

B. 344. 47/15 Dec 84

The Examiner is
authorized to admit
the pay of the temporary
draftsman, from the
18th August to the
11th Oct 1884, as
recommended by the
Supt Engineer.

15.12.84

U.S.
12.84

W. A. Webb. ✓
S. E. V. Crele. ✓
18/12
23/12

1040

From

THE SUPERINTENDING ENGINEER,
5TH CIRCLE,

To

THE Chief Engineer
S. W. Dept.



Dated 13th } December 1884.
Recd. }

ENCLOSURES.

No. 3537

J. Salbroya Chud.

Requests that the
Examiner P. M. C. may
be authorized to ad-
mit the pay of —
Temporary Draftsman
from 18th August to
11th Octob. 1884. for
reasons stated.
With order

No. 3537

SUPERINTENDING ENGINEER'S OFFICE,
5TH CIRCLE, MADRAS,
Chepauk, 13th Decr 1884.

From

THE SUPERINTENDING ENGINEER,
5TH CIRCLE,

To

THE Chief Engineer
P. W. Department.

SIR,

Enclosures.

T. Subroya Mudaliper,
who has passed the Purseers'
Test, was appointed by the
Executive Engineer Chingleput
Division to be a Temporary Draughts-
man from the 18th August 1884,
under G. O. No. 1791 dated 21st
July 1884.

The temporary Draughtsman's salary
was passed provisionally by the
Examiner, subject to the opinion
of the Principal of the Civil En-
gineering College whether he
was

was qualified as a Draughts-
man and the Principal's
reply — stated that
T. Subbroya Mudaliyar's
marks in Drawing at his
final examination were not
sufficient to have secured him
a Certificate as a Draughts-
man, had he failed to obtain
one as an Overseer."

2. T. Subbroya Mudaliyar
ceased to perform the duty
of Draughtsman from the
12th October 1884, and I have
the honor to request that, as
the appointment was only tem-
porary and the incumbent
had passed the examination
for Overseer which requires
higher qualifications than those
demanded from a Draughtsman,
the Examiner of P. & A. accounts
may be authorized to admit the

the Draughtsman's pay, as
an exceptional case from
the 18th August to 11th October
1884.

I have the honor to be
Sir
Yours Most Obedt Servt
Lawrence J. Cole P. & A.
Superintendent of Engrs
P. & A.

The Examiner is
authorized to admit
the pay of the temporary
draftsman, from the
18th August to the
11th Oct 1884, as
recommended by the
Supply Engineer.

15.12.84

U.S.

15.12.84

W. H. C. 18/12
S. E. C. 18/12
18/12

From
THE SUPERINTENDING ENGINEER,
5TH CIRCLE,

To
THE Chief Engineer
P.W. Dept.



Dated 13th } December 1884.
Recd.

ENCLOSURES.

No. 3537

J. Salbroya Mud.

Requests that the
Examiner P.W. Dept. may
be authorized to ad-
mit the pay of —
Temporary Draftsman
from 18th August to
11th Oct. 1884, for
reasons stated.
With order

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

21st July 1884

READ the following

From the S. Engr. & Circle N. E. No. 1354 of 5th July 1884

Sanction is accorded to the entertainment for three months of a III class draftsman, for employment in the V Circle (Chingleput Division)

2. This sanction has been registered as No. 31 W of 1884-85, and classified as Establishment temporary

S. Engr & Circle
For PW Accts

Ces

11.7.84

74.7.84

G. B. No 403 J. D. 19-4-84
No 1049 D. n 9-6-84

No 59 E. W.

Forwarded to the Chief Engineer P. W. Dept. with a recommendation that the proposals of the Insptg. Engineer be sanctioned.

[Signature]

Chapatt
Lieut. Col. R.
For Chief Engineer for Irrigation
9/7



From

932 C. W.

THE SUPERINTENDING ENGINEER,

5TH CIRCLE,

To

THE Chief Engineer for Irrigation.

Dated

5th

Recd.

9th July

1884.

ENCLOSURES.

