

Educational (1913) Department.

ORDINARY MS.

G.O., No. 386

DATED 29-4-1913.

[Despatch Abstract.]

Buildings — Requesting the Director of Public Instruction to instruct the school authorities at Muthialpet to carry out the suggestions made by the Chief Engineer with regard to the extensions to the High school building there.

PAPERS PUT UP WITH CURRENT No. _____

Papers of the department to which the current belongs.

Back papers.

Number.	Date.	Original (=O.) or spare copy (= S.C.).	Remarks. (Note.—When an original is removed from this file the fact should be noted against the paper and its destination mentioned.)

Further papers.

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Papers of other departments to be returned.

Department.	Number.	Date.	Original (= O.) or spare copy (= S.C.).	Date of return.

Stock Form No. 141 (a).
100-15-11-11.

PUBLIC WORKS DEPARTMENT.

CURRENT No. 1413 DR

Irrigation Branch.



ENCLOSURE. { Plans No.
Others No.

1 copy of letter No. 309 S.E.
10-2-13.

Received 191 .

Registered 20 2 1913.

Total. _____ Passed on by Registering Clerk ...

SPARE COPIES.

" " U. R. Clerk ...
" " Record-keeper ...
" " Drafting Officer ...

Subject.

24 tensions to the building occupied by the Mouthialpet High school.
Madras - Forwarding with remarks copy of a letter from the 24. Engineer
Presidency Division saying that the building is not safe.

No. 217 W

Station MADRAS, Dated the 19 February 1913.

From (Name) S.D. Pears Esq.,

(Designation) Superintending Engineer, V Circle.

To The Chief Engineer to the Government of Madras,
The Joint Secretary
Public Works Department,
Irrigation Branch.

Sir,

I have the honour to enclose copy of letter
No. 309-S.E. dated 10th February 1913 from the Executive
Engineer, North Presidency Division. The G.O. No. 40
Educational dated 15th January 1913 has not been communi-
cated to this Office.

2. It not infrequently happens that a School
building is well in hand before we hear of it, and it is
then impossible to say what foundations it has actually
been given. A rule might be made with advantage that in
such

CF. Linkerph

DC3

502 20 2/13 MVS 20/2

2

such cases no grant, or only a reduced grant, will be given. Such a rule might perhaps be objected to by the Educational Department as causing delay in the progress of buildings, but the delay would not I think be appreciable, so far as this Department is concerned, at any rate in Madras City. But it would be necessary that the sanctioning G.O's should be communicated to us promptly which has not been done in the present instance.

I have the honour to be,

Sir,

Your most obedient Servant,

S. J. P.

18.2.13.

Supg. Engineer, V Circle.

cab
18.2.13

COPY OF COMMUNICATION.

No. 309-S.E./75 x(2)

Dated 10th February 1913.

From C.T. Mullings Esq., Executive Engineer, North Presidency Division,

To The Superintending Engineer, V Circle.

3

With reference to G.O. No. 40-Educational dated 15th January 1913 received from the Director of Public Instruction and sent herewith I have the honour to inform you that the Muthialpet High School building is already nearly finished and only the roof remains to be put on. It is therefore too late to alter the design. I am told that the correspondent sent notice to the Director of Public Instruction about August last that he intended starting construction then.

2. In my opinion the building is not strictly safe and it would be unwise of Government to contribute to its construction. The plans do not show details of the stair case which is built of brick work, and between the first and second storey the steps are supported on an absolutely flat arch of about 12 feet span which might easily break its back when loaded or else produce enough thrust to push out the wall marked N in the accompanying blue print; this ought to be replaced by a wooden stair case. On the date of my inspection 5/2/13 a third flight of brick steps was being started leading up to the roof, and I recommend that this should not be permitted, as the loading on the foundations owing to this heavy stair way is already too high for safety. The foundations appear to have been put in according to the drawing, but we cannot be certain of this now.

cab
16.2.13

4
Public Works Department.

MEMO. No. 141352 dated 13/3 - 1913.

Read the following:-

From the Superintending Engineer, V Circle, No.
217 W., dated 19th February 1913.

The Superintending Engineer is
requested to take a very early
opportunity of inspecting the build-
ing and after doing so to report what
can be done to make the building safe
for occupation.

2. With his reply he is requested
to send a plan of the building as
actually constructed.

W. S. 17

To

The Suptg Engr V Circle ✓
Educational Dept (Lto) with Copy of note.
J.D.

Remind in a month

DESPATCHED
18 MAR 1913

Enc 1
141352/13

PUBLIC WORKS DEPARTMENT.

R.F.D. 80 (D).

CURRENT No.

2459 Dd

ENCLOSURES. { Plans No. 1. Blue print
1. pencil sketch.
Others No. 1. Sheet of calculations

Received 191

Registered 191

SPARE COPIES.

Total.

3

Passed on by Registering Clerk ...

" " U. R. Clerk ...

" " Referencer ...

" " Record Superintendent.

" " Drafting Officer

Subject.

No. 421 W

Station Madras, Dated the 10-4-1913.

From (Name) S. D. Pears, Esq.,

(Designation) Superintending Engineer, V Circle.

To The Chief Engineer to the Government of Madras,
The Secretary
Public Works Department.

Sir,

for ante

With reference to your Memo No. 1413 D.R.-2 dated the 13th March 1913, I have the honour to report that I have inspected the school building in question.

It is very nearly complete.

2. It is xxxx impossible now to make a complete examination of the foundations. I examined them at one fairly accessible point and found them there according to plan. The school authorities assured me that they were so elsewhere also, but were obliged to admit later that where the South wall abuts against

DG

11/4

the wall of the next property it had not been possible to put in the concrete offset.

3. The soil is sandy, but mixed with so large a proportion of earthy matter as to approximate to loam, and had I been consulted beforehand I should not have passed it for a pressure of $2\frac{1}{2}$ tons per s.ft. The superstructure, however, seems sound enough at present, though it has still to receive the roof and it has still to be seen how the soil will behave under variations of humidity and temperature.

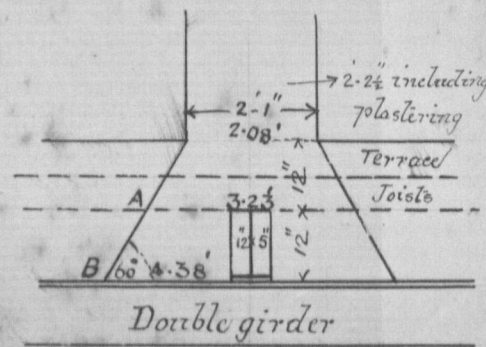
4. In other respects the building appears to have been built according to plan, and is therefore open to the criticisms contained in your Note No. 62-C dated 3-1-13 except that the girders referred to in para 4 of your Note are, as a matter of fact, 14" x 6".

5. Also, on the Sub Division Officer's suggestion, which I supported, the builders propose to bring the gable roof right up to the facade, which will slightly reduce pressures.

6. The Executive Engineer's criticisms of the staircase are sound, but inasmuch as the staircase is not only standing, but has been ~~pretty~~ pretty severely