M.R.O. 1—10,006—28-2-50.

(1) Number of pages _____

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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public works DEPARTMENT

G.O. No.	2307 A	Press
~~B.P. No.~~ 277A 277B		~~Mis.~~
Dated	14-9-	~~195~~ 1873

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department,
17th September 1873.

No. 277A. Read the following letter from Captain J. MORANT, R.E., District Engineer, Neilgherries, to Colonel G. W. WALKER, R.E., Chief Engineer and Secretary to Government, Public Works Department, dated Ootacamund, 12th September 1873, No. 166 :—

IN accordance with your request, and with reference to the current year's allotment of Rupees 5,000 for improvements to the Coonoor Ghaut, I have the honour to submit an estimate for the same, amounting to Rupees 24,220.

2. The proposed improvements consist of widening the road to an uniform width of 18 feet, so as to enable the up and down traffic to pass without difficulty, and of straightening it on the inner side so as to allow of the storm waters running along the inner edge of the road into the cross drains which have been provided for them. There are many parts of the road now a good deal less than 18 feet wide, and owing to the jagged rock line of the inner side of the road the flood waters course along the road to its great and constant detriment.

3. Another improvement is to provide the road where needed with parapet walls, which also in most cases involve revetments, and with an earthen parapet bank at other places.

4. The other smaller improvements consist of catch drains and cross drains. One-half of the ghaut has no catch drains, and the present number of cross drains is insufficient.

5. Now that the Railway is opened to Mettapollium, it is more necessary than ever that the above improvements should be carried out.

No. 277B. ORDER THEREON, 17th September 1873, No. 2,307A.

CIVIL WORKS, No. 18A.

RECOGNIZING the necessity of perfecting the new Coonoor Ghaut for quick traffic on completion of the Branch Railway to Mettapollium, His Excellency the Governor in Council has anticipated submission of this estimate which he now sanctions to the amount of Rupees 24,000 by a grant of Rupees 5,000 from Provincial Funds, recorded in G. O., No. 1,999, of 12th August 1873.

2. Rupees 7,000 additional will be at the District Engineer's dispcsal from anticipated savings, on his reporting the expenditure of the first grant and his ability to avail himself of that further amount within the current official year.

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the District Engineer, Neilgherries.
,, Inspecting Engineer for Communications.
,, Officiating Controller of Public Works Accounts.
,, Accountant-General.
,, Financial Department.

Exd. E. C. Shunker.

Spare Copies.

No166

Ootacamund
Dist Engineer's office
12th September 1873

From

The District Engineer
Neilgherries

To

The Chief Engineer
and Secretary to Government
P.W.D.

Sir

In accordance with your request and with reference to the current years allotment of Rs 5000 for improvements to the Coonoor Ghaut I have the honor to submit an estimate for the same amounting to Rs 2422.

2 The proposed improvements consist of widening the road to an uniform width of 18 feet, so as to enable the up and down traffic to pass without difficulty; and of straightning it on the inner side so as to allow of the storm waters running along the inner edge of the road into the Cross Drains which have been provided for them. There are many parts of the road now a good deal less than 18 feet wide; and owing to the jagged rock line of the inner side of the road the flood waters course along the road to its great and constant detriment.

3 Another improvement is to provide the road where needed with parapet walls which also in most cases involve revetments, and with an earthen parapet bank at other places.

4 The other smaller improvements consist of Catch Drains and Cross Drains. One half of the Ghaut has no Catch Drains and the present number of Cross Drains is insufficient.

5 Now that the Railway is opened to Metapollium it is more necessary than ever that

that the above improvements should be carried out

I have the honor to be
Sir
Your most obed.t Servant
Jeo Morant - Capt R.E.
Distt Engineer

Oct 27/73

Dy. No. 1873 Public Works
No. 5144.
From
The Asst. Engineer
Nail Sherry.

Cakes 12" } Left 19/73.
Rup 19.3.3 } Right 19/73.
No. 186.
Enc: 1.

