Number of Sheets 29

Date of Repair: 8-4-88

Initial of the Refr: 25/4/88

Tamil Nadu Archives
Govt of Tamil Nad.

G.O.No:- 3086-87 W dt 16-11-1887
Public Works Department

GR

3088-87
1

16th November 1887, No. 3087 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Military Works.

Read—the following papers :—

From Brigadier-General E. FAUNCE, Quartermaster-General, to the Secretary to Government, Military Department, dated Ootacamund, 26th September 1887, No. 2715 B.

I have the honor, by order, to forward, for sanction and transfer to the Public Works Department for disposal, the estimate, plan, &c., below mentioned, which have been approved by the Commander-in-Chief. The plan and estimate have been countersigned :—

I. Estimate in duplicate, amounting to Rs. 11,710, for constructing masonry drains to the regimental lines at Mangalore.
II. Three plans.
III. Report of the Executive Engineer, West Coast Division, dated 8th June 1887, explaining the necessity for the work.

No. 5958, Military.

Approved and transferred to the Public Works Department for disposal.

(By Order.)

(Signed) A. KENNEY-HERBERT, Brigdr.-Genl.,
Secretary to Government.

Ootacamund,
28th September 1887.

No. 3662 C.

Forwarded to the Superintending Engineer, IV Circle, for favor of his views on the alternative estimate providing for 4-inch earthen pipes in lieu of open drains for discharging water from cisterns.

2. A saving of Rs. 1,086 would be effected by the use of concrete for the foundations of drains Nos. 1 and 2 in place of laterite in mortar. The Superintending Engineer should consider this point, and if he considers the alteration advisable, should revise the estimate accordingly.

(Signed) J. O. HASTED, Colonel, R.E.,
Chief Engineer, P.W.D.

22nd October 1887.

Superintending Engineer, IV Circle, with original papers (return requested).

From Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 2nd November 1887, No. 441 E.W.

With reference to your memorandum, No. 3662 C., of 22nd ultimo, I have the honor to inform you that, on the 27th June 1887, I submitted to the Deputy Assistant

Adjutant-General, Belgaum district, for approval of His Excellency the Commander-in-Chief and transmission to Government for sanction, the undermentioned three estimates :—

No. 1—Estimate of Rs. 11,710 for constructing V-shaped drains to the main and minor streets *throughout* the Native Infantry lines at Mangalore, and brick-in-chunam cisterns to each backyard with 4-inch earthenware pipes for house connections ;

No. 2—Estimate of Rs. 5,516 for the same works, but only to the eastern portion of the lines ; on the supposition that funds might not be available for doing the whole work at once, and the eastern portion was considered the most emergent ; and

No. 3—Estimate of Rs. 5,490 for the same drains with small V-shaped house connections.

2. From the papers received with your memorandum under reference, I gather that His Excellency the Commander-in-Chief has approved of the No. 1 estimate of Rs. 11,710, and that the Quartermaster-General has transmitted it to Government for sanction.

3. I prefer V-shaped small open drains for house connections, as provided in the *detailed estimate* herewith returned, in preference to the 4-inch earthenware pipes entered in the abstract of the estimate ; as the former would probably prove more durable than the latter, and there is little difference in cost as will be seen by the last paragraph of the specification.

4. It is, however, in my opinion better and cheaper to use concrete for foundation, as suggested by you, in the three sizes of drains, instead of laterite in mortar ; and I accordingly now submit a revised abstract estimate providing for this. By this alteration the total cost is reduced from Rs. 11,710 to Rs. 10,350.

ORDER—dated 16th November 1887, No. 3086 W., Public Works.

Ordered that the estimate, amounting to Rs. 10,350, for constructing masonry drains to the Native Infantry Regimental lines at Mangalore be forwarded to the Government of India, Military Department, for sanction with reference to para. 1140 of the Madras Public Works Code.

(Here enter No. 3087 W., dated 16th November 1887.)

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle,
" Examiner, Public Works Accounts,
" Military Department.

ENDORSEMENT—dated 16th November 1887, No. 3087 W., Public Works.

Forwarded.

Captain, R.E.,
Under Secy. to Govt., P.W.D.

Exd. J. Henricus.
Spare Copies

3087/2

BUILDINGS AND ROADS.
MILITARY WORKS.

Govt. of | 1887 | Madras.

PUBLIC WORKS.

Dated November, 16th.

Recd. *Encl.*

G.O., 16th Nov. 1887, No. 3087 W.

NOVEMBER.

Native Infantry Regimental Lines at Mangalore

Estimate of Rs. 10,350 for constructing masonry drains to the —, forwarded to the Government of India, Military Department, for sanction.