No. 1791 W of 21st July/84

No. 1354

Temporary Establishment -
Requests that sanction may be given for the entertainment of a 3rd Class Draftsman & an Overseer for three months under for the preparation of plans of the Red Hills Distributaries.

B. B. 12.7.84 or 18.7.84

No. 1854

SUPERINTENDING ENGINEER'S OFFICE,

5TH CIRCLE, MADRAS,

Chepauk, 5th July 1884.

From

THE SUPERINTENDING ENGINEER,

5TH CIRCLE,

To

THE *Chief Engineer*
for Irrigation.

SIR,

Enclosures.

With reference to para 7 of your
note in G. O. No 403 I dated 19th April
1884, I have the honor to request
that sanction may be given for the
employment of a temporary 3rd class
Draftsman for three months in the
Chingleput Division for the pre-
paration of the plans & estimates
of the Red Hills Distributaries
called for in the above G. O.

2. Quarter Mr. Sims has
been employed in levelling &c. on this
work and it is advisable that he
should complete the plotting and
drawing

Drawing also. This will occupy him
about 3 Months and for this period
the services of a Temporary Overseer
are required to take up Mr. Seens
current duties in the Trinellone Sub-
Division and I request that a temporary
Overseer may be nominated & I
accordingly.

I have the honor to be

Sir,

Your most Obedt. Servant

W. H. Horton

Col. R. E.

Offg. Supt. Engineer

5th Linc.

IRRIGATION.

Gobt. of {1884} Madras.
PUBLIC WORKS.

Dated April, 19th.

Recd.

Encl.

G.O., 19th April 1884, No. 403 I.

APRIL.

**Cholaveram and Red Hills
Tanks**

The Superintending Engineer, V Circle,
directed to submit revised estimates for
completing the distributary channels under
the —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.

READ—the following papers :—

From J. F. PRICE, Esq., Collector of the Chingleput District, to the Chief Engineer for Irrigation, dated Saidápet, 18th August 1881, No. 3293.

In reference to your letters, Nos. 9 C.N. and 27 C.N., dated 17th March and 22nd June last, respectively, calling for a statement showing separately the area, compensation and annual assessment of the lands required to be taken for the proposed distribution channels of the Madras water-supply and irrigation extension project, I have the honor to inform you that the general charge Deputy Collector (compensation department) has reported as follows :—

“The tahsildar of Ponnéri states that, on inquiry, he learns the lines of channels noted in the margin were lock-spitted but the work was not carried out. The tahsildar of Saidápet states that new channels to Vilankadoopakum and to Madaveram were marked out some four years ago but that the lands were not taken. These were parts of channels reported on in my letter, No. 178, dated 30th May 1879, on which no final orders have been received. The marks were obliterated long ago.

“2. Under these circumstances, I am unable to prepare an account in the form given. If an account is to be prepared, the lands will have to be marked out and plans supplied to us.”

2. Mr. Pinto, who went over the lines of the proposed channels with Major Clarke, suggested, in his letter quoted above, on that, on the score of economy and of more probable utility, certain alterations in the lines of the then proposed channels should be made. Upon this, I requested Major Clarke to inform me whether he approved of the views of the Deputy Collector and I asked him to, in the event of his not doing so, have the proposed distributaries permanently demarcated in view to ensure accuracy of measurement for the purpose of settling compensation.

3. In reply, the Executive Engineer intimated that he fully concurred in the opinion of Mr. Pinto, and he further expressed himself in the following terms :—

“I am led to believe, from the wording of one of the late orders received from the Superintending Engineer's office, that the Government purpose abandoning *pro tem.* the distributary channel project, and therefore I cannot very well re-align the various channel lines nor demarcate them with stones without definite orders, which will be asked for.”

4. This being, however, inconclusive, I again addressed Major Clarke requesting him to state whether he had obtained orders regarding the re-alignment referred to, and whether the work of demarcating the new distributaries would take much time.

5. In answer to this he wrote as follows :—

“Orders were received some months ago to suspend all work in connection with the Madras water works, to which the distributary channel belongs.