Submitted for
Favourable Consideration
Bore Rivers Wks
Cannon Hunt
No. 2307 Dt 29/10/73

Estimate No 45 of 1873-74

Nail Sherry District

Work cost of widening and constructing Parapets on the Coonoor New Shaut

Measurement				Contents	Particulars of Work
No	L	B	D		
					Carried over
	72	2½	9	1620	
	40	3	10	1200	
	90	1½	13	1755	
	60	2	12	1440	
	20	2	26	1040	
	30	3	9	810	From Head of Shaut to 1st Mile
2	50	3	7	2100	
	60	3	12	2160	
	60	3	7	1260	
	84	3	16	4032	
	48	3	7	1008	
	48	3	10	1440	
	20	3	7	420	
	36	3	8	864	
	20	3	7	420	
	204	2½	4	2040	From 1st to 2nd Mile
	36	3	7	756	
	25	3	8	600	
	60	3	8	1440	
	30	3	10	900	
	50	2	10	1000	
	336	3	9	9072	
	204	2	6	2448	
	30	3	8	720	From 2nd to 3rd Mile
	30	3	12	1080	
	50	3	7	1050	
	50	3	9	1350	
	60	3	7	1260	
	40	3	9	1080	
	42	3	3	378	From 3rd to 4th Mile
				46743	Carried over

			46743	Brought forward
30	3	7	630	
80	3	6	1440	
30	3	10	900	
30	3	8	720	
20	3	10	600	
50	3	20	3000	
30	3	7	630	From 3d to 4th Mile
84	3	20	5040	
30	3	20	1800	
30	3	12	1080	
60	3	8	1440	
22	3	4	264	
36	3	20	2160	
2 32	3	8	1536	From 4th Mile to 1st Crossing
30	3	10	900	
51	2	15	1530	
20	3	6	360	From 1st to 2nd Crossing
50	4	14	2800	
50	3	10	1500	
30	3	5	450	
30	3	4	360	From 2nd to 3d Crossing
30	2	8	480	
30	4	12	1440	From 3d to 4th Crossing or Toll Bar
50	3	7	1050	
180	4	7	5040	
20	3	12	720	
30	3	10	900	
85	2	14	2380	
108	4	11	4752	
36	3	7	756	
50	3	10	1500	From 4th Crossing or Toll Bar to No 6 Zigzag
96	3	8	2304	
100	2½	7	1750	
72	4	12	3456	
108	4	14	6048	
96	4	8	3072	
44	5	20	14400	
72	3	20	4320	
			130251	Carried over

			130251	Brought forward
40	2	6	480	
50	3	7	1050	
20	2	6	240	
25	2	6	300	
84	3	6½	1638	From No 6 to No 7 Zigzag
84	3	8	2016	
30	3	9	810	
40	5	12	2400	
72	3	10	2160	
36	3	6	648	
75	3	6½	1462½	
25	3	6½	487½	
30	3	7	630	
168	3	14	7056	
25	4	6	600	From No 7 to No 8 Zigzag
20	3	8	480	
50	3	8	1200	
30	3	7	630	
60	3	10	1800	
130	5	20	13000	
108	2	8	1728	
84	3	10	2520	
20	3	15	900	From No 8 Zigzag to 6th Crossing
240	4	20	19200	
30	2	6	360	
60	3	10	1800	
48	3	5	720	
59	2	5	590	
74	4	9	6264	
66	3	6	1188	
180	4	5	3600	From 6th to 7th Crossing
45	3	6	675	
165	4	7	4620	
63	1½	5	472½	
499	2½	6½	7995	
82	3	4	984	
			222955½	Carried over

			22295½	Brought forward
201	4	7	5628	
120	2	6	1440	
100	2	6	1200	
75	3	5	1125	
42	3	8	1008	From 7th Crossing to 9th Mile
123	3	8	2952	
78	4	10	3120	
320	4	14	17920	
50	3	10	1500	
192	3	20	11520	From 9th Mile to Trussed Bridge
120	3	6	2160	
266	3	16	12768	
192	3	5	2880	
264	3	14	11088	
108	3	20	6480	
84	3	12	5184	
192	3	6	3456	
50	3	6	900	
50	3	6	900	From trussed Bridge to 11th Mile
100	2	8	1600	
108	3	5	1620	
300	3	7	6300	
108	3	7	2268	
180	3	14	7560	
200	3	8	7200	
360	3	10	10800	
684	3	20	41040	
552	3	6	9936	
57	2	5	570	
240	3	6	4320	
372	4	23	34224	
780	5	16	62400	
420	6	20	50400	From 11th to 12th Mile
324	3	8	7776	
192	3	4	2304	
48	3	6	864	
			567386½	Carried over

