CW. 9454.

Govt. of (1894) Madras.
PUBLIC WORKS.

Dated

Recd.

Encl.

G.O. 17/12, 1894 No. 3238W

Light House at Mangalore

Estimate of Rs 3190 for improvements to the lightning conductor of the — sanctioned with remarks.

10—2,000—93.

17th December 1894, No. 3238 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers :—

G.O., dated 28th April 1893, No. 142, Marine.

Read—the following letter from the Presidency Port Officer, Madras, dated 17th April 1893, No. 1633/122 G. :—

I have the honour to forward, for sanction and allotment of funds, an estimate from the Executive Engineer, West Coast division (duly countersigned by me), amounting to Rs. 3,190, for effecting certain improvements to the lightning conductor of the Mangalore Lighthouse and connecting the conductor with the river by means of a galvanized iron wire cable. The necessity for the work is pointed out in detail in the correspondence accompanying the estimate. The amount can be met from the South Canara District Port Fund which now has a balance of about Rs. 33,400 to its credit and will form a general charge on the West Coast Lighthouses. I beg that the amount required may be placed at the disposal of the Superintending Engineer, IV Circle, and that the estimate, when sanctioned, may also be forwarded to that officer with its accompaniments.

Order—dated 28th April 1893, No. 142, Marine.

The estimate is approved and will be transferred to the Public Works Department for execution.

2. The question of funds will be considered in the Financial Department.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

Memo. to the Superintending Engineer, IV Circle, dated 20th May 1893, No. 2105 C.

From Major A. W. SMART, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Tirupur, 30th May 1893, No. 216 E.W.

With reference to your endorsement No. 2105 C., * dated 20th May 1893, I have the honour to return, duly scrutinized, the estimate, amounting to Rs. 3,190, for improvements to the lightning conductor of Lighthouse at Mangalore. The papers which accompanied the estimate are herewith returned.

* 1. Chief Engineer's endorsement with ten enclosures (returned).

2. I would, however, suggest that, before expending so large a sum, a further reference be made to some competent authority, say, the head of the Telegraph Department at Madras, as to whether there is any real danger to the Lighthouse though the conductor gives so high a resistance as 20 ohms. Will its safety be much increased by a reduction in the resistance ?

Endorsement to the Superintendent of Telegraphs, Madras, dated 9th June 1893, No. 2288 C.

From A. L. H. PALMER, Esq., Superintendent of Telegraphs, Madras Division, to the Acting Chief Engineer, Public Works Department, dated Ootacamund, 21st June 1893, No. 5002.

With reference to your endorsement No. 2288, dated the 9th instant, I have the honour to inform you that in this department the maximum resistance allowed for an earth is 10 ohms. and that I consider it very desirable to reduce the resistance of the Mangalore Lighthouse lightning conductor earth to at least the same figure.

2. As so large an expenditure is involved, I may perhaps be permitted to make a suggestion. I notice that the record of tests taken on 23rd January 1892 mentions the lightning conductor earth as being composed of "copper rope." I do not think this copper rope is nearly so satisfactory as a copper earth plate would be. The departmental pattern is made of sheet copper one-eighth of an inch in thickness and about 4 × 3 feet in size, and one of this description could be procured from the department on payment.

3. If such a plate were procured and substituted for the copper rope under water at the bottom of the well, care being taken to fix it *vertically* by *wooden* struts, it is quite possible the resistance might be largely reduced. Should the well be nearly dry the plate might be kept vertical by filling the bottom with charcoal and old scrap iron up to the top edge of the plate, watering it during the dry season and leading all the surface drainage to the spot during the rains. Neither of these arrangements should be costly, so that it would seem desirable to experiment as indicated before adopting any other method.

4. The papers received are returned as requested.

No. 471 D.

MEMORANDUM.

Read—letter from the Superintendent of Telegraphs, dated 21st June 1893, No. 5002.

Copy of the above forwarded to the Superintending Engineer, IV Circle, with reference to his letter No. 216 E.W., dated 30th May 1893. The suggestion of the Superintendent of Telegraphs should be adopted and the tests re-taken.

