Public Works. (1897) Department.

G.O., No. 20096

DATED 24 July 97

24/7/97

[Despatch Abstract.]

Control Over Famine Relief Works. P.W.D:

Revenue Dept passing orders on the subject of the relative positions of the Revenue and the P.W. Departments in the matter of —, Control & Officers of the P.W.D. for Irrigation.

220/14

B 26 24.2.97

[P.W. 98 1,500—30-11-96.]

Indexed

BACK PAPERS.

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FURTHER PAPERS.

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BUILDINGS AND ROADS.
CIVIL WORKS.

Government {1897} of Madras.

PUBLIC WORKS.

Recd. } 1897. *Enclosures*

Regd. *Spare copies*

G.O., No. 2009 W., 24th July 1897.

JULY.

Control over Famine Relief Works

Proceedings, Revenue Department, passing orders on the subject of the relative positions of the Revenue and the Public Works Departments in the matter of —, communicated to officers of the Public Works Department for guidance.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

G.O., No. 593, Revenue, dated 19th July 1897.

Read—Proceedings of the Board of Revenue (Revenue Settlement), No. 327, dated 1st May 1897, submitting, with remarks for the early orders of Government, letter from the Collector of Bellary soliciting the orders of the Board on certain points of famine administration.

Read—Telegram from the Board of Revenue (Revenue Settlement), dated 21st May 1897, requesting early orders on Board's Proceedings, No. 327, dated 1st May 1897.

Read—Memorandum from the Public Works Department, No. 305 D., dated 22nd May 1897, transferring letter from the Superintending Engineer, III Circle, bringing to the notice the inconvenience caused by the interference of Revenue officers with relief works.

Read—Proceedings of the Board of Revenue (Revenue Settlement), Mis. No. 3880, dated 30th May 1897, submitting report of the Collector of Bellary as to the attitude of the Public Works Department towards the Revenue Department and soliciting early orders on Board's Proceedings, No. 327 of 1897.

Read—Proceedings of the Board of Revenue (Revenue Settlement), Mis. No. 4246, dated 11th June 1897, submitting to Government in continuation of Board's Proceedings, Mis. No. 3880, dated 30th May 1897, endorsement from the Collector of Bellary submitting copy of letter from the Executive Engineer, Bellary Division, in the matter of the issue of orders for the increase of allowance for lead for metal collection referred to.

Read—Note by the Chief Engineer, No. 248 D., dated 17th May 1897.

Order—No. 593, Revenue, dated 19th July 1897.

The papers read above relate to the relative positions of the Revenue and the Public Works Departments in regard to famine relief works. In paragraph 9 of its order, No. 216, dated 30th March 1897, the Government has ruled that the Public Works staff engaged in connection with relief works is under the control of Collectors in all but technical matters, but as the existing provisions of the Famine Code have not yet been modified and brought into conformity with this ruling, there is often considerable delay in the enforcement of orders issued by District and Divisional officers ; misunderstanding leading to considerable friction between the officers of the two departments appears also to have arisen as to what should be regarded as technical matters. It is therefore necessary to issue precise instructions and to define the spheres of the two departments in regard to relief works.

2. The Collector of Bellary points out that as section 110 of the Famine Code stands at present, the Collector cannot issue any orders direct to the officers in charge of relief works but should communicate them through the Executive Engineer, that Divisional officers cannot introduce any desirable change in the details of these works without first addressing the Collector, who again has to move the Executive Engineer to issue the necessary orders, and that in consequence matters requiring prompt disposal are often not attended to till after considerable delay. He therefore proposes that the section should be modified so as to enable Collectors and Divisional officers to issue their orders direct to officers in charge of works whenever they consider this necessary, communicating copy thereof to the Executive Engineer or the Sub-divisional officer as the case may be ; and that with a view to avoid conflict of orders, the superior officers of the department should be debarred from issuing to officers in charge of works any independent orders of their own which are not strictly of a professional nature. In submitting these proposals to Government the Board of Revenue draws attention to the provisions of section 38 of the Bombay Famine Code and suggests that, as in that Presidency, the executive officers of the Public Works Department should be directed to confine themselves to matters which are purely technical and professional and that on all other points the Public Works staff engaged in connection with relief works should be under the control of the Revenue Department; it also endorses Mr. Stuart's contention that " authority without power to secure punishment is a phantom" and recommends that so long as relief operations are carried out in a district, Collectors should have the same power over the officers of the Public Works Department that the Superintending Engineer has.

3. The Chief Engineer to whom these proposals were referred for remarks is of opinion that the present system of dual control is objectionable and in some cases likely to lead to friction, but is altogether opposed to the Board's proposal of subordinating the Public Works staff to the Revenue Department. He considers that Revenue officers do not as a rule possess sufficient knowledge to be in a position to issue orders to Public Works officers on such technical points as the adjustment of tasks, provision of huts, arrangement of water-supply, &c., and suggests that large works should be left entirely in charge of Public Works officers without any interference on the part of the Revenue Department, which should confine itself to the other branches of relief administration and to the execution of petty works.

4. The Government has given this matter its most careful consideration and is of opinion that the Board's proposals must in the main be given effect to. It is settled that the control of, and responsibility for, general famine relief must in every district rest with the Collector, and it is therefore impossible to deny him the right to control the management of relief works, whether large or small. Indeed it seems more necessary that he should have this right in regard to large works than in regard to small works as most of the relief in the affected districts will, under recent orders, be in future concentrated on the larger works.

5. The Chief Engineer's proposal to place large works entirely under the Public Works Department has the merit of simplicity, but it is wholly unsuitable as the real object in view is not so much the execution of the works as the saving of life. Though a Public Works officer who has been carrying out works for years ought to know more about tasks and the condition of the ordinary coolies than a Revenue officer, it does not necessarily follow that he will set proper tasks for famine labourers or that he knows as much of their manners and customs as the Revenue officer does. It is therefore necessary in the public interests that the Public Works staff employed in connection with relief works should be subordinated to the Revenue Department.