Public Works Department.

3087/3

Current No. 7751

Letter No. 5958

Dated the 28th September 1887

From the Secry to Govt Military Depts

NOTE OF REMARKS.

1. The accompanying plans & estimates provide for constructing masonry drains and culverts for the Regimental lines at Mangalore.

The amount of the estimate is Rupees 11,760.

2. Report accompanying the estimate explains the necessity for the work. Specification is submitted.

3. This estimate has been prepared at the request of the Officer Commanding Mangalore and of the Medical Officer in charge.

4. The drains will be of the sections given in the plan accompanying & will be of 3 descriptions, i.e. the first

for main drains with a large section to carry the drainage of the main streets and of the minor drains, the second with a smaller section to carry the drainage of the minor streets and Line houses, and the third with a still smaller section to connect the house yards with the minor drains. In each house yard there will be a cistern 2½'×2½'×½' provided to receive all filthy water.

5. The first two description of drains will be constructed with laterite of the best quality neatly trimmed to the slopes of V drains shown in plan and built with mortar.

6. The third description of drain and the cistern attached to it will be built of

mission

3087/18

mission bricks of full size 12"×6"×3" the cistern having also concrete 6" thick underneath the foundation to prevent the filth percolating in to the ground below.

7. An alternative estimate substituting earthen ware pipes 4" diam. for smaller V drain house connections is also submitted and it shows a saving of Rs. 50 on the whole estimate i.e. Rs. 11710.

8. Two culverts A & B in plan require extension and 3 more culverts C. D & E require renewal with laterite in chunam.

9. The rates of both the estimates are fair.

10. The contingencies and Petty supervision are separately charged at 5 percent.

11. The plans and estimates have been countersigned by the Quarter Master

General and approved
in the Military Departt.

JH.

7.10.87

C. No. 7751 P. W. Secretarial.

Note by Budget Section.

3087/5

Work Constructing masonry drains and culverts for the Regimental lines at Mangalore

Remarks and References.

Fund Imperial Ordinary

Service Head ... Military...

Departmental Head Original Works

Amount of Estimate ... ... Rs. 11,760 / 11,710 } Alternative estimates

Expenditure in previous year ... " "

Allotment in current year ... ... " "

Balance required to complete ... " "

Total Rs. ... "

Note of available funds.

No funds are available with the Govt. under Imperial Military. As the work has been entered as Class C in the schedule of requirements for 1888-89, the estimate may be sanctioned for execution when funds are available.

11th October 1887

Budget Clerk.

Note by Budget Section.

Note

3087/6

Saving of Rs 1086 would be effected by the use of concrete for the foundation of drains Nos. 1 + 2 in place of laterite in mortar and it would appear advisable that this alteration should be made.

(2) The use of 4" Earthen pipes for discharging water from cisterns appears preferable to the alternative plan of small open brick drains in addition to being rather less expensive.

C. J. C.

Did. For orders whether substance of the above shall be embodied in Ch. Engr's note, accompanying the sanction

Yes.
10.10.87

Ca
8/10/87

3087/7

Note by the Chief Engineer
Public Works Deptt.

The plan and estimate for constructing masonry drains for the regimental lines at Mangalore are submitted for the sanction of Government, with the following remarks.

2. Two estimates are submitted, one amounting to Rs. 11760, which provides small open brick drains for discharging water from cisterns, and the other amounting to Rs. 11710, in which 4" earthen pipes are substituted for open drains. The use of the 4" earthen pipes appears preferable and is rather less expensive.

3. A saving of Rs 1086 would be effected by the use of concrete for the foundations of drains Nos. 1 + 2 in place of laterite in mortar, and the Supg. Engr.

should report whether it
would be advisable to
make this alteration

GW

12.10.87

3087/8

These Documents
can be sent to
India - the others
available but
with the file

11.87

Public Works Department.

3087/9

Current No. 8848

Letter No. 441 E.W.

Dated the 2nd November 1887

From the Supg: Engr: IV Circle

The Est to be sanctd as revised by the S.E. for Rs 10,350

10.11.87

NOTE OF REMARKS.

In accordance with the instructions conveyed in this Office memo No 3662 C d/22nd Sept the Supg: Engr in the accompanying revised Estimate has substituted concrete foundations under the drains instead of laterite in mortar, but has not provided for earthen pipes instead of the V shaped drains as suggested in the memo quoted above, the Sup. Engineer bein should report whether it would be advisable to make this alteration

G.W.

12.10.87

Public Works Department.

3087/9

Current No. 8848

Letter No. 441 E.W.