(Signed) J. HANNAN,
Ag. Chief Engineer, P.W.D.

26th June 1893.

From J. HANNAN, Esq., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 8th December 1894, No. 517 W.

I have the honour to re-submit for sanction an estimate for Rs. 3,190 for certain improvements to lightning conductor of the Mangalore Lighthouse.

2. This estimate was returned with your memo. No. 471 D. of 26th June 1893, with a copy of a letter from the Assistant Superintendent of Government Telegraphs. The Assistant Superintendent's suggestions were given effect to and the lightning conductor re-tested by the Sub-Assistant Superintendent of Telegraphs with an unsatisfactory result. Copy of his letter is enclosed.

3. The cable which it is now proposed to lay down to the sea will benefit the station generally as the lightning conductors of all the main buildings can be connected with it.

4. There has been a good deal of delay in this matter. It is partly due to the frequent unavoidable changes of Division officers and partly to delay in getting the tests from the Sub-Assistant of Telegraphs as well as other information bearing on the matter.

ORDER—dated 17th December 1894, No. 3238 W., Public Works.

The estimate, amounting to Rs. 3,190, for improvements to the lightning conductor of the Lighthouse at Mangalore, is sanctioned.

2. An allotment of Rs. 3,972, inclusive of the percentage charges, was provided for the work in G.O., No. 469,* Financial, dated 17th May 1893, and this sum was surrendered to the Financial Department in G.O., No. 480 W., dated 20th February 1894. The question of re-allotting the amount in the current official year will be considered in that department.

* G.O., No. 2968 W., dated 16th November 1893.

3. This sanction has been registered as Excluded Local No. 15 W. of 1894–95 and classified as Miscellaneous Public Improvements, Original Works.

(True Extract.)

Under Secy. to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with eight enclosures.
" Examiner, Public Works Accounts.
" Financial Department.
" Marine Department.

Exd. C. A. Munisawmy.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1894} Madras.

PUBLIC WORKS.

Dated December, 17th.

Recd. *Encl.*

G.O., 17th Dec. 1894, No. 3238 W.

DECEMBER.

Lighthouse at Mangalore

Estimate of Rs. 3,190 for improvements to the lightning conductor of the —, sanctioned with remarks.

Heading. No. 1633/122 G

Presidency Port Office,
Madras, 17 April 1893.

From

The PRESIDENCY PORT OFFICER,
Madras,

To

The CHIEF SECRETARY TO GOVERNMENT,
MARINE DEPARTMENT,
Fort St. George.

Sir,

× Estimate Rs. 3190.
Plan of Mangalore Town
Report of Sub. Divisional Officer
Report of Sub Assistant Superintendent of Telegraphs with Tests.
Letter No. 570 of 8 March 1893 from Executive Engineer, West Coast Division.
Letter No. 11, of 13th March 1893 from the Port Officer, Mangalore.

I have the honor to forward, for sanction and allotment of funds, an Estimate× from the Executive Engineer, West Coast Division, (duly countersigned by me) amounting to Rupees (3190) three thousand one hundred and ninety, for effecting certain improvements to the Lightning Conductor of the Mangalore Light house and connecting the conductor with the River by means of a galvanized iron wire cable. The necessity for the work is pointed out in detail in the correspondence accompanying the Estimate. The amount can be met from the South Canara District Port Fund which now has a balance of about Rs 33,400 to its credit and will form a general charge on the West Coast Lighthouses. I beg that the amount required may be placed at the disposal of the Superintending Engineer, IVth Circle, and that the Estimate when sanctioned may also be forwarded to that Officer with its accompaniments.

I have &c

(Sd) H. D. Baddeley

for Presidency Port Officer

No. 1633/59 P.W.

Copy forwarded to the Superintending Engineer, IVth Circle, for information.

PWS.2
5606/54

H D Baddeley

No 169/RC d/22-4-93. for Presy. Port Officer

Copy forwarded to E.E. West Coast Dn. for information.