6. His Excellency the Governor in Council accordingly resolves to direct that the principles contained and the procedure prescribed in sections 38 and 39 of the Bombay Code be followed in future by Revenue and Public Works officers and that the Collector of the district (but he alone) shall have same powers of punishing the Public Works staff in charge of, or employed on, relief works that the Superintending Engineers have. It must be distinctly understood that the executive officers referred to in section 38 are officers in actual charge of works or employed in immediate supervision of their execution, not the controlling and other officers of the department such as the

Executive Engineer not so employed. It will be the duty of these latter, however, to see that the requests made by the officers of the Revenue Department are promptly carried out and to bring to the notice of that department shortcomings noticed by them in the administration of relief. The superior officers of the Public Works Department will restrict their control and supervision of relief works to technical matters and will not introduce any change in respect of such matters as the following except with the approval of, or in consultation with, the Revenue Department:—

(1) Adjustment of tasks (provided for in section 107 of the Famine Code).
(2) Provision of hutting accommodation.
(3) Arrangement of water-supply.
(4) Sanitary and conservancy arrangements.

7. While issuing instructions in accordance with the above orders, the Famine Commissioner will impress upon Collectors that needless interference with Public Works officers employed on relief works is to be deprecated and that, as a general rule, these should be left to carry out the works in accordance with the provisions of the Famine Code and the orders of the Board and Government. Experience has shown that interference on the part of Revenue officers may sometimes be necessary and their right to do this is now fully recognized but it is very inadvisable that Public Works officers should be so interfered with in the discharge of their duties as to be made to lose heart or cease to take an interest in their work. The Famine Commissioner will also impress upon Collectors that the power now given them of punishing Public Works subordinates in charge of works should be used with tact and discretion and as sparingly as possible.

(True Extract.)

(Signed) G. STOKES,
Ag. Secretary to Government.

Order—No. 2009 W., dated 24th July 1897.

Communicated to officers of the Public Works Department for information and guidance.

(True Extract.)

Under Secretary to Government.

To the Chief Engineer for Irrigation.
„ all Superintending Engineers.
„ the Consulting Architect to Government.
„ the Examiner, Public Works Accounts.

Exd. W. D'Moss.

Public Works (189) Department.

CURRENT No. 7332

4P

From P. R. & Buildings

A No. 2009 W. dated 24-7-97. the Rev. dept.

Order

Communicated to Officers of the P.W. Dept for information and guidance.

No. 593

22/7/97

Dated 19th July 97.

Received

Registered 21-7-97 24-7-97

Enclosures

Spare copies

Rev 22/7/97 SUBJECT.

Passing orders on the subject of the relative positions of the Rev & P.W. depts in the matter of control over famine relief works.

Rev.

B/PWS

To Chief Engr for Irrign
The Chief Engr for Irrigation
All Supt Engrs
C.A. Brown
Exr P.W. Accts. 31/8/97
Examr, P. Wks. Accts.

O.S. 47

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

Revenue Department. 1P

Proceedings of the Madras Government.

Read Proceedings of the Board of Revenue, Rev. Sett. No. 327 dated 1st May 1897, submitting with remarks for the early orders of Govt. letter from the Collector of Bellary soliciting the orders of the Board on certain points of Famine administration.

(2) Read telegram from the Board of Revenue, Rev. Sett. dated 21st May 1897 requesting early orders on B.P.No. 327 dated 1st May 1897.

(3) Read Memo. from the P.W.Dept. No. 305D dated 22nd May 1897, transferring letter from the Superintending Engineer III Circle bringing to the notice the inconvenience caused by the interference of Revenue officers with relief works.

(4) Read Proceedings of the Board of Revenue, Rev. Set Misc. No. 3880 dated 30th May 1897 submitting report of the Collector of Bellary as to the attitude of the P.W. Dept. towards the Revenue Dept. and soliciting early orders on B.P. No. 327 of 1897.

(5) Read Proceedings of the Board of Revenue, Rev. Sett. Misc. No. 4246 dated 11th June 1897, submitting to Govt. in continuation of B.P. No. 3880 Misc. dated 30th May 1897, endorsement from the Collector of Bellary submitting copy of letter from the Executive Engineer Bellary Division in the matter of the issue of orders for the increase of allow-ance for lead for metal collection referred to; and

(6) Read note by the Chief Engineer No. 248D dated 17th May 1897.

Order, No. 593 dated 19th July 1897.

The papers read above relate to the relative positions of the Revenue and the P.W. Departments in regard to famine relief works. In para. 9 of its order No. 216 dated

30th March 1897, the Govt. has ruled that the P.W. staff engaged in connection with relief works is under the control of Collectors in all but technical matters, but as the existing provisions of the Famine Code have not yet been modified and brought into conformity with this ruling, there is often considerable delay in the enforcement of orders issued by district and divisional officers, misunderstanding leading to considerable friction between the officers of the two departments appears also to have arisen as to what should be regarded as technical matters. It is therefore necessary to issue precise instructions and to define the spheres of the two depts. in regard to relief works.

2. The Collector of Bellary points out that as section 110 of the Famine Code stands at present, the Collector cannot issue any orders direct to the officers in charge of relief works but should communicate them through the Executive Engineer, that Divisional officers cannot introduce any desirable change in the details of these works without first addressing the Collector who again has to move the Executive Engineer to issue the necessary orders, and that in consequence matters requiring prompt disposal are often not attended to till after considerable delay. He therefore proposes that the section should be modified so as to enable Collectors and Divisional officers to issue their orders direct to officers in charge of works whenever they consider this necessary, communicating copy thereof to the Executive Engineer or the Sub-Divisional officer as the case may be; and that with a view to avoid conflict of orders, the superior officers of the dept. should be debarred from issuing to officers in charge of works any independent orders of their own which are not strictly of a professional nature. In submitting these proposals to Govt. the Board of Revenue draws attention to the provisions of section 38 of the Bombay Famine Code and suggests that, as in that Presidecy, the executive officers of the P.W. Dept. should be directed

to confine themselves to matters which are purely technical and professional and that on all other points the P.W. staff engaged in connection with relief works should be under the control of the Revenue Department; it also endorses Mr. Stuart's contention that "authority without power to secure punishment is a phantom" and recommends that so long as relief operations are carried out in a district, Collectors should have the same power over the officers of the P.W. Dept. that the Superintending Engineer has.

