M.R.O. 1—10,006—28-2-50.

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No. / B.P. No:	3563	Press / Mis.	Original
Dated	20-12-	1825 195-	

Not to be folded or roughly handled

Supt
DISTRICT ENGINEER'S OFFICE, GODAVERY.
DOWLAISHWARUM, 1st December 1875.
Supt 2 do

No. 2615

From

Major J. Beatty R.E.

Supt
Offg District Engineer
Godavery District

To

Major General Gell. Walker R.E.

Secretary to Government D. P. W.
MADRAS

Sir,

With reference to your Under Secretary's Memorandum No. 430 of 23 August 1875, I have the honor to report on certain deviations from the Standard Plans as regards quantities, and deviations from the District Schedule as regards rates.

2. The deviations in quantity are comparatively trifling, and the explanation is that the printed list of quantities appears not to have been received when the estimates were framed.

3. As regards rates I have been unable to obtain any explanation because it is not known what is meant by the term "District Schedule", given

DISTRICT ENGINEERS' OFFICE

in your Comparative statement. It does not appear to be the Range Schedule; but if so, the rates naturally vary for stone, lime, gravel, sand &c according to the distance of places in the Delta from the source of supply; and no general rate for the whole Range can be used as a check on particular works. I send copy of a letter from the Range Officer on the subject.

4 So far as I can judge alteration of the estimates already submitted is unnecessary, but if you wish me to send in revised estimates please return the papers already submitted, and the document called "District Schedule"

I have the honor to be,

Sir,

Your Most obedient Servt

R. Beatty - Major R.E.

Offg Supt Engineer Godavery.

P.W. 1875 Dept

From The Officiating
The District Engineer,
Godavery District.

To No 7760
The Secretary to Government
Department Public Works
MADRAS

Dated. 12th December
Received. 16th

NO. 2615

P.W. Dept. Encls. Three

Subject.

Regarding deviations from Standard estimate of quantities and District Schedule.

D.C. No
G.O. No 35 dt 3-20-12-75

DISTRICT ENGINEER'S OFFICE, GODAVERY.

No. 4022 Camp Peravelly DOWLAISHWARUM, 24th March 1875.

Desp. 26 Dr

30

From.

Major I. Beatty R.E.
District Engineer
Godavery District

To.

Colonel G. W. Walker R.E.
Secretary to Government D. P. W.
MADRAS

12
3 Estimates of Catcheries
3 Detail Estimates
3 Specifications
3 Site Plans
1 Sheet of Sections
1 General abstract

Sir,

As directed in para 2 of G.O. No. 162 of the 24th January 1874, I have the honor to submit herewith revised estimates for 1st class Taluq Cutcherries at Tanuku, Bheemaveram and Nursapur, according to the sanctioned standard Plans.

7 Desp. by Bandy

2. This revision has become necessary in consequence of alterations sanctioned in the standard plans of main and out buildings.

3. The General Abstract which accompanies this letter will show the items provided in the estimates.

4. Of these three cutcherries I recommend that the one at Nursapur should be built first as that is at present the head quarters of the Range Officer and can therefore be

better

better supervised by mine, while there is also a canal to the place by which the supply of building material can be conveniently made.

I have the honor to be,

Sir,

Your most obedient & Servant

[illegible] Major R.E.

District Engineer Godavery

[illegible] made for sinking a Well 6 feet inner dia
and 20 ft deep on the English system in the

P. W. 1875 Dept.
No: 2094

From

The District Engineer,
Godavery District.

To

The Secretary to Government
Departmental Public Works

Circular No. 430 dated 24th Dec. 1875

Dated. 24th March 1875

Received. 31st

No. 4021

Encl. Tabular

Subject.

Submitting estimate for sinking a well 6 feet inner diameter and 20 ft. deep on the English system in the compound of the Taluq Cutcherry at Samukia Godavery Dist.

