

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	211-12	Press
B.P. No.		Mis. —
Dated	14-8-	195

Not to be folded or roughly handled

Read the following papers:—

No. 319. From J. D. GRANT, Esq., Officiating District Engineer, Tinnevely, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Palamcottah, 12th April 1876, No. 11.

In acknowledging receipt of G.O., No. 204, of 29th March, directing me to prepare a plan and estimate for the Light-house to be built at Muttum, I have the honor to request further instruction as to the height of the tower.

2. Captain Taylor in paragraph 5 of his letter printed with G.O., No. 340, of 1st October 1875, gives it as his opinion that the light should command a radius of 22 to 24 miles, for which he gives 180 or 200 feet above sea-level as the height required.

3. To throw a light 22 miles, I find that the elevation of the light must be 322 feet 8 inches, and as the sight chosen for the Light-house is 75 feet above sea-level, and as the focal plane of the light will be $11\frac{1}{2}$ above the tower, the height of tower should be 322 feet 8 inches minus $86\frac{1}{2}$ feet or 236 feet.

4. The Government of India in sanctioning the erection of a Light-house limit its height to 50 or 60 feet, and apparently believe the land at Muttum to be very high, but without going further from the sea than the Marine Authorities consider desirable, there is in fact no land high enough to render a tower of 60 feet sufficient.

5. Under these circumstances, I beg to be directed as to the height to be provided. I should be obliged also by your forwarding me for guidance the design submitted by Mr. Rundall with his letter, No. 208, of 26th March 1874.

No. 319-A. From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Madras, to Colonel W. T. F. FAREWELL, Officiating Deputy Chief Engineer, Public Works Department, dated Madras, 7th June 1876, No. 3,841.

I HAVE the honor, in reply to your letter marginally noted, to state that the distance from Muttum and Cape Comorin on all charts used for nautical purposes *i.e.*, Mercators projection and Geographical measurement, is a little under 14 miles. In all communications having reference to marine affairs these measurements are used.

2. In the same way with regard to paragraph 2, I beg leave to point out that the distance at which the light would be visible was expressed in geographical miles, 60 to a degree. The sizes of ships and particularly the height of Steamers' bridges vary so much, that some latitude appeared to me to be necessary. There are slight discrepancies in the various methods of calculating the visibility of lights, and practice and theory sometimes clash in the eastern seas, where on rare occasions a very great amount of refraction obtains, but Alan Stevenson's formula will answer the present purpose as well as any. The difference between 150 and 200 feet is little more than a mile. $\sqrt{14.91}$ and $\sqrt{16.22}$ then the height of the ship at 30 feet added "6.28" makes 21 miles 19 and 22 miles 50 respectively, but the bridges and standard compasses of the Steamers which almost exclusively use these lights, or at any rate

*Proceedings of the Madras Government, Public Works Department,
14th August 1876. No. 2,111.*

examine their distances carefully, is often 40. I believe 22 and 24 miles practically are about the right distances.

No. 320. ORDER THEREON, 14th August 1876, No. 2,111.

CIVIL WORKS, No. 31.

The height of the Light-house site at Muttum being 75 feet above sea-level, and the focal plane of the light to be exhibited $11\frac{1}{2}$ feet more, while the total height recommended by all authorities is 200 feet, the District Engineer, Tinnevely, will be instructed to plan and estimate for a Light-house $113\frac{1}{2}$ feet high from the ground to the cap.

2. These Proceedings will be communicated to the Government of India with reference to their letter, No. 97,* of 4th March.

* Revenue, Agricultural and Commerce, vide Public Works G.O., No. 204, dated 29th March 1876.

(Here enter No. 2,112, dated 14th August 1876.)

(True Extract.)

Colonel,

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

To the District Engineer, Tinnevely.
" Marine Department.

PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 14th August 1876.

No. 321.

No. 2,112.

FROM

MAJOR-GENERAL G. W. WALKER, R.E.,
Secretary to the Government of Madras,
Public Works Department,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
Public Works Department.

CIVIL WORKS, No. 32.