3. The Chief Engineer to whom these proposals were referred for remarks is of opinion that the present system of dual control is objectionable and in some cases likely to lead to friction, but is altogether opposed to the Board's proposal of subordinating the P.W. staff to the Revenue Department. He considers that Revenue officers do not as a rule possess sufficient knowledge to be in a position to issue orders to P.W. officers on such technical points as the adjustment of tasks, provision of huts, arrangement of water supply etc., and suggests that large works should be left entirely in charge of P.W. officers without any interference on the part of the Revenue Dept., which should confine itself to the other branches of relief administration and to the execution of petty works.

4. The Govt. has given this matter its most careful consideration and is of opinion that the Board's proposals must in the main be given effect to. It is settled that the control of and responsibility for general famine relief must in every district rest with the Collector, and it is therefore impossible to deny him the right to control the management of relief works whether large or small. Indeed it seems more necessary that he should have this right in regard to large works than in regard to small works as most of the relief in the affected districts will, under recent orders,

be in future concentrated on the larger works.

5. The Chief Engineer's proposal to place large works entirely under the P.W.Dept.has the merit of simplicity,but it is wholly unsuitable as the real object in view is not so much the execution of the works as the saving of life.Though a P.W.officer who has been carrying out works for years ought to know more about tasks and the condition of the ordinary coolies than a Revenue Offfcer,it does not necessarily follow that he will set proper tasks for famine labourers or that he knows as much of their manners and customs as the Revenue officer does.It is therefore necessary in the public interests that the P.W.staff employed in connection with relief works should be subordinated to the Revenue Dept.

6. His Excellency the Governor in Council accordingly resolves to direct that the principles contained and the procedure prescribed in sections 38 and 39 of the Bombay Code be followed in future by Revenue and P.W.officers and that the Collector of the district (but he alone) shall have the same powers of punishing the P.W.~~Dept~~.staff in charge of or employed on relief works that the Superintending Engineers have.It must be distinctly ~~be~~ understood that the executive officers referred to in section 38 are officers in actual charge of works or employed in immediate supervision of their execution,not the controlling and other officers of the Dept.such as the Executive Engineer not so employed.It will be the duty of these latter,however,to see that the requests made by the officers of the Revenue Dept.are promptly carried out and to bring to the notice of that Dept.shortcomings noticed by them in the administration of relief.The superior officers of the P.W.Dept.will restrict their control and supervision of relief works to technical matters and will not introduce any change in respect of such matters as the following except with the approval of or in consultation with the Revenue Department:-

(1) Adjustment of tasks,(provided for in sec.107 of the Famine Code.)

(2) ~~Arrangement of water supply~~. Provision of hutting accommodation.

(3) Arrangement of water supply.

(4) Sanitary and conservancy arrangements.

7. While issuing instructions in accordance with the above orders,the Famine Commissioner will impress upon Collectors that needless interference with P.W.officers employed on relief works is to be deprecated and that as a general rule,these should be left to carry out the works in accordance with the provisions of the Famine Code and the orders of the Board and Govt. Experience has shown that interference on the part of Revenue officers may sometimes be necessary and their right to do this is now fully recognized but it is very inadvisable that P.W.officers should be so interfered with in the discharge of their duties as to be made to lose heart or cease to take an interest in their work.The Famine Commissioner will also impress upon Collectors that the power now given them of punishing P.W.subordinates in charge of works should be used with tact and discretion and as sparingly as possib

(True Extract.)

Ag.Secy.to Govt.

To the Famine Commissioner.

.. Public Works Department.

P. W. Department.

Read the following:—

Letter from the Suptg. Engineer, III Circle, No. 2340 W. dated 18th July 1897.

2009 W
24-7-97

FOR ORDERS.

I herewith forward a letter from Mr. deWinton which I think deserves attention. I have already expressed my views on the subject, the result being the issue of G.O. No. 593 Revenue dated 19th July 1897, which in my opinion will make matters far worse than before.

2. As any remarks I make are forwarded to the Board of Revenue who is, I believe, the body responsible for the famine Code and who desires to retain the entire conduct of famine operations in its own hands, the result is a foregone conclusion. However I have the satisfaction of knowing that I have tried my best.

W.

43—500-22-1-96.

H. E

[illegible]

I herewith forward a letter
from the Chief Engineer
I think however that
I can already express
my views on the subject, the
result being the same if I do
so now this being
premature in the absence
now there before
me any remarks I make on
forwarding it to the Govt of India
the case will be the body
unprovided for the famine loan
& the means of obtaining the latter
in the meantime
Government of India specially
the matter is a pressing
one there is, however, the
satisfaction of knowing that I shall merely
have

23/7/97

FOR ORDERS.

Public Works (1897) Department.

urgent

CURRENT No. 8565

C7

From the Superintending Engineer
3rd Circle
Bellary

D

Order

In reply to this letter
No 2340 W dated 18th July 1897,
the Supts. Engr., III Circle, is
referred to this office No.
874 D dated 21st July 1897
in which the system pro-
posed by him has been
ordered to be given a
trial on the Chepad project.

No. 2340 W

Dated 18th July 1897

Received

Registered 21-7-97

Enclosures 1

Spare copies

SUBJECT.

Famine Relief operations
in Northern India:—
Requesting that this
system of —— be given a
trial in the Madras Presidency

Put up
& 515 W
Dra. 21/7/97
Sd 22/7/97
Supt. III Circle
Bellary
Submitted
22/7/97

Rpt.

E.W.

To The Supts. Engr., III Circle,

Copied

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No 2340 W

Superintending Engineer's
Office, III Circle.
18th July 1897.

From

W. B. de Winton Esqre.,
Superintending Engineer,
III Circle.

To

The Chief Engineer,
Public Works department,
Ootacamund

Encl 1

Sir,

I have the honour to forward for your information a copy of— Proceedings of the Board of Revenue No. 415 A, dated 3d June 1897, which has been forwarded to me by the Collector of Cuddapah. Otherwise I should not have seen a document— of vital importance to the proper organisation of the professional part of famine relief work.

N. 8740
21-7-97.

2. The Resolution of the Board is an instructive instance of the manner in which my endeavours to do my duty thoroughly, and introduce improved methods of employing famine labour

in

in this Presidency are rendered absolutely null and void by the necessity of— submitting my proposals to a Board of amateurs on Engineering questions.

3. The position is this

(1). I read the account printed with G.O. No. 575W of- 22d February 1897 of- the method of carrying out earthwork by famine labour in force in the North-Western Provinces, where they have had far more experience of- such work than we have.

