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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Public Works, DEPARTMENT

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GOVERNMENT OF MADRAS
PUBLIC WORKS DEPARTMENT.

6th September 1878, No. 3,554 W.

Buildings and Roads.
Civil Works

Read the following paper.—

No. 96 From A CRUICKSHANK, Esq, Acting Collector of South Arcot, to the Chief Engineer, Public Works Department, dated Kallakurchi, 50th August 1878, No 254.

I HAVE the honor to forward herewith a letter* from the District Engineer to your address regarding the house belonging to Government at Cuddalore. The only remarks I have to make are to object again most strongly to the erection of pillars thereby completely spoiling the appearance of the room, and to request that Government may be pleased to pass order in the matter at a very early date, as I have desired the District Engineer to stay the building of the pillars till the Government order is known, and as the house has been at the disposal of the Public Works Department since 11th July last, and I am likely to return to Cuddalore in the end of the next month

From Major H. R. MEAD, R.E., District Engineer, South Arcot, to the Chief Engineer, Public Works Department, dated Poodooschuram, 27th August 1878, No 193.

I HAVE the honor to report the following regarding the Government house at Cuddalore in which the Collector lives. The house and detached bungalow are in bad repair, and they require at least Rupees 4,500 to place them in good order

2. The verandah roof of the detached bungalow has been for some years in very bad order, but funds not being available nothing could be done to it. In the budget for this official year Rupees 1,500 are allotted for these buildings, and I arranged with Mr Sharp, then Collector, that the detached bungalow should be repaired at a probable cost of Rupees 1,000, and the remaining money be spent in repairs to the main building

3. In, I think, March 1878 Mr Sharp called my attention to the state of a beam in the south bed-room. I found it had sunk about half an inch, and as it was in, I considered, a dangerous state, I had it shored up, and proposed this official year to build a pillar under it as a permanent support. Mr. Sharp agreed to this, but wished the work to be carried out when he went to Kallakurchi on jamahbundy

4. Before I left the district in May I directed Mr Bird, the Range Officer, to prepare repair estimates for the buildings, and, in anticipation of sanction, to have all the main beams of the house thoroughly examined, the ends being opened out.

5. I regret much that on my return at the end of July I found the roof of the verandah of the bungalow removed, but nothing done towards the examination of the beams. His excuse is that the Collector, Mr. Cruickshank, requested that the repairs or examination should not be done until he left Cuddalore on jamahbundy. I can only say all the beams (except the inner ends of four beams) could have been looked at without any inconvenience, and this might have been explained to Mr. Cruickshank.

6. The beams have now been all thoroughly examined by me. I find one end of the beam in the south bed-room in a bad state; this, I consider, be permanently supported by a masonry pillar 2 feet square built under it, as the room is a

THE UNIVERSITY OF CHICAGO PRESS

For the purpose of this study, the following hypotheses were formulated:

$$f = \frac{1}{\sqrt{\pi}} \exp(-x^2) \quad \text{and} \quad g = \frac{1}{\sqrt{\pi}} \exp(-y^2)$$
[illegible]

$\mathbb{R}^n$ is a vector space over $\mathbb{R}$ with the standard inner product. Let $\mathbf{v}_1, \mathbf{v}_2, \dots, \mathbf{v}_n$ be an orthonormal basis for $\mathbb{R}^n$. Define the matrix $\mathbf{V} = [\mathbf{v}_1 \mathbf{v}_2 \dots \mathbf{v}_n]$. Then $\mathbf{V}$ is an orthogonal matrix, i.e., $\mathbf{V}^T \mathbf{V} = \mathbf{I}$. Let $\mathbf{A}$ be an $n \times n$ matrix. The matrix $\mathbf{B} = \mathbf{V}^T \mathbf{A} \mathbf{V}$ is the orthogonal transformation of $\mathbf{A}$ by $\mathbf{V}$. The eigenvalues of $\mathbf{B}$ are the same as the eigenvalues of $\mathbf{A}$. The eigenvectors of $\mathbf{B}$ are the projections of the eigenvectors of $\mathbf{A}$ onto the columns of $\mathbf{V}$.

[illegible][illegible][illegible]

[Faint handwritten notes at the bottom of the page, possibly "The end of the world"]

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SOUTH ARCOT

No. 234

COLLECTOR'S OFFICE,

Camp Kallakurichi
33rd August 1878

From

^{335th}
3
A. Cruickshank Esq.

To

Chg. Collector of South Arcot.
The Chief Engineer
D. P. M.

By

I have the honor to for-
(C. No 9635) - ward herewith a letter from
the District Engineer to
your address regarding the
house belonging to Govern-
ment at Cuddalore. The
only remarks I have to make
are to object again most
strongly to the erection of
pillars thereby completely
spoil the appearance of
the

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has a solution if and only if the condition $\alpha + \beta = 1$ is satisfied.