Dated the 2nd November 1887

From the Supdg: Engr: IV Circle

The Est. to be sanctd. as revised by the S.E. for Rs 10,350

10.11.87

NOTE OF REMARKS.

In accordance with the instructions conveyed in this Office Memo No 3662 C d/22nd Sept the Supdg: Engr in the accompanying revised Estimate has substituted concrete foundations under the drains instead of laterite in mortar, but has not provided for earthen pipes instead of the V shaped drains as suggested in the memo quoted above, the Supdg Engineer bei opinion that the latter would probably prove more durable than the former, the difference of cost being very little —

The amount of the Estimate has however been reduced by Rs 1360 or from Rs 11,710 to Rs 10,350 —

9/11/87

Duplicate

3089/10

ESTIMATE FORM.—Abstract.

Quantity.	Description of Work.	Rate.	Per	Amount.	Total.
	Providing Drains and Culverts for the lines of the Native Infantry at Mangalore	RS.		RS.	RS.
60142	Cft of Earthwork	5	1000 Cft	301	
20618	Cft of Concrete	10	100 Cft	2062	
1029	Cft of Laterite in Chunam plain Masonry	19	do	196	
17060	Cft of Laterite in Chunam with stones trimmed to slope	24	do	4094	
266	Sft of Laterite covering slabs	3	Sft	50	
5830	Cft of Brick in Chunam neatly pointed	35	100 Cft	2040	
22185	Sft of Plastering with 1 Coat Soorkee mortar	3	100 Sft	666	
				9,409	
	Contingencies about	5	Cent	471	
	Petty Supervision	5	Cent	470	

Grand Total of Estimate 10350

Station Coimbatore

Dated 2nd November 1887.

G. V. Beatty Colonel R.E.

Supg Engineer 4th Circle

9-11-87

NOTES

REFERENCE TO MADRAS P. W. D. CODE.

PARAS. 1074, 1075, 1086, 1087, 1091 TO 1094, 1108, 1111 TO 1114, 1130 AND 1145 TO 1147.

(1.)—ABSTRACTS of Estimates should be prepared under such sub-heads as are to be separately shown in the Accounts (Register of works, work-vouchers, &c.) of the work. For repairs of buildings and roads, the classification of the Budget Estimate should be strictly followed, one estimate only being framed for each Budget entry, and if a further estimate is required, it should be supplemental to the first; by this means, as the Work Abstracts follow the estimates, the Register of Works, the Schedule of Expenditure, the Books of the Central Office will show by one entry the entire outlay on repairs to each work for the whole year, which is not the case when several estimates are sanctioned for the repairs of one work in the course of the year.

(2.)—Quantities are to be entered as so many units.

(3.)—All rates are to be quoted in Rupees, Annas and Pies.

(4.)—Annas and Pies are to be excluded from the Abstract Estimates, the cost of each item being brought to the nearest Rupee. Totals of estimate need not be brought to round numbers.

P. W. D. For
No. [illegible]

CIRCLE—

DIVISION—

ESTIMATE FORM.—Abstr

(To accompany the Detailed Estima

of 188 -8 for *

* Here enter the name and description of

Duplicate

3087
11

Estimate No. of 1887-88.

Fund
~~Financial Head~~— Imperial

ervice
~~Budget~~ Head— Military

Departmental Head— Original Works

Main Head— General Cantonment Works

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Providing Drains and Culverts for the Lines of the Native Infantry at Mangalore

Amount of Estimate— Rs 10,350

To be carried out by— P.W.D.

REFERENCES.

Chief Engineer's Memorandum No. 3662 C of 22nd October 1887.

REFERENCE TO MADRAS P. W. D. CODE.
PARAS. 1074 TO 1076.

P. W. D. FORM.
No. M 203.

Fourth CIRCLE.

DIVISION— West Coast

TALUK— Mangalore

ESTIMATE FORM—Wrapper or Outer-sheet.

Estimate for* Providing Drains and Culverts for the Lines of the Native Infantry at Mangalore.

Amount of Estimate, Rs. 10350

Detailed Estimate No. of 1887-88.

*Here enter name and description of work in full.