(2) I am greatly impressed with the merits of- the system and decide that it would vastly improve matters in this Presidency to introduce it here.

(3) I, therefore, take the first opportunity of doing so.

(4) My efforts are rendered entirely futile by the action of the Board of Revenue, in refusing to stir a foot outside the covers of the Madras Famine Code.

4. I must in the first place absolutely deny that my instructions to the Executive Engineer contained anything of a non-professional nature. If the method of laying out and executing earthwork are not "professional", I do not know the meaning of the word. The Executive Engineer was wrong in submitting my instructions to the Collector on those grounds.

5. Secondly I must record, once more, a most emphatic protest against the Board of Revenue and the Officers of the Revenue department having anything whatever to say to the setting of tasks on relief works.

6. I have no authority to speak on Mr. Higham's behalf, but I think I may say, without fear of- my words being proved untrue, that he will shew in his report— how that

(1) In the Punjab, North Western Provinces and Bengal relief works have been left entirely in the hands of the Public Works Department.

(2) That as a result, they work with admirable smoothness and cost the state far less than in Madras.

(3) That those Provinces have

arrived at this desirable state of things by throwing their Codes (which contained practically the same provisions as the Madras Code) overboard, and placing implicit confidence in the only department which is competent by experience and training to organise and execute famine relief works.

7. But Mr Higham's Report will take months to appear, and I know not what, if any, action will be taken on it. I, therefore, most earnestly beg that the system which is working so admirably in the North may be introduced in this Presidency, and the whole organisation of relief works placed in our hands. What have we done in Madras that we should be placed in the false position we now occupy, unable to do justice to ourselves or Government?

8. I have no objection whatever to the Collector and his Division officers inspecting a relief work and writing notes in the order book on any matters connected with the health and comfort of the relief workers. But the carrying out of their suggestions should be left entirely to this department, and they should have nothing to say to tasks, fining or payments.

9. With regard to this latter point, you are aware that complaints are numerous of delays in payments. The overseer blames the paymaster, and the paymaster blames the overseer, and the workers suffer. In Northern India all this is avoided by the following system.

(1) There is a Pay office on each work with an accounts' clerk in charge under the 'officer in charge of the work' (generally up there a deputy Tashildar).

(2) There are 'Jemadars' in charge of 10 gangs, somewhat corresponding to our sub maistries.

(3) There are 'Mates' (our head coolies) in charge of each gang.

(4) Payments are made daily. The muster rolls for the day are sent to the

the Pay office by 4 P.M.

They are there abstracted for each gang, and the amount for each gang put (all in small coin) into a bag.

(5) At noon next day (the commencement of the rest hours) every Jemadar comes to the Pay office, and receives 10 bags, one for each of his gangs, counts their contents (amounting to between ~~Rs~~ 4 and 5 each) gives a receipt for them in a book, and takes them to his 10 gangs; gives a bag to each head cooly and superintends the payment, which takes about 10 minutes for each gang, and, as all the payments proceed simultaneously, any number of gangs can be paid.

(6) When the payment is finished if any money is over, owing to absence of coolies or errors, it is put back in the bag and returned with the payment sheet to the Pay office.

(7) These arrears are kept in a separate account and paid to coolies at the Pay office whenever they present themselves.

This system works, I understand, with admirable smoothness, and if any peculation is attempted, it is easily detected. Coolies get their pay daily in small coin. There is no dual control, consequently no friction, and, above all, no delay.

Is it too much to hope that this system also may be given a trial in this Presidency?

I have the honour to be,
Sir,
Your most obedient Servant.

L Beckinton

Supg. Engineer, III circle.

~~Disposal~~ Reference No. 223 / F 4 of 1897.

Dated 26 JUL. 97

Copy communicated to Divisional Officers.

Special Deputy Collector
Jammalamadugu

Tahsildars of affected Taluks.

~~District Medical and Sanitary Officer.~~

~~Superintendent of Police.~~

The Executive Engineer.

Sub-Engineer.

Assistant Engineers.

Superintending Engineer.

Special Deputy Tahsildar of
Weavers' Relief.

Special Deputy Collector of
Weavers' Relief.

for information and guidance.

Cuddapah
Collector's Office.

for Collector.

Copied by
15-7-97

Examined by
15-7-97

REVENUE DEPARTMENT.

I.C.S.
8- JUL. 1897

415m
16 JUL. 97
BELLARY

1897.

Board of Revenue

(Revenue Settlement, Land Records and Agriculture),

MADRAS.

Read. } 1897. *Enclosures*

Regd. *Spare copies*

Printed June 17th.

Proceedings, 3rd June 1897, No. 415A.

JUNE.

Method of tasking.—Passing orders on a reference from the Collector of Cuddapah asking for instructions as to the introduction of a new — proposed by Superintending Engineer, III Circle.

PROCEEDINGS OF THE BOARD OF REVENUE

(REVENUE SETTLEMENT, LAND RECORDS AND AGRICULTURE).

READ—the following letter from A. C. TATE, Esq., Collector of Cuddapah, to the Famine Secretary to the Commissioner of Revenue Settlement, Land Records and Agriculture, dated Kasanur, 14th May 1897, Ref. on Cur. No. 223-F. :—

With reference to sections 23, 97, 100, 106 and 107 of the Famine Code, I have the honour to request the Board's orders on the enclosed correspondence.

2. The Superintending Engineer and, following him, the Executive Engineer wish to fix earth-work tasks with reference to each digger in a gang and to set a task for three days instead of for one day. Having done so the task for each unit is to be obtained from the following formula :—

$$\frac{\text{Task per digger} \times \text{number of diggers}}{\text{Number of units in gang}}$$

Lead and lift are to be neglected.

3. The task per digger is to be taken from the following table :—

Soil.	Daily task in cubic feet. Full.	Low.
Soft earth	130	100
Medium earth	110	80
Hard earth	85	70
Very hard earth	85	50

4. The Superintending Engineer says that this plan works well in Northern India and he wishes to give it a trial here.

5. The idea is that diggers are to be started on the "low task" which is to be gradually increased to the "full task" as the workers become accustomed to the work.

6. The typical gang mentioned by the Superintending Engineer in paragraph 14 of his letter, No. 4722, dated 26th March, contains 15 men and consists of 96 persons, all told. Its task in sandy loam would therefore be—

Full	1,950 cubic feet	= 72 cubic yards,
Low	1,500 „	= 55 „

which from the worker's point of view compares favourably with the figures in Form F, page 66, Famine Code, Madras, and I cannot object to it on the score of being excessive.