G.O. No 556. 20.12.75

Estimate for sinking a well 6 feet inner diameter and 20 ft. deep on the English system in the compound of the Taluq Cutcherry at Samukia Godavery Dist.

No. of Section	Depth	Quantity	Description of Work	Rate	Amount	Total
			Excavation			
1st	4	7½	Cyds Earthworks for Cyd.	-2-	-5-	
2nd	4	7½	Do.	-26	1 29	
3rd	4	7½	Do.	-3-	1 66	
4th	4	7½	Do.	-36	1 103	
5th	4	7½	Do.	-4-	1 14-	7-6
			Steining			
1st	4	2.9½	Cyds Brick in chunam	5 8-	12 15-	
2nd	2	1.4¾	Do.	5 14-	6 4 6	
3rd	2	1.4¾	Do.	6--	7-11	
4th	2	1.4¾	Do.	6 2-	7 33	
5th	2	1.4¾	Do.	6 4-	7 57	41 53
2nd	2	1.4¾	Brick in clay	4--	4 11-	
3rd	2	1.4¾	Do.	4 2-	4 134	
4th	2	1.4¾	Do.	4 4-	4 158	
5th	2	1.4¾	Do.	4 6-	5 2-	19 10-
1st	4	1	**Concrete**	3 12-	3 12-	
2nd	2	½	Do.	3 14-	1 15-	
3rd	2	½	Do.	4--	2--	
4th	2	½	Do.	4 2-	2 21-	

Estimate for Sinking a well of 6 ft. inner diameter and 16 ft. deep in the English System in the Compound of the Taluq Cutcherry at Pheemaveram Godv. Dist.

No. of sections	Depth	Mean = tth	Description of Work	Rate	Amount		Total		
			Excavation						
1st	4	7½	Cyds. Earth work @ Cyd.		2	15			
2nd	4	7½	Do.		2 6	1 2	9		
3rd	4	7½	Do.		3	1 6	6		
4th	4	7½	Do.		3 6	1 10	3	5	2 6
			Steining						
1st	4	2.9½	Cyds Brick in chunam @ Cyd.		6 8	14	2 4		
2nd	2	1.4¾	Do.		6 10	7	12 8		
3rd	2	1.4¾	Do.		6 12	7	15		
4th	2	1.4¾	Do.		6 14	8	1 4	37	15 4
2nd	2	1.4¾	Brick in clay		5	5	14 1		
3rd	2	1.4¾	Do.		5 2	6	5		
4th	2	1.4¾	Do.		5 4	5 6	2 9	18	1 4
1st	4	1	Concrete		4	4			
2nd	2	½	Do.		4 2	2 1			
3rd	3	½	Do.		4 4	2 2			
4th	3	½	Do.		4 6	2 3	10 6		
2nd	2	½	Cyds Pudding		5	2 6			
3rd	2	½	Do.		6	3			
4th	2	½	Do.		7	3 6	12		
			Parapet wall						
	2¼		Cyds Brick in chunam		6 8	14 10			
	1		Sqr. Plastering		3 10	3 10	18 4		
			Counter Slope						
			Carried Over					90	9 2

			Brought Over				9 12	67 15 9
5th	2	½	Cyds Concrete per Cyd.	4 4	2 2	11 4		
2nd	2	½	Pudding	5	2 6			
3rd	2	½	Do.	6	3			
4th	2	½	Do.	7	3 6			
5th	2	½	Do.	8	4	13		
			Parapet Wall					
2¼			Cyds Brick in chunam per Cyd.	5 8	12 6			
1			Sqr. Plastering Sqr.	3 8	3 8	15 14		
			Counter Slope					
2			Cyds Concrete per Cyd.	3 12	7 8			
2			Cuttestone	15	30			
100			Rg. ft. V shaped drain round the Counter slope and for a length of 50 ft. outside	4 25		62 8		
							159 7	
			Contingencies				13 15 3	
			Add for Curbs and suspending Sods &c. that may be found necessary				30	
			Total Rupees				200	

Dist: Engrs Office
Powlaisheveram
24th March 1875

Executed Major P.C.
District Engineer Godv.