Details of lengths of [illegible]
of Cisterns & lengths of [illegible] connecting [illegible]

3087
12

SUPG. ENGINEER'S OFFICE
No. 11/451 WC
13 JUN. 87
P. W. D.
FOURTH CIRCLE

Reference to figures in plan	No.	Length	Total length	[illegible]	[illegible]	[illegible]
O – Western side	6	70	420			
	3	40	120			
	2	35	70			
f' western side	1	300	300			
i' western side from junction of cross drains &c.	1	50	50			
		Total Rft	960			
a	2	290	580	8 8	4 1/2 4 1/4	36 34
b	2	265	530	18 17	3 1/2 3 3/4	63 64
b'	2	340	680	21 24	3 3/4 3 1/2	[illegible]
c	2	270	540	17 15	1/2 1/2	[illegible]
c'	2	340	680	24 24	[illegible]	[illegible]
d	2	270	540	15 17	[illegible]	[illegible]
			3550	208		746

3087/13

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			3550	208		746
d'	2	340	680	24	3½	84
				24	3½	84
e	2	270	540	17	3½	60
				17	3¼	55
e'	2	440	880	24	3¾	90
				24	3½	84
f	2	270	540	–	–	–
of north eastern portion	1	140	590	–	–	–
up to Culvert	1	450				
g	2	270	540	[illegible]	5¼	74
				14	5	[illegible]
				26	5	130
		460	920	24	4¾	114
				10	6¼	62
	2	270	540	16	5	80
				24	5¾	138
h'	2	[illegible]	[illegible]40	17	4½	76
				14	5½	77
i	2	[illegible]		16	5½	88
				31	5	155
[illegible] Culvert	1	4[illegible]		22	5¼	116
i'	1	[illegible]		–	–	–
k	2	270	54[illegible]	15	5¼	79
				10	4¾	47
k'	2	490	98[illegible]	27	5	135
				[illegible]	5½	137

[illegible]	[illegible]	Length	Total Length	[illegible]	[illegible]	[illegible]
			12490	741	–	2770
l	1	270	270	–	–	–
l'	1	400	400	–	–	–
				15	5	70
m	2	420	840	33	5¼	173
				29	3¾	109
n	1	450	450	3	4	12
o	7	70	490	–	–	–
	3	40	120	–	–	–
	2	35	70	–	–	–
Tot			15130	727	–	3134

Mangalore
4th April 1887

Sub Dt Officer

SUPDG. ENGINEER'S OFFICE
No.
13 JUN. 87
P. W. D.
FOURTH CIRCLE

SUPDG. ENGINEER'S OFFICE
No.
21 JUN. 87
P. W. D.
FOURTH CIRCLE

SUPDG. ENGINEER'S OFFICE
No.
10 JUL. 87
P. W. D.
FOURTH CIRCLE

SUPDG. ENGINEER'S OFFICE
No.
24 OCT. 87
P. W. D.
FOURTH CIRCLE

Details of lengths
drains, the Numbers
of cisterns and lengt
of house Connection
drains.

3087
14

REFERENCE TO MADRAS P. W. D. CODE.

PARAS. 1074 AND 1075.

EXECUTIVE ENGINEER'S OFFICE
No.
13 APR. 87
P. W. D.
WEST COAST DIVISION

P. W. D. FORM.
No. M 204.

ESTIMATE FORM. Detail Measurements.

Detail of Work.	Number.	Measurements in Feet.			Area or Contents.	Total Quantity of each description of Work.
		Length.	Breadth.	Depth.		
Providing drains and Culverts for the Lines of the Native Infantry at Bangalore						
Earthwork						
Excavating foundation for No 1 main drain	1	960	2 3/8	1 1/2	3420	
Do for minor drains No 2	1	15130	2 1/8	1 1/4	40189	
Do for Cisterns No 3 in House yards	731	4 1/2	4 1/2	3/4 ~~1/2~~	10950 ~~7300~~	[illegible]
Do for House connecting drains No 4	1	3134	1	1	3134	
Do for Culvert No A	1	3	4 1/4	4 3/4	61	
Do for Culvert No B	1	2 1/2	5 3/4	5 1/4	75	
Do for Culvert No C	1	18 1/2	8 1/2	5 1/4	826	
Do for Culvert No D	1	17 1/2	5 3/4	5 1/4	528	
Do for Culvert No E	1	21 1/2	8 1/2	5 1/4	959	
Total Earthwork Cubfeet						60142 56449
Concrete						
Below Cisterns No 3 in House yards	731	4 1/2	4 1/2	1/2	7300 ~~3650~~	
Do Culvert No A	1	3	4 1/4	1	13	
Do Do No B	1	2 1/2	5 3/4	1	14	
Do Do No C	1	18 1/2	8 1/2	1	157	
Do Do No D	1	17 1/2	5 3/4	1	101	
Do Do No E	1	21 1/2	8 1/2	1	183	
Total Concrete Cfeet						7768 ~~4118~~

