Engineer.	Upper Subordinates.	Assistant Engineer.	Upper Subordinates.	Assistant Engineer.	Upper Subordinates.
Number of the latter that can be employed daily.		Number of subordinates that can be employed daily.		Number of labourers that can be employed daily.	

N.B.—Under Establishment, the Executive Engineer is excluded, as in all observations must be one officer of this grade or otherwise as such.

The zone liable to famine in this Presidency, as indicated during the last calamity, may be taken as comprising the Collectorates named in the annexed table showing

(1) Census of 1871
(2) Do. of 1881
(3) The daily averages of persons on relief works under both professional and civil agency from January to September, 1877, both inclusive.

quarters as to admit of a sufficient amount of personal supervision and inspection.

a. Where contractors can be employed as before.
b. Piece-work ditto.
c. Tasks ditto.

The information required as above should, for conciseness sake, be given in the following form, all observations being, as far as possible, embodied in the "Remarks" column.

From your personal acquaintance with any of the Districts named, be good enough to submit your opinion on the following points :—

(1.) Were the requisite professional agency made available for the preparation of projects of all classes (Productive, Protective and ordinary, whether Railways, Tramways, Irrigation, Navigation, Communications, Buildings, Miscellaneous Public Improvements) are you satisfied that such a programme of original Major works (*i.e.*, each estimated to cost over Rs.2,500) *of a character likely to be sanctioned in ordinary times*, could be prepared within say two years, capable of providing occupation for a maximum of 10 per cent. of the present population of the District for eight or nine months certain ?

(2.) In case you consider such a programme could be prepared and maintained, state briefly its character with any specially important works you would name as desirable to include in it, (*e.g.*, steam tramways on the Decauville system or other Protective works) and also, more precisely the strength of Establishment, (Engineering and Upper Subordinate,) which would be required above what at present exists in the Division for the preparation of the several schemes composing it.

(3.) Should you be of opinion that so large a programme of works of public utility is not practicable, state the limit in terms of a percentage of the present population, for which a feasible programme could be prepared with the extra establishment and time needed.

(4.) What fraction of the total programme as contemplated by you could be prepared by the existing establishment in two years ?

Turning now to the requirements of supervision during famine as dealt with under the three several classes enumerated at the commencement of this Memo., and your replies thereto, state as nearly as you can the strength of establishment you would consider as essentially necessary for carrying out the programme of works adverted to in (2) or (3) above, as you may consider one or other feasible.

For convenience, please embody your replies in a table as follows :—

Collectorate.	Population as per Census of 1881.	Numbers of able-bodied labourers for whom in addition to ordinary work can be provided daily for eight months certain by such a programme as you consider feasible.	Establishment Required.						Remarks as to the character of the works you would propose, naming any special ones of importance including "Protective."
			(1) For framing all the estimates within two years' time.			(2) For execution during famine.			
			Executive Engineers.	Assistant Engineers.	Upper Subordinates.	Executive Engineers.	Assistant Engineers.	Upper Subordinates.	

With regard to works which may have to be provided for under civil agency calling for no direct professional supervision, state generally your opinion as to the character of such (each under say Rs.10,000 in value) and the percentage of the present population for which work of a useful character can be found.

Also within what time you would be enabled, in communication with the Collector, to prepare a programme of such work for execution during famine.

R. H. SANKEY, COL., R.E.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

No. 48.

READ—the following letter from Colonel W. S. TREVOR, R.E., Secretary to the Government of India, Public Works Department (Civil Works—Miscellaneous), to the Secretary to the Government of Madras, Public Works Department, dated Simla, 6th May 1882, No. 163 M. :—

In reply to paragraph 9 of your No. 3198 W., dated 31st December 1881, and in continuation of this office letter No. 437 I., dated 12th November 1881, I am directed to state that the Government of India is desirous of confining the attention of the establishment, sanctioned against the "Protective Works Fund", entirely to the preparation of projects for works most suited to the purpose of protection from famine, as distinct from projects for works for affording relief during famine. It is thought that by confining the attention of this establishment entirely to its legitimate duties, and to the preparation of projects manifestly well adapted to *protective* purposes, the investigation of the schemes, for Steam Tramways and Light Railways, alluded to in your letter, could, without much difficulty, be conducted by it. More than one of the schemes, mentioned in your No. 1697, dated 9th July 1881, are confessedly of doubtful value; and it seems very unadvisable to employ establishment on the examination of such projects, when others of obviously greater importance await inquiry.

No. 48-A.

READ—the following Note by Colonel J. O. HASTED, R.E., Acting Chief Engineer for Irrigation, dated Ootacamund, 18th May 1882, No. 52 I. :—

The accompanying statements have been prepared from the lists submitted with this office No. 55 I., dated 21st February 1879, which were forwarded to the Famine Commission, and are printed in Appendix V of the Report of Famine Commission, showing under three different heads the projects proposed in the Madras Presidency for the extension of irrigation.

Statement No. I shows the projects which have been either sanctioned or submitted for sanction, and which are therefore disposed of.

Statement No. II shows the projects which, it is now considered, may be indefinitely postponed; the reasons for adopting this course are given in the remark column. It might be said that they may now be altogether set aside, but there are some which, when the large systems have been worked out and the population has increased, it may be possibly advisable to investigate.

Statement No. III shows the projects which it is proposed to take up and thoroughly investigate, and the agency by which it is suggested the work shall be done. It includes the projects now being investigated in the project and other divisions, and every work entered in the lists above referred to not named in Statements Nos. I and II, except those affecting existing irrigation, and which are not capable of any considerable extension.

Statement No. IV shows all these projects in the order in which it is proposed to take them up, the 13 works not allotted being reserved until further progress has been made in the project divisions.

2. It is possible that some of the projects which it is now proposed to work out may prove so remunerative that the works may be classed as Productive Public Works, but this can only be ascertained after they have been worked out. They are all Protective Works, and as such the establishment provided for from funds allotted for the prevention of famine may properly be employed on them.

3. A recent order of the Government of India makes a distinction between works intended for the prevention of famine, and works intended for execution during famine, and apparently contemplates the complete investigation of projects which answer the first condition only. Now, although, as stated above, all the works referred to may be classed as Protective Works, many of them would be suitable for the employment of famine labor, but until they are investigated it is impossible to ascertain to what extent they will be useful as famine works. Generally speaking, all those projects which contemplate the construction or improvements of reservoirs would, to a greater or less extent, provide employment for famine labor, but to class these works as famine works, and therefore only partially to investigate the projects and prepare rough estimates would, it is considered, lead to a waste of time and money. Allowing that they are Protective Works, the projects should thoroughly be worked out and submitted in such a complete state that the work can be commenced forthwith if necessary. They cannot be commenced for some time to come, and therefore many of them will, in all human probability, remain available for the employment of labor when failure of the monsoon rains has again induced scarcity or famine. To show how far these works will be available as famine works, it might be well to append to the estimates, when submitted, a statement showing the number of skilled and unskilled laborers that could be employed on them for, say, six months.

4. In Statement No. IV it will be seen that a very long list of projects has been allotted to the C Project Division. This division is working and will work in the Third Circle, which comprises the districts of Cuddapah, Kurnool and Bellary, a part of the country which is most liable to suffer from failure of the rains. The projects proposed contemplate the diversion and storage of the flood water of the rivers which traverse these districts, and many of them have been worked out in connection with the Madras Irrigation and Canal Company's works, the plans, &c., prepared by the officers of that Company having been handed over to Government. There is therefore a great deal of work already done, and it is now proposed to take up the rivers systematically, examining the projects already investigated in turn, and to work out such schemes as may promise most effectually to utilize the water-supply.

5. In Statement No. II the Nilgiri reservoirs are included as projects to be indefinitely postponed, and in Statement III, in the remark opposite the Neringipett Anicut, reference is made to the Bhavani reservoir which was not included in the original lists. This reservoir was proposed to be constructed somewhere near the junction of the Bhavani and Moyar river, which together fall into the Cauvery. It was partially investigated and reported on by Major Montgomerie, R.E., in May 1880, and is intended as a flood regulator, to supplement the supply of water to the Cauvery Delta, and also to supply local cultivation. It is considered very important that the subject of flood regulators on one of the rivers supplied by the south-west monsoon should be taken up, and it is now thought, after the investigations that have been made, that such reservoirs can more probably be provided at reasonable cost at the foot of the hills rather than in the hills.