“2. The re-marking or lock-spitting of the proposed channel lines will occupy a month or two.

“3. I am personally averse to the whole scheme and would like to put an end to it if not overruled by the Chief Engineer for Irrigation.”

6. This, again, being insufficient for my purposes, I wrote * to the Executive Engineer asking whether any decision

* No. 2186, dated 2nd June 1880.

had been arrived at respecting the distributary channels and whether the lands proposed to be appropriated for them might be struck off the account as not required.

7. To this the Executive Engineer replied:—

"The Superintending Engineer has decided that, for the present, nothing is to be done regarding extension of irrigation under the Madras water works. The project for distributary channels has no chance of receiving attention for some years; in fact, until the Red Hills tank bund is in a fit condition to bear the maximum water-level for which it is designed, namely, 46·31, there will not be sufficient water to irrigate more land than is at present under cultivation, and I think therefore that the lands proposed to be taken up may be struck off the lists unless you consider that the delay would seriously affect their price when eventually taken up."

8. A report was obtained from the Deputy Collector, Mr. Pinto, on the contingency referred to, and it was communicated to the Executive Engineer: no reply has up to date been received.

9. As the scheme appeared, to all intents and purposes, to have been abandoned, the lands concerned were struck off the list.

10. If a return such as that required by you is to be prepared I beg to state that it can only be done after definite proposals are passed, the lines lock-spitted, and the compensation settled.

Proceedings of Government, Public Works Department, dated 28th November 1883, No. 972 I.

From Lieutenant-Colonel H. SMALLEY, R.E., Executive Engineer, Chingleput Division, to the Superintending Engineer, V Circle, dated Mount, 20th December 1883, No. 4227.

With reference to your endorsement, No. 3136, dated 3rd instant, on Chief Engineer's memorandum, No. V-14, paragraph 7, I have the honor to report that I have discussed the subject of the Red Hills distributaries with the Deputy Collector on general duties, and I have also been in correspondence with Major A. C. Smith, R.E., who drew up the estimate for them.

2. Major Smith says, he would most certainly have carried out his scheme had he been here still; that he designed his channels according to the levels of the ground and according to the area to be irrigated, section by section, to do away with the evils caused by using drainage channels for irrigation, the system which commends itself to the Deputy Collector. He admits that in a bad year the irrigation would suffer, and must give way to the Madras water-supply; but he thinks that in a good year there should be sufficient water for all. He also admits that there might be a considerable amount to be paid for compensation for land to be taken up by his scheme.

3. The Deputy Collector had never seen the map of the proposed distributaries till I showed it to him, and he was unaware that the estimates for them had been formally sanctioned by Government; or he probably would have raised no question about them. He is ready to value the land taken up by them on their being permanently demarcated with stones. His objections to Major Smith's scheme seem to be—

1st.—That irrigation by channels direct to the fields, as designed, is only applicable to large river schemes, such as the Godáviri, and not to a reservoir like Red Hills.

2nd.—That the principal object of the distributaries proposed is to carry irrigation to distant points which have not hitherto been irrigated from the reservoir, and thus to create fresh interests.

3rd.—That compensation for land taken up by the proposed distributaries would be very heavy.

4. The Deputy Collector's own scheme is to make use of the tanks under the reservoir by connecting them with the reservoir and with each other by a chain of channels. The merits of his scheme seem to him to be—

1st.—That he would catch and store in these tanks water which the reservoir could not hold.

2nd.—That he would not be creating fresh interests.

3rd.—That compensation for land taken up would be small.

He admits that in a bad year all irrigation under the reservoir must suffer in order to keep Madras supplied with drinking water.

5. The Collector supports his deputy in every particular, and deprecates going on with Major Smith's scheme "until the subject has been thoroughly considered and all concerned have had their say."