2. In the second part of the paper, the problem of the stability of the solution of the system (1) is considered. It is shown that the solution is stable if and only if the condition $\alpha + \beta = 1$ is satisfied.

3. In the third part of the paper, the problem of the asymptotic behavior of the solution of the system (1) is considered. It is shown that the solution tends to zero as $t \rightarrow \infty$ if and only if the condition $\alpha + \beta = 1$ is satisfied.

4. In the fourth part of the paper, the problem of the periodicity of the solution of the system (1) is considered. It is shown that the solution is periodic if and only if the condition $\alpha + \beta = 1$ is satisfied.

5. In the fifth part of the paper, the problem of the boundedness of the solution of the system (1) is considered. It is shown that the solution is bounded if and only if the condition $\alpha + \beta = 1$ is satisfied.

6. In the sixth part of the paper, the problem of the uniqueness of the solution of the system (1) is considered. It is shown that the solution is unique if and only if the condition $\alpha + \beta = 1$ is satisfied.

7. In the seventh part of the paper, the problem of the regularity of the solution of the system (1) is considered. It is shown that the solution is regular if and only if the condition $\alpha + \beta = 1$ is satisfied.

8. In the eighth part of the paper, the problem of the smoothness of the solution of the system (1) is considered. It is shown that the solution is smooth if and only if the condition $\alpha + \beta = 1$ is satisfied.

9. In the ninth part of the paper, the problem of the differentiability of the solution of the system (1) is considered. It is shown that the solution is differentiable if and only if the condition $\alpha + \beta = 1$ is satisfied.

10. In the tenth part of the paper, the problem of the integrability of the solution of the system (1) is considered. It is shown that the solution is integrable if and only if the condition $\alpha + \beta = 1$ is satisfied.

SECRET

D. P. W.
SOUTH ARCOT. No. 198

DISTRICT ENGINEER'S OFFICE.

Camp

Poochoochoo

Date

27. August 1898.

FROM

THE DISTRICT ENGINEER,

SOUTH ARCOT.

Roads &
Buildings

TO

THE CHIEF ENGINEER

D. P. W.

Enclosures

Sir,

I have the honor to report the following regarding the Government houses at Seendalore in which the Collector's house. The house and detached bungalow are in bad repair and they require at least Rs 6,500 to place them in good order.

2 The verandah roof of the detached bungalow has been for some years in very bad order, but funds not being available nothing could be done to it. In the Budget for this financial year Rs 1,500 are allotted for these buildings, and I arranged with Mr. Sharp the Collector that the detached bungalow should be repaired at a probable cost of Rs 1000, and the remaining money be spent in repairs to the

From

SOUTH ARCOT.

the Collector Mr. Lumsden requested that
the report of examination should not be sent,
until he had been consulted on Jamaica.
I can only say all the beams (except the inner
ends of 4 beams) could have been looked at
without any inconvenience - & this might have
been explained to Mr. Lumsden.

b. The beams have now been
all thoroughly examined - by me.
I found one end of the beam in the South
bed room - in a bad state, this can, I
consider, be permanently supported by
a masonry pillar 2 ft square built on level,
as the room is a bed room 26 ft x 20 ft, I do
not think it necessary for a new beam to
be put in place of the old one.

In the drawing room, a fine room 40 ft x
26 ft and 23 ft high I regret to say the
main beam is very bad indeed, at one
end more than $\frac{1}{2}$ the beam has gone with
dry rot to within a few inches of the inside
of the wall and the other end - is very bad.
I consider it in a very dangerous state.

except putting in a new beam and to do this
I have no time or money

10 I propose therefore that the pillars shall be
built at once & the house be repaired as far
as the money is available. I trust that this can
all be done by the 20th Sept and the house avail-
able for occupation then.

I hope that next year Govt may be able to
allot Rs 3000 for the repairs of this building and if
so I should propose that a new beam should
be put in the place of the old one and the pillars
be removed, until then the room although
spacious appears - will be perfectly safe
and habitable and so no loss being in
the pillars with a little or no inconvenience.

11 I send this letter to you through
the Collector so that he may make any
remarks he thinks right. I have told
him that if he wishes I will stop the
work of building the pillars at once.

I have the honor to be
Your most obedt servt
J. H. P. [Signature]
District Engineer

BTR
clears
No 35574 Public Works Department

PROCEEDINGS OF THE MADRAS GOVERNMENT
UNDER date the 6 Sept 1878
Read the following —

From
The Collector
of South Arcot } (G.O. No 234 of 30th August 1878)

As the Government
have no money to allot for
the ~~construction~~ ^{reconstruction} of a new beam
in the drawing room, it is
absolutely necessary that
pillars shall be built as pro-
posed under the old beam.

Although for the time
being the appearance of
the room, they can be re-
moved next year, when
funds for the proper repairs

P. S. Arcot
Collector of S. Arcot } if the building will be provided
for the year 1878-79

20-9-78