General Abstract to accompany Estimates for first Class Taluq Cutcherries at Nursapur, Tanuku and Bheemavaram.

Places	Cutchery	Pyol & Shed	Kitchen	Public Latrine	Jail Latrine	Gate and Pillars	Compound fence	Wells	Compensation for land	Total
Nursapur	18540	850	590	1100	670	75	1375	"	700	22,900
Tanuku	17,700	730	460	1010	620	60	290	200	350	21,420
Bheemaveram	18740	800	500	1050	660	65	305	200	330	22,650

District Engrs Office Godavery
Dowlaisheveram, 24th March 75

L. Beatty. Major R.E.
District Engineer Godavery

2 Cyde Concrete Cyds 4 .. 8 ..
2 Cutchery " 17 .. 35 ..
100 Qrs Well Masonry
the Curb 2 Cyds 4 Qrs 2 at 5. 31 4 .
Length of 50 Qrs Curb Line 74 4

Correspondence 10 2
Added for Curb & Curb Facing
Pedals & Star Mouldings
Necessary 25

Total 154 13 2

L. A. Pepper 200

District Engineers Office
Dowlaisheveram
24th March 1875

Certified Main. Pipe
Cutcherry Buildings Estimate

P.h 2094/95

12 Enclosures

Specification of wells to be sunk in the Compounds of the Taluq Cutcherries at Tanuku and Bheemavaram in the Western Delta.

1. The shaft is first sunk of 8 feet diameter, so as to leave a space of three inches all round, between the sides of the excavation and the steining, and to 4' deep or such a depth as the earth continues to stand safely. When it becomes no longer prudent to proceed, the bottom of the excavation is levelled, the brickwork commenced and carried up to the surface. As the brickwork proceeds, all vacuities behind should be rammed hard with Concrete.

2. The excavation is then resumed in the Centre of the shaft and carried as deep as may be consistent with safety (4 feet deemed best) leaving a benching of earth to carry the brickwork (See Sketch) When the brickwork is dry, this benching is to be cut away, and the excavation completed to the full diameter. The bottom having been levelled, the brickwork is to be carried on as in the upper portion only 2 feet to be in advance

and two feet in clay and all vacuities filled in with concrete, or puddled.

3. So that the steining will be a series of cast iron rings 2 feet deep, alternately of brick in chunam and brick in mud; the brick in chunam having a concrete backing, and the brick in clay, one of clay puddle. The bricks are to be laid all headers, and the steining constructed truly cylindrical and perpendicular.

4. Soil may be met with so soft as to render it necessary to build the brick work on a curb. This curb should be made of durable timber and formed in several segments joined with half lap joints, secured with a plate on each side, and four bolts passing through the whole. Upon this curb the brickwork is carried up.

5. It may also be necessary when sinking through sand to use curbs for each section in depth of the excavation; and in such cases the benchings of earth carrying the curb (as shewn in Sketch No. I) should not be removed except a narrow portion which is to be cut away as far back as the brick work and a prop inserted raking to the front of the curb and abutting against a foot block as shewn in Sketch No. 2: another prop is to be inserted in a similar manner and so on until the whole curb and brickwork is thus supported.

6. If considered preferable, the curbs may be suspended from the surface by chains in the manner shewn in Fig. 3: Fig 3. is a section of the shaft and fig 4 a plan at the surface of the ground; two beams of timber are placed parallel to each other across the shaft and two other pieces are similarly placed across and at right angles to them forming a square opening (See fig 4) to admit the traffic up and down the shaft. Each of the beams should be well bedded on the grounds so as to give a good bearing; the lower end of each chain passes also through a beam, two of which carry the curb on which the brickwork rests.

District Engineer's Office Godavery, Dowlaiswaram 24th March 1875.