Detail of Work.	Number.	Measurements in Feet.			Area or Contents.	Total Quantity of each description of Work.
		Length.	Breadth.	Depth.		
Laterite in chunam & neatly pointed						
Foundation to main drains No 1	1	960	1 1/2	1/2	720	
Do minor drains No 2	1	15130	1 1/2	1/2	11347	
Do to Culvert No A	1	3	3 3/4	1 1/2	14	
Abutments	2	3	3/4	1 1/2	7	
Foundation to Culvert No B	1	2 1/2	4 3/4	1 1/2	18	
Abutments & piers	3	2 1/2	3/4	1 1/2	8	
Parapet walls	2	4 1/4	3/4	1 1/2	10	
Foundation to Culvert No C	1	17 1/2	7 1/2	1 1/2	197	
Abutments & piers	3	17 1/2	1 1/2	1 1/2	118	
Backing to Covering slabs	2	17	3/4	3/4	19	
Parapet	2	7	3/4	1 1/2	16	
Foundation to Culvert No D	1	16 1/2	4 3/4	1 1/2	118	
Abutments	2	16	1 1/2	1 1/2	72	
Backing to covering slabs	2	16	3/4	3/4	18	
Parapets	2	4 1/4	3/4	1 1/2	10	
Foundation to Culvert No E	1	20 1/2	7 1/2	1 1/2	231	
Abutments & piers	3	20	1 1/2	1 1/2	135	
Backing to covering slabs	2	20	3/4	3/4	22	
Parapets	2	7	3/4	1 1/2	16	
Total Laterite in Chunam plain masonry Cfeet						13096
Lat: in Chunam with stones [illegible] to slope & neatly pointed						
Side walls of main Drains No 1	2	960	5/8	1 1/12	1300	

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Measurements in Feet. Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.
					1300	
Side walls of minor Drain No 2	2	16130	5/8	5/6	15760	17060
		Total Cubfeet				
Laterite [illegible] Slabs 9" thick to Culvert						
To Culvert No A	1	3	2 3/4	-	8	
Do No B	1	2 1/2	4 1/4	-	11	
Do No C	1	17	5 1/2	-	93	
Do No D	1	16	2 3/4	-	44	
Do No E	1	20	5 1/2	-	110	266
		Total Sqfeet				
Brickwork in chunam [illegible] [illegible] bricks 12×6×3						
Foundations to Cisterns	721	4	4	1/4	2884	
Parapet to do	721	12	1/2	1/2	2163	
Foundation to House Connection Drains	1	3134	1	1/4	783	
Side walls of do	2	3134	1/4	1/2	783	6613
		Total Cubfeet				
Plastering brickwork [illegible]						
Floor of cistern	721	2 1/2	-	2 1/2	4506	
Parapet of do	721	12	-	1 1/2	12978	
Sides & top of House connection drain	1	3134	-	1 1/2	4701	22185
		Total Plastering Sqft				

Mangalore
4th April /87

Sub Dt Officer

3087/16

Reference to Madras P. W. D. Code.
Paras. 1074 and 1075.

15 APR 87
P.W.D.
West Coast Division

P. W. D. Form.
No. M 204.

ESTIMATE FORM.—Detail Measurements.

ESTIMATE FORM.—Detail Measurements.

Detail of Work	Number	Measurements in Feet. Length.	Measurements in Feet. Breadth.	Measurements in Feet. Depth.	Area or Contents.	Total Quantity of each description of Work.
Earthwork as per details of accompanying Alternative Estimate — Cubfeet						60142
Concrete — do — do — do Cubfeet						7768
[illegible] in Chunam neatly pointed — do do Sft						12096
[illegible] in Chunam [illegible] to shape & neatly pointed — do — do Cubfeet						17060
[illegible] [illegible] to [illegible] as per do — Sqrfeet						266
Brickwork in Chunam [illegible]						
Foundation to Cistern —	721	4	4	½	3884	
Parapet to do —	721	1½	½	½	2163	
Total Cubfeet						6047
[illegible]						
For 721 Houses @ 2 [illegible]	721	2	"	"	1442	
Total					1442	1442
Plastering [illegible]						
Houses of Cistern —	721	2½	2½	"	4506	
Parapets of do —	721	1½	2½	"	12978	
Total Sqrfeet						17484

Mangalore
18th April 1887

W. [illegible]
Asst. Engr.

ESTIMATE FORM.—Detail Measurements.

Detail of Work	Number	Measurements in Feet. Length.	Measurements in Feet. Breadth.	Measurements in Feet. Depth.	Area or Contents.	Total Quantity of each description of Work.

ESTIMATE FORM.—Detail Measurements.

Detail of Work.	Number.	Length.	Breadth.	Depth.	Area or Contents.	Total Quantity of each description of Work.

SUPDT. ENGINEER'S OFFICE
24 OCT. 87
P.W.D.
FOURTH CIRCLE

3087/18

ESTIMATE FORM.—Abstract.