			567386½	Brought forward
180	6	15	16200	
144	3	7	3024	
84	3	6	1512	
50	3	5	750	
75	3	6	1350	
156	6	15	14040	From 11th to 12th Mile
204	6	20	24480	
276	6	12	16560	
72	4	15	4320	
100	3	10	3000	
100	2	9	1800	
100	4	12	4800	
27	2	9	486	
200	2½	9	4500	
200	2½	9	4500	
27	2	9	486	
200	3	6	3600	From 12th Mile to Burliar Bridge
200	2	6	2400	
200	8	5	8000	
120	3	6	2160	
135	3	10	4050	
200	2	7	2800	
230	3	17	11730	
153	2	2	612	
25	2	4	200	From Burliar Bridge to 8th Crossing
60	2	6	720	
40	3	7	840	
20	3	7	420	
35	3	8	840	
20	3	7	420	From 8th Crossing to 13th Mile
50	3	6	900	
10	3	15	450	
35	3	11	1155	
35	3	7	735	
25	3	12	900	
40	4	12	1920	
			714046½	Carried over

			7140462	Brought forward
60	3	10	1800	
100	3	18	5400	
25	3	12	900	
75	3	14	3150	
20	3	7	420	
20	3	20	1200	
45	3	20	2700	From 8th Crossing to 13th Mile
80	3	20	4800	
90	3	11	2970	
35	3	14	1470	
60	3	14	2520	
70	3	14	2940	
50	3	15	2250	
50	3	12	1800	
60	3	12	2160	
60	3	7	1260	
30	3	10	900	
70	3	2½	525	
65	3	32	6240	
45	3	20	2700	
100	3	10	3000	
20	3	6	360	
20	3	10	600	From 13th to 14th Mile
20	3	10	600	
50	3	12	1800	
100	3	7	2100	
30	3	12	1080	
96	3	10	2880	
30	3	14	1260	
200	3	12	7200	
130	3	20	7800	
170	3	8	4080	
180	3	8	4320	
108	3	7	3780	
20	3	6	360	
2037			8033712	Carried over

			8033712	Brought forward
180	3	10	5400	From 13th to 14th Mile
129	3	12	4644	
50	3	6	900	
50	3	6	900	
110	3	7	2310	
170	3	7	3570	
110	3	7	2310	
90	3	6	1620	
90	3	15	4050	
100	3	8	2400	
40	3	6	720	
50	3	6	900	From 14th to 15th Mile
70	2	6	840	
60	3	7	1260	
130	3	6	2340	
130	3	7	2730	
170	3	10	5100	
504		5	1000	
60	3	5	1500	
50	3	10	1500	
40	3	8	960	
20	3	5	300	
50	3	6	900	
50	3	7	1050	
60	3	7	1260	
70	4	12	3360	
60	3	7	1260	
50	3	6	900	From 15th Mile to Foot
50	3	7	1050	
48	3	6	864	
100	3	7	2100	
22	3	7	462	
			8638312	Cubic feet
			31994	Cubic Yards Earthwork

Rough Stone Work

24	4	10	960	From Head Connor Shaut to 1st Mile	Revetment
24	2	3	144	do	Parapet
30	4	8	960	do	Revetment
30	2	3	180	do	Parapet
72	2	3	432	do	do
32	2	3	192	do	do
36	2	3	216	do	do
90	2	3	540	do	do
432	3	4	5184	do	Revetment
432	2	3	2592	do	Parapet
10	2	3	60	do	do
72	2	3	432	do	do
360	3	3	3240	do	Revetment
360	2	3	2160	do	Parapet
84	2	3	504	do	do
84	3	2	504	do	Revetment
134	2	3	804	do	Parapit
30	3½	10	1050	do	Revetment
48	2	3	288	do	Parapet
178	2	3	1068	do	do
48	2	3	288	From 1st to 2nd Mile	Parapet
98	2	3	588	do	do
76	2	3	456	do	do
21	4	6	504	do	Revetment
21	2	3	126	do	Parapet
54	4	8	1728	do	Revetment
54	2	3	324	do	Parapet
12	3	5	180	do	Revetment
12	2	3	72	do	Parapet
36	2	3	216	do	do
12	3	5	180	do	Revetment
38	3	1½	171	do	do
50	2	3	300	do	Parapet
84	2	3	504	do	do
216	3	3	1944	do	Revetment
216	2	3	1296	do	Parapet
			30387	carried over	