SIR,—Adverting to the letter from the Secretary to the Government of India in the Department of Revenue, Agriculture and Commerce, No. 77, dated 4th March 1876, I am directed to forward for information the accompanying copy of Proceedings of the Madras Government on the subject of the height of the Light-house to be erected at Muttum.

I have the honor to be,

Sir,

Your most obedient servant,

Colonel,

Offg. Under Secy. to Govt., P.W.D.,
for Secretary to Government.

Exd. W. H. French.

Spare Copies

No 11

District Engineer, Tinnevely
Palanacottah, 13th April 1876

From,

J. D. Grant Esq. Esq.
Offs District Engineer
Tinnevely

To,

Major General G. W. Walker R.E.
Secretary to Government
P. W. D.

Sir,

In acknowledging receipt of
G. O. No 204 of 29th March directing me
to prepare a plan and estimate for the
lighthouse to be built at Mutton I
have the honor to request further in-
struction as to the height of the tower.

2. Captain Taylor in para. of his
letter printed with G. O. No 40 of
1st October 1875 gives it as his opi-
nion that the light should command
a radius of 22 to 24 miles, for which
he gives 180 or 200 feet above sea
level as the height required.

3. To throw a light 22 miles I find
that the elevation of the light must
be 32.3' 8" and as the site chosen for the
lighthouse is 75' above sea level and
as the focal plane of the light will
be 11 1/2' above the tower the height of
tower should be 32.3' 8" minus 86' 3"
or 236 feet.

4. The Government of India in
sanctioning the erection of a lighthouse

Victorians of
the Peninsula
letter printed
with G. O. No 40
of 1st May 1876

limit its height to 50 or 60 feet and
apparently believe the land at Mullum
to be very high, but we have to go very
farther from the sea than the marine
authorities consider desirable, there
is in fact no land high enough to
render a tower of 60 feet sufficient.
5. Under these circumstances I
beg to be directed as to height to be pro-
vided. I should be obliged also by
your forwarding me your signature
to the design submitted by Mr. Marshall
with his letter of 20th of 2. 6. March
1874.

I have the honor to be
Sir
Your most obedient servant

J. D. Grant
Offg. Dir. of Engineers

17319

1273 B + 1273 C
 16.9 - 1913
 9.9 - 1913
 1.10 - 1913
 8.11 - 1913
 29.3 - 1913

height to 500 or 60 feet and
 believe the same

1876 Department
 No. 2788
 The Offr Dist Regt
 I am
 the Secretary to Genl
 S. B. W.
 Dated 12th
 Received 19th April 1916
 1811

Requesting further
 instruction regarding
 the preparation of Plan
 and Estimate for the
 Light House to be built
 at Muttum.

10 June 1876.
 No. 333
 To Capt. J. H. Taylor R. I. A.
 Master Attendant Administration
 Deptt. Madras.

Sir, With reference to your reply to
 Question 5 printed with E.B. in the Marine
 Deptt. of 1st Oct 75. I have the honor
 to inquire what miles you mean when
 stating Lomoria is 16 miles from
 Muttum by the accompanying Trig-
 -ometrical Survey Map of Ludia (to be
 returned); the distance according to the
 scale attached thereto is 16 1/2 miles.

2. Further with reference to your remark
 that a light on Muttum with a height
 of say 180 or 200 ft above sea level
 would give a radius of twenty two
 to twenty four miles, I beg you will
 note what miles you mean and on
 what formula the assertion is
 based. I would note that according

to Alaw Stephenson's formula for
curvature refraction $7/8$ ft. A first
class light with its focal plane
at a height of 200 ft above sea
level would only give a radius
of 18.408 statute miles.

Yours &c

W Farewell Hall
off. Dy. Chas. Long
S.H.B.

PCH

No 7
118

Fort St George
10 May 1872

To

The Secy. to the Govt. of India
S.H.B.

Sir, I have the honor to request
that the designs forwarded with
Proceedings of the Land and
Government in the Public
Works Department, under
date the 11th May 1874, may be
returned.

Yours &c

Signed W Farewell Hall
off. Dy. Chas. Long
S.H.B.