7. My doubt is whether this system of tasking is permissable under the Madras Code. It is really taking the diggers and not the gang as a whole.

8. With reference to section 100 of the Famine Code the Engineers do not state whether the proposed task is for A class labourers (diggers?) or for B class labourers (diggers?); nor is allusion made to the varying of the tasks according as the gang

(digger?) is in "good", "fair" or "low" condition. In my letter, Ref. Cur. No. 1147-Rev., dated 5th April 1897, to the Executive Engineer, I approved of his proposal that the tasks of gangs in "fair" and "low" condition should be respectively $\frac{2}{3}$rds and $\frac{1}{2}$ of the task of a gang in good condition (but on the works recently inspected by me I found the officers in charge ignorant of this order. There had been, however, no fining).

9. Personally, I think Mr. De'Winton's proposal is a good one, but I think it desirable to obtain the Board's order on it.

ENCLOSURE No. 1.

From S. B. MURRAY, Esq., Executive Engineer, Cuddapah Division, to the Collector of Cuddapah, dated 13th April 1897, Cur. No. 1388.

I have the honour to forward herewith a copy of a letter sent to me by the Superintending Engineer giving me instructions as to how the Chepad channel work is to be carried out.

2. As there are several non-professional points involved, I request you will approve of them or make any alterations that you may consider advisable.

ENCLOSURE No. 2.

From W. B. DEWINTON, Esq., Superintending Engineer, III Circle, to the Officer in charge of Cuddapah Division, dated 26th March 1897, No. 4722.

As I understand from the Collector of Cuddapah that there is every probability of his asking you to start the Chepad project (Rajoli-channel) in the near future, I have the honour to give below some instructions as to how the work should be carried out :—

(1) *Estimate.*—As soon as you know for certain, that the work is to be started, you should telegraph to Chief Engineer for Irrigation for the longitudinal sections and estimate of earthwork.

(2) *Establishment.*—I have already applied for an Assistant Engineer and two Upper Subordinates for employment on this work.

(3) *Position.*—The channel starts from the Rajoli anikat across the Kunder and ends after a course of 26 miles near the village of Vedumur.

(4) *Mile and furlong stones.*—The mile-stones are all fixed in concrete, in what is intended to be the left berm of channel and are all or most of them boundary marks. The furlong-stones are simply fixed in the ground in centre of channel and can be removed. It would, however, be well to replace them in the left berm.

(5) *Alignment.*—The line of channel has been lock-spitted throughout and most of it is now visible. The line, however, has been changed a good many times, and the curves joining old and new lines have still to be drawn.

(6) *Land.*—The officer in charge of Kurnool division will be asked to inform you what amount of land has been provided for in the estimate, and this should be occupied and land statements submitted speedily.

(7) *Berms.*—If feasible, I should like a berm of 9′ left on each side between top of cutting and toe of banking. If not, please leave as much as possible.

(8) *Location of Relief work.*—I believe the Collector wants the work started (1) at Rajoli and (2) at Korrapad. As the first few 100 feet pass directly through the village of Rajoli and the work here is unsuited for famine labour, you had better begin excavation clear of the village to the southward.

(9) *Nature of soil.*—The channel runs for the first 18½ miles in more or less deep cutting, the average being, speaking from memory, about 10 feet. Trial pits have been dug all along the line and the earth found to be ordinary black cotton, or alluvial. No rock was met with.

(10) *Water.*—I believe you will find water everywhere from 12′ to 15′ below ground surface and wells should be dug where the Kunder is too far away to draw from. It will probably be cheaper to dig one in every ½ mile where necessary, rather than to carry.

(11) *Shelter.*—There is, I fear, very little shelter or shade on the line and you should be prepared with plenty of bamboos and palmyra leaves. It would be quite possible to erect a movable pandal over the work described below and would enormously increase the comfort of the workers.

(12) *Method of work.*—Large experience has been gained in earth-work by famine labour in Northern India; and the conclusions arrived at as to the best method of organising such work are as follows:—

1. To give the diggers of a gang a certain daily task and ignore the fillers and carriers altogether.

2. To entirely ignore lead and lift; because, it is found that only when the lead and lift are great, have the fillers and carriers as much to do as they can manage.

3. To set out the task for each individual digger.

4. To set him a task which will take him at least three days to do before having to move further on.

(13) The task which has been found suitable for a digger for various soils is given below:—

Soil.	Daily task in cubic feet.		Remarks.
	Full.	Low.	
Soft earth such as sandy loam ..	130	100	In the rare cases when a woman works as a digger, she should have a $\frac{3}{4}$rd task.
Medium earth	110	80	
Hard earth and clay	85	70	
Strong soil and black cotton soil when dug.	85	50	

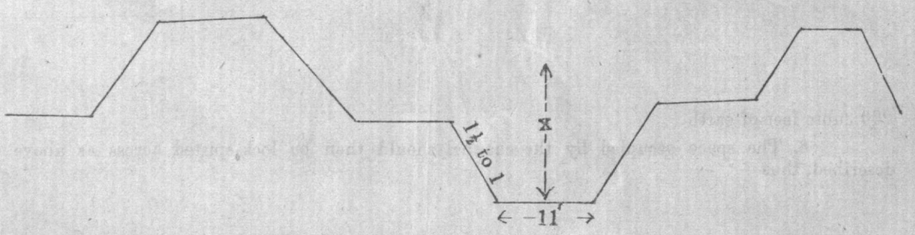
(14) I want this system given a trial in the Chepad Project. It should be applied in the following manner:—

1 Say a gang consists of the following numbers:—

15 Men	= 60	units.
6 Nursing mothers	= 12	„
45 Women	= 90	„
30 Children	= 30	„
96	192	

2. Take the task per digger as 80 c. ft., then the total task per gang = 15 × 80 = 1,200 c. ft. = $\frac{1,200}{192}$ = 6·25 cubic feet per unit.