			30387	Brought forward	
12	3	6	216	From 2nd to 3d Mile	Revetment
12	2	3	72	do	Parapet
50	2	3	300	do	do
192	2	3	1152	do	do
192	2	3	1152	do	Revetment
6	3	6	108	do	do
6	2	3	36	do	Parapet
336	3	3	3024	do	Revetment
336	2	3	2016	do	Parapet
288	3	3	2592	do	Revetment
288	2	3	1728	do	Parapet
75	3	3	675	do	Revetment
75	2	3	450	do	Parapet
72	3	8	1728	do	Revetment
72	2	3	432	do	Parapet
24	2	3	144	do	do
252	2	3	1512	From 3d to 4th Mile	Parapet
36	3	6	648	do	Revetment
180	2	3	1080	do	Parapet
20	3	3	180	do	Revetment
24	2	3	144	do	Parapet
24	2	3	144	do	do
36	2	3	216	do	do
52	2	3	312	do	do
87	2	3	522	do	do
40	3	3	360	do	Revetment
40	2	3	240	do	Parapet
12	2	3	72	do	do
36	3	3	324	From 4th Mile to 1st Crossing	Revetment
96	2	3	576	do	Parapet
12	4	8	384	do	Revetment
7	2	3	42	do	Parapet
24	3	6	432	From 1st to 2d Crossing	Revetment
24	2	3	144	do	Parapet
110	4½	12	5940	do	Revetment
110	2	3	660	do	Parapet
60	2	3	360	do	do
60	4½	12	3240	do	Revetment
36	4	10	1440	do	do
36	2	3	216	do	Parapit
			65400	Carried over	

			65400	Brought forward		
48	4	10	1920	From 3d to 4th Crossing		Revetment
48	2	3	288	do		Parapet
36	2	3	216	From 4th Crossing or Toll Bar to No 6	Zigzag	Parapet
24	3½	3	420	do		Revetment
24	2	3	144	do		Parapet
24	4½	10	1080	do		Revetment
24	2	3	144	do		Parapet
96	4	10	3840	do		Revetment
96	2	3	576	do		Parapet
55	4	8	1760	do		Revetment
55	2	3	330	do		Parapet
204	2	3	1224	do		do
204	3	3	1836	do		Revetment
96	2	3	576	do		Parapet
15	4	8	480	do		Revetment
15	2	3	90	do		Parapet
72	4½	12	3888	From No 6 to No 7	Zigzag	Revetment
72	2	3	432	do		Parapet
40	4	10	1600	do		Revetment
40	2	3	240	do		Parapet
36	4	10	1440	From No 7 to 8	Zigzag	Revetment
36	2	3	216	do		Parapet
30	4	10	1200	From No 8 Zigzag to 6th	Crossing	Revetment
30	2	3	180	do		Parapet
50	5	15	3750	do		Revetment
50	2	3	300	do		Parapet
33	2	3	198	do		do
141	4	10	5640	From 6th to 7th	Crossing	Revetment
141	2	3	846	do		Parapet
66	2	3	396	do		do
57	2	3	342	do		do
36	2	3	216	From 7th Crossing to 9th Mile		Parapet
6	2	3	36	do		do
120	2	3	720	From 9th to 11th Mile		Parapet
36	2	3	216	do		do
180	3	2	1080	do		Revetment
180	2	3	1080	do		Parapet
72	3	2	432	do		Revetment
72	2	3	432	do		Parapet
20	3	8	480	do		Revetment
			105684	Carried over		

			105684	Brought forward		
20	2	3	120	From 9th to 11th	Mile	Parapet
32	4	6	768	do		Revetment
32	2	3	192	do		Parapet
300	3	2	1800	do		Revetment
300	2	3	1800	do		Parapet
171	3	2	1026	do		Revetment
171	2	3	1026	do		Parapet
162	3	2	972	do		Revetment
162	2	3	972	do		Parapet
24	4	6	576	do		Revetment
24	2	3	144	do		Parapet
384	3	2	2304	do		Revetment
384	2	3	2304	do		Parapet
525	3	3	4725	do		Revetment
525	2	3	3150	do		Parapet
211	3	3	1899	From 11th to 12th	Mile	Revetment
211	2	3	1266	do		Parapet
372	3	3	3348	do		Revetment
372	2	3	2232	do		Parapet
50	4	6	1200	do		Revetment
420	3	3	3780	do		do
420	2	3	2520	do		Parapet
324	3	2	1944	do		Revetment
324	2	3	1944	do		Parapet
168	3	2	1008	do		Revetment
168	2	3	1008	do		Parapet
144	3	2	864	do		Revetment
144	2	3	864	do		Parapet
32	4	8	1024	do		Revetment
32	2	3	192	do		Parapet
20	4	8	960	do		Revetment
72	2	3	432	do		Parapet
156	3	3	1404	do		Revetment
156	2	3	936	do		Parapet
20	4	10	800	do		Revetment
20	2	3	120	do		Parapet
198	3	2	1188	do		Revetment
198	2	3	1188	do		Parapet
36	4	8	1152	do		Revetment
			160836	Carried over		