To the Acting Joint Secretary to Government, Public Works Department, Irrigation Branch.

ENCLOSURES.

I.

STATEMENT of Irrigation Projects referred to in List accompanying this office No. 55 I., dated 21st February 1879, which have been disposed of.

—	REFERENCE TO LISTS. List.	Number.	District.	System or Source of Supply.	Name of Project.	Remarks.
	A	A	Godávari ..	Godávari Delta System.	Eastern Delta Completion.	Estimates have been submitted to the Government of India.
	..	B	..	..	Central Delta Completion.	
	..	C	..	..	Western Delta Completion.	
	..	E	Kistna ..	Kistna Delta System.	Eastern Delta Completion.	Estimates have been sanctioned by the Secretary of State.
	..	F	..	..	Western Delta Completion.	
	..	M	Nellore ..	Pennér River.	Sangam Project ..	Do. do.
	..	N	Tanjore ..	Cauvery Delta System.	Upper Anicut—Regulation of the Cauvery at Grand Anicut.	Do. do.
	..	W	Tinnevelly ..	Támbraparni.	Srivaikantham Anicut.	
	B	I	Ganjam ..	Rushikulya ..	Rushikulya Project.	Estimates have been submitted to the Government of India. Do. do.

II.

STATEMENT of Irrigation Projects referred to in Lists accompanying this office No. 55 I., dated 21st February 1879, to be indefinitely postponed.

—	REFERENCE TO LISTS. List.	Number.	District.	System or Source of Supply.	Name of Project.	Remarks.
	A	D	Godávari ..	Godávari River.	Polavaram Anicut ..	It is only necessary to quote the late Colonel Anderson's remark: "It cannot seriously be thought of until the Delta System has been fully completed."
	B	3	Ganjam ..	Vamsadhara River.	Vamsadhara or Chicacole Project.	Investigations that have hitherto been made on these projects have shown that the Zemindari rights are almost an insuperable bar to the improvement of irrigation.
	..	4	Vizagapatam.	Surada ..	Krishnamraz Channel.	
	..	5	Do. ..	Do. ..	Kondakirla Ava Project.	
	..	6	Do. ..	Nangoolia River.	Nangoolia River Project.	
	..	7	Kistna ..	..	..	These projects have been to some extent investigated; they are not recommended, as scantiness of population prevents extension of irrigation. Moreover, the Delta Works in the district will be in progress for many years to come, and irrigation is steadily increasing under these works.
	B	8	Do. ..	..	Pondapad Tank ..	
	..	9	Do. ..	..	Kolapilly Tank ..	
	..	10	Do. ..	..	Uppurla Tank ..	
	..	11	Do. ..	Muneyar ..	Muneyar Anicut ..	
	..	12	Do. ..	Nagaleru ..	Kanding Nagaleru ..	
	..	..	..	Peddavagu ..	Kanding Peddavagu and Yeddavagu.	
	B	38	North Arcot.	Cheyár ..	Kambakum Project.	This was examined and set aside some years ago.
	..	42	Salem ..	Kurambapilly.	Vadatalao Project ..	Do. do.
	..	43	Do. ..	Ponniár ..	Malapady Tank Restoration.	Do. do.
	C	III	Ganjam ..	Mahánadi ..	Boilada Reservoir ..	These reservoirs were proposed with the Rushikulya Project which has just been submitted, but were not considered necessary.
	..	IV	..	Do. ..	Soolagutah do. ..	
	..	V	..	Goodaholo ..	Goodsholo do. ..	
	..	VI	..	Do. ..	Mutchycotta do. ..	

Statement of Irrigation Projects referred to in Lists accompanying this office, &c.—*cont.*

—	Reference to Lists. List.	Number.	District.	System or Source of Supply.	Name of Project.	Remarks.
..	..	VIII	Vizagapatam.	Surada ..	Kondakirla Ava ..	Referred to above, B 5.
..	..	XII	Kurnool ..	Goomlacumma.	Mamadavaram Reservoir.	See remarks, B 7 to 12.
..	..	XIV	Bellary ..	Chitravati River.	Parnapally Reservoir.	This has been given up, as borings in the bed of the river have shown that a safe foundation for the dam cannot be obtained.
..	..	XV	Mysore ..	Budra River.	Luckavelly River ..	These projects were partially investigated in connection with the Madras Irrigation and Canal Company's works, but have been given up. The right of the Madras Government to store and make use of the water of rivers in foreign territory cannot be established.
..	..	XVI	Do. ..	Tungr River.	Moodaba Reservoir ..	
..	..	XVII	Do. ..	Choarly River.	Masoor Reservoir ..	
..	..	XXII	Malabar and Coimbatore.	Bhavani ..	Palavoor Reservoir..	Some of these projects have been investigated, and an attempt (which failed) was made to construct the bund of one of the reservoirs by the silting process. It is now considered that sites for the construction of reservoirs to regulate the flood waters of the Cauvery should not be looked for in the hills.
..	..	XXIII	Do. ..	Do. ..	Kottamala Reservoir.	
..	..	XXIV	Nilgiris ..	Pykara River.	Pykara Reservoir ..	
..	..	XXV	Do. ..	Drainage into Moyar.	Nunjanad Reservoir.	
..	..	XXVI	Do. ..	Pearkay ..	Lake Victoria ..	
..	..	XXVII	Do. ..	Do. ..	Lake St. Lawrence..	
..	..	XXVIII	Do. ..	Sandy Nullah.	Sandy Nullah ..	

III.

STATEMENT of Irrigation Projects referred to in Lists accompanying this office No. 55 I., dated 21st February 1879, showing the Agency by which it is proposed they should be investigated.

Division or Circle to which Project is allotted.	Reference to Lists. List.	Number.	District.	System or Source of Supply.	Name of Project.	Remarks.
D. Project Division.	A	B	Bellary ..	Tungabhadra River.	Upper Bellary Project.	Estimated for by the Madras Irrigation and Canal Company's Canal officers.
Second Circle.	..	L	Nellore ..	Pennar Anicut System.	Survapully Project..	The estimates are under preparation.
D. Project Division.	..	O	South Arcot, Tanjore.	Coleroon River.	Lower Coleroon Anicut.	It is intended to improve and extend the irrigation under the existing anicut.
B. Project Division.	..	U	Coimbatore and Salem.	Cauvery ..	Neringipett Anicut..	This will be considered when the Bhavani river is investigated.
C. Project Division.	..	V	Madura ..	Vaigai ..	Perryaur Project ..	Estimates are expected to be ready in three or four months.
D. Project Division.	B	2	Ganjam ..	Korkey River.	Mullada Tampara Project.	Revised plans and estimates are being put into shape.
Not allotted ..	..	13	Nellore ..	..	Restoring Adurapillai Tank of Gudlalore.	Ruined tanks which may be worth restoring.
Do. ..	..	14	Do. ..	..	Restoring Tirumalapady Tank.	.....
Do. ..	B	15	Do. ..	..	Restoring Gandipalem Large Tank.	
..	..	16	Cuddapah ..	Sugglair ..	Sugglair Project ..	These projects are for the utilization of the water of rivers in Cuddapah, Kurnool, and Bellary. Some of these have been investigated by the officers of the Madras Irrigation and Canal Company. It is proposed to take up each river separately and conclusively to deal with each project in turn.
..	..	17	Do. ..	..	Talarychervoi Dyalla Tank Restoration.	
..	..	18	Do. ..	Papadry ..	Anicut to Papadry ..	
..	..	19	Do. ..	Pennér ..	Peddapanda Channel Irrigation.	
..	..	20	Kurnool ..	..	Restoring Venkatareddipalem Tank.	
..	..	21	Do. ..	..	Arvaid Tank Restoration.	

