

(1) Number of pages 4(2) Date of repair 29.5.81

(3) Initials of the Referencer _____

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

REVENUE DEPARTMENT

G.O. No.	4099. REV.	Press.
B.P. No.		Mis.
Dated	23. 7. 1877.	197 .

Not to be folded or roughly handled

1.
4099
GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

9th July 1877, No. 145 I.

Irrigation.
Account.

Read the following paper :—

No. 77 I.

No. 37. *Note by the Chief Engineer for Irrigation.*

THE District Engineer, Bellary, has submitted estimates for completing the investigation of the Potalacoontah Tank Project near Pennacondah. In the report forming an enclosure to the District Engineer's letter, it is shown that the site for the tank has some favorable features, inasmuch as the bund will abut on two hills and there is a saddle 395 yards long near the north end for the discharge of surplus. It has not been mentioned what the nature of the soil at the saddle is.

2. The survey of the catchment basin is reported to have been completed and plotted. It is to be observed that its area could have been taken from the Atlas Sheet No. 59, so that time and labor appear to have been wasted.

3. Mr. Supervisor Harris is stated to have been employed on the project for three months without any useful results, as he did not plot his work, and his books do not show where he commenced. The District Engineer should see whether something cannot be made of his books, which can, if necessary, be sent to him through the District Engineer, Godavery, in order that he may plot all the work he did.

4. With regard to the further work to be done, it is to be noticed that the F.T.L. being approximately settled by the level of the saddle where the waste weir is to be placed, the first thing to be done is to select a suitable bench mark, to which all the levels of the project must be referred.

2nd.—If Mr. Harris has not already done it to take longitudinal and cross sections of the bund site and to ascertain the nature of the surface and sub-soils at that site.

3rd.—To ascertain the level of the saddle by a longitudinal and cross sections and to record the nature of the surface and sub-soils.

4th.—To take longitudinal and cross sections of the course which the surplus water will take.

5th.—To select a suitable site for the lowest of the sluices.

6th.—To contour the water-spread at the level of sill of lowest sluice and at proposed full tank level and to lockspit the contour lines.

7th.—To divide these contour lines into any convenient number of parts of approximately equal length on each line, and to run levels between the corresponding divisions fixing the distances for each foot of difference of level between

Vide sketch appended.
the upper and lower contour. This will enable the capacity of the tank both when full and at each foot above the lowest sluice to be ascertained and by interpolation the capacity for every 3 inches may be deduced and tabulated.

8th.—To survey the lands available for irrigation by the tank and then after to select the sites for all the sluices considered necessary, and to lay out the channels for the distribution of water to them, the land to be irrigated by each being indicated by a distinct shade of color.

9th.—To take and plot levels along the lines of the distribution channels.

10th.—To furnish the Collector with a tracing of the survey of the land to be irrigated and obtain from him a report of additional assessment, which will be obtainable from the land, if irrigated. Of course, the area shown as irrigable must not exceed that for which an adequate supply of water will be available, and it will have to be determined, with reference to the area of the catchment basin (not reported) the average water yield of that area, the capacity of the tank, and the proportion which that capacity bears to the yield, what area the tank may be expected to irrigate. The average annual surplus of the Durmavaram tank, the terminal of the group, is supposed to be about 22½ millions of cubic yards annually, but no deduction can be made from this fact even if correctly estimated, for the drainage basin of this tank is very large and there is a great number of tanks above it. The problem must be solved with reference to the catchment basins of and actual areas of irrigation under a few of the existing tanks of the basin of the proposed Potalacoontah Tank, and this mode of solution will be fairly reliable. The register of rainfall at Pennacondah should also be made use of.

11th.—To ascertain the circumstances of all the tanks lying above the proposed tank, particularly with reference to the sufficiency of their waste weirs. Surveys and levels of some of them may be found to be necessary, but should not be taken without reference to definite information desired but not otherwise obtainable.

12th.—To prepare a map by enlargement from the Atlas Sheet or otherwise of the catchment basin showing the parts occupied by existing tanks, the areas of these parts and the area entirely unobstructed.

13th.—To prepare cross sections of the bund showing its arrangement and details of seating, puddle wall if necessary, revetment, &c., and to take out quantities of each description of work. The F.T.L. and the M.W.L. to be shown on the cross sections, and the level of the top of the bund must be fixed with reference to M.W.L., which will depend upon the maximum flood discharge from the basin, the length of the surplus weir, and the depth of water intended to pass over it. A cross section of the proposed weir may be prepared, and then before the estimates and designs of the works are completed, the District Engineer should forward the papers to this office with a preliminary report and approximate estimate. All plans involving designs can be sent in pencil in the first instance.

5. The District Engineer has entered a salary of Rupees 100 a month for the Surveyor in his estimate for Survey Establishment. Looking to the locality and to the nature of the work which, though simple, will demand care and attention, this salary may be allowed provided a man with corresponding qualifications can be obtained.

6. The time for taking up the investigation should be determined with reference to other demands on the District Engineer's attention. He must be able to ensure that no more useless work is done.

7. There are many fine tanks in this part of the district, and, if the site be really favorable, it may be anticipated that the project will be successfully worked out.

For St. GEORGE,
28th June 1877.

(Signed) JOHN MULLINS, Colonel, R.E.,
Chief Engineer for Irrigation.

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

No. 38.

ORDER THEREON, 9th July 1877, No. 145 I.

The following estimates are sanctioned in connection with the investigation of the Potalacoontah Tank Project in the Pennacondah Range of the Bellary District:—

ORDINARY AGRICULTURAL.

ORIGINAL WORKS.

Irrigation.						RS.
1. Bench marks, &c.	...	...	...	...	...	50
Establishment.						
2. Surveyor, five months, at Rupees 100	...	...	...	...	...	500
Five Lascars, do., at " 6	...	...	...	...	...	150
Contingencies	...	...	...	...	...	20
						670

The former will be met from the district grant for Minor New Works, and the latter from the provision for Temporary Survey Establishment.

2. The District Engineer will be guided by the observations of the Chief Engineer for Irrigation in carrying out the investigations.

3. This sanction has been registered as No. 90 I of 1877-78.

(True Extract.)

(Signed) JOHN MULLINS, Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

(True copy)

John Mullins Colonel R.E.

Joint Secretary to Govt.

Irrigation
Branch

To the District Engineer, Bellary.

" Collector of Bellary.

" Chief Engineer for Irrigation.

" Examiner of Public Works Accounts.

" Revenue Department.

Exd. E. C. Shunker.

Spare Copies

1933/77
IRRIGATION.
ACCOUNT.

Gobt. of 1877 Madras.
PUBLIC WORKS.

To

THE DISTRICT ENGINEER,
BELLARY.
&c., &c., &c.

Dated July 9th.

Issued

Encl.

9th July 1877, No. 145 L.

JULY.

Nos. 37-38.

Potalecoontah Tank Project, Bellary District. — The estimates in connection with the investigation of the —, sanctioned with instructions.

Comm. to the
Board of Revenue
23rd July 77