21/4/93

EXECUTIVE ENGINEER'S OFFICE No. 9/762 EE 16/12/93 P.W.D. WEST COAST DIVISION
EXECUTIVE ENGINEER'S OFFICE No. 1- JUL. 93 P.W.D. WEST COAST DIVISION
19 NOV. 94 SOUTH CIRCLE
WEST COAST DIVISION No. 2/... 12 JUL. 93 P.W.D. SOUTH CANARA, SUB-DIVISION
ENGINEER'S OFFICE 4- AUG. 94
EXECUTIVE ENGINEER'S OFFICE No. 7- OCT. 93 P.W.D. WEST COAST DIVISION
ENGINEER'S OFFICE P.W.D. No. 2081 19 APR. 93 CIRCLE
SUPG. ENGINEER'S OFFICE P.W.D. No. 7425 8- DEC. 93 4 CIRCLE
EXECUTIVE ENGINEER'S OFFICE No. 4/529 EE 10 AUG. 94 P.W.D. WEST COAST DIVISION
EXECUTIVE ENGINEER'S OFFICE No. 4 SEP. 94 P.W.D. WEST COAST DIVISION

PORT OFFIC[E] 17 MAR 93 MADRAS

Heading. Lighthouse

№ 11/1.

PORT OFFICE,
MANGALORE, 13 March 1893.

From

M. WOODHOUSE ESQUIRE,
Port Officer,
MANGALORE.

EXECUTIVE ENGINEER'S OFFICE No. 7- OCT. 93 P.W.D. WEST COAST DIVISION.

To

The Presidency Port Officer
Madras

Enclosures:—8. Sent per Packet Post

Copy of
1. Ex. Engineer's letter
2. do Mr Shunkers letter
3. do Report on test.
4 Plan of the Lighthouse
5. Detailed estimate
6 Abstract do
7. Report.
8. Plan of the Mangalore Town

Sir,

I have the honor to submit for approval an estimate from the Executive Engineer D.P.W for Rs 3190-.- for connecting the lightning conductor at the Lighthouse with the River by means of a galvanised iron wire cable; together with a copy of his letter on the subject.

2. When the Lighthouse was struck by lightning and one man killed and another hurt as reported in this Office letter No 334 dated 15th May 1889, measures were at once taken to connect the Copper wire Conductor with water and it was conveyed to an adjacent well, which as reported in the Executive Engineer's letter under reference has very serious faults; and in consultation with the Ex-Engineer he has informed me that all the other wells in the vicinity offer similar objections to a through connection, and that connection with the backwater

is in his opinion, the only means of Security.

3. As none of the Public buildings in Mangalore are lightning proof owing to their having no good earth connection, the Several Departments would doubtless Contribute a proportionate share of the outlay, by being permitted to connect the ends of their Conductor with the main cable from the lighthouse should it be sanctioned.

I have the honor to be,
Sir
Your most obedient Servant
A. Woodburn
Port Officer

SUPG. ENGINEER'S OFFICE, P.W.D.
No. 5414
26 MAY. 93
2

EXECUTIVE ENGINEER'S OFFICE,
No.
1 JUL. 93
P.W.D.
WEST COAST DIVISION.

SUPG. ENGINEER'S OFFICE, P.W.D.
No. 5544
28 JUN. 93
Enclo: 2
FOURTH CIRCLE.

SUPG. ENGINEER'S OFFICE, P.W.D.
No. 7420
8 DEC. 93
Enclo: 10
FOURTH CIRCLE.

SUPG. ENGINEER'S OFFICE, P.W.D.
No.
4 AUG. 94

EXECUTIVE ENGINEER'S OFFICE,
No. 11529
10 AUG. 94
P.W.D.
WEST COAST DIVISION.

EXECUTIVE ENGINEER'S OFFICE,
No. 7762
16/12/93
P.W.D.
WEST COAST DIVISION.

SUPG. ENGINEER'S OFFICE, P.W.D.
No.
19 NOV. 94
FOURTH CIRCLE.

EXECUTIVE ENGINEER'S OFFICE,
No.
4 SEP. 94
P.W.D.
WEST COAST DIVISION.