3. The section of the channel for the first 18½ miles is as follows:—



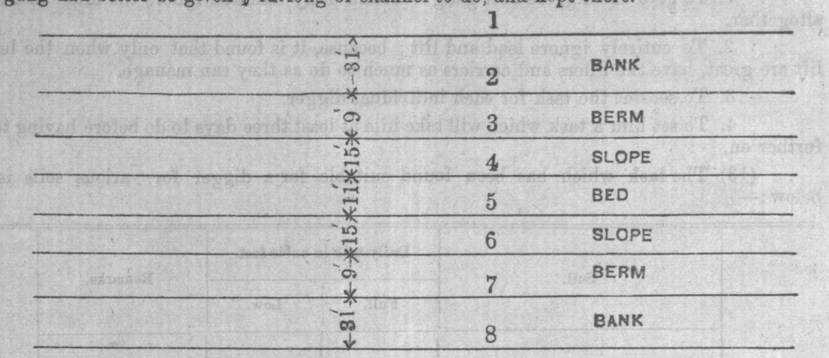
Fall 1′ per mile, with extra drops of 3″ or 6″ at syphons, 11′ bed width; side slopes 1½ to 1″ depth = x, averages 10 feet. Taking x as 10 feet, the cross sections will total (11 + 10 + 5) × 10 = 260 cubic feet per foot run.

One digger would, therefore, do 5·52 rectilineal feet of the channel in six days.

4. Take, therefore, one furlong of the channel and divide it into 120 tâks of 5·5 each. Give two of these tâks to three diggers and tell them to do the left-hand one first, and the right-hand one afterwards. This will keep each party of diggers quite distinct.

5. Divide the remaining numbers of the gang who are not diggers, equally between the diggers. This should give about sixteen fillers, carriers and clod-breakers to each party of three diggers.

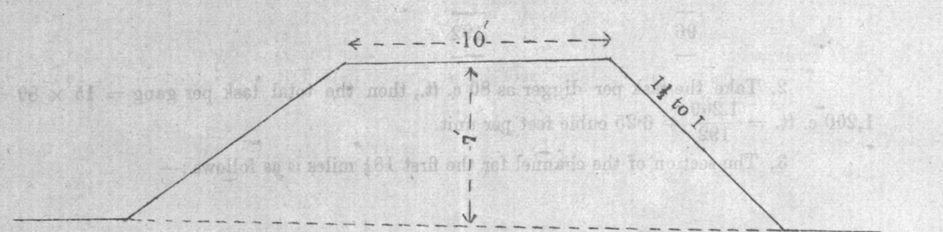
6. A gang comprised as above would, therefore, be employed on digging 55 rectilineal feet of the channel, and the work would occupy them for a fortnight (12 working days). At this rate, it would take a gang four weeks to do $\frac{1}{6}$th furlong and twelve weeks to do ½ furlong. So each gang had better be given ½ furlong of channel to do, and kept there.



7. *Before commencing work*, the line should be lock-spitted as above with eight lines—

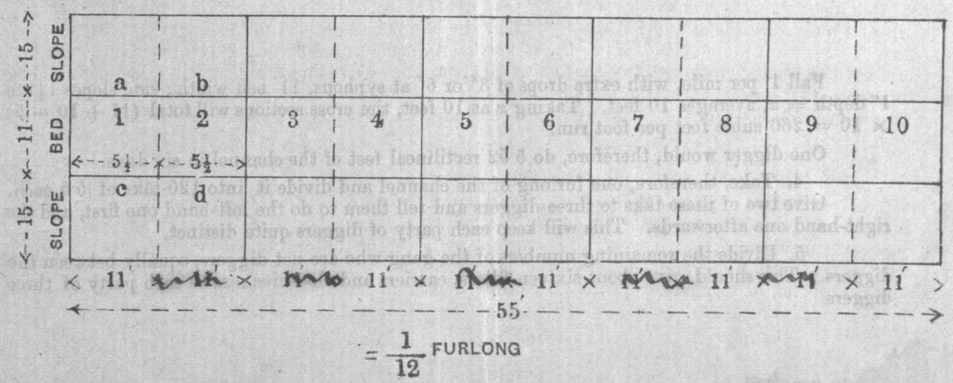
No. 1 being outside line of bank.
„ 2 „ inside „
„ 3 „ top of slope on left.
„ 4 „ bottom of „
„ 5 „ „ right.
„ 6 „ top of right.
„ 7 „ inside toe of bank.
„ 8 „ outside „ „

This provides for a bank of the following section on either side, which will take



260 cubic feet of earth.

8. The space occupied by the channel should then be lock-spitted across as above described, thus—



Tâks Nos. 1 and 2 to be given to three diggers.
Do. 3 and 4 do. do.

With orders to begin in 1, 3, 5, 7 and 9 and complete them before beginning 2, 4, 6, 8 and 10. This will keep the parties always distinct. The rectangle *a*, *b*, *c*, *d* had better be excavated first to ½ depth of cutting and then the slopes completed to that depth, before the lower ½ is taken up.

9. Measurements must be approximate in first and second day of each three-day period, and on third day, the diggers should be made to finish off with sufficient evenness to admit of rather more accurate measurement. Workers should be allowed to go whenever the day's task is completed.

10. Three women to each party of diggers should be supplied with clod-breakers 2½′ long 3″ diameter at big end tapering to 1″ at small end. Probably tumma wood will do best for these; fifteen will be wanted for a gang.

11. Of the three diggers, probably one had better be armed with a crowbar and two with mamooties.

(15) The above measurements, of course, only apply when the depth of cutting is 10 feet. Where it is greater or less than this, the tâks marked out must be less or more than 11′ in length.

(16) The cost of this work as so carried out will be nearly Rs. 7 per 1,000 cubic feet for labour only without counting head coolies, &c., the estimate rate being between Rs. 4 and Rs. 5. This is rather better than the usual ratio of cost of famine to ordinary labour.

(17) As above stated (paragraph 11), pandals may be erected over the channel, as gangs will remain so long in one place. A mile of channel will give employment for twelve weeks to sixteen gangs, or, say, 1,500 people.

(18) I beg that the system above described may be given a fair trial in a systematic and intelligent manner and the result reported.

ENCLOSURE No. 3.

From A. C. TATE, Esq., Collector of Cuddapah, to the Executive Engineer, Cuddapah Division, dated 19th April 1897, Ref. on Cur. No. 148-F.

In reply to your letter, C. No. 1388, dated 13th April 1897, I have the honour to state that, with the exception of the method of tasking, I see nothing that I have to object to in the Superintending Engineer's instructions.

