

(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. 2918	Press
48-49	Mis.
Dated 2	12
1870.	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
2nd December 1870.*

No. 48. Read the following letter from the Acting Superintending Engineer, 1st Division, to the Secretary to Government, Public Works Department, dated Dowlaishweram, 6th November 1870, No. 2,638:—

In accordance with G. O., No. 1,977, dated 18th August 1870, I have the honour to forward herewith, for the sanction of Government, an estimate, with specification, plan, etc., amounting in aggregate to Rupees 3,760, for renewing and improving the masonry works

- 1 Plan.
- 1 Abstract Estimate. } Despatched in separate
- 1 Specification. } covers.
- 1 Original letter of Mr. Lever, No. 41, dated 20th June 1870, to be returned.

on the road from Aska to Russelcondah, *via* Gungoopoor, in the Ganjam District.

2. The bridges provided for in the estimate now forwarded are numbered consecutively in each mile, commencing from the 33rd mile of this road, or at the limits of the No. 2 Range, Ganjam. For a part of a road it is impossible, I find, to note them otherwise.

No. 49. ORDER THEREON, 2nd December 1870, No. 2,918.

CIVIL WORKS, No. 7.

With his letter of the 2nd August 1870, No. 1,454, the Acting Superintending Engineer of the 1st Division submitted an estimate of Rupees 3,760 for the renewal and improvement of the masonry works on the road from Aska to Russelcondah in the Ganjam District. As the papers were laid before Government in an incomplete form, they were returned to Major Fischer with a view to certain additional particulars being furnished which that officer now submits.

2. His Excellency the Governor in Council sanctions the estimate, but, being unable to assign any funds during the current year, directs that an application for the requisite grant be submitted after the 1st April next.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Acting Superintending Engineer, 1st Division.
„ Controller of Public Works Accounts.

Exd. S. T. Augustin.

Communications

Supplements 3

Abstract Estimate \$ 30

Work. Renewing and improving the masonry works on the Road from Ikato to Crossedendale in the Ganjam District.

Quantity	Description of work.	Rate	Per Stone	Amount	Total
33 rd mile					
	82 1/2 Tunest in good order				
	Renewing the timber work of timber platform bridge of 1 bay of 10 feet span across Sallah 82 20				
4	Longitudinal beams at	4	Each 16		
195	square feet of planking at	24	1/2 feet 28	7	
22	sq. feet of Hand rails at	3	6 1/2 ft.	4	13
2	hundred of iron nails at	5	handed	10	
11 1/2	sub yards of restalling and travelling over road way	6	1/2	7	28
				63	68
	Carriage miter	10	1/2	6	94
					70
34 th mile					
	82 1/2 and 3 in good order				
	Renewing the timber work of timber platform bridge of 1 bay of 9 feet span across Sallah 82 20				
4	Longitudinal beams at	4	Each 16		
180	square feet of planking at	24	1/2 feet 26	4	
20	square feet of Hand rails at	3	6 1/2 ft.	4	6
1 1/2	hundred of iron nails	5	handed	7	8
	Carried over			54	2 70

Brought Over 54 2 40

9¹/₂ cub yds of stalling and
graveling over road way - 1 15 1 3 7 11
cutting masonry - 10 or 12 ft 57 5 17 11 63

35th mile

All the heavy work in
this mile are in good order.

36th mile

No. 1 Tunnel in good order.

Improvement to Tunnel
of 1 arch of 3 feet span across
tallah 82.2

3¹/₂ cub yds of rough stone in
Chunam 1 15 1 7 10 3

10¹/₂ cub yds of brick work in Chunam 2 13 1 1 8

4¹/₂ squares of plastering in Chunam 1 13 1 13 7 11
cutting masonry - 10 or 12 ft 9 8 6 10

Improving a Tunnel of 1 arch
of 3 feet span across
tallah 82.3

5¹/₂ cub yds of rough stone in
Chunam 1 15 1 11 7 5
183 squares of plastering in do. 1 13 1 1 10 6
cutting masonry - 10 or 12 ft 13 1 11 15

82.4 in good order.