Statement of Irrigation Projects referred to in Lists accompanying this office, &c.—*cont.*

Division or Circle to which Project is allotted.	Reference to Lists. List.	Number.	District.	System or Source of Supply.	Name of Project.	Remarks.
..	B.	22	Kurnool ..	..	Kálavatala Tank Project.	These projects are for the utilization of the water of rivers in Cuddapah, Kurnool, and Bellary. Some of these have been investigated by the officers of the Madras Irrigation and Canal Company. It is proposed to take up each river separately and conclusively to deal with each project in turn.
..	..	23	Do. ..	Duvulair ..	Duvulair Project ..	
C. Project Division.	..	24	Do. ..	Hindri ..	Taikur Reservoir ..	
..	..	25	Do. ..	..	Dewanapilly Reservoir.	
..	..	26	Do. ..	..	New Tank, south of Arveed Tank.	
..	..	27	Do. ..	..	Garladiuna Tank ..	
..	..	28	Do. ..	..	Tank sites in Márkápur Taluk.	
..	..	29	Bellary ..	Penner ..	Bookacharla Project.	
..	..	30	..	..	Potalacoonta Tank Project.	
..	..	31	..	Hagari ..	Mylapore Reservoir at Hagari.	
Do. ..	..	32	..	Penner ..	Hindupur Project ..	These projects are expected to be submitted shortly.
Do. ..	..	33	..	Do. ..	Roddam Project ..	
Do. ..	..	34	..	Hagari ..	Hagari Raidrug ..	See remarks, B.15 to 31.
Not allotted ..	..	35	Chingleput ..	Narnaveram River.	Improving irrigation under Narnaveram River.	These projects have been partially investigated.
Do. ..	..	36	..	Cortiliar River	Channel from Anicut at Tamrapaukum.	
D. Project Division.	..	37	North Arcot.	Pálár ..	Improving Pálár River Channels, N. Section.	This as well as the improvement of irrigation in the S. Section is now under consideration with a view to the submission of a complete estimate system, as required by the Government of India.
Fourth Circle.	..	39	Do. ..	Cheyár ..	Cheyár River ..	There is no information regarding these projects.
Fifth Circle ..	..	40	South Arcot.	..	Athur Project ..	
Do. ..	..	41	..	Trimaneemcotanaddy.	Pullagacherry Channel Project.	Partly investigated.
B. Project Division.	B	43	Salem ..	..	Pennacondapuram Tank Project.	These were commenced as famine relief works. Projects are expected to be submitted shortly.
Do. ..	..	44	..	Sunnath Conara River.	Marandahully Project.	
Do. ..	..	45	..	Ponniár River	Paroor Project ..	
Fourth Circle.	..	47	Coimbatore ..	Cauvery ..	Improvement and extension of Pugalore Channel.	Commenced as famine relief work.
Do. ..	..	48	..	Bhavání River	Channel from Bhavám to the Nóvil.	Not investigated.
D. Project Division.	..	49	Trichinopoly.	Cauvery ..	Vengur Channel Project.	Estimates have been prepared, but require revision.
Do. ..	..	50	..	..	Kodunkoray Tank Project.	.....
Sixth Circle ..	..	51	Tinnevelly ..	Támbraparní.	Maradur Channel improvement.	
D. Project Division.	C	VII	Ganjam ..	Korkey River.	Mullada Tampara ..	See remarks above, B 2.
Not allotted ..	..	IX	Godávari ..	Yerracalva ..	Annamalunka Reservoir.	Project has been investigated, but may require revision.
Do. ..	..	X	..	Penner ..	Gandicotta Reservoir.	Proposed, but not investigated.
Do. ..	..	XI	Nellore ..	Do. ..	Do. do. ..	
Do. ..	..	XIII	Kurnool ..	Kistna ..	Great Kistna Reservoir.	Proposed by Sir A. Cotton.
B. Project Division.	..	XVIII	Salem ..	Ponniár River	Krishnagiri Reservoir.	Partly investigated.
Do. ..	..	XIX	Do. ..	Stream from Shevaroy Hills.	Vaniár Reservoir ..	
Do. ..	..	XX	..	Swatanaddy.	Goodanully Reservoir.	Site examined and favorably reported on.
Do. ..	C	XXI	Coimbatore ..	Cauvery ..	Allambody Reservoir.	Not investigated.
..	..	XXIX	Madura ..	Pitchiour ..	Tank in Thalihooth Manoor Valley.	Partly investigated. Will not be taken up if Perryaur Project is sanctioned.
Not allotted ..	..	XXX	..	Pálár ..	Páni Reservoir ..	
..	..	XXXI	..	Vaigai ..	Gullapuram Reservoir.	
..	..	XXXII	..	Do. ..	Reservoir near Battigondoo.	
D. Project Division.	..	XXXIII	Tinnevelly ..	Támbraparni.	Pápanásam Reservoir.	Not investigated.

IV.

STATEMENT showing Irrigation Projects in progress, or to be taken up, in order of importance.

Division or Circle to which Work is allotted.	Reference to Appendix V. Report of Famine Commission. List.	Number.	District.	System or Source of Supply.	Name of Project.	Remarks.
B. Project Division.	B	43	Salem ..	..	Pennacondapuram Tank.	
..	..	44	Do. ..	Sunnuh Coonars River.	Marandahully Project.	These are nearly completed.
..	..	45	Do. ..	Ponnér River.	Baroor Channel ..	
..	C	XIX	Do. ..	..	Vaniár Reservoir ..	In progress.
..	..	XVIII	Do. ..	Ponnér River	Krishnagiri do. ..	It is possible that very little work will be needed here.
..	A	V	Do. ..	Cauvery ..	Narsjapett Anicut..	The work is entered in the list referred to in column 2, but will probably be superseded by the Bhavani Reservoir near Sayramanjalam, reported on by Major Montgomerie, which it is proposed now to investigate.
..	C	XX	.. ..	Swatanadi ..	Goodanully Reservoir	.....
..	..	XXI	Salem ..	Cauvery ..	Allambady do. ..	.....
C. Project Division.	B	32	Bellary ..	Penner ..	Hindupur do. ..	These are nearly completed.
..	..	33	Do. ..	Do. ..	Roddam do. ..	
..	A	V	Madura ..	Vaigai ..	Perryaur Project ..	This is about to be taken up by Major Pennycuick.
..	B	26	Cuddapah ..	Penner ..	.....	It is intended that the rivers should be taken up successively and thoroughly investigated. All projects hitherto proposed, including those investigated by the Madras Irrigation and Canal Company, the surveys and plans of which were made over to Government being taken into consideration.
..	..	30	..	..	.....	
..	..	31 and 34	Kurnool .. and Bellary ..	Hindry, and Hagari and minor rivers.	.....	
..	B	2	Ganjam ..	Korkay River.	Mullada Tampara Project.	This has to be put into shape. The work is mentioned both in List B and List C.
..	C	VII	.. ..	..	.....	.....
..	A	H	Bellary ..	Tungabhadra River.	Upper Bellary Project.	
D Project Division.	B	37	North Arcot.	Palár ..	Improving River Channels. North Section.	The North Section only is mentioned, but the South Section has to be taken up also. Much of the work has been done.
..	C	XXXIII	Tinnevelly ..	Támbraparni.	Pápanásam Reservoir	
..	B	49	Trichinopoly.	Cauvery ..	Vengur Channel Project.	
..	..	50	.. ..	Do. ..	Koduthoray Tank Project.	
..	A	O	South Arcot Tanjore ..	Coleroon River.	Lower Coleroon Anicut.	
Fourth Circle.	B	47	Coimbatore ..	Cauvery ..	Pugalár Channel.	
..	..	48	Do. ..	Bhavání ..	Channel from Bhavání to Nóyil.	
Fifth Circle ..	B	40	South Arcot.	..	Athur Project	
..	..	39	North Arcot.	Cheyár ..	Cheyár River.	
..	..	41	.. ..	Trimutteemoo-toonadi	Pullagacherry Channel Project	
Not allotted ..	B	13	Nellore ..	..	Restoring Adurapillai Tank of Griddalore.	
Do. ..	..	14	Do. ..	..	Restoring Timmalapady Tank.	
Do. ..	B	15	Do. ..	..	Restoring Gandipalum Large Tank.	
Do. ..	B	35	Chingleput ..	Varnaveram River.	Improving irrigation under Narnaveram River.	
Do. ..	..	36	.. ..	Cortiliar River.	Channel from Anicut at Tásarapakam.	
Do. ..	C	IX	Godávari ..	Korracalva ..	Annamalanka Reservoir.	
Do. ..	..	X	.. ..	Ponnér ..	Gandicotta Reservoir.	
Do. ..	..	XI	Nellore ..	Do. ..	Do. do.	
Do. ..	..	XIII	Kurnool ..	Kistna ..	Great Kistna do.	
Do. ..	..	XXIX	Madura ..	Pitchiar ..	Tank in Thadanoothi Mannoor Valley.	
Do. ..	..	XXX	.. ..	Palár ..	Palni Reservoir	Will not be taken up if the Perryaur Project is sanctioned.
Do. ..	..	XXXI	.. ..	Vaigai ..	Gullapuram do.	
Do. ..	..	XXXII	.. ..	Do. ..	Reservoir near Batlagoondoo	

No. 49.