PW E.T. ~~2~~ 3
~~4091/93~~
~~5036~~
9454/94

1893
Marine Dept.
Enclos. No. 4
To
C. No. 343

Jm/

No. 570

Executive Engineer's Office
West Coast Division
Camp. Mangalore 8 March 1893.

From
A. Joyce Esqre M. In. C.E.
Executive Engineer
West Coast Division

To
The Port Officer
Mangalore

WEST COAST DIVISION,
No 9/687
12 JUL. 93
P.W.D.
SOUTH CANARA, SUB-DIVISION.

EXECUTIVE ENGINEER'S OFFICE,
No. 8/1627
9 OCT. 93
P.W.D.
WEST COAST DIVISION.

9/5548
28/6/93

Sir,

I forward you herewith an Estimate for Rs 3190/ for additions and improvements to the Lightning Conductor of the Lighthouse at Mangalore. About twelve months ago I had in the ordinary course of events to test this Lightning Conductor and others in Mangalore. They are supposed to be tested about once a year. With the Lightning Conductor per se I could not find fault but with its earth Connection I found very serious faults. On testing other lightning Conductors in Mangalore I found the same faults in earth Connections. I then procured a report from Mr. Shunker of the Telegraph Dept. I have sent the whole file for your perusal in which this report is contained.

2. You will I think perceive from a perusal of this report that there is only one means in Mangalore of obtaining a good earth Connection with the Sea

I therefore propose to run a twisted Iron wire cable underground thro' the streets of Mangalore and end it in the backwater very near to where the Telegraph have their earth Connection, I am indeed afraid that this estimate is rather expensive but I have been over the ground myself and see no other way of making the Lighthouse safe and I most decidedly consider it a necessity. The Lighthouse was indeed struck by lightning a short time ago and most decidedly stands in a very conspicuous position particularly liable to attract lightning

3. In addition, I would desire to add that if this cable be sanctioned, I could make use of it as the main Cable for the protection of any buildings in the Town of Mangalore. I would propose to connect with it the Magazine, the Judge's Court, the Collector's Kutcherry, the Tahsildar's Kutcherry and any other important buildings which might in future be built in Mangalore.

4. Concerning the other proposed improvements to the Lighthouse in Mangalore as I have inspected the Lighthouse with you and found the new light burning brightly, I would propose no alterations as none appear to be needed. Indeed from the very narrow inside width of the Lighthouse any Considerable alterations will be very expensive.

I would take it as a great favor if you would kindly get sanction for this Estimate from the Presidency Port officer as quickly as possible. It is very important to have it carried out if possible before June

I have &c
sd. J. A. Joyce
Ex. Engineer

P.W.
Sec. Sr

S.2.3 True copy

P.W. 4051/93

Port officer

WEST COAST DIVISION
2/856
13 AUG. 94
SOUTH CANARA SUB-DIVISION

ENGINEER'S OFFICE, P.W.D.
5416
26 MAY. 93
3

EXECUTIVE ENGINEER'S OFFICE,
No.
1- JUL. 93
P. W. D.
WEST COAST DIVISION.

SUPG. ENGINEER'S OFFICE, P.W.D.,
No. 742 WR
8 DEC. 93
Enclo: 11
FOURTH CIRCLE.

EXECUTIVE ENGINEER'S OFFICE,
No. 3/7628
16/12/93
P. W. D.
WEST COAST DIVISION.

EXECUTIVE ENGINEER'S OFFICE,
No. 10/529 M
10 AUG. 94
P. W. D.
WEST COAST DIVISION.

EXECUTIVE ENGINEER'S OFFICE,
No.
4 SEP. 94
P. W. D.
WEST COAST DIVISION.

1893
Marine
Enclos 4 5
O. 313

From,

Mr. A. Perkins
Sub Asst. Supt. of Telegraphs.

To

The Officer in Charge of
Mercara Sub Dn.

No. — dated 15th July 1894.
Ootacamund.

Sir,

I have the honor to return enclosed the letter you sent me under your No. 1066 of the 13th Instant and to request you will be kind enough to inform the Executive Engineer West Coast Division that the tests I took last March of the Mangalore Light house Lightning Conductor afforded the following results.