R. Keatly - Major R.E. District Engineer Godavery

Specification of work at the Taluq Cutcherie of Nursapur, Tanuku and Bheemavaram Western Delta.

Vide G.O. No 1201 dt 14th May 1872.

Consult the standard specifications, and attend carefully to the instructions contained therein.

Cutcherry and Sailyas

Construct the buildings in accordance with the standard design approved in G.O. No. 795 dated 23d March 1874 with the addition of 2 windows for the Inspectors Room instead of open work, and with exception of Post office.

Excavation.

Excavate the trenches to a depth of 2½ feet and to the breadths specified in drawings and scrape the sides to such an angle that the earth may stand without slipping. Then well water and ram the bottom to receive the concrete.

Concrete.

Lay and ram the concrete in layers of 6 inches each to the required depth. The concrete is to be composed as follows; two parts of

of broken stone (broken to pass through 1½ inch ring) one part of sharp river sand, one part broken brick and one part lime. Beat the 1st layer to a true and level bed with heavy beaters and finish off with ordinary flat wooden beaters. Care should be taken that the concrete fills the whole width of excavation.

Foundations — To be of stone in chunam and 1½ feet deep throughout with the exception of upperstory walls which should be 2½ feet, and to turret 4 feet over the concrete as shewn in drawing.

Basement. — The basement should be 3 feet deep throughout the building and thickness as shewn in drawings. The retaining walls of Verandah and covered way should be coped with cut stone 9" thick and 2 ft. wide. The outer plinth of the building should be capped with cut stone 6" thick and 9" broad as shewn in drawing.

Superstructure. — Build the walls above of Nursapore cutcherry with stone in chunam 18" thick the exterior faces being dressed; and those of less thickness with brick in chunam. The superstructure of Tanuku and Bheemavaram cutcherries should be built with brick in chunam of the dimensions shewn in drawing.

Lay bricks in English bond alternate courses of headers and stretchers using king or queen closers only when necessary. Keep the courses level worked to ⅜ of an inch mortar joints horizontal and vertical. The bricks to be of the best quality and those for face work specially selected.

Mortar — The mortar to be used should consist of common lime of good quality and 2 of clean sharp river sand well pounded together.

Plastering — The interior of the whole superstructure to be plastered with 3 coats of chunam (the last one fine)

Pointing — The exterior of the whole superstructure to be neatly pointed with cement.

Painting — All doors and windows and all wood work exposed to the action of sun and rain to be painted in dark brown or lead colour with two coats. Carson's patent paint to be used if procurable. Carsons "oak colour"

Roofing — The roof to consist of flat and pan tiles resting on Teakwood rafters and reepers supported

supported by trusses as shown in plan and it should project 2 feet beyond the face of the wall where there is a gable. The eaves of the Sail should project 2 feet beyond the wall plate as shewn in plan. Eave boards should be provided on all sides.

Rafters

The rafters to be of best seasoned Pegu Teak scantlings shewn in the drawing and Estimate and to be placed at 16" apart from centre to centre and to be wood oiled in one coat.

Flooring

The floor of the whole building to be paved with stone slabs over a concrete bed of 6 inches except that of Sail which should be of asphalte ½ inch thick over 6 inches concrete.

Minor details

As for the minor details care must be taken that the work is carried on in conformity with the plan and Estimate.

Lead flashing

After the whole of the carpentry of the roof has been completed, lay in the valley only eighteen inches broad leading (or zinc if sheet lead is not procurable) 8 lbs. to the foot superficial with a lap of 9 inches where joined. Where the spiral intercepts the record room roof and where the low roofs abut the walls of the Record Room provide and fix lead flashing 9" broad grooved in brickwork ¾ inch and neatly beaten.

Out Buildings

The out buildings should be constructed in accordance with the standard design and specification approved in G.O. No. 1014 dated 20th April 1874.