ORDER—dated 13th June 1882, No. 465 I., Public Works.

Ordered that the following letter be sent to the Government of India :—

(Here enter No. 466 I., dated 13th June 1882.)

(True Extract.)

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

To the Chief Engineer for Irrigation,
" Consulting Engineer for Railways, } with copy of letter.
" Superintending Engineer
" S.E. Tank Maintenance Scheme

Exd. C. Howarth.
Spare Copies.

IRRIGATION.

Govt. of [1882] Madras.

PUBLIC WORKS.

Dated June, 13th.

Recd. *Encl.*

G.O., 13th June 1882, No. 465 I.

JUNE.

Nos. 48-49

Irrigation Projects suitable for Famine Relief.

Statements of —, forwarded to the Government of India.

PUBLIC WORKS DEPARTMENT.

Irrigation.

No. 50.

LETTER—from

COLONEL R. H. SANKEY, C.B., R.E.,

Secretary to Government, Public Works Department,

To

THE SECRETARY TO THE GOVERNMENT OF INDIA,

PUBLIC WORKS DEPARTMENT.

SIR,

With reference to your letter No. 163, dated 6th ultimo, I am desired by the Right Honorable the Governor in Council to forward the four statements of irrigation projects, as per margin, with a Note by the Chief Engineer for Irrigation, dated 18th ultimo.

I. Statement of irrigation projects which have been disposed of.
II. Statement of irrigation projects to be indefinitely postponed.
III. Statement of irrigation projects showing the agency by which it is proposed they should be investigated.
IV. Statement showing irrigation projects in progress, or to be taken up, in order of importance.

2. Of these statements, No. I enumerates practically ten works which have either been sanctioned or the projects for which have been framed or submitted. Though classed technically as "*Productive*," they are each and all necessarily "*Protective*," and would moreover be very suitable for famine works, should such a calamity occur while they are in course of ordinary execution.

3. Statement II contains 31 works, which, though previously proposed and many of them in great degree investigated, are now proposed to be indefinitely postponed for the reasons assigned opposite each. In order to save time and prevent misapprehension it is thought best by this Government to place these on a prohibited list. To this list will also be transferred all other projects which, on sufficient investigation, are proved to the satisfaction of Government, to be capable of classification neither as Productive nor Protective.

For the reasons assigned in another letter of this date, No. $\frac{1275}{B}$ W. His Excellency in Council is wholly averse to the commencement of large works during famine which cannot be classed either as Productive or Protective, or which would not from their nature be undertaken in ordinary years were funds available, or again any works however classified, which have not undergone all the needful scrutiny and been sanctioned by Government in ordinary course.

4. Statement III contains 56 works which it is proposed to investigate, and Statement IV shows the order of importance in which such investigations are to be taken up, and the project divisions or other agency to be employed with this object.

5. As the Government of India is unprepared to sanction any increase to the permanent establishment, for undertaking these investigations, and as the immediate necessity for creating two* new divisions for the execution of lately sanctioned irrigation projects, and another immediately anticipated, will certainly absorb all the suitable agency of a temporary character available in South India, this Government is of opinion that the scheme now sent up is all that can, under existing circumstances, be attempted.

* 1. Kistna Completion Works.
2. Cauvery and Vennár Regulations.
3. Godávari Completion Works.

6. In the letter under reply the Government of India express an opinion that, the attention of the establishment should be confined entirely to its legitimate duties, and to the preparation of projects manifestly well adapted to protective purposes, but as with regard particularly to irrigation works it is quite impossible, prior to exhaustive investigation, to say whether a project can be classed as Productive or merely as Protective, His Excellency in Council has no other course open than to deal with the matter as above suggested, leaving, if necessary, the charge for establishment to be distributed in the best feasible manner, after the close of each year's operations.

7. In reference to Tramways or Light Railways to be employed as Protective Works, the inquiries are as yet, I am to say, incomplete, but the subject will be dealt with at the earliest opportunity.

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

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

OOTACAMUND,
13th June 1882.

Edd. C. Howarth.
Spare Copies

IRRIGATION.

Govt. of {1882} Madras.

PUBLIC WORKS.

Dated June, 13th.

Read. *Encl.*

13th June 1882, No. 466 I.

JUNE.

No. 50.

Irrigation Projects suitable for Famine Relief.

STATEMENTS of —, forwarded to the Government of India with observations.

50

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

No. 7.

READ—the following papers:—

From the Collector of Trichinopoly, dated 14th June 1882, No. 1748.
Do do. Anantapur, „ 20th „ „ „ 74.
Proceedings of the Board of Revenue, dated 12th August 1882, Mis. No. 6162, on letter from Collector of Bellary, dated 1st August 1882, No. 2617.
Proceedings, Revenue Department, transferring above, dated 18th September 1882, No. 3057.
From the Collector of Bellary, dated 14th October 1882, No. 3553.
Endorsement, Revenue Department, on above letter, dated 24th October 1882, No. 3504.

No. 8.

ORDER—dated 3rd November 1882, No. 2882 W., Public Works.

In the orders of the Revenue Department of the 21st August 1880, No. 995, it was directed, under instructions from the Government of India, that all serviceable tools of the ordinary description suitable for famine purposes should be stored, wherever practicable without much expense, at the Taluk or Huzur Cutcherries, or at the Public Works Stores in the various districts, as might be most convenient. Several Collectors have now requested permission to dispose of tools thus stored. It is alleged that the tools take up much valuable space, that they are deteriorating and that they might be utilized on Government works.

2. Before finally deciding as to whether any modification of existing orders on the subject is desirable, the Government would be glad to be furnished with the views of the Collectors of other Famine Districts, which will be submitted as early as practicable through the Board of Revenue.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Offg. Secy. to Govt., P.W.D.

To the Board of Revenue.
„ Revenue Department.
To Superintending Engineers.

Exd. S. T. Austin.
Spare Copies

GENERAL ACCOUNT.

Govt. of {1882} Madras.

PUBLIC WORKS.

Dated November, 3rd.

Read. *Enc.*

G.O., 3rd Nov. 1882, No. 2882 W

NOVEMBER.

Nos. 7-8.

Serviceable Famine Tools.

Requesting the submission, through the Board of Revenue, of the views of Collectors of certain districts relative to the disposal of —.

4TH APRIL 1884, No. 920 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General Account.

READ—the following paper:—

Proceedings of the Board of Revenue, dated 22nd March 1884, No. 1041.

Read—the following letter from W. H. GLENNY, Esq., Collector of Kurnool, to the Secretary to the Board of Revenue, dated 19th March 1884, No. 1-Z.

Some of the contractors working on the Bellary-Kistna State Railway have been asking me whether I am disposed to sell them some of the serviceable famine tools of which we have such large quantities. I strongly recommend that we should sell as many of these tools as we can get a fair price for. If the Board agree with me, I have the honor to ask them to suggest to Government that orders by telegram should be sent direct to Captain Jackson, Executive Engineer, Kurnool, who has charge of all the tools, directing him to sell as many as he can dispose of at what he considers a fair price. After the disposal of all that we are likely to be able to sell, more would remain than we are likely ever to want in the event of another famine.

Resolution—dated 22nd March 1884, No. 1041.

Submitted for the orders of Government in the Public Works Department.

2. The Collector of Kurnool wishes to dispose of some famine tools to the Bellary-Kistna State Railway. In proceedings, dated 2nd March 1883, No. 590, the Board remarked that they are "strongly of opinion that it is a wise measure of precaution to retain these tools even at a considerable cost in case of emergency," and by G.O., dated 28th March 1883, No. 940 W., the tools were placed in charge of Executive Engineers who are held responsible for their custody. The Board adhere to their opinion expressed in March 1883.

(A true Copy and Extract.)

(Signed) G. MACKENZIE,
Acting Sub-Secretary.

ORDER—dated 4th April 1884, No. 920 W., Public Works.

The Government are not prepared to authorise the sale of the tools in question, which should be kept in store as directed in G.O., No. 940 W., dated 28th March 1883.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, III Circle.
" Revenue Department.

Exd. E. Fernandez.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated April, 4th.

Read *Encl.*

G.O., 4th April 1884, No. 920 W.

APRIL.

Famine Tools

Declining to authorise the proposed sal of some of the serviceable — in the Kurnool district.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation Account.