Conductor. Conduction <1 Ohm that is practically perfect. Resistance

of earth (average of 3 tests) = 27
which is excessive.

2. Mr Vas the Sub Dn officer, D.P.W. assisted me in the tests and I was under the impression he had also recorded the results.

3. You are aware that the earths of the Mangalore Telegraph office that are installed in the river give excellently low results: and I am therefore of opinion that the Light house earth should be placed there also:- It would ~~f for~~ form a main earth connection to the river to which the Conductors of all the other public buildings in the town could be attached by branch connections.

I have &c

Sigd A. Perkins
Sub Ctrs Supt
Govt Telegraphs.

No 1117 Tellicherry 28th July 1894.

Forwarded in Original to the Executive Engineer, West Coast Division, for his information with reference to his No 950 M dated 12th July 1894.

Sigd C. T. Shunker
Sub Ctrs Supt
Mercara Sub Dn.

| True copy |

J Harman
Supdg Engineer 4th Circle

1

PWE. 1
9454/94

Marine Department.

CHIEF SECRETARIAT MADRAS

EXECUTIVE ENGINEER'S OFFICE
No. 9/1167
21 OCT 93
P.W.D.
WEST COAST DIVISION.

18

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following paper :—

From the Presidency Port Officer, Madras, d/ 17th April 1893, No: 1633/122 G.

I have the honor to forward, for sanction and allotment of funds an estimate from the Executive Engineer, West Coast Division, (duly countersigned by me) amounting to Rs (3190) three thousand one hundred and ninety for effecting certain improvements to the Lightning Conductor of the Mangalore Lighthouse and connecting the conductor with the River by means of a galvanized iron wire cable. The necessity for the work is pointed out in detail in the correspondence, accompanying the Estimate. The amount can be met from the South Canara District Port Fund which now has a balance of about Rs 33,400 to its credit, and will form a general charge on the West Coast Lighthouses. I beg that the amount required may be placed at the disposal of the Superintending Engineer, IVth Circle, and that the Estimate when sanctioned may also be forwarded to that Officer with its accompaniments

Order d/ 28 April 1893, No: 142.

The estimate is approved and will be transferred to the Public Works Department for execution.

2. The question of funds will be considered in the Financial Department.

(True Extract)

Under Secretary, P.W.D.,
for Chief Secretary.

SUPG. ENGINEER'S OFFICE, P.W.D.
No. 5414
26 MAY. 93
CIRCLE.

EXECUTIVE ENGINEER'S OFFICE,
No.
1- JUL. 93
P.W.D.
WEST COAST DIVISION.

To The Public Works Department, with Enclosures.
" Presidency Port Officer, Madras.
" Financial Department.

EXECUTIVE ENGINEER'S OFFICE,
No. 16/169
7- OCT. 93
P.W.D.
WEST COAST DIVISION.

2

E. 1

P. W. CURRENT No. ~~4291~~

[G./15]

~~0286~~ 10766/93

Govt. of { 18 } Madras.

SUPDG. ENGINEER'S OFFICE, P.W.D., FOURTH CIRCLE. No. 6545 28 JUN. 93 Encl. 1

To

The Public Works Department

Enclo 9 (2 plans)
Recd: 9. 5. 93

Proceedings, dated 28th April 1893,
No. 142.

Subject.

Approving and transferring to the Public Works Department for execution estimate for improvements to the lightning conductor of the Mangalore Light-house.

4. V. 93

SUPDG. ENGINEER'S OFFICE, P.W., FOURTH CIRCLE. No. 5416 26 MAY. 93 Encl. 10

No. 2105 C d/ 20 - May 1893

Forwarded to the Superintending Engineer IV Circle for scrutiny and return.

J Hamme

Ag: Chief Engineer P.W.D.

EXECUTIVE ENGINEER'S OFFICE, WEST COAST DIVISION. No. 1- JUL. 93 P. W. D.

SUPDG. ENGINEER'S OFFICE, C.B. No. 7420 8 DEC. 93 Encl. 12

WEST COAST DIVISION, SOUTH CANARA, SUB-DIVISION. No. 10/87 12 JUL. 93 P. W. D.