			160836	Brought forward		
36	2	3	216	From 11th to 12th Mile	Parapet	
300	3	2	1800	do	Revetment	
300	2	3	1800	do	Parapet	
72	3	2	432	do	Revetment	
72	2	3	432	do	Parapet	
30	4	10	1200	From 12th Mile to Burlias Bridge	Revetment	
30	2	3	180	do	Parapit	
30	4	9	1080	do	Revetment	
40	4	8	1280	do	do	
70	2	3	420	do	Parapet	
117	4	8	3744	do	Revetment	
117	2	3	702	do	Parapet	
33	4	12	1584	From Burlias Bridge to 8th Crossing	Revetment	
33	2	3	198	do	Parapet	
40	4	8	1280	From 8th Crossing to 13th Mile	Revetment	
40	2	3	240	do	Parapet	
73	2	3	438	do	do	
20	3	4½	270	do	Revetment	
20	2	3	120	do	Parapet	
21	2	3	126	do	do	
18	3½	9	567	do	Revetment	
18	2	3	108	do	Parapet	
30	4½	10	1350	do	Revetment	
30	2	3	180	do	Parapet	
40	4½	15	2700	do	Revetment	
40	2	3	240	do	Parapet	
50	5	16	4000	do	Revetment	
50	2	3	300	do	Parapet	
15	3	5	225	do	Revetment	
15	2	3	90	do	Parapet	
30	4	8	960	do	Revetment	
30	2	3	180	do	Parapet	
16	3	7	336	From 13th to 14th Mile	Revetment	
16	2	3	96	do	Parapet	
40	4½	11	1980	do	Revetment	
40	2	3	240	do	Parapet	
214	2	3	1284	do	do	
200	2	3	1200	do	do	
20	3	6	360	do	Revetment	
20	2	3	120	do	Parapet	
			194894	Carried over		

			194894	Brought forward		
10	3	6	180	From 13th to 14th Mile	Revetment	
10	2	3	60	do	Parapet	
170	2	3	1020	do	do	
24	4	8	768	do	Revetment	
39	4	8	1248	do	do	
39	2	3	234	do	Parapet	
24	3	6	432	From 14th to 15th Mile	Revetment	
24	2	3	144	do	Parapet	
60	4	8	1920	do	Revetment	
60	2	3	360	do	Parapet	
30	3	8	720	do	Revetment	
30	2	3	180	do	Parapet	
70	3	6	1260	do	Revetment	
70	2	3	420	do	Parapet	
30	4	8	960	From 15th Mile to Foot	Revetment	
30	2	3	180	do	Parapet	
30	3	7	630	do	Revetment	
30	2	3	180	do	Parapet	
40	4½	10	1800	do	Revetment	
40	2	3	240	do	Parapet	
60	3½	6	1260	do	Revetment	
20	3	6	360	do	Revetment	
20	2	3	120	do	Parapet	
			209570	Cubic feet		
			7761½	Cubic Yards Rough Stone Work		
				To Casting Ring remaining Yards		
8	2	4	64			6
6	2	8	96			6
36	4	13	1872			
4	2	2	16			
30	5	8	1200			
6	3	4	72	From Head Connor Shaft to 1st Mile		
9	3	6	162			
6	2	3	36			
24	3	6	432			
4	2	2	16			
24	4	16	1536			
			5502	Carried over		

			5502	Brought forward
6	2	3	36	
2	2	2	8	
4	2	2	16	
3	3	2	18	
6	3	3	54	
4	4	2	32	From Head Coonor Shaut to 1st Mile
48	3	7	1008	
3	4	3	36	
12	2	8	192	
24	2	4	192	
6	2	4	48	
30	3	2	180	
8	4	2	64	
6	3	2	36	
12	2	5	120	
12	2	6	144	
3	2	3	18	From 1st to 2nd Mile
4	3	2	24	
4	4	2	32	
10	3	2	108	
4	4	3	48	
4	4	2	32	
4	4	3	48	
12	2	3	72	
4	4	2	32	
8	4	4	128	
4	4	2	32	
8	4	3	96	
24	6	6	864	
8	3	3	72	
6	4	3	72	From 2nd to 3rd Mile
4	3	2	24	
4	4	3	48	
4	4	2	32	
12	3	9	324	
6	4	3	72	
4	2	3	24	
3	4	2	24	
			9912	Carried over