READ—the following office note from D. C. GORDON, Esq., Examiner of Public Works Accounts, to the Chief Engineer for Irrigation, dated 20th August 1884, No. 382 :—

From proceedings of the Madras Government, No. 701 A.I., dated 4th August 1884, in which "Ganjam-Gopálpur Canal" was, for the first time, classed under Irrigation and Navigation Works for which Capital and Revenue Accounts are kept, it would appear evident that the project should be regarded as an addition to the two already existing Provincial systems (viz., Madras water supply and irrigation extension project and Buckingham canal) for which Capital and Revenue Accounts are kept. Please therefore inform me whether it is desirable that the new classification of the project should be formally sanctioned by Government in a separate proceedings and its past outlay (Rs. 17,413) directed to be transferred to Provincial from Protective Public Works, Famine Relief, where it hitherto appeared.

ORDER—dated 15th September 1884, No. 837 I., Public Works.

The estimates for excavating a tidal canal from Ganjam to Gopálpur were submitted for the sanction of the Government of India, with proceedings of Madras Government, No. 586 I., dated 23rd June 1884, the cost being apportioned between Famine Protective funds and Provincial funds, as in the case of the Buckingham canal; but the Government of India have declined to sanction the estimates until the Buckingham canal and the Rushikulya project are completed. The outlay incurred in investigating the Ganjam-Gopálpur canal project, which was, in the first instance, provisionally charged to Famine Protective funds, will now be written back, in the current year's accounts, to "Provincial, 44. Irrigation and Navigation."

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

To the Superintending Engineer, I Circle.
" " " V "
" Chief Engineer for Irrigation.
" Examiner, Public Works Accounts.
" Revenue Department.

Exd. E. Fernandez.
Spare Copies

IRRIGATION.
ACCOUNT.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated September, 15th.

Read. *Encl.*

G.O., 15th Sept. 1884, No. 837 I.

SEPTEMBER.

Ganjam-Gopalpur Canal Project

Instructions for adjustment of outlay incurred in investigating the —.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Proceedings of the Board of Revenue, dated 7th January 1885, No. 22 :—

Read—G.O., dated 30th December 1884, No. 1435, Revenue.

Read—the following letter from C. A. GALTON, Esq., Acting Collector of Bellary, to the Secretary to the Board of Revenue, dated Adóni, 29th December 1884, No. 3560 :—

In continuation of my letter * of the 19th instant, No. 3469, to Government, I have the honor to submit lists of works proposed for execution as famine relief works in case of necessity arising. As already reported the people are leaving their villages in large numbers in the south-east corner of the district in search of labor, and as the ordinary means of employment for the agricultural classes will not be available this year owing to the failure of the later crops over a wide area, it will be absolutely necessary for the State to provide work for those whose resources will not enable them to tide over the period of six months which must elapse before the next cultivating season will commence.

* Copy whereof was sent to the Board on 20th December 1884.

2. The Government are aware that the munjari (earlier) crop on the red soils, except on lands irrigated by wells and channels, has proved very deficient owing to the scanty rainfall, the yield in many localities being only from two to four annas, *i.e.*, from one-sixth to one-third of the average outturn and hardly anywhere exceeding a half crop. The hingari or later crop will, I fear, prove a complete failure throughout almost the whole of the black soil tract comprising the taluks of Bellary and Alúr, about half of Adóni and third of Rayadrug. In some parts of this area there have been a succession of bad seasons, hence the poorer ryots have no reserves of grain on which they can depend till the next harvest. Stocks of fodder too are very low, and most of the cattle have been driven away to distant hills in search of pasturage. I rode from Bantanahal to Alúr and back to Bellary ten days ago. I have now traversed the length of the Bellary taluk to Sirugappa and thence crossed to Adóni. These marches enable me to speak confidently regarding the state of the Alúr and Bellary taluks. The southern half of these two taluks is, to a great extent, unsown, or the seed has not germinated. Where cholum has sprung up it has grown a span or two high and then withered for want of moisture in the soil and rain. Such crop as exists is worthless and will not even yield straw for the cattle. The northern half of the two taluks has been cultivated extensively. There is hardly any waste to be seen, and the cholum crops which are generally from two to three feet high would have yielded a fair outturn, probably at least half, had there been sufficient rain during the last month. They are fast withering just when they should be coming into ear, and are, I think, past revival even if rain were to fall now. The ryots will get no grain, but will secure some straw. Cotton has not been extensively sown in this tract this year. What I saw was stunted and burnt up. It will yield little or nothing. The condition of this part of the Adóni taluk is better; the difference is noticeable as you enter the taluk from Sirugappa. The cholum will yield something and would have been a good crop with a little more rain. Cotton looks more thriving than in Bellary and

Alúr and will probably yield half the average outturn. I am now going to the north-east corner to Nagalddinni and across to the Tungabhadra station to inspect the worst part of this taluk. I give below the rainfall for these three taluks for the current year.

	South-West Monsoon.						North-East Monsoon.			
	April.	May.	June.	July.	August.	September.	Total.	October.	November.	December.	Total.
Bellary	40	46	97	50	68	93	3·57	1·78	·82	..	3·34
Alúr	..	1·37	37	·93	1·87	2·30	6·83	2·48	..	..	2·48
Adóni	1·80	·27	1·30	1·47	4·52	3·00	12·36	3·00	·01	·02	3·03

3. I do not however anticipate anything more serious than a period of high prices which I trust will not touch scarcity rates; present prices at head-quarters as compared with the recognized scarcity rates are shown below; the affected area is comparatively limited and it is intersected by a line of railway by means of which supplies of food-grains can be obtained from neighbouring districts where the harvest has been plentiful. Under such conditions there cannot be any lack of supplies and prices can, hardly I think, be maintained at scarcity rates. The impetus given to importation by rail and road is seen in the enclosed statements. In the early part of September the imports by rail were only about one hundred tons a week chiefly rice and Bellary was exporting cholum to a considerable extent. In the second week in December the imports had risen to 750 tons, of which 420 were dry food-grains. By road the grain traffic is almost entirely with Mysore; the transactions with the Nizam's country being inconsiderable. On the western side of the district the imports of rice have not risen considerably since June, but during September and October there was a great increase in the imports of dry grains, the staple food of the people; the diminution in the supply obtained from this source in November was probably due to the harvesting of the early crops grown on the red soils in these taluks. These statements evidence activity in the grain market and there is no reason to fear any cessation thereof. In my opinion all that is likely to be required is work for the people to enable them to purchase their food, and the question is how can this best be done.

	Rice.	Cholum.	Ragi.	Cumbu.
Scarcity rates ...	9·5	13·5	14·5	13·
Present prices ...	12·9	18·00	23·3	16·9

4. The lists which I submit were drawn up in September when Mr. Sewell was in charge of the district, and from a draft report which he wrote I gather that it was his intention to send them on to Government at once; but I presume Mr. Goodrich was of opinion that the time had not arrived for proposing the opening of any special works. I have already requested that steps be at once taken to commence the Guntakal-Hindupur Railway embankment, but this work is not likely to afford employment for any length of time to all who will be flocking to it from this district and Anantapur, and I consider that no time should be lost in selecting other works to be put in hand later on, as the necessity arises. Plans and estimates are not ready for any of the civil agency works and none of the professional agency (*a*) works are sanctioned schemes, though the first three in the list A have been investigated. They were suggested by the Superintending Engineer, the remainder were selected from the lists furnished by divisional officers as requiring professional supervision. The schedule of (*b*) works B1 was framed in consultation with divisional officers. Meetings of the Local Fund Board and Municipal Commissioners were held and copies of the resolutions passed are forwarded herewith. Sub-committees of officials and the leading non-officials of each taluk were formed to select suitable works for entry in the programme. No estimates have been prepared for these works. If it is decided to undertake any of them the Local Fund Engineering staff will require strengthening to

prepare the requisite plans and estimates and provide efficient supervision. The establishment is not strong enough to prepare numerous estimates for works which may never be required. A list of feeder roads required for the development of railway traffic drawn up in consultation with the Deputy Consulting Engineer for Railways, Major Sidney Smith, for all of which estimates are ready is submitted. These can be put in hand at any time, but will afford employment only to a very limited number for a short time.