Improving tunnel of 1 arch
of 6 feet span across tallah
No. 5

12³/₄ cub yds of rough stone in Chunam 1 15 1 24 11 3
1⁹/₁₀₀ squares of plastering in Chunam 1 13 1 3 9 5
28 4 8

cutting masonry - 10 or 12 ft 25 11 4 31

Carried over 189

Brought Over 189

82.6 in good order

Improving tunnel of 1 arch
of 6 feet span across
tallah 82.7

12³/₄ cub yds of rough stone in Chunam 1 15 1 24 11 3
1⁹/₁₀₀ squares of plastering in do. 1 13 1 3 9 5
28 4 8

cutting masonry - 10 or 12 ft 25 11 4 31

37th mile

No. 1 Tunnel in good order.

Improving Tunnel of 1 arch
of 3 feet span across tallah
82.2

5¹/₂ cub yds of rough stone in Chunam 1 15 1 11 7 5
183 squares of plastering in do. 1 13 1 1 10 6
200 13 1 11

cutting masonry - 10 or 12 ft 1 14 1 15

Improving tunnel of 1 arch
of 3 feet span across
tallah 82.3

5¹/₂ cub yds of rough stone in Chunam 1 15 1 11 7 5
183 squares of plastering in do. 1 13 1 1 10 6
200 13 1 11 15

Constructing a Tunnel of 1 arch
of 9 feet span across

tallah 82.4 in do. do.
tunnel of Timber Bridge
which is entirely rotten

87⁵/₉ cub yds of rough stone in Chunam 1 15 1 169 10 2
25¹/₂ do. of brick work in do. 2 13 1 70 12 6
5¹/₁₀ do. of concrete work in do. 1 4 1 6 5 1

12¹/₂ squares of plastering in do. 2 3 1 26 4 1
1 cutting masonry - 15 or 12 ft 15 11 4 31

Excavating foundations of filling in approaches 125 5 0
cutting masonry - 10 or 12 ft 279 15 9 330
Carried over 580

Improving Tunnel of 12mt
of 3 feet span across Kullak
No 5

5 $\frac{11}{12}$	sq yds of rough stone in Chumam	1	15	0	11	7	5
183 200	sq yds of plastering in Chumam	1	13	0	1	10	6
	Contingencies	10	00	00	13	1	11
					14	1	15

Improving Tunnel of
12mt of 6 feet span across
Kullak No 6

12 $\frac{3}{4}$	sq yds of rough stone in Chumam	1	15	0	2	11	3
128 100	sq yds of plastering in Chumam	1	13	0	3	9	5
	Contingencies	10	00	00	28	4	8
					2	11	4

31

Improving Tunnel of 12mt
of 3 feet span across Kullak
No 7

5 $\frac{11}{12}$	sq yds of rough stone in Chumam	1	15	0	11	7	5
183 200	sq yds of plastering in Chumam	1	13	0	1	10	6
	Contingencies	10	00	00	13	1	11
					14	1	15

15

Constructing a Tunnel of
12mt of 8 feet span across
Kullak No 8 in substitution
of timber bridge

41 $\frac{43}{104}$	sq yds of rough stone in Chumam	1	15	0	80	0	3
11 $\frac{79}{108}$	bricks of brick in Chumam	25	13	0	32	15	11
3 $\frac{8}{9}$	bricks of concrete work in Chumam	1	4	0	4	13	9
1	Contingencies	10	00	00	10	0	0
5	sq yds of plastering in Chumam	2	3	0	10	15	0
	Excavating foundations and filling in approaches				8	0	0
	Contingencies	10	00	00	14	6	12
					13	3	1

160

Carried over 801

Improving a Tunnel of 12mt of
3 feet span across Kullak
No 9

5 $\frac{11}{12}$	sq yds of rough stone in Chumam	1	15	0	11	7	5
183 200	sq yds of plastering in Chumam	1	13	0	1	10	6
	Contingencies	10	00	00	13	1	11

Contingencies	10	00	00	1	14	1	15
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Constructing a Tunnel of 12mt
of 9 feet span across Kullak
No 10 in substitution of
timber bridge

87 $\frac{5}{9}$	sq yds of rough stone in Chumam	1	15	0	16	9	10
25 $\frac{1}{6}$	bricks of brick in Chumam	25	13	0	70	12	6
5 $\frac{1}{10}$	bricks of concrete work over arches	1	4	0	6	5	1
12	sq yds of plastering in Chumam	2	3	0	26	4	0
1	Contingencies	15	00	00	15	0	0

Excavating foundations and
filling in approaches

Contingencies	10	00	00	29	9	15	9
				30	0	3	330

38th mile

All necessary works in
this mile are in good order.