The foundations should be built with stone in Chunam of 1 foot deep and breadth as shewn in drawings and over a bed of Concrete 1 foot deep.

The superstructure of outbuildings at Nuwara Eliya Cutchery to be built of dressed rubble except walls of less than 18 inches thick which should be built with brick in Chunam. The dressed faces shall be neatly pointed with cement and the brick work of interior walls plastered with two coats of Chunam. The superstructure of out buildings at the Cutcherie at Tanuk

Jamkan and Rheemaveiam should be built with brick in Chunam and neatly pointed with Cement. The open or Honey Comb work where provided in the plans should be made of tiles dabbed with white wash and be of ordinary muster and of superior quality.

Roofing

The roofing should consist of flat and pan tiles of good quality supported by well seasoned country teak wood placed at 18 inches a part from Centre to Centre and of dimensions as provided for in the Estimate.

Flooring

The floor of Cook rooms to be made of 6" concrete well rammed and rubbed over. The floor of Ryots' shed should be paved with stone slabs over 6" concrete and that of Latrines to be asphalted over 6 inches concrete.

The work in these buildings in all other respects should be similar to that of the Cutcherries to which they belong.

Boundary Wall

The boundary wall and pillars should be built of brick in Chunam over foundation and basement of rough stone in Chunam

13

resting on Concrete bed as per plan and the whole above ground should be carefully pointed with Cement. Where the main Buildings are built of stone the Compound wall must also be of stone. a berm of not less than one yard to be left between the compound ditch and bund.

District Engr's Office Godavery
Dowlaicheveram 24th March 1915

L Beatty Major R.E.
District Engineer Godavery

50

No. II.—PARTICULARS FROM ESTIMATES.

Main Budget Head to which chargeable.

Provincial

Title and purpose of the work as given by District Engineer. Construction 1st Class Salary Cutcherries at Tanuk Bhimavaram & Narsapur

Original sanction for the preparation of the detailed estimate.

(Date and number in both sanctioning and Public Works Department.) Jud. Dept No 1844 of 18 & P.W. No 3986 of 1868

Amount of original detailed estimate. Tanuk Rs 21240 Bhimavaram Rs 22560 Narsapur Rs 22440

Number and date of sanction and endorsement in Public Works Department.

Amount of revised estimate	... ...	21420
Do. of original do.	... ...	21240
Excess over do. do.	... ...	180

Budget Head to which the work is chargeable, in detail.

Civil Buildings

Amount of current year's allotment ... Nil

Do. expended in previous years Rs 37-15

Total ... 37-15

Balance to be provided ... Rs 21,383-0-6

Funds can be made available during the current year.

(Yes or no, and state how in former case.)

No

Brought forward as urgent.

(Yes or no, and if so state by who.)

No

Bhimavaram Cutcherry

Amount of revised estimate Rs 22650

Do original do — 22560

Excess over do — 90

Current years allotment Nil

Expended in previous years Nil

Balance to be provided Rs 22650

Narsapur Cutcherry.

Amount of revised estimate 22900

Do original — 22440

Excess over do 460

Current years allotment - Nil

Expended in previous years 593-10

Total expenditure — 593-10-

Balance to be provided 22306-5-

DOCUMENTS IN FILE.

From District Engineer—Godavery—

1 Covering letter No 1022 date 24-3-75

1 Letter from Range Officer, No ——, date ——

~~1 Detailed Estimate.~~

5 Abstract do.
1 Genl Ab

3 Plan. Site & 1 Sheet of Sections—

2 Specification Reports

From Office—

One Standard Plan

Original sanction, No 1844 date 8-12-68
for detailed estimate preparation. Jud Dt
P. W. No 3986 21-12-68
Jud Dt No 1037 of 1869 P. W. No 2158 of 2/1/69

Orders and Proceedings.	No.	Date.	Under P. W. D. G. O. No.	Date.
P. W. Department ...			3986	21/12/68
Jud Dt ...	1844	8/12/68		
Public do. ...			2801	28/10/72
			3034	16/12/73
Revenue do. ...			1625	24/7/74
Financial do. ...			1871	13/7/74
Jud Dt ...	1037	21/6/69	2158	2/7/69

Principal
Original
Judicial
Public Works Accounts
Ry Electric Pharmacy
Revenue
Marine
Financial
Works Accounts
Stationery
Forest
Jud Dt

11/14/75

Chs { 2054 / 7760

16/12/75

No 343.