0/15.5

ot 110-5
M 17-5

R 19. 5. 93

18/5 D

No. 216
EW

From.

Supdg. Engr's Office 4th C.
Camp Tirupur 30 May 1893.

40

Major A. W. Smart, R.E.
Supdg. Engineer
4th Circle,

To

The Chief Engineer,
P. W. Department.

Encls: 11
1 Ch. Engr's Endorsement with 10 Enclosures (returned).

Return to ... of No. 4921 ... sent ... on 31-5-93 from ... Mangalore Light House. Regarding provision of Rs 3972 for improvements to the Lightning Conductor of the -

Sir,

With reference to your endorsement No. 2105 C dated 20th May 1893, I have the honor to return duly scrutinized the estimate amounting to Rs 3190 for improvements to the Lightning Conductor of Light House at Mangalore. The papers which accompanied the estimate are herewith returned.

2. I would however suggest that before expending so large a sum, a further

reference be made to some competent authority; say the head of the Telegraph Department at Madras, as to whether there is any real danger to the Light house though the conductor gives so high a resistance as 20
?ohms
spans. Will its safety be much increased by a reduction in the resistance?

I have the honor to be
Sir,
Your most obed.t Serv.t
Major R.E.
Superintending Engineer 4th C

P. W. CURRENT No. 5036

From

The Supg. Engineer,

Fourth circle.

Dated 30th May 93.
Recd: 1. 6. 93

No. 216/CW.

Enclo: # 10 (2 plans)

Mangalore Light House: —

Returning scrutinised, estimate &c. of Rs. 3190 for Improvements to the lightning conductor of —.

GOVT. TELEGRAPH DEPT.
12 JUN. 93
SUPDT'S OFFICE

Rucate

No. 2288 C d/ 9th June 1893

Referred to the Supt. of Telegraphs Madras Division for favour of opinion on the question raised in para 2 of the Supdg: Engineer's letter.

J Hammer
Ag: Chief Engineer
P.W.D.

To
The Supt. of Telegraphs Madras Dn. in original to be returned.

en

0/1/6. R8/6 ors 57-6
m 6-6

L 2a. (½ foolscap).

GOVERNMENT TELEGRAPH DEPARTMENT.

FROM A. L. H. Palmer Esqr. Superintendent of Tels: Madras Division	INDEX No. OF 189 -9 .
TO The Acting Chief Engineer Public Works Department, Madras	ABSTRACT.
No. 5002 Dated 21 June 1893	PRECIS.
(Place) Ootacamund	Returns his No. 2288C of 9 June with his opinion
Encs. Recd.	6 P

SIR,

With reference to your ~~letter~~ endorsement No. 2288, dated the 9th instant ~~of~~ ~~189~~, I have the honour to inform you that in this Department the maximum resistance allowed for an Earth is 10 Ohms, and that I consider it very desirable to reduce the resistance of the Mangalore Lighthouse Lightning Conductor earth to at least the same figure.

2. As so large an expenditure is involved I may perhaps be permitted to make a suggestion. I notice that the record of tests taken on 23d. January '92 mentions the Lightning Conductor Earth as being composed of "Copper rope". I do not think this copper rope is nearly so satisfactory as a Copper Earth plate would be. The Departmental pattern is made of sheet Copper 1/8th of an inch in thickness and about 4 × 3 feet in size and one of this description could be procured from the Department, on payment.

3. If such a plate were procured and substituted for the Copper rope under water at the bottom of the well care being taken to fix it vertically by wooden struts, it is quite possible the resistance might be largely reduced. Should the well be nearly dry the plate might be kept vertical by filling the bottom with charcoal and old scrap iron up to the top edge of the plate, watering it during the

dry

P. W. CURRENT No. 5857

dry season and leading all the surface drainage to the spot during the rains. Neither of these arrangements should be costly, so that it would seem desirable to experiment as indicated before adopting any other method.

4. The papers received are returned as requested.

I have the honor to be,
Sir,
Your most obedient servant,

A.L.H. Salmuler
Superintendent.

Recd 22/6

As orders

Dn

No. 471 D of 26-6-93

P.W. Department.