39th mile

No 1 Tunnel in good order.

Renewing the timber work of
timber flat from bridge
of 3 bays of 15 feet span across
Kullak No 2

12	Longitudinal beams	6	00	00	7	20	00
810	sq yds of planing at	2	4	0	11	8	20
96	sq yds of banding at	3	6	0	21	00	00
5	heavies of iron nails at	5	00	00	25	00	00

Carried over — 236 2 11 46

Brought over — 236 20 1146

24 ¹³/₁₈ Cub yards of installing and graveling
over road way — 6. 6. 9 44
Contingencies — 10 — 245 6 4
249 8 270

For 3 and 4 Lenses in good order.

Improving tunnel of 12mb
of 6 feet span across hallah
No 5

12 ³/₄ Cub yards of rough stone in flume 1 15. 6. 24 11 3
1 ⁹⁸/₁₀₀ Squares of plastering in do — 1 13. 6. 3 9 5
28 4 8
Contingencies — 10 — 25 11 4 31

Improving tunnel of 12mb
of 6 feet span across hallah
No 6

12 ³/₄ Cub yards of rough stone in flume 1 15. 6. 24 11 3
1 ⁹⁸/₁₀₀ Squares of plastering in do — 1 13. 6. 3 9 5
28 4 8
Contingencies — 10 — 25 11 4 31

Running the timber work of
timber flat from bridge of 1 bay
of 20 feet span across hallah
No 7

4 Longitudinal beams at 7. 00 each 28 00
345 Sps. of plank in do — 24 Sps. 50 50
42 Running flat of hand rails at 3. 6 9 3
3 Haunds of iron nails — 5 — 15 00
15 ⁵/₈ Cub yards of installing and
graveling over road way — 6. 6. 5. 13 4
108 5 4
Contingencies — 10 — 10 10 8 119

Carried over 1597

Brought over 1597

Improving tunnel of 12mb
of 6 feet span across
hallah No 8

12 ³/₄ Cub yards of rough stone in flume 1 15. 6. 24 11 3
1 ⁹⁸/₁₀₀ Squares of plastering in do — 1 13. 6. 3 9 5
28 4 8
Contingencies — 10 — 25 11 4 31

Improving tunnel in good order

Improving tunnel of 12mb
of 3 feet span across hallah
No 10

5 ¹¹/₁₂ Cub yards of rough stone in flume 1 15. 6. 11 7 5
1 ⁹⁸/₁₀₀ Squares of plastering in do — 1 13. 6. 1 10 6
13 1 11
Contingencies — 10 — 1 4 1 15

No 10 Mile

For 1, 2, 3, 4 and 5 in good order.

Improving tunnel of 2 vents
of 6 feet span across hallah
No 6

24 ¹³/₁₈ Cub yards of rough stone in flume 1 15. 6. 53 11 4
4 ²⁰/₁₀₀ Squares of plastering in flume 1 13. 6. 7 9 9
61 5 1

Contingencies — 10 — 6 10 11 68

Running timber work of
timber flat from bridge
of 1 bay of 12 feet span across
hallah No 7

4 Longitudinal beams at 5 00 each 20 00
228 Sps. of plank in do — 24 Sps. 32 13 5
26 Sps. of hand rails at 3. 6 9 3
5 Haunds of iron nails at 5 00 Haunds 10 00
11 ²/₃ Cub yards of installing and graveling
over road way — 6. 6. 4 6 5
72 4 5
Contingencies — 10 — 7 2 5 80

Carried over 1597

21st mile

Brought over 1791

Renewing the timber work
of timber plank form bridge
of 1 bag of 6 feet span across
Kullah at 1

4	Longitudinal beams at	3 or each	12	—
135	Square feet of planking at	24 ft.	19	110
14	Running feet of hand rails at	36 ft.	3	10
1	Maunds of iron nails at	5 or maunds	5	—
6 ² / ₃	Lab garr of hotelling and graveling over roadway	6. (at 2)	2	80
	Centingruies	10 or Cent	42	40

461

At 2 and 3 tunnels are in good order.