5. Owing to my brief acquaintance with the district I cannot pronounce any opinion as to the merits of individual works; as they were selected by those best acquainted with the locality, I have no doubt they represent the improvements most urgently needed. But I consider that very few of them are suited for the present purpose. What is wanted is the scheme of some magnitude which will afford employment to a large number of *unskilled* laborers for a considerable time; it should be accessible to the population of the affected area, but if possible at a sufficient distance from the homes of the majority to make resort to the work a test of the necessity for providing labor, and last but not least it should be a work which will render some return hereafter or at any rate prove a lasting benefit to the people of the neighbourhood instead of being merely a source of expense without any corresponding advantage. These conditions are satisfied by hardly any of the works proposed; those entered in the Local Fund lists fall under the three heads of (*a*) construction and repair of roads, (*b*) improvement of village sites and (*c*) improvement of water-supply. As to the first class although mere metalled roads would no doubt be useful in the black cotton soil tract and, if absolutely necessary, a large number can be employed in this manner in the Alúr and Bellary taluks where employment is chiefly required at present, I am doubtful whether it is good policy to spend any more money in this way. The Board can with difficulty maintain the roads already opened, and the proportion of the funds available for repair of roads is likely to be curtailed when the new Act is introduced, as the heads of service dependent on the General Fund have hitherto received an insufficient share of the assets. Another forcible objection to this description of work is that in a season of drought like the present when water is not available within a reasonable distance for the consolidation of the material, the cost must necessarily be much greater than it ordinarily would be.

6. As regards second and third classes they are mostly petty works which would not afford employment for more than a few days, and in the case of improvements to wells and tanks, especially on black cotton soil, it will generally be found that the work is too hard for unskilled labor, and that Ooddars must be employed. Even when the nature of the work is suitable, I do not consider it at all advisable to start works in the immediate vicinity of each village at the present juncture. Such employment should be reserved for a later stage when the cultivation season is approaching and it is desirable to provide labor for the ryots in the vicinity of their homes. At present there is no necessity for keeping them near their villages as there would be no cultivation operations for the next five months, and the distance to which they will go for employment will bear test of their necessity. If works are started too near their homes numbers will flock to them, who are not in such need as to induce them to go to any distance. Moreover a large number of petty scattered works cannot be properly supervised and much of the money will be wasted. For proper supervision there must be concentration of labor and a large scheme is required.

7. The list of civil agency works consists of repairs to various irrigation tanks and channels, but none of these works is of any magnitude and most of them lie in the western taluks, where the necessity for providing employment is not so great as in the eastern portion of the district. In the municipal list the principal item is the deepening of the Bellary tank which is estimated to cost Rs. 22,500 and would give employment to a thousand coolies for a period of six months. This work would not be remunerative, but it would be of value for the improvement of the water-supply of the town. In Adóni also the available funds can best be utilised in a similar manner. The time is not favorable for the repair of roads as water is scarce and the store must be husbanded.

8. Of the professional agency works the principal are the first three schemes. The Tungabhadra canal from Vallabhapur, designed to irrigate a large tract of country and to supplement the water-supply of the town of Bellary, is admirably fitted for a relief work and is likely to prove of greater benefit to the district than any other project which can be undertaken. The resolutions of the Local Fund Board and the Bellary Municipal Commissioners show the interest which is manifested in the scheme. The advantage to be derived from its execution are prominently set forth in the papers embodied in G.O., dated 26th August 1886, No. 2696, Public Works Department, in which are recorded two letters from Mr. Wedderburn, the then Collector, strongly urging the desirability of putting in hand the project. These letters demonstrate so clearly the benefits likely to be derived from the measure that it is unnecessary to say more on this point. The original scheme was estimated to cost some 95 lakhs of rupees, and was intended to supply irrigation to at least a quarter of a million of acres situated in the taluks of Hospet, Bellary and Alur. The Government remarked that they were well aware that the only certain and effectual mode of supplying the means of irrigation to the plains of Bellary is the construction of a sufficiently capacious canal from the Tungabhadra at or near Vallabhapur, but as the project formed part of the intended plan of operations of the Madras Irrigation Canal Company, the Government did not consider it advisable at that time to take any steps towards the prosecution of the work. That obstacle no longer exists, as the Company's works have, I believe, been transferred to the Government. Mr. Norfor is now employed in re-investigating this project with a view to a modification of the original plan so as to bring the cost within 50 lakhs. It is now proposed to lead the water from the Tungabhadra to the Daroji tank and thence by a low level channel into the town of Bellary. I fear the investigation has hardly advanced sufficiently to admit of the work being put in hand at once. Mr. Norfor has hitherto been engaged in surveying the line of the channel at the Vallabhapur end, but he informs me that he could in six weeks or two months complete the survey of the country between Daroji and Bellary, and lay out the land ready for the excavation of the channel, if required. It will probably, however, be considered inadvisable to execute this portion of the work before the investigation is complete, and it has been decided to undertake the whole project, as a channel from Daroji will be useless unless the tank supply is supplemented by the waters of the Tungabhadra. I would urge, however, that the matter should be considered in the Department of Public Works without loss of time. There appear to be so few useful or remunerative works available for the employment of a large body of laborers that it might prove less wasteful in the end to embark on a scheme which is admitted to be likely to be productive of much benefit to the district, even though the probable returns may not come up to the required standard for productive works, than to waste a large sum on roads which are not really required and cannot be efficiently maintained, or on repairs to minor irrigation works which will not prove any more remunerative.

9. The second work on the list is the Hagari-Rayadrug project, a description of which will be found in G.O., dated 30th January 1878, No. 255. The design was to bund off two channels from the Hagari river for the supply of several tanks and the irrigation of lands in the Dharmavaram, Rayadrug and Gooty taluks at a cost of 28 lakhs of rupees. Colonel Mullins did not recommend the scheme because the water-supply from the Hagari is unreliable, and the net return is not likely to exceed one per cent. on the outlay. The work was not at the time required for famine relief, but the Government remarked that "a fairly good project of moderate dimensions might be found in this direction, and it should be investigated at the first favorable opportunity." No steps have been taken to this end, and as it seems questionable whether the supply in the river is sufficient, the scheme is not one which can be taken in hand at short notice. The only other large scheme is the formation of a new tank in the Sandur valley. I understand, however, that it is likely to divert water from the Daroji tank, and for that reason cannot be recommended. Moreover, the Sandur State which will benefit by the work has no funds to spare.

10. I am unable at present to form even an approximate estimate of the numbers likely to apply for work. The agricultural population of Alur and Bellary, the two taluks more immediately concerned, is, according to the census tables, 28,700 and 43,500

respectively, and assuming that half of them will require employment, 36,000 laborers for these two taluks may be expected. I have no data for anything more than a rough guess. The railway works at Guntakal will suffice for the present, and the number resorting to them from this district will afford a means of judging what provision must be made as the year advances. My object in forwarding the lists without further delay is to obtain an early decision as to whether any Imperial or Provincial scheme is likely to be forthcoming in the hour of need, or whether we must rely chiefly on the ordinary agricultural repairs and Local Fund and Municipal works. In the latter event a selection should be made and estimates be prepared at once. The expenditure which may have to be incurred in excess of the funds available for public works in the Local Fund and Municipal budgets must be debited to Provincial as provided in paragraph 6 of the Famine Code, but the only change of system that will in my opinion be necessary for the present at any rate, is the exercise of control over contractors if employed, so that all who present themselves and are able to work should receive a fair rate of remuneration for a full task or piece-work.

11. I request that the orders of Government may be obtained at the earliest possible date.

Resolution—dated 7th January 1885, No. 22.

The foregoing Government order is communicated to the Collectors of Bellary and Kurnool, and with reference to paragraph 2 thereof, the Board submit to Government a further letter from Mr. Galton, in which he makes proposals for a scheme of relief in the Bellary district.

2. The Board agree with the Collector as to the gravity of the position and the need for providing employment for a portion of the laboring population of the distressed tract as the season advances, and they recommend that, as soon as the sanction of the Government of India is received, the construction of the earth-work of the Guntakal-Hindupur Railway be pushed forward with a view to affording labor for those in distress. The work is admirably suited to the purpose, and the Board concur with the Collector in deprecating the construction of roads in various localities where they are not much needed and which could not be kept up by the Local Fund Board. For the present the railway embankment will doubtless afford sufficient employment; but should it become necessary hereafter to open other works, it would seem that the project of a channel from the Tungabhadra towards the town of Bellary, entered as work No. 1 in list A accompanying the Collector's letter, is the most suitable project for selection, and the Board suggest that such further investigation of the project, as may be required, be at once undertaken by the Public Works Department. The further extension of this channel from the Daroji tank to the town of Bellary—if it is carried through that tank—may be postponed, as it would be of no service until the river is connected with the tank. Later in the season, if need be, the deepening of the large tank within the municipality might be undertaken, care being taken that the work of excavation is carried out in a more satisfactory manner than was the case in the last famine.