			9912	Brought forward
8	4	3	96	
24	3	10	720	
12	4	3	144	
24	3	3	216	
8	4	3	96	
4	4	3	48	From 3rd to 4th Mile
168	3	3	1512	
36	12	18	7776	
18	3	12	648	
6	4	3	72	
12	4	3	144	
4	3	2	24	
4	3	2	24	
6	4	3	72	
10	3	6	180	
4	4	3	48	From 4th Mile to 1st Crossing
30	3	3	270	
5	3	3	45	
8	4	2	64	
4	4	2	32	
9	3	3	81	
6	3	3	54	
8	6	3	144	From 1st to 2d Crossing
8	4	3	96	
8	4	3	96	
8	4	3	96	
4	4	3	48	
4	3	2	24	From 2d to 3d Crossing
4	3	2	24	
4	3	2	24	
6	3	2	36	
16	3	3	144	
36	3	7	756	
9	3	12	324	
6	3	5	90	
3	3	2	18	From 3d to 4th Crossing
12	3	10	360	
30	3	8	720	
4	2	3	24	
12	5	6	360	
			25662	Carried over

			25662	Brought forward
57	3	7	1071	
16	5	5	400	
8	6	4	192	From 4th Crossing to Toll Bar
4	2	3	24	
72	3	7	1512	
10	4	3	120	
2	2	2	8	
15	3	2	90	
30	3	9	810	
18	3	3	162	
7	3	4	84	
24	3	18	1296	
5	3	4	60	
2	2	2	8	From Toll Bar to No 6 Zigzag
12	2	3	72	
8	3	4	96	
6	3	3	54	
4	3	3	36	
8	4	10	320	
20	3	4	240	
4	2	3	24	
25	3	8	600	From No 6 to No 7 Zigzag
5	4	3	60	
6	5	4	120	
4	4	3	48	
9	3	4	108	
8	4	6	192	
4	4	3	48	
6	5	3	90	
15	4	4	240	From No 7 to No 8 Zigzag
4	3	2	24	
4	4	3	48	
8	4	5	160	
4	3	3	36	
24	4	12	1152	
6	2	5	60	From No 8 Zigzag to 6th Crossing
12	3	4	144	
			35471	Carried over

			35471	Brought forward
4	3	3	36	
42	3	7	882	
8	4	3	96	
4	2	3	24	
27	3	3	243	From 6th to 7th Crossing
24	3	4	288	
6	2	2	24	
9	3	3	81	
8	2	2	32	
8	4	6	192	
16	5	5	400	From 7th Crossing to 9th Mile
3	2	3	18	
27	6	7	1134	
8	3	6	144	
30	3	9	810	From 9th Mile to Trussed Bridge
15	3	4	180	
36	3	20	2160	
12	3	5	180	
20	3	4	240	
25	3	8	600	
10	3	3	90	
20	4	3	240	From Trussed Bridge to 11th Mile
25	4	7	700	
30	3	12	1080	
20	3	8	480	
39	3	20	2340	
22	3	12	792	
15	3	3	135	
15	15	10	2250	
18	3	6	324	
18	3	6	324	
50	4	6	1200	
30	4	6	720	From 11th to 12th Mile
10	4	5	200	
10	4	6	240	
10	3	4	120	
8	3	5	120	
50	6	16	4800	
50	5	12	3000	
8	4	6	192	
			62582	Carried over

			62582 Brought forward
8	6	7	336
16	4	4	256
24	10	21	5040
15	5	4	300
9	8	9	648
30	4	15	1800
9	6	4	216 — From 12th Mile to Burlias Bridge
40	4	14	2240
10	3	2	60
10	3	3	90
50	2	4	400
10	4	6	240
10	3	2	60 — From Burlias Bridge to 8th Crossing
2 6	3	2	72
30	6	6	1080
4	2	2	16
6	2	2	24
3	2	2	12
2	2	2	8
8	3	2	48
8	2	3	48
22	3	8	528
60	4	6	440 — From 8th Crossing to 13th Mile
8	3	3	72
8	2	3	48
10	2	2	40
8	2	2	32
22	2	3	132
8	4	3	96
20	4	5	400
2 12	3	2	144
5	2	2	20
15	5	5	375
15	3	6	270
6	2	2	24 — From 13th to 14th Mile
6	2	2	24
96	4	12	4608
18	4	4	288
4	4	3	48
6	3	7	126
			84191 Carried over