6. Now, as regards the first merit claimed by the Deputy Collector for his scheme, I do not know where the water is that the reservoir cannot hold, which he expects to catch and store in the tanks under the reservoir. The reservoir can hold its full supply in perfect safety *now*, whatever may have been the case in 1879 (when the Deputy Collector first wrote), and indeed I do not see why its capacity should not be increased 2 feet perpendicularly by a series of posts and shutters on the crest of the weir, and the same at Cholaveram reservoir. The only normal time the reservoir lets water to waste is in the height of the north-east monsoon, when the tanks themselves are also full and could not hold any more. It is in the *hot weather* that the cultivators under these tanks would require them to be filled from the reservoir, were they connected with it, just the time when the supply has to be carefully economised for the sake of the population of Madras. And this shows the fallacy of the second merit claimed by the Deputy Collector for his scheme; for, if the tanks are to be filled up from the reservoir whenever they run short of water, what is it but creating fresh interests, just as much as taking off channels from the reservoir to distant points? As regards compensation of land, no doubt this would be much less under the Deputy Collector's scheme than under Major Smith's, but I do not consider that that is the point of first importance.

7. With regard to the objections taken by the Deputy Collector to Major Smith's scheme, the second is the only one to be discussed. The Collector, in his No. 2395, dated 23rd June 1879, gives it as his opinion, that it is decidedly advantageous to secure all that is near the parent tank before giving attention to the supply to points which are far distant. That is an important objection not only to Major Smith's scheme, but also to the Deputy Collector's, or any other that seeks to draw off more water from the reservoir than at present is supplied to irrigation; and the question is whether irrigation under the reservoir has reached its safe limit. Judging by the experience of the present calendar year, I am inclined to think that it has, and that it cannot be extended with discretion under existing arrangements.

The reservoir water-surface stood at 46·98, *i.e.*, ·33 below full tank-level, on 8th December 1882.

Rainfall on the catchment basin of 23 square miles from 8th December 1882 to 3rd October 1883 was registered at Red Hills at 7·14,* of which, however, probably very little reached the reservoir.

* Dec. 1882	...	...	...	...	·05
June 1883	...	...	...	...	·99
July "	...	...	...	...	4·60
Aug. "	...	...	...	...	1·50
Sept. "	...	...	...	...	Nil.

No supply was received from the river *viâ* Cholaveram till 1st October 1883.

The water surface stood at 37·41 on 1st October. Irrigation was shut off on the 21st September.

Now, this was by no means an extraordinarily bad year, yet the municipality of Madras began to complain, in the end of September, of the water being lower than it should have been according to their rights, *i.e.*, a minimum of 38·31, and they would have been obliged to resort to pumping had not rain fallen in abundance on and after the 3rd October. Had the rain held off, as in the previous year, till late in November, there would have been great difficulty in supplying water to Madras, and had irrigation been shut off much earlier than it was, there would have been a great outcry from the cultivators under the reservoir.

8. My conclusion is, that irrigation cannot be extended with discretion under existing arrangements; but that, as one of the objects of Major Smith's scheme, at least, if not the principal one, is to better regulate the supply of water to existing irrigation

and to prevent waste, I would not abandon his scheme, but carry it out only so far at present as it affects existing irrigation; but I would give the full sectional areas as designed to the heads of these channels, in the hopes either of being able to extend irrigation at some future time by increasing the supply in Red Hills and Cholaveram reservoirs, as before indicated, or of the municipal arrangements for supplying Madras being altered. I would, therefore, leave the amounts estimated for these distributaries as they stand in the estimate, but I would propose that only Rs. 10,000 be spent upon them during the next year, 1884-85. To this should be added Rs. 4,200 for extending the north sluice, which is an essential part of Major Smith's scheme, though not as yet put down for execution in 1884-85. The compensation for land for the upper portion of the distributaries would not probably exceed Rs. 5,000, which would also have to be met in 1884-85.

9. Were we not fettered by the conditions imposed by the Madras water-supply, I consider we should carry out Major Smith's scheme in its entirety at once. I cannot help thinking it was a mistake in the first instance to allow for an irrigation supply and a drinking-water supply in the same reservoir. The water-supply of Madras, it seems to me, ought to have been able to stand on its own merits, and not have been tacked on to an irrigation project. I suppose that it would be impossible now, at reasonable cost, to separate the reservoir into a drinking-water reservoir proper, under the sole charge of the municipality, and an irrigation reservoir proper available for cultivation to its full capacity.