3. The Collector of Kurnool will consider what steps are necessary for giving effect to the instructions conveyed at paragraph 5 of the Government order and should take action without delay, reporting in due course to the Board.

4. It seems desirable, in view of the probable expansion of relief operations, that a Special Assistant be posted to the district—paragraph 11, Famine Code.

(A true Copy and Extract.)

(Signed) E. GIBSON,
Secretary.

To the Secretary to Government, Revenue Department,
with letter and enclosures in original to be returned.
" the Collector of Bellary.
" " Kurnool.

ORDER—dated 10th January 1885, No. 29, Revenue.

Miscellaneous.

The reply of the Government of India regarding the immediate commencement of the Guntakal-Hindupur Railway extension will be awaited.

2. Meanwhile, the foregoing Proceedings of the Board of Revenue will be transferred to the Public Works Department, in order that the further consideration of the Tungabhadra channel project may be promptly taken up.

3. The proposal to deepen the Bellary tank (the chief project on the list of municipal works) which, it is calculated, will give employment to a thousand labourers for six months will be considered in the Financial Department.

4. The Board's suggestion that a Special Assistant should be posted to the Bellary district will be considered when the time comes for the organisation of regular relief operations.

(True Extract.)

(Signed) H. E. STOKES,
Secretary to Government.

To the Public Works Department, Irrigation Branch.
" the Financial Department.
" the Board of Revenue, with eighteen enclosures.

Rgd. W. H. French.

80 Copies.

1/53

Govt. of [1885] Madras.

REVENUE.

Issued

Recd.

G.O., 10th January 1885, No. 29.

JANUARY.

Relief Works.

Orders passed on further proposals regarding — in the Bellary district.

List of Irrigation Projects showing the number of famine Labourers that can be employed on each

Cuddapah

months		
15	Kannal from Mandatur Tank	10,000
4½	Cheyair Embankment	10,000
3	Papagni — do	3,000
4½	Anglair Project	10,000
3	Peddapuspala Project	2,000
	Total	35,000

Kurnool

months		
4	Restoring Venkatareddipollium Tank	5,000
4	Mandtur Extension Channel	6,000
4	Tank South of Erraveed	5,000
4	Erraveed Tank Restoration	2,000
3	Kalavatala Tank Project	5,000
3	Devalair Project	2,000
3	Tungadimcha Diversion	5,000
	Total	30,000

Cuddapah

10	Toongabudra Channel	150000
	Total	150,000

Bellary

24	Bookacherla Project	30000
4	Hindupur — do	10000
4	Boddam — do.	5000
4	Potoolacunta — do.	5000
	Total	50000

Grand Total — 265,000

Supdg Engrs Office
Bellary 13 Augt 82.

Dt Executive Engineer
Supdg Engrs Circle

SUPERINTENDING ENGINEER'S OFFICE,

~~MADRAS~~,

No. 956 Bellary ~~Chepauk~~, 12th Augt 1884.

From Lt Col W.R. Vibart RE

~~THE~~ SUPERINTENDING ENGINEER,

~~III~~ CIRCLE,

55

To

THE Chief Engineer

PWD

Madras

SIR,

Enclosures.

Statement.

In continuation of my telegram dated the 11th Inst I have the honor to submit a Statement showing the number of Coolies for which each of the projects will provide labour.

2. In the list, I have not placed the Tungabhadra Diversion or the Munnar Canal. It would employ 5000 labourers for 3 months.

I have the honorable

Sir

Your most obdt Servant

Lt Colonel

Supdg Engineer Zeffirds

From

The Superintending Engineer,

1st Circle,

To

The

Dated } September 1884.
Recd. }

ENCLOSURES.

No. 956

Irrigation Projects in
Third Circle

Submitting a statement
of the Projects upon
which famine labour
can be employed

INDIAN TELEGRAPH

From Ootacamund To Bellary

INDIAN TELEGRAPH. Local No. 96

To DE Ootacamund From Red Penukonda (Station)

Words	Pay.	Hour.	Minute.	Official Instructions.
82	4	19	.	urgent

To (Person) Chief Engineer P. W. D.

From (Person) Lt. Col H. M. Vibart R.E.

1 Irrigation projects on
2 which famine labour
3 can be employed x
4 Cuddapah no thirty
5 five thousand Chankel
6 from Kandaleur tank,
7 Chepair enlargement Papagni
8 embankment Sugalan project
9 pedapuspula project Kurnool
10 twenty five thousand
11 Penkatareddipalliam tank,
12 main feeder extending Channels,
13 Cank south, & west,
14 do west Tank, Kalavatalu
15 tank perused, duplicate

Sent from L. P. At Hrs Mts. By

Sent to L. N. At Hrs Mts. By

Date OOTACAMUND 4-8-84 Telegraph Master

From

Ootacamund Bellary

INDIAN TELEGRAPH. Local No.

Class.

To

From

(Station)

Words	Day.	Hour	Minute.	Official Instructions.

To (Person)

From (Person)

Project Bellary End
Sub to P and Left Bank
Canal to Gabbadsa Channel
Anantapur Fifty Thousand
Rockchoola Sindapur
Road Gooty and Kasoolacum
Projects total two
Hundred and Eighty
Thousand

Chapple

Date OOTACAMUND 4-8-84 Telegraph Master

Form—No. 740—25-4-83—1700000

From

The Superintending Engineer

cle

8 AUG 14

Pub. 143/7

INDIAN TELEGRAPH

Local No. 286

W. D

Office XS. From Bellary

To Vijayawada (Station)

Words. Day. Hour. Minute. Official Instructions.

32/6 11 1730 Urgent.

To (Person) Addressed From (Person) Supg Engineer

Madras Works. &

Kundakur Channel will give labour for 15 months

Tungabudra Channel 12 months

Pookachintla project 24 months bother works between three and four months particulars by post

Recd. 11/8

Date COTACAMUND. 11-8-

Submitted in connection with papers R.A. 18804

265,000

6755

Dear Sir,

I am desired by the Secretary of State for War to forward herewith for your information a copy of the Telegram from General Officer Commanding in Chief the Egyptian Army No. 112 of the 5th instant regarding the Organization of Egyptian Army.

I am, Sir,
Your obedient Servant,

(1)

Secretary.

The Under Secretary of State,
Foreign Office.

AUG 3

MAY 3 1922

60

Can statement be
linked file be now
completed?

JH

19-8-82

To W
The Statement only has
been completed RS
20.8.82

C.A.W.

P.W.D

Please inquire of S.E. III. for how many months with the [redacted] works named in this telegram provide labour for the number stated by him.

The papers should be returned to me after telegram is despatched.

W.
5-8-84

J.W.
Telegram prepared accordingly
C.S.
5 8 84

P. W. D.

52

Telegram

Urgent State

To

S.E. III Circle.
Bellary

Your telegram fourth ×
For how many months
will works named provide
labour for two hundred
thousand
and sixty persons

(Sd) J.S.H.
Secy.

Tel. draft 5/5/04

Total acuta — 4 — 5,000
50,000
265,000

Famine labour immediately available

63

Circle	Division	Works	No. of labourers	Remarks.
Cuddapah		Channel from Kandeleru tank	10,000	For 15 months
		Chagair embankment	10,000	" 4½ "
		Papagni embankment	3,000	" 3 "
		Sugglair project	10,000	" 4½ "
		Seddapurepulu project	2000	" 3 "
			35,000	
Kurnool		Venkatareddipollam tank	5,000	" 4 "
		Mandkur extension channel	6,000	" 4 "
		Tank south of Atmakur	5,000	" 4 "
		Atmakur tank restoration	2,000	" 4 "
		Kalavatalu tank project	5,000	" 3 "
		Dwalair project	2,000	" 3 "
		Jangadancha diversion	5,000	" 3 "
			30,000	
Bellary		Tungabadra channel	150,000	" 18 "
Anantapur		Bookacherla project	30,000	" 24 "
		Kudupur "	60,000	" 4 "
		Roddam "	5,000	" 4 "
		Totoolacunta "	5,000	" 4 "
			50,000	
			265,000	

Circle Division Works Labourers employed

Salem	Barur. Marandahelli. Vaniar.	15,000	For four months.
	Other Suppl. Irrig: Works	5,000	
Coimbatore	Cauveri and Calingarayen Channels. Bhavani Kattamjetty	11,000	
	Other Suppl. Irrig: Works	2,000	
		33,000	
Madura	Tank improvement and repair works	5000	*being work to the value of Rs 60,000, and finding labor for 3 months.
	Tank Maintenance	5,000	work to the value of Rs 5,000.