			84191 Brought forward
6	2	3	36
4	2	2	16
8	4	3	96
15	3	3	135
20	6	5	600
150	2	6	1800
40	4	6	960
40	4	4	640 — From 13th to 14th Mile
6	4	3	72
6	3	4	72
30	3	2	180
4	2	2	16
6	3	2	36
24	4	7	672
24	3	7	504
24	2	3	144
4	4	2	32
40	4	12	1920
3	3	3	27
20	3	2	180
6	4	4	96
20	3	5	300
10	4	3	120 — From 14th to 15th Mile
15	3	3	135
20	3	3	180
25	3	3	225
8	6	6	288
16	4	3	192
20	3	4	240
24	5	14	1680
20	4	7	560
12	4	6	288
6	3	2	36
6	3	4	72
6	3	2	36
18	4	3	216
10	3	5	150 — From 15th Mile to Foot
20	4	6	480
6	3	3	54
6	3	3	54
			97731 Carried over

		97731	Brought forward
6	3	4	72
70	3	4	840
25	3	4	300
9	4	4	144
6	3	5	90
8	4	3	96
2	2	2	8
8	4	4	128
2	2	2	8
8	2	3	48
8	2	1	16
8	2	1	16
		99497	Cubic feet
		3685	Cubic Yards Blasting and removing Rocks

Earth Bank or Parapet

375	2½	2½	2343¾ From 1st to 2d Mile
204	2½	2½	1275 do do
432	2½	2½	2700 do do
120	2½	2½	750 From 2d to 3d Mile
147	2½	2½	918¾ do do
162	2½	2½	1012½ do do
84	2½	2½	525 do do
111	2½	2½	693¾ do do
96	2½	2½	600 do do
50	2½	2½	312½ do do
53	2½	2½	331¼ do do
192	2½	2½	1200 do do
108	2½	2½	675 do do
96	2½	2½	600 do do
48	2½	2½	300 do do
90	2½	2½	562½ do do
108	2½	2½	675 From 3d to 4th Mile
48	2½	2½	300 do do
192	2½	2½	1200 do do
60	2½	2½	375 From 4th Mile to 1st Crossing
96	2½	2½	600 From Toll Bar to No 6 Zigzag
240	2½	2½	1500 From No 6 to No 7 Zigzag
100	2½	2½	625 do do
300	2½	2½	1875 From No 7 to No 8 Zigzag
119	2½	2½	74¾ do do
150	2½	2½	937½ From No 8 Zigzag to 6th Crossing
250	2½	2½	1562½ From 13th to 14th Mile
		25193¾	From 14th to 15th Mile
		933	Cubic feet
			Cubic Yards Earth Bank

14880	2	47520	1st Section
9025	2	7920	2d Section
9280	2	37120	3d Section
570	2	2280	6th to 7th Crossing
9248	2	36960	4th Section
7920	2	31680	5th Section
		163480	Cubic feet
		6055	Cubic Yards Excavating Catch Drain
		72	Running feet Lengthening Drains 4 Section 12 Drains at 6 feet low
		38	Covering Stones to 1st & 2d Class Drains
		36	Common Drains 2 2 × 2½ × 2

Abstract Estimate No. of 1873-74

Vulgherry District

Work Cost of Widening and Constructing Parapets on the Coonoor New Chaut

Quantities	Particulars	Rate	Amount	Total
31994	Cubic Yards Earthwork	26	4999.1.	
7761/2	do Roughstone work	12.	5821 2.	
685	do Blasting & Removing Rocks	2 8	9212 8.	
933	do Earthen Bank	26	145 12 6	
6055	do Catch Drain	2	756 14.	
72	Running Feet lengthening Drains	125	55 14.	
38	Covering Stones	4 8	171 . .	
36	Common Drains including Foundations	14	504 . .	
			21764 3 6	
	Supt and Sundries		2235 12 6	
	Total Estimate Rupees		24000 . .	

Specification

Amount of Estimate Twenty four thousand two hundred and twenty.

GWW.
Ch. Surv.