No. 3555.

Endorsement on the above.

Forwarded to the Chief Engineer for Irrigation, with reference to G.O., No. 972 I., dated 28th November 1883.

2. I think that the sanctioned arrangements for the distributaries should be adhered to, and be carried out so far as to meet the requirements of the existing irrigation.

CHEPÂK, (Signed) H. L. PRENDERGAST, Colonel, R.E.,
12th January 1884. Superintending Engineer, V Circle.

No. 80 I.

Note by the Acting Chief Engineer for Irrigation.

The estimates for the Madras water-supply and irrigation extension project sanctioned by the Secretary of State provided a sum of Rs. 27,201 for distributaries under the Red Hills and Cholaveram tanks, of which Rs. 8,051 had already been expended, and also a sum of Rs. 10,147-7-3 for land compensation for these channels. These channels were designed and marked out by Major A. C. Smith, R.E., and there was considerable correspondence on the subject, but nothing has yet been done. The Collector, in his letter above recorded, quotes the then Executive Engineer's (Major S. C. Clarke, R.E.) opinions, and says that as the scheme appeared, to all intents and purposes, to have been abandoned, the lands concerned were struck off the list.

2. Further correspondence on the subject of the total compensation under the project took place, and the Collector, in his letter printed with G.O., No. 972 I., dated 28th November 1883, submits a statement showing particulars of compensation with a saving of Rs. 8,385-4-6, which, he says, is in consequence of no expenditure having been incurred on account of distributary channels, the scheme having been abandoned. The Government order corrected the Collector's misapprehension on the subject, stating that the construction of the channels is still under consideration, and the Superintending Engineer was directed to submit a further report.

3. The Superintending Engineer's docket printed above forwards the report called for, and the undersigned having lately visited the Red Hills has taken the opportunity

of inquiring fully into the circumstances with this result, that he has no doubt whatever that the channels should be excavated. There are already some distributary channels, but these are very incomplete; water is taken from surplus channels and bunds put up were considered necessary; and, in fact, the old arrangements for distributing water on no system at all are still in force, in consequence of which water is wasted and as much land as there is water available for is not irrigated.

4. The Deputy Collector's objections to the distributary channels, which are concurred in by the Collector, show that the subject has not been understood. He has a "scheme" which he desires to substitute for distributary channels, by which he would catch and store in the tanks lying below the Red Hills tank the water which that tank cannot hold, which apparently means that he would continue the old confused system of distributing water under the tank and run all surplus down existing drainages into other tanks. In ordinary years there is no surplus at all, and generally when the Red Hills tank surpluses the lower tanks are full. The objections are not worth further consideration.

5. The Red Hills tank weir has now been brought up to proper level, and the tank can hold its full supply, so that so far as water is available the irrigation can be extended. Water is retained up to a certain level for the use of the municipality so that this level is in effect the bottom of the tank so far as irrigation is concerned. It would not of course be advisable to excavate channels to extend irrigation indefinitely, but the volume available can be very nearly as accurately calculated as in the case of any other tank, and the channels should be designed to make the most of this supply.

6. Major Smith's channels were designed many years ago, and it therefore seems desirable to have the lines resurveyed and the channels worked out afresh, advantage being taken of existing channels where such are available so as to reduce the amount of compensation to be paid. It seems probable that all that is necessary to utilise the supply to the fullest extent can be done for the amount left available in the completion estimate.

7. The Superintending Engineer should make application for temporary establishment, if required, for the purpose of working out the estimates.

CHEPÂK, (Signed) C. VINCENT,
10th April 1884. for Acting Chief Engineer for Irrigation.

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

ORDER—dated 19th April 1884, No. 403 I., Public Works.

The Superintending Engineer, V Circle, will submit, with as little delay as possible, revised estimates for completing the distributary channels under the Cholaveram and Red Hills tanks.

(True Extract.)

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

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

Exd. E. Fernandez.
Spare Copies