II Circle.

No. E.
GOVT. OF MADRAS. 1885. P. W. DEPT.
SECRETARY.

Ootacamund, 13th July 1885.

OFFICE NOTE.

From W

To E. J

Adverting to memorandum No. 307. C of 25-2-85 and the papers forwarded therewith, I shall be obliged if you will kindly favour me with a brief statement showing the present position of Irrigation Famine Relief projects in the various Circles.

(Sd) J. Ld
W

13/7/85

showing the present
of Irrigation

Works

No 6298

S.A.W. 65

If Inspectors have submitted list of famine projects with their Admin Reports, the accy. drafts reply W.O.'s may be placed before Dir. for initials.

Please return to Dy. the file of papers with No 360 E & 13.7.85

Cr
21.7.85

showing the present
state the Irrigation

1885.

P. W. DEPARTMENT.

Current No. 6295

From

No. 212.
Dated 17th Sep 1885
Received 18th Sep 1885

ENCLOS

SUBJECT.

DISPOSAL.

No. [illegible] Dated [illegible]

Work

60°

- Arq 837 Da/15. J. 84
- " 980 Wa/26. 8. 82
- " 465 Sh/13. 6. 82
- " 465 Da/13. 6. 82
- " 920 Sa/4. 4. 82
- " 940 Wa/28. 3. 82
- " 988 Wh/3. 11. 82
- " 668 W 2/15. 3. 82
- " 1729 Wh/14. 7. 81
- " 560 S h/13. 7. 85
- Arq. 958 S h/24. 10. 84
- " 2787 W/h/7. 11. 83
- " Regue a/9. 8. 83

~~1897~~

- 2453 C a/8. 12. 82 [illegible] E a/13 Sa/15

GOVT. OF MADRAS

1885.

P.W. DEPT.

CHIEF ENGINEER FOR IRRIGATION.

68

Retained Madras, 3rd August 1885.

OFFICE NOTE. No 237

Circulation Register.

To	From	Despatch Date.	Receipt Date.
W	E. I.		

Your Office Note No
E. of 13th July 1885.

Herewith a brief note showing the present state of progress of the projects investigated and under investigation. The only project that has been formally closed under "Famine Relief & Insurance" is the Kushkurthy a project in the Ganjam District. The classification of the Projects under investigation

Copy

1st April

Brief Note showing the present state of progress of the Irrigation Projects investigated and under investigation.

69

At the end of 1881 four project Divisions, called "A." "B." "C." & "D" were under G.O. № 1729. W. dated 14th July 1881 formed for the investigation of projects, but the Govt of India having declined to make any allotment for 1884-85 from "Protective funds" for the investigation of projects the "A" & "D." Project Divisions were abolished at the close of 1883-84, and the "B" & "C" Project Divisions were ordered to continue, their cost being met from Provincial funds. A separate Division for the investigation of the Lower Coleroon Anicut irrigation project was formed ~~in September~~ in September 1884. The names of the Divisions in which the projects were or are being investigated are shown in the margin against each project.

1st Circle

1st Circle

Ganjam District

Rushikulya Project – The estimates for this project which were sanctioned by the Secretary of State in April 1883 are now under revision by the Executive Engineer of the Ganjam Division, the sanctioned rates having been found insufficient. The work is in progress. D. Project Div

Ganjam – Gopalpore Canal – The estimates for this canal were sanctioned by the Govt of India in April 1885. No funds available. —Do—

Vizagapatam District

Improving irrigation works in the Palkonda and Kanjeram Estates. – The plans and estimates have been prepared and are with the Superintending Engineer, 1st Circle. Vizagapatam Div

Sarada and Vardha rivers – Training and embanking the – and improving irrigation under them – The investigations of these projects has not yet been commenced. —Do—

Godavari District

Boat Canal from Dummagudam to Bachellum – The Chief Engineer Godavari Eastern Division.

1st Circle has not yet submitted the further report on this Canal called for in this office Memorandum No. 102. G. D. dated 3 November 1884 which was communicated to the Chief Engineer, D. P. W. with office note No. 13 dated 27 January 1885. It does not seem probable that this work will be carried out.

Godavari Eastern Div

New Head to Samulcottah Canal – This work is considered unnecessary at present.

Anumeelanka Project – The completion of the investigation of this project has been deferred until the Godavari Delta works are completed.

"A" Project Div

Samulcottah Tanni Canal – The investigation of this project was stopped on the abolition of the "A" project Division – Owing to the difficulty that is likely to be experienced in supplying it with water, a tidal canal is considered to be preferable.

Third Circle

Kurnool District

Kurnool Div

Vellagudi, Mudkur, Sirwell and Produtur projects Connected with

The Kurnool Canal — Surveys and levels for the first project are in progress while those for the second project have been completed and plans for masonry works and estimates for the project are under preparation. The last two projects being only under contemplation, their investigation has not been commenced.

Cuddapah District

Sugglair Project — The estimates and plans for this project have just been received from the Supg Engineer, 3rd Circle, and will be examined shortly. — C. Project Div.

Peddapasupula channel — The investigation of the requirements of this channel has nearly been completed and the plans and estimates are shortly expected from the Supg Engineer. — Do —

Bellary District

Hindupur and Koddam Projects — The preliminary report upon these Projects is with the Chief Engineer for Irrigation. Neither of them is favourable from a financial point of view. — Do —

C. Project Div. — Tungabudra Project — A second report on this project has been received from the Supg. Engineer, 3rd Circle, and a reduced estimate is being worked out.

5th Circle

Chingleput District

Chingleput Divn. — Narayanaveram river embankments — The Supg Engineer, 5th Circle, was in February 1885 requested to arrange for a fresh survey and levels of these embankments being taken.

4th Circle

Salem District

B. Project Divn. — Vaniar Project — The estimates for this project amounting to Rs 1,67,427 including Rs 48,721 for indirect charges have been completed. The water supply is ample and will be fully utilized but the estimated cost is so large that it is not likely to prove remunerative.

Maravandahully Project — The estimates for this project amounting to Rs 4,69,878 are with the Chief Engineer for Irrigation.

— Do — Krishnagherry reservoir Project — A preliminary

preliminary report on this project was forwarded in P. Irrig. No. 626. I dated 30 July 1884 – 65½ miles of levels have been taken. The water supply is ample and the project estimated to cost Rs 30 lakhs is intended to bring 50000 acres under irrigation which will probably pay a return of 4½ per cent on the outlay.

Coimbatore District

Kalingarayan Channel – 180½ miles "B." Project Dist.
have been levelled and 147¾ miles surveyed and 616 miles of cross sections have been taken. The plotting of the channel to the east of the 87th mile has been almost completed. The field work is nearly finished.

Bhavani reservoir Project – 19 miles — Do
of levels, 3½ miles of surveying and 43 miles of cross sections were completed. A preliminary report on this project was received in P. Irrig. No 935. I. dated 15th October 1884 and the site for the reservoir was settled. Since then nothing has been done.

6th Circle

Lower Coleroon Anicut Irrign Project Dist.

South Arcot and Tanjore Districts

Lower Coleroon Anicut Irrigation Project – In the Tanjore District Survey and levels of the South bank and margins of the Coleroon river and sketches of masonry works have been completed. The survey of the South Rajah channel and levelling for 7½ miles have been finished. In the South Arcot District the survey of the North bank and margins of the river for 30 miles and that of the North Rajah channel for the same distance have been finished. Spiral levels for 24 miles of the Vadavar channel have been taken and a contour survey of the Veeranam tank has been commenced. The discharge of water over the Lower Coleroon Anicut during the last 10 years, and the supply sent down the different channels are being calculated.

Madura District

D. Project Dist. Periyaur Project – The estimates for this project have been submitted for the sanction of the Govt. of India

Botacamund
3rd August 85

To The Secy to Govt P. W. D.

Submitted.
Col. RR
Chief Engr for Irrign