Quantity.	F	Description of Work.	Rate.	Per	Amount.	Total.
			RS.		RS.	RS.
6042	C.ft	Earthwork.	5-0-0	100 c.ft	301	
7768	〃	Concrete	10-0-0	100 〃	777	
13096	〃	Laterite in Chunam plain masonry	19-0-0	100 〃	2488	
17060	〃	Laterite in Chunam with stones trimmed to slope	24-0-0	100 〃	4094	
266	Sq ft	Laterite Coping slabs	0-3-0	Sq ft	50	
5747	C.ft	Brickwork in Chunam	30-0-0	100 c.ft	1766	
1442		Burnt Earthen Cylindrical tubes 4" diameter with socket & spigot each 2½ ft long including carriage and fitting in mortar	45-0-0	100	649	
17484	Sq ft	Plastering with Cement surkhi mortar	3-0-0	100 sq ft	525	
		Contingencies.			530	
		Petty Supervision.			530	
				Grand Total of Estimate ..		11710

Examined

Estimated

T. Beatty

STATION Mangalore
Dated 4th April 87

Sub Dn Officer

Executive Engineer.
8/6/87

REFERENCE TO MADRAS P. W. D. CODE.

PARAS. 1074, 1093, 1095, 1097, 1321 to 1324, 1110, 1111 to 1114, 1139 and 1143 to 1147.

P. W. D. Form No. M. 297.

29/7/87

Circle—

Division—

ESTIMATE FORM.—Abstract.

(To accompany the Detailed Estimate No. of 188 -8 for*

JUN. 87

P.W.D.

* Here enter the name and description of work.

(1891.)

3087/19

Estimate No. of 1887-88

~~Financial Head~~ Fund— Imperial

~~Budget Head~~ Service— Military

Departmental Head— Original works

Main Head— Cantonment works

Sub-Head—

Project of which the work forms part—

Section—

Name of Work— Providing Drains & Culverts for the lines of the Native Infantry at Bangalore

Amount of Estimate— Rs 11710.

To be carried out by— The Executive Engineer B. C. Dn

REFERENCES.

№ 1)

P. W. D. Form No. M 203.

Reference to Madras P. W. D. Code, Paras. 1074 to 1078.

SUPDG ENGINEER'S OFFICE No. 4/45 13 JUN 87 P.W.D. FOURTH CIRCLE

2179m of 87

SUPDG ENGINEER'S OFFICE JUN. 87 P.W.D. FOURTH CIRCLE

SUPDG ENGINEER'S OFFICE No. 9/471 10 JUL 87 P.W.D. FOURTH CIRCLE

ESTIMATE FORM—Wrapper or Outer-sheet.

Estimate for* Remodeling drain of culverts for the Lines of the Native Infantry at Mangalore

Amount of Estimate, Rs. 11760

Detailed Estimate, No. of 1887-88

SUPDG ENGINEER'S OFFICE No. 7228 24 OCT 87 P.W.D. FOURTH CIRCLE

Encl: 5

*Here enter name and description of work in full.

3082/20

ESTIMATE FORM.—Abstract.

Quantity		Description of Work	Rate	Per	Amount	Total
			Rs.		Rs.	Rs.
60147	Cft	Earthwork	5-0-0	1000 cft	301	
7768	"	Concrete	10-0-0	100 cft	777	
13096	"	Laterite in chunam plain masonry	19-0-0	"	2488	
17060	"	Laterite in chunam with stones trimmed to slope	24-0-0	"	4094	
766	Lft	Laterite covering slabs 1 foot broad and 9" thick	0-1-0	Lft	50	
6613	Cft	Brickwork in chunam	35-0-0	100 cft	2315	
22185	Lft	Plastering brickwork with 1 coat of chunam mortar	3-0-0	100 lft	666	
		Contingencies	5-0-0	Cent	534	
		Petty Supervision	5-0-0	Cent	535	

G Beatty

Supdg Engineer

Grand Total of Estimate .. 11760

Station: Mangalore
Dated 4th April 1887

W. Thompson
Sub Dl Officer

Executive Engineer.
9/6/87

Reference to Madras P. W. D. Code.

Paras. 1074, 1075, 1086, 1087, 1091 to 1094, 1108, 1111 to 1114, 1130 and 1145 to 1147.

P. W. D Form
No. M. 207.

Supdg. Engineer's Office
30 JUL 87
P. W. D.
Fourth Circle

15 AUG 87

Circle—

Division—

ESTIMATE FORM.—Abstract.

(To accompany the Detailed Estimate No.
of 188 -8 -8*

21/7/87

* Here enter the name and description of work in full.