2. As I understand the matter we must carry out famine works according to the Madras Famine Code, and you will therefore have to set tasks for each gang and not for each digger. It will have also to be a daily task.

ENCLOSURE. No. 4.

Copy of letter Cur. No. 33, dated 21st April 1897, with three enclosures, from the Executive Engineer, Cuddapah Division, to the Sub-Engineer in charge of Famine Works, Jammalamadugu.

I have the honour to request you will apply the system of setting tasks for earth-work which is fully described in the letter of the Superintending Engineer to me about the Chepad channel, a copy of which has been sent to you, to all works under your charge on which digging is the task.

This system, as you are aware, consists of considering only the diggers of a gang and ignoring all question of lead and lift where neither the one nor the others is excessive.

For setting the task please use the table given by the Superintending Engineer in his letter referred to above, but remember that this table is a progressive one the idea being, as is no doubt the case, that as coolies get accustomed to a certain kind of work, they can gradually turn out more of it. Your object therefore must be to gradually work up the task from "low" to "full."

To help you in deciding the proper number of diggers to have for a gang under varying leads and tasks, I send you a table which I have drawn up.

By this new system of setting tasks all deductions, except that for distance, will now be done away with.

(On rare occasions when work is stopped by rain, or the coolies having to stop work for the reorganization of gangs or for any other reason for which they are not to blame a certain deduction should be made from the task proportionate to the time so lost.)

The table now sent should be applied as follows: First inspect your gang and see how many men capable of digging it contains. (The number of diggers should never exceed 20 per cent. of the strength of the gang, because each digger requires a filler, two carriers and a clod-breaker). Next, fix your task per digger according to the soil, and measure your lead and then see if you have enough carriers for your diggers according to the scale laid down in the table, remembering that in addition to carriers, each digger is to be given a filler and clod-breaker. Having fixed your task per digger and number of diggers for the gang, the task per unit for that gang will be *number of diggers* × *task per digger*, when number of units in gang. . . . . Setting the task for a gang, the diggers should be divided up into small parties of 3, 4 or 5 and each party given its task. By this means work is much more individualized and a whole gang prevented from being punished owing to the laziness of individual members.

It will frequently happen that a gang does not contain sufficient diggers to find work for the carriers on the scale laid down in the table, but this cannot be avoided. In such cases the extra carriers must be divided up amongst the diggers. The table of carriers is supposed to represent the *minimum* number of carriers, a digger must have under varying conditions.

Three tables accompany this letter—

(1) Table I is the one from which the task per digger is to be set.

(2) Table II shows how the day's work of a carrier has been arrived at; this table is sent for information only.

(3) Table III shows the number of carriers, a digger requires under varying conditions.

Table I.

Soil.	Daily task in cubic feet.		Remarks.
	Full.	Low.	
Soft earth such as sandy loam ..	130	100	
Medium earth	110	80	In the rare cases when a woman works as a digger she should have a ⅔ task.
Hard earth and clay	..	..	
Strong soil and black-cotton soil when dry.	..	..	

Table II.

Lead.	Distance walked per trip.	Trips per hour at 1 mile per hour.	Trips per day at 8 hours per day.	Trips per day as actually taken.	Load per trip (per woman).	Quantity carried per day per woman in cubic feet.	Remarks.
Up to 30 yards	60	29	232	200	0·25 cubic feet.	50	Where the leads are short, a comparatively greater time will be occupied in filling the baskets, so a deduction in the "Trips per day" has been made up to 120 yards lead. A man or a woman can carry 0·25 cubic feet per trip and a child half this load.
30—40	80	22	176	150		37	
40—50	100	17	136	120		30	
50—60	120	14	112	100		25	
60—70	140	12	96	90		22	
70—80	160	11	88	85		21	
80—90	180	10	80	78		19	
90—100	200	9	72	70		17	
100—120	240	7	56	55		14	
120—140	280	6	48	48		12	
140—160	320	5	40	40		10	
160—180	360	5	40	40		10	
180—200	400	5	40	40		10	
200—250	500	4	32	32		8	
250—300	600	3	24	24		6	

Table III.

NUMBER of carriers required for each digger for varying tasks and leads.

Lead in yards.	Task in cubic feet.												Remarks.
	50	55	60	65	70	75	80	85	90	95	100	110	
Up to 30 ..	1	1½	1½	1½	1½	1½	2	2	2	2	2	2½	In this table a carrier is a man or woman; a child is ½ a carrier. In addition to carriers each digger must have a filler and clod-breaker.
30— 40 ..	1½	1½	2	2	2	2	2½	2½	2½	3	3	3	
40— 50 ..	2	2	2	2½	2½	2½	3	3	3	3½	3½	4	
50— 60 ..	2	2½	2½	3	3	3	3½	3½	4	4	4	4½	
60— 70 ..	2½	2½	3	3	3½	3½	4	4	4½	4½	4½	5	
70— 80 ..	2½	3	3	3½	3½	4	4	4½	4½	4½	5	5½	
80— 90 ..	3	3	3½	3½	4	4	4½	4½	5	5	5½	6	
90—100 ..	3	3½	3½	4	4½	4½	5	5	5½	5½	6	6½	
100—120 ..	4	4	4½	5	5	5½	6	6	6½	7	7½	8	
120—140 ..	4½	4½	5	5½	6	6½	7	7	7½	8	8½	9½	
140—160 ..	5	5½	6	6½	7	7½	8	8½	9	9½	10	11	
160—180 ..	5	5½	6	6½	7	7½	8	8½	9	9½	10	11	
180—200 ..	5	5½	6	6½	7	7½	8	8½	9	9½	10	11	
200—250 ..	6½	7	7½	8	9	9½	10	10½	11½	12	12½	14	
250—300 ..	8½	9	10	11	12	12½	13½	14½	15	16	17	18½	

Note.—Allowance for lift.—Up to 10 yards lead, all lift is to be ignored. Beyond 10 yards lead, add ½ carrier for every yard lift in excess of 3 yards.

Endorsement by S. B. MURRAY, Esq., Executive Engineer, Caddapah Division, dated 21st April 1897, C. No. 134.

Forwarded to the Collector of Cuddapah for approval.

ENCLOSURE No. 5.

From A. C. TATE, Esq., Collector of Cuddapah, to the Executive Engineer, Cuddapah Division, dated Tondier, 27th April 1897, Ref. on Cur. No. 223-F.