6	3				
70	3				
25	3				
9	4				
6	3				
8	4				
2	2				
8	4				
2	2				
8	2				
8	2	1			
8	2	1			
375	2½	2			
204	2½	2			
432	2½	2			
120	2½	2½			
147	2½	2½			
162	2½	2½			
84	2½	2½			
111	2½	2½			
96	2½	2½			
58	2½	2½			
53	2½	2½			
192	2½	2½			
108	2½	2½			
96	2½	2½			
48	2½	2½			
90	2½	2½			
108	2½	2½			
48	2½	2½			
192	2½	2½			
60	2½	2½			
96	2½	2½			
240	2½	2½			
100	2½	2½			
300	2½	2½			
119	2½	2½			
150	2½	2½			
250	2½	2½			

Earthwork. Inner Bank to be cut down so as to form a clear roadway throughout Shaut of not less than 18 feet wide exclusive of parapets and Earthen Bank. All corners to be cut away irrespective of road being wider at these parts so that the line of Inner Bank be as straight as possible. All convex portions or outer edge of road to be removed and edge aligned as straight as possible or with a nice concave cut. Inner Bank to be cut with a slope and evenly cut.

Roughstone Work On 1st Mile 1602 Running feet Parapet to be constructed, when completed this portion will have Stone Parapet the whole length.

2nd Mile 695 Running feet Stone Parapet

3rd ——— 1055 ——— do

4th ——— 707 ——— do

From 4th Mile to 1st Crossing 103 Running feet

From 1st to 2d Crossing ——— 230 ——— do

——— 3d to 4th ——— do ——— 48 ——— do

From 4th Crossing to No 6 Zigzag ——— 550 ——— do

From No 6 to No 7 Zigzag ——— 112 ——— do

From No 7 to No 8 Zigzag ——— 36 ——— do

From No 8 Zigzag to 6th Crossing ——— 113 ——— do

From 6th to 7th Crossing ——— 264 ——— do

From 7th Crossing to Burliar ——— 4810 ——— do

From Burliar to Foot ——— 1379 ——— do

or a total of 10102 Running feet Parapet to have Foundations as per Estimate

2632

100

Revetments to be constructed so as to extend Drains and bring them in straight line – The Stone work to be properly laid and bonded

Blasting and removing rocks All rocks to be blasted & removed and no rock or stone to project above the road all Ground rock to be blasted and removed 1½ ft below the surface the full width of road to be thoroughly cleared from rocks.

Inner Bank To be made along the Shaut wherever Stone Parapets are omitted. In most parts the earth from the Inner Bank to make the Earthen Bank and in other parts to be completed as per Estimate the Bank is to be neatly sloped and formed so as to prevent any portion of it from falling on the road.

Catch Drain To be made along the Shaut the whole length and to be 2 feet wide and 2 feet deep, at present about half the Catch Drain is completed.

Drains 12 Drains on 4th Section to be lengthened

36 Common Drains to be constructed

7 1st and 2nd class Drains to be lengthened

38 Covering Stones to be fixed

See Mount

Facamund
Asst Engrs Office
September 1873

Capt RE
District Engineer

Estimate 1873-74

Lord Lauderdale
Engineering Project
on the Ardnamurchan
Peninsula - Kyle
Rhea - Kyle

£ 24 220

£0 W 230 at 17½ Kilos
£0 B.F. 6144 / 73.

Recommended

Recognizing the necessity of perfecting the new Communication for quick traffic, on completion of the Tunnel Railway to Metapolitan A.S. The L. & C. has "anticipated subscription of this Estimate, which he now sanctions to the amount of £ 24000, by a grant of £ 5000 from Parliamentary Funds, vended in L.O. No. 1999 of 12 August 73.

£ 7000 additional will be at the District Engineer's disposal from anticipated Savings, on his reporting the expenditure of the first Grant, & his ability to provide himself of that sum thro' mentd. letter. The Lords Comm. Official Secr.

J.B.

To the Dist Engr. Railways
H.S. dept 17/9/73

To the 1st Engr Northern
& 2nd Engrs for Copies &
Contracts with Ala Contrs
& Acct. Genl
& Ft Dearborn
& S. C. dated 2/10/73

C/o 5744

Govt. of 1873 Madras.

PUBLIC WORKS.

To The District Engr
Nilgherris

Dated

Recd. Encl. 1

G. O. 17 Sept 1873. 2307/3

Nos. 2774 & 2773

Siru Coonoor Shaut.

Estimate of the
Amount of Rs: 24000
for repecting the
Shaut, sanctioned
& funds allotted
for the work.

& S. C. dated 3/10/73