3087/21

Estimate No. of 188 -8

~~Financial Head~~ Fund — Imperial

~~Budget Head~~ Service — Military

Departmental Head— Original works

Main Head— Military works

Sub-Head—

Project of which the work forms part— Providing drains & Culverts for the lines of the Native Infantry at Bangalore

Section—

Name of Work—

Amount of Estimate— Rs 11,780

To be carried out by— The Executive Engr 4th C. Dn

REFERENCES.

REFERENCE TO MADRAS P. W. D. CODE.

*PARAS. 1074 TO 1076.

No. 1)

P. W. D. Form
No. M 20

13 OCT. 87
P.W.D.

[illegible] JUN. 87
P.W.D.

Division West Coast

3/451 W.C.
13 JUN. 87
P. W. D.
FOURTH CIRCLE

1/271
30 JUL. 87
P. W. D.
FOURTH CIRCLE

ESTIMATE FORM—Wrapper or Outer-sheet.

Estimate for* Providing drains and culverts for the Lines of the Native Infantry at Mangalore

Amount of Estimate, Rs. 11710

Detailed Estimate, No. of 1887-8

SUPDG. ENGINEER'S OFFICE
2335
24 OCT. 87
P. W. D.
FOURTH CIRCLE

Enclo: 4

*Here enter name and description of work in full

QUARTER MASTER GENERAL'S OFFICE,
Ootacamund, 25th September 1887

Barracks and Buildings
Estimates.

No. 2715B

38/22

From

BRIGADIER-GENERAL E. FAUNCE,
QUARTER MASTER GENERAL,

To

THE SECRETARY TO GOVERNMENT,
MILITARY DEPARTMENT.

SIR,

I have the honor, by order, to forward for sanction and transfer to the Public Works Department for disposal, the estimate, plan, &c., below-mentioned, which have been approved by the Commander-in-Chief. The plan and estimate have been countersigned.

I. Estimate in Duplicate, amounting to Rs 11,710 for constructing masonry drains to the Regimental Lines at Mangalore.

II. 3 Plans.

III. Report of the Executive Engineer West Coast Division dated 8th June 1887, explaining the necessity for the work.

I have the honor to be
Sir
Your Obedient Servant

Brigadier General
for Quarter Master General

3087/23

PWC No. 7751

Military (1887) Department.

No. ~~6661~~

From

THE QUARTER MASTER GENERAL,

To

THE SECRETARY TO GOVERNMENT,
MILITARY DEPARTMENT.

U.P.G. ENGINEER'S OFFICE
No. 9334
24 OCT. 87
P.W.D.
FOURTH CIRCLE

Enclo: 3. No. 2715 B E. 10 (+3 plans)

Dated 26th } September 1887
Received 28

Recd. in P.W.D. 30.9.87

Ry 4.10.87

ENCLOSURES. 3 Plans & Estimate & Report

Forwards for sanction and transfer to the Public Works Department Plans estimate & report for constructing masonry drains to the Regimental Lines at Mangalore -

T / M 29.11.87

Ootacamund
28th Sept. 87.

No. 5958. Approved and transferred to the Public Works Dept for disposal.

By order.
A. Kenney Herbert Brig. Genl
Secy to Govt M. D.

O.S. 190. IX / M 29.9.87

Circ 14-11-87 R. 14.11.87

3

C/

Pwd

22d October/87

3087/24

Memo

From the Qr. Mr. General No 2715 B of 26.9.87.
Endt. from the Milt. Dept. 5958 of 28.9.87.

Forwarding for sanction and transfer to P.W.D Plans and estimate & report for constructing masonry drains to the Regimental lines at Mangalore -

Forwarded to the Supdg Engr IV Circle for favour of his views on the alternative estimate providing for 4" earthen pipes in lieu of open drains for discharging the water from cisterns

2. A saving of Rs 1086 would be effected by the use of concrete for the foundations of drains Nos 1 & 2 in place of laterite in mortar - the S.E. should consider this point, & if he considers

the alteration advisable,
should revise the estimate
accordingly.

Jol 21/10/87
E W

[illegible]
21.10.87

G.O. No. 2624 W of 6.10.87

No 3662 C of 22 [illegible]

J [illegible]
22-10

B W
27/10

S. E. IV Circle. with
original papers
(return requested)

D
22 [illegible]

Cr

Dy 25/10
[illegible]

4

3087/28

No 441
E W

Superintending Engineers Office
4th Circle
Coimbatore 2d November 1887.

From
Colonel J. Beatty R.E.
Supg: Engineer 4th Circle

To,
The Chief Engineer
P.W. Department.