Improving tunnel of 12 mt of
3 feet span across Kullah
At 4

5 ¹¹ / ₁₂	Lab garr of rough stone in Kuman	1 15. (at 2)	11	75
183	Squares of plastering in Kuman	1 13. (at 2)	1	106
200			13	111

Centingruies 10 or Cent 1 141 151

Renewing the timber work
of timber plank form bridge
of 2 bags of 15 feet span across
Kullah at 5

8	Longitudinal beams at	6 or each	48	—
540	Square feet of planking at	24 ft.	78	120
64	Running feet of hand rails at	36 ft.	14	—
4	Maunds of iron nails at	5 or maunds	20	—
18 ¹¹ / ₁₂	Lab garr of hotelling and graveling over roadway	6. (at 2)	6	158

167 118

Centingruies 10 or Cent 16 44 184

Carried over 2036

22nd mile

Brought over 2036

Improving tunnel of 2 mt
of 3 feet span across Kullah
At 1

11 ¹¹ / ₁₂	Lab garr of rough stone in Kuman	1 15. (at 2)	22	54
183	Squares of plastering in Kuman	1 13. (at 2)	3	50
200			25	104

Centingruies 10 or Cent 25 58 208

Improving tunnel of 12 mt
of 3 feet span across Kullah
At 2

5 ¹¹ / ₁₂	Lab garr of rough stone in Kuman	1 15. (at 2)	11	75
183	Squares of plastering in Kuman	1 13. (at 2)	1	106
200			13	111

Centingruies 10 or Cent 1 141 151

Renewing the timber work
of timber plank form bridge
of 3 bags of 15 feet span across
Kullah at 3

12	Longitudinal beams at	6 or each	72	—
810	Square feet of planking at	24 ft.	118	20
96	Running feet of hand rails at	36 ft.	27	—
5	Maunds of iron nails at	5 or maunds	25	—
24 ¹¹ / ₁₂	Lab garr of hotelling and graveling over roadway	6. (at 2)	9	44
	Centingruies	10 or Cent	24	98

270

At 4 tunnel in good order.

Renewing the timber work of
timber plank form bridge
of 2 bags of 9 feet span across
Kullah at 5

8 Longitudinal beams at 4 or each 32 or
Carried over 2349

Brought over 32 2349

360 square feet plankings at 24 s. ft. 52 80
 40 feet of hand rails at 36 s. ft. 8 120
 3 haunches of iron rails at 5 s. haunch 15
 12 1/2 feet yards of distaffing and
 graveling over road ways } 6 s. Cent 11 15
 Centing meier 10 s. Cent 11 15

124

Improving tunnel of 2 haunches
 of 3 feet span across kullah
 No 6

11 3/4 feet yards of rough stone in Chumam 1 15 s. Cent 22 54
 1 83/100 square of plastering in do. 1 13 s. Cent 3 55
 Centing meier 10 s. Cent 25 104

28

3rd Mile

Post 1, 2, 3, 4, 5, 6 and 7 in good order

Renewing the timber work of
 timber that form bridge across
 kullah No 8

4 longitudinal beams at 4 s. Each 16
 180 square feet of plankings at 24 s. ft. 26 40
 20 feet of hand rails at 36 s. ft. 4 6
 12 haunches of iron rails at 5 s. haunch 7 80
 9 1/2 feet yards of distaffing and
 graveling over road ways } 6 s. Cent 3 75
 Centing meier 10 s. Cent 57 95

63

4th Mile

All masonry works in this
 mile are in good order

5th Mile

No 1 tunnel in good order

Carried over 2564

Brought over 2564

13

Improvements to tunnel of
 12 feet of 2 feet span across
 kullah No 2

7 1/2 feet yards of rough stone in Chumam 1 15 s. Cent 14 11
 1 33/100 square of plastering in do. 1 13 s. Cent 2 20
 Centing meier 10 s. Cent 16 131