PCH

From

The Master Attendant
Administrative Department
Machias

To

The Officiating Deputy Chief Engineer
Fort Saint George

Sir

I have the honor, in reply
to your letter marginally noted, to
state that the distance from Mattam
and Cape Comorin on all charts used
for nautical purposes is a Mercator
projection and geographical measure-
ment, is a little under 44 miles. In
all communications having reference
to marine affairs these measurements
are used.

2

In the same way with
regard to para 2, I beg leave to point
out that the distance at which
the light would be visible was
expressed in geographical miles,
60 to a degree. The sizes of ships,
and particularly the height of
steamers' bridges vary so much, that
some latitude appeared to me to be
necessary.

I dated 17th June 50
233

26.12.50

necessary. There are slight discrepancies
in the various methods of calculating
the visibility of lights, and practice
and theory sometimes clash in the
Eastern Sea, where on rare occasions
a very great amount of refraction
obtains, but Adam Stevenson's formula
will answer the present purpose
as well as any. The difference
between 150 and 200 ^{miles} is little more
than a mile. K' 14-91 and K' 15-22 then
the height of the ship at 30 ^{feet} added
" 6-28 " ^{miles} makes 21.19 and 22.50 ^{miles} respective-
ly, but the bridges and standard
compasses of the steamers which
almost exclusively use these lights,
or at any rate examine their
distances carefully is often 40. I believe
22 and 24 miles practically are about the
right distances.

Maadras. I have the honor to be
Sir
Your most Obedt Servant
J. H. Taylor
Master Attendant
Administrative Department

Marine Office
7th June 1875

MM

Memos 2 of 125 May 1876 & 2 of 125 June 1876
 both on the 1788 letter file - P. No. 1876 Department
 88-4-118

for 22 Dec 72 - No. 2482
 11 May 74 - 12732.
 9 Sept 75 - 2891
 10 Oct 75 - 840.
 29 March 76 - 204
 29 Aug 72 - 216

Recd - 11-8-76 Ptd 14-8-76
 Cj - 14-6-76
 Recd to date 10-6-76

about the distance
 of Madras State Commission
 to the Government

No. 3001

Sent 7th June 1876

Administrative Dept
 Mr. Walter Attwood

No 2112 of 14 Aug 76

To The Secretary to the
 Govt of India, P.M.S.
 Sir,

Adverting to the
 letter from the Secretary to
 the Government of India
 in the Department of
 Revenue Agriculture
 and Commerce, No 77, dated
 4th March 1876, I am
 directed to forward for
 information the accom-
 panying copy of Proceed-
 ings of the Madras Govern-
 ment on the subject of
 the height of the Light
 House to be erected at
 Pruthur, and to request

Mem
P.
P.
P.
M

that the documents which
accompanied my No.
1273 C dated 11th May 1874
may be returned.

Dated 1/9/8

W. L. G.

No 2111

Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 14 Aug 76

Read the following:—

From

The Offg: Dist Engineer
Sinnerelly

" Master Attendant
Madras

(St. Co. P 11 d/12th April 1876)

3841 of 7th June 76

The height of the
lighthouse site at Muttam
being 75 feet above sea
level, and the focal plane
of the light to be exhibited
11 1/2 feet more, while the
total height recommended
by all authorities is 200
feet, the District Engineer
Sinnerelly will be in-
structed to plan and
recommence for a light-
house 113 1/2 feet high
from the ground to the
Cap

2. These proceedings
will be communicated

to the Government of

India

21/5 1876

Capt. Taylor himself

communicated 180 to 200

in letter of 20th Sept 1875

Sweden with reference
to their letter No 750 of
4th March. And they
will be requested to
return the papers
submitted to them with
letter No 1270 dated
4th May 1874.

* No. 49. *Homocidus* - vide
No. 30 & No. 304 of 1896

4118
2780
Govt. of Madras
PUBLIC WORKS.

Mr. H. G. Srinivasulu

... 2/11/12

No. 319 to 320

Remaining copy of
No. 211 of 11-12-11
on the subject of the
height of the
House to be erected
at Muttam & regarding
that the documents
with its accompaniment
dated 21-12-11 may be
returned.

Right House to be erected
at Muttam - Srinivasulu
DE - Passing orders on
the subject of the height
of the —

Entirely in the
2-9-12