In reply to your foot-note, No. C-134, dated 21st instant, forwarding for my approval a copy of your letter, No. C-133, dated 21st instant, to the Sub-Engineer in charge of relief works, Jammalamadugu, in which you have instructed him to apply the system of setting tasks for earthwork described in Superintending Engineer's letter about the Chepad project, I have the honour to invite your attention to my letter, Ref. on Cur. No. 148-F. of 1897, dated 19th instant, relating to the Chepad project and to say that, as I have to work under the rules of the Madras Famine Code, I must raise the same objections to your present instructions as I made then.

2. It appears to me that, under the present very liberal discretion given to me, to approve of tasks, that if you will make out a fair task for each gang according to the Madras rules, you can still arrange to have the task executed (daily) in the manner desired by Mr. de Winton.

3. I request a very early reply. I had been expecting to obtain from you for approval some task for the Chepad channel work now started.

ENCLOSURE No. 6.

From S. B. MURRAY, Esq., Executive Engineer, Cuddapah Division, to the Collector of Cuddapah, dated Madanapalli, 2nd May 1897, Cur. No. 740-M.

With reference to your letter, No. 223, dated 27th April 1897, I have the honour to inform you that the tasks for all earthwork, which is now being done by famine labour, are set from the following table:—

Soil.	Daily task in cubic feet.	
	Full.	Low.
Soft earth	130	100
Medium earth	110	80
Hard earth	85	70
Very hard earth	85	50

2. This table was sent to me by the Superintending Engineer with his instructions about carrying out the Chepad channel, and I understood that you had approved of it. The tasks given in the table are for a digger, so the task for a gang will be the task per digger × number of diggers in the gang.

ENCLOSURE No. 7.

From A. C. TATE, Esq., Collector of Cuddapah, to the Executive Engineer, Cuddapah Division, dated 10th May 1897, Ref. on Cur. No. 223.

Referring to your letter, No. 740, dated 4th May 1897, I have the honour to inquire whether you did not receive my letter, Ref. No. 148-F. of 1897, dated 19th April 1897, and if so to say that I am astonished that you should say in your letter, No. 740, dated 4th instant, that you thought I had approved of Chepad tasks. I clearly stated that, under the Famine Code, tasks must be set for each gang and not for each digger.

ENCLOSURE No. 8.

From S. B. MURRAY, Esq., Executive Engineer, Cuddapah Division, to the Collector of Cuddapah, dated 6th May 1897, No. 791.

With reference to your No. 223-F. of 27th April 1897, I have the honour to request you will inform me what rules of the Madras Famine Code I am contravening in the instructions I give to my Sub-Divisional Officer in my letter, a copy of which was sent to you with my No. C. 134, dated 21st April 1897.

You apparently object to "the system of setting tasks for earthwork described in the Superintending Engineer's letter about the Chepad project," but as this system consists of considering only the diggers of a gang, and ignoring all questions of lead and lift, where neither the one nor the other is excessive, I do not see what you have to take objection to.

I have the power, according to the appendix VI of the Madras Famine Code which you work under, to organize the gangs. Appendix VI is, I am aware, liable to modification, but as I have received no orders to the effect that I am not to organize gangs, I consider that, according to article 115 of the Code, it is quite within my province to issue orders to my officers about the number of diggers, carriers, &c., there should be in a gang. As I understand the Madras Famine Code, which we both work under, it is for you to approve of a task and for me to arrange for the proper carrying out of it.

RESOLUTION—dated 3rd June 1897, No. 415A.

The Collector of Cuddapah submits, for the orders of the Board, correspondence between himself and the Executive Engineer on the subject of tasks on the Chepad channel work.

2. The Superintending Engineer, III Circle, proposes to adopt the following system which has been introduced into the North-Western Provinces:—

(1) To give the diggers of a gang a certain daily task and ignore the fillers and carriers altogether.

(2) To entirely ignore lead and lift, because it is found that only when lead or lift is great, have the fillers and carriers as much to do as they can manage.

(3) To set out the task for each individual digger.

(4) To set him a task which will take him at least three days to do before having to move further on.

3. The system approaches the ideal in so far as it aims at setting a task suitable to the capacity of each individual of the most important class of workers on whose efforts the outturn of the whole gang necessarily depends. Government in paragraph 3 (1) of G.O., No. 216 of 1897, has recognised the necessity of fixing the task according to the number of diggers, and not according to the total number in the gang. The only objection that the Board can see to the proposed system is the impossibility of carrying it out. It is owing to the large masses of labourers that have to be dealt with in famine times that it has been found necessary to deal with the gang

and not with the individual. Mr. deWinton realises the necessity of daily measurements. Let it be supposed that there are 16 of Mr. deWinton's typical gangs on the works—a by no means excessive number. Under the present rules, the officer in charge of the work would have to set out 16 tasks each day, and no more measurements would be required unless any of the allotted tasks were not worked up to. Under Mr. deWinton's scheme, it would be necessary to set out 960 tâks every 12 weeks, *i.e.*, an average of over 11 a day, to set out 16 × 5 or 80 tasks every third day and to measure up 16 × 5 or 80 tasks every day. It is true that accurate measurements are only intended to be made every third day, the measurements on the other days being approximate, but this means that there will be a proper check over the labourers' work only once every three days, instead of every day. It is presumably intended to pay labourers according to the outturn of the squad and not of the gang, or else one of the chief advantages of the system is lost. This means that each head cooly will have to make five entries against one under the present system, and all the scriptory work will be increased in the same proportion. Even if it is intended to write up the work lists only once in every three days, scriptory work will be nearly doubled. Under the existing system delays are numerous enough.

4. For these reasons, the Board considers that it is undesirable to add to the complexity of the existing rules for the conduct of works by introducing the proposed system.

5. The Board observes that the Superintending Engineer issued orders to the Executive Engineer to introduce a system totally at variance with the provisions of the Famine Code, without consulting the Collector, although the proposed system involved several points of a non-professional nature. It is glad to note, however, that the Executive Engineer thought fit to consult the Collector in the matter.

(True Copies and Extract.)

(Signed) L. E. BUCKLEY,
Famine Secretary.

To the Collector of Cuddapah.
„ Secretary to Government, Revenue Department.

Erd. Md. Pahilvan