18

Improvements to tunnel
 of 12 feet of 6 feet span across
 kullah No 3

12 3/4 feet yards of rough stone in Chumam 1 15 s. Cent 24 113
 1 28/100 square of plastering in do. 1 13 s. Cent 3 95
 Centing meier 10 s. Cent 28 48

31

Renewing the timber work of
 timber that form bridge of
 2 bays of 18 feet span across
 kullah No 4

8 longitudinal beams at 7 s. Each 56
 630 square feet of plankings at 24 s. ft. 91 140
 76 feet of hand rails at 36 s. ft. 16 100
 4 haunches of iron rails at 5 s. haunch 20
 21 1/2 feet yards of distaffing and
 graveling over road ways } 6 s. Cent 8 04
 Centing meier 10 s. Cent 19 78

212

Post 5, 6 and 7 in good order

Improving tunnel of 12 feet
 of 3 feet span across kullah
 No 5

5 1/2 feet yards of rough stone in Chumam 1 15 s. Cent 11 75
 1 83/100 square of plastering in do. 1 13 s. Cent 1 106
 Centing meier 10 s. Cent 13 111

157

Centing meier

Carried over 2840

Brought over 2840

Improving tunnel of 10mb
of 6 feet span across hallah
No 9

12 $\frac{3}{4}$	lab gars of rough stone in flume	1 15.0	lab gars	24	11	3
1 $\frac{28}{100}$	square of plastering in boat	1 13.0	sqrs	3	9	5
				28	4	8

Contingencies 10 or 12 2 11 4 31

No 10 tunnel in good order
Improving tunnel of 10mb
of 3 feet span across hallah
No 11

5 $\frac{4}{12}$	lab gars of rough stone in flume	1 15.0	lab gars	11	7	5
1 $\frac{83}{200}$	square of plastering in boat	1 13.0	sqrs	1	10	6
				13	1	4

Contingencies 10 or 12 1 14 1 15

Improving tunnel of
10mb of 3 feet span across
Hallah No 12

5 $\frac{4}{12}$	lab gars of rough stone in flume	1 15.0	lab gars	11	7	5
1 $\frac{83}{200}$	square of plastering in boat	1 13.0	sqrs	1	10	6
				13	1	11

Contingencies 10 or 12 1 14 1 15

No 6 mile

Improving tunnel of 10mb
of 6 feet span across
Hallah No 1

12 $\frac{3}{4}$	lab gars of rough stone in flume	1 15.0	lab gars	24	11	3
1 $\frac{28}{100}$	square of plastering in boat	1 13.0	sqrs	3	9	5
				28	4	8

Contingencies 10 or 12 2 11 4 31

Carried over 2932

Brought over 2932

No 2 tunnel in good order
Improving tunnel of 10mb
of 3 feet span across hallah
No 3

11 $\frac{3}{4}$	lab gars of rough stone in flume	1 15.0	lab gars	22	5	4
1 $\frac{83}{100}$	square of plastering in boat	1 13.0	sqrs	3	5	5
				25	10	4

Contingencies 10 or 12 2 5 8 28

Improving tunnel of 10mb of
6 feet span across hallah
No 4

12 $\frac{3}{4}$	lab gars of rough stone in flume	1 15.0	lab gars	24	11	3
1 $\frac{28}{100}$	square of plastering in boat	1 13.0	sqrs	3	9	5
				28	4	8

Contingencies 10 or 12 2 11 4 31

Improving tunnel of 10mb of
3 feet span across hallah
No 5

5 $\frac{4}{12}$	lab gars of rough stone in flume	1 15.0	lab gars	11	7	5
1 $\frac{83}{200}$	square of plastering in boat	1 13.0	sqrs	1	10	6
				13	1	11

Contingencies 10 or 12 1 14 1 15

Improving tunnel of 10mb
of 3 feet span across hallah
No 6

5 $\frac{4}{12}$	lab gars of rough stone in flume	1 15.0	lab gars	11	7	5
1 $\frac{83}{200}$	square of plastering in boat	1 13.0	sqrs	1	10	6
				13	1	11

Contingencies 10 or 12 1 14 1 15

No 7 tunnel in good order
Improving tunnel of 10mb of
9 feet span across hallah
No 8

21 $\frac{4}{36}$	lab gars of rough stone in flume	1 15.0	lab gars	41	1	0
3 $\frac{33}{100}$	square of plastering in boat	1 13.0	sqrs	6	0	6
				47	1	6

Contingencies 10 or 12 4 14 6 52

Carried over 3073

27th mile

Brought over 3043

Running the timber work of
timber flat form bridge
of 2 bays of 15 feet span across
Kullah No. 1

8	Longitudinal beams at 6 or each	48	or	
540	Sq. feet of plank	78	120	
64	Running feet of hair rails	14	or	
24	Beams of plank	20	or	
18 1/2	Sub grade of settling and hauling over road way	6	158	
	Contingencies	10	167	118
			16	44

184

Improving tunnel of 120 ft
of 3 feet span across
Kullah No. 2

5 1/2	Sub grade of rough stone in them	1	15	11	75
183	Sq. feet of plastering in them	1	13	1	106
200				13	11
	Contingencies	10	1	14	1

15

Improving tunnel of 120 ft
of 9 feet span across Kullah
No. 3

21 1/2	Sub grade of rough stone in them	1	15	21	1
3 33/100	Sq. feet of plastering in do	1	13	6	6
	Contingencies	10	27	16	
			4	146	

52

Improving tunnel of 120 ft
of 2 feet span across
Kullah No. 4

7 1/2	Sub grade of rough stone in them	1	15	14	11
1 33/200	Sq. feet of plastering in do	1	13	2	25
	Contingencies	10	16	13	1
			1	2	11

18

Carried over 3342

Brought over 3342

17

Improving tunnel of 120 ft
of 3 feet span across Kullah
No. 5

5 1/2	Sub grade of rough stone in them	1	15	11	75
183	Sq. feet of plastering in them	1	13	1	106
200				13	11
	Contingencies	10	1	14	1

15

Improving tunnel of 120 ft
of 3 feet span across Kullah
No. 6

5 1/2	Sub grade of rough stone in them	1	15	11	75
183	Sq. feet of plastering in them	1	13	1	106
200				13	11
	Contingencies	10	1	14	1

15

Improving tunnel of 120 ft
of 3 feet span across Kullah
No. 7

5 1/2	Sub grade of rough stone in them	1	15	11	75
183	Sq. feet of plastering in them	1	13	1	106
200				13	11
	Contingencies	10	1	14	1

15

Improving tunnel of 120 ft
of 2 feet span across Kullah
No. 8

7 1/2	Sub grade of rough stone in them	1	15	14	11
1 33/200	Sq. feet of plastering in them	1	13	2	25
	Contingencies	10	16	13	1
			1	2	11

18

Carried over 3405

Repairs to Road Dam of 48 feet
Long across Sallah 8:25

5 Cub yards of rough stone in them 1 15. (Lg) 9 11
Plastering in them 1 13. Apr. 2 25

Improving Summit of 10mb of
4 feet span across Sallah
Sp. 3

7 1/2 Cub yards of rough stone in them 1 15. (Lg) 14 11 1
1 33/200 Squares of plastering in them 1 13. Apr. 2 25

Plastering in them 10 50 (Lg) 1 2 11 18

Sp. 4 Road Dam in food over

Improving Summit of 10mb
of 3 feet span across Sallah
Sp. 5

5 1/2 Cub yards of rough stone in them 1 15. (Lg) 11 7 5
1 183/200 Squares of plastering in them 1 13. Apr. 1 10 6

Plastering in them 10 50 (Lg) 1 14 1 15

Sp. 6 in food over

Improving Summit of 10mb
of 4 feet span across
Sallah 8:7

7 1/2 Cub yards of rough stone in them 1 15. (Lg) 14 11 1
1 33/200 Squares of plastering in them 1 13. Apr. 2 25

Plastering in them 10 50 (Lg) 1 2 11 18

Improving Summit of 10mb
of 3 feet span across Sallah
Sp. 8

5 1/2 Cub yards of rough stone in them 1 15. (Lg) 11 7 5
1 183/200 Squares of plastering in them 1 13. Apr. 1 10 6

Plastering in them 10 50 (Lg) 1 14 1 15

49 mile
Improving Summit of 2 vents
of 6 feet span across Sallah
Sp. 1

27 13/18 Cub yards of rough stone in them 1 15. (Lg) 53 11 4
4 20/100 Squares of plastering in them 1 13. Apr. 7 9 9

Plastering in them 10 50 (Lg) 6 10 11 68

Improving Summit of 10mb
of 3 feet span across
Sallah 8:25

5 1/2 Cub yards of rough stone in them 1 15. (Lg) 11 7 5

183/200 Squares of plastering in them 1 13. Apr. 1 10 6

Plastering in them 10 50 (Lg) 1 14 1 15

Improving Summit of
2 vents of 12 feet span
across Sallah 8:3

59 7/8 Cub yards of rough stone in them 1 15. (Lg) 114 8 8

9 48/100 Squares of plastering in them 1 13. Apr. 17 2 11

Plastering in them 10 50 (Lg) 12 4 8 144

Improving Summit of 10mb
of 10mb of 9 feet span
across Sallah 8:4

21 7/8 Cub yards of rough stone in them 1 15. (Lg) 21 1 5
Carried over 21 1 3408

Brought Over 41 10 3408

3 ³³/₁₀₀ Squares of Plastering in
Chimney at 12.50 per sq. 6.6

Lanterns 10.00 per set 4 146 52

Total Keweenaw Super. 3760

San Juan District
No. 3 Range Office
Bismarck
17th October 1870

James Lewis
Superintendent D. & P.
in Charge No. 3 Range

W. T. Ketchum Major D.R.
Capt. J. J. Ketchum D.R.

Brought Over 41 10 3708

1277/70

P.W. 4593/70-
Nov-2 Dec-10 L 448-

Abstract Estimate
for renewing and
improving the
Masonry Works on the
Road from Akha to
Russleendah via
Gungoofore in the
Gungum District.

N^o 2638

From

Superintendent's Office
Dowlisham Road
6th November 70

Major J. T. Fisher M.A.
Asst. Superintendent

To

Colonel C. A. Esq. M.A.
Secretary to Govt. P.W.D.
Masses

Sir,

In accordance with G.O. No. 1977
dated 18th August 70 I have the honor to
forward herewith for the sanction of
Govt. an Estimate with specifications for
renewing and improving the masonry works
on the Road from Akha to Russleendah
via Gungoofore in the Gungum Dist.
2. The Bridges provided for in the
Estimate now forwarded, are, numbered
consecutively in each mile, commencing
from the 33rd mile of this road, or at the
limits of the N. 2 Range Gungum. For
a part of a road, it is impossible, I find,
to note them otherwise.

I have the honor to be
Your most obed^t &c
Wm. T. Fisher Esq. M.A.
Asst. Superd^t

23/8

Under date the 2^o Dec/90.

Read the following

From The Ag. Supy Engineer

24638 of 6th November 1870

With his letter of the
2nd August 1870 No. 1454,
the Acting Super Engineer
of the 1st Division sub-
mitted an estimate of
Rs 3760 for the renewal
and improvement of the
masonry works on the
road from Arker to
Puvvelcondah in the
Ganjam District. As
the papers were laid
before Government in
an incomplete form,
they were returned to
Major

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Chanderanji

Q. J. Anderson

David L. Lawrence 1876
1880

Received of
E. C. Smith
for and to the amount of

of Grassman in Concord
with R. O. in 1977 dated
18th August 1890 and Estimate
No. amounting to \$2376 for
improving highway and
on road from (Hick) to
Bendland in the
Hayward District.

Dec 29 18-20

8757

623² 100770 DN. 29.

Major Fröcher with a view
to certain additional par-
ticulars being furnished
which that officer now submits.

2. His Excellency
the Governor in Council
sanctions the estimate
but being unable to
assign any funds during
the current year directs
that an application for
the requisite grant be
submitted after the 1st
April next.

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The Sup^{ts} of the
"Controller P. Dr. Accts."

Dec 2 3/14/70

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Govt. of 1870 Madras.

PUBLIC WORKS.

To *Chief Superintending Engineer*
1st Division

Dated

Recd.

Encl. *D*

G. O. *2 Decr* 1870, No. *2918*

No. *48849*

Masonry Works. The estimate
of Rs. 3,760 for the General Im-
provement of the Masonry
works on the road from Arka
to Russelendah in the
Gangam District, sanctioned
with remarks.