Enclosures.
2. Plans
1 Estimate with abstract Estimate
1 Alternative abstract estimate
1 Revised Estimate
1 Duplicate of do
1 Report
1 Specification
1 Origl. letter of the Dy. Qr. Mr. General No 2715 B of 26th September 1887 with Endt. of the Military Depts.

Sir,

With reference to your memo No 3662 C of 22nd ultimo I have the honor to inform you that on the 27th June 1887 I submitted to the Deputy Asst. Adjutant General Belgaum District, for approval of His Excellency the Commander in-chief and transmission to Government for sanction, the undermentioned three estimates:-

No 1. Estimate of Rs 11,710 for constructing V shaped drains to the Main and Minor Streets throughout the Native Infantry Lines at Mangalore, and brick in chunam

Cisterns to each back-yard with 4" earthen ware pipes for house connections;

No 2. Estimate of Rs 5516 for the same works, but only to the Eastern portion of the Lines; on the supposition that funds might not be available for doing the whole work at once, and the eastern portion was considered the most emergent; and

No 3 Estimate of Rs 5490 for the same drains with small V shaped house connections.

2. From the papers received with your Memo: under reference, I gather that His Excellency the Commander-in-chief has approved of the No 1 Estimate of Rs 11,710, and that the Qr. Mr. General has transmitted it to Government for sanction.

3 I prefer V shaped small open drains for house connections, as provided in the detailed Estimate herewith returned, in preference to the 4"

3087/28

4" Earthen ware pipes as entered in the abstract of the Estimate; as the former would probably prove more durable than the latter, and there is little difference in cost, as will be seen by the last para of the Specification.

4. It is, however, in my opinion better and cheaper to use concrete for foundation as suggested by you, in the three sizes of drains, instead of Laterite in mortar; — and I accordingly now submit, a Revised abstract estimate providing for this. By this alteration the total cost is reduced from Rs 11,710 to Rs 10,350.

I have the honor to be
Sir,
Your most obedt. Servant.

L. Beatty. Colonel R.E.
Superintending Engineer
4th Circle.

JH

G.O. 2624 W. of 6-10-87

From
Col. J. Beatty R.E.,
Supg. Engineer
Fourth circle

Dated 2-11-87

Rg. 5-11-87

No. 441/Wd.

Enclo. 9

Providing Drains and Culverts for lines of Native Infantry at Mangalore:-

Submitting revised Estimates, &c., of Rs. 10,350 for — with certain observations.

ine-14-11-87

3087/27

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

From the Qr. Mr. General- A.G. No. 2715 B. of 26th Septr. 1887.
Endorsement of the Mily. Deptt. No. 5958 of 28th Septr. 1887.
Note by the Chief Engr. R.W.D. of -

The estimate amounting to Rs. 11,710, for constructing masonry drains for the regimental lines at Mangalore, is sanctioned for execution when funds are available.

2. The attention of the Supg. Engr. is drawn to para 3 of the Chief Engineer's Note above recorded.

3. This sanction has been registered as Imperial — No. W of 1887-88, and classified as Military Original works.

12.10.87

To The Supg. Engr. IV Circle with 11 Enclos.
Ex: P.W.A. with copy of abstract estimate
Mily. Deptt.

Ro. 3086 W

3887/28

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 11th November 1887

READ the following

From the Quarter Master General. H. E. No. 2715 B d/ 26th September 1887.
Endorsement by the Military Department. H. E. No. 5958 d/ 28th September 1887.
Do — by per Mil. Dept No. 3662 C d/ 22-10-87.
From the Supdg. Engineer IV Circle. H. E. No. 441 C. W. d/ 2nd November 1887

Ordered that the estimate amounting to Rs. 10,350 for constructing masonry drains to the Native Infantry Regimental lines at Mangalore be forwarded to the Govt. of India, Military Department, for sanction with reference to para 1140 of the Madras P. W. Code.

H. E. No. 3087 W d/ 11th

Forwarded.

To The Supdg. Engr. IV Circle
" Examiner of P. W. Accts
" Military [illegible] Department

Jole 12/11/87

12/11

3087/29

843 8

Govt. of (1886) Madras.

PUBLIC WORKS.

Read [illegible]

Dated

Recd.

Ent'd.

G.O. 16th Nov. 1887 Nos 3086 W
3087 W

Native Infantry Regiment
Lines at Mangalore

≡

Estimate of Rs 10,350
for constructing masonry
drains to the ———
~~ordered~~ to be forwarded
to the Govt of India,
military dept, for sanction

Native Infantry Regimental
Lines at Mangalore

≡

Estimate of Rs 10,350
for constructing masonry
drains to the ———
forwarded to the Govt of India
military dept, for sanction

17/11