From,

The Officer in charge
No 3 Range Godavery.

To,

The District Engineer
Godavery.

Dated 7th
Dispd
Recd 15. } November 1875.

Enclos

District Engrs No 2146 dated 19th ultimo.

Sir,

In returning herewith the four enclosures of the above I have the honor to point out that the rates in the Column headed Rates as per "District Schedule" do not correspond with those shown in this Range Schedule of Rates while those in the estimates do.

No one rate for all works in the Range can be laid down as the rate depends on the distance of the work from Dowlaish weram Quarries, from Chettipett Line

kiln, and from the river where sand is got. I will take one item, the most important one, viz, "Brickwork in superstructure" In column "Rates as per District Schedule" Rs 18-8-- per 100 Cft. is given for the Tanuku & Bhimaveram Cutcherries & Rs 22 for the Nursapore one. In the "Rates as per estimate" column Rs 21 is the rate given for the Nursapur & Tanuku Cutcherries & Rs 23. for the Bhimaveram one. In the last Range Schedule the rate for such work is given as "from Rs 4-8-- to Rs 6-8-- per Cubic yard". All the above rates come within these limits. The circumstances of the Nursapur & Tanuku Cutcherries are nearly similar as regards a supply of materials for brickwork. But those of Bhimaveram are very different. The water carriage is longer and materials for it will have to be carried 7 miles by land. The rates <u>as per estimate</u> all agree with this Range Schedule

Schedule.

Ikaue vde 172 fasi.

/Sd/ A.R.F. Dorward Lieut R.E.
Assistant Engineer in ch: No 3
Range Godr.

(True Copy)
P. Beatty - Major R.E.
Offg Supt Engineer Godavery

No 3563

Public

PROCEEDINGS OF THE MADRAS GOVERN

Under date the 20 Dec 76.

Read the following:—

From

The District Engineer Cudd. } No 4022 dd 24 Nov 76
Godavery } " 2615 — 1st Ulter

— Do — — Do — —

The following revised Estimates are sanctioned and will be inserted if practicable in the Budget for 1876-77.

Constructing a 1st Class Salay

Cuttchery at Nursapoor Rs 2290

Do — Do — at Samulcot — 2142

Do — Do — at Bheemavaram — 2265

To The Ofg Sup. Godavery
" Controller of Rev with 3
Abstract Estimates
Judicial Deptt
II

Draft. 7-1-76

No 3563

Public

From

The District Engineer
Godavery

Letter from the Dist. Engineer Godavery No 4022 dtd 24th October 76.

Subject Revised Estimates for Salary Cutcheries and Subsidiary Buildings to be constructed in connection with Revenue and Magisterial Courts.

To

The Dist. Engineer
Godavery

Sir,

I am directed to transmit the accompanying Estimate noted in the margin for the construction of a Salary Cutchery at Nursapoor, Samulcot and Bheemavaram and to request that you will be good enough to submit the same with your opinion thereon to the Board of Revenue.

I have the honor to be
Sir
Your most obedient Servant
Chief Secy.

2094
720

Govt. of Madras.

PUBLIC WORKS.

To D. E. Godfrey

21/12

Dated

Rec'd

Rec'd

G. O. 25th Dec 1874 No. 3563

Nos.

Taluq Cuttherriest. Kurta
-pady Tamtam & Kheerna
-veram Godavery Dist —
Period Schedules amount
-ing to Rs 66940 for construc-
-tion 1st Class — Sanctioned