Memorandum

10

Letter from the Supt. of Telegraphs No. 5002 dated 21st June 1893.

Copy of the above forwarded to the Supdg. Engineer IV Circle with reference to his letter No. 216 EW dated 30th May 1893. The suggestion of the Superintendent of Telegraphs should be adopted and the tests retaken.

JH
22.6

EW

OMY
22.6.93

To The S/E IV Circle
with encls ✓
+ 2 plans

Despd 26/6

CS

No. 471 Dy 26-6-93

No. 517
W.

Supdg. Engr. Office 4th Cl.,
Coimbatore 8th December 1894.

From,

J. Hannan, Esq.,
Superintending Engineer,
4th Circle,

To

The Chief Engineer
P. W. Department,

Enclosures. 2
1 File of Estimate, plans &c.
1 Copy of letter.
2

Sir,

I have the honor to resubmit for sanction an estimate for Rs 3190 for certain improvements to Lightning Conductor of the Mangalore Light house.

2 This estimate was returned with your memo No 471 of 26th June 1893 with a copy of a letter from the Assistant Superintendent of Government Telegraphs. The Asst. Superintendent's suggestions were given effect

to and the Lightning Conductor — retested by the Sub Assistant Superintendent of Telegraphs with an unsatisfactory result. Copy of his letter is enclosed.

3 The cable which it is now proposed to lay down to the sea will benefit the station generally as the lightning Conductors of all the Main buildings can be connected with it.

4 There has been a good deal of delay in this matter. It is partly due to the frequent unavoidable changes of Division officers and partly to delay in getting the tests from the Sub Assistant of Telegraphs as well as other information bearing on the matter.

I have the honor to be
Sir
Your most Obedt. Servt.
J Hammill
Supg. Engineer 4th Circle

P. W. CURRENT No. 9454

20.2-94 No 480 W
24.11.93 .. 3980 C
16.11.93 .. 2968 W
18.12.93 4378 C

From

The Supg. Engineer,
4th Circle

Dated 8th } December 1894
Despd 10th }
Recd: 11-12-94
Recd 12-12-94 at 3 P.M.

No 517
W.

Enclos: ~~2~~.12 (2 Plans)

Lightning Conductor of the Light house at Mangalore –

Subuits for Sanction an Estimate &ca amtg. to Rs 3190 for improving the —

X/

No 3238 W. d/ 17th Dec: /94.

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Print Proceedings of Govt in the Marine Deptt No 142 d/ 28th April 1893
Quote 3 S.P. Memo: to the Suptg: Engineer IV Circle No 2105 C d/ 20th May 1893
Print From the Suptg: Engineer IV Circle No 2168 W d/ 30th May 1893
Quote 5 S.P. Endorsement to the Supdt of Telegraphs, Madras No 2288 C d/ 9th June 1893
Print From the Supdt of Telegraphs, Madras, No 5002 d/ 21st June 1893
Print Memo: to the Suptg: Engineer IV Circle No 471 D d/ 26th June 1893
Print From the Suptg: Engineer IV Circle No 517 W d/ 8th December 189

9 P

W
15 Dec

The estimate, amounting to Rs 3190, for improvements to the lightning conductor of th Light House at Mangalore, is sanctioned.

2. An allotment of Rs 3,97 inclusive of the percentage charges was provided for th work in G.O. No 469[x] Financia dated 17th May 1893, and th sum was surrendered to th Financia

[x] G.O. No 2968 W d/ 16th November 1893

(40—1,000—26-11-94.)

Financial Department in G.O. No. 480 W dated 20th February 1894. The question of reallotting the amount in the current official year will be considered in that Department.

3. This sanction has been registered as Excluded Local No. 15 W of 1894-95 and classified as Miscellaneous Public Improvements, Original Works

Comm
14/12/94

14/12

H.E.

Estimate for improvements to the lightning conductor of the Mangalore Light House

CMC B/

DESPATCHED
8-JAN.95

To The S.E. IV Circle with 8 enclos:
.. Exar P.W. Accts
. Financial Deptt
Marine Deptt

H.E. 14/12
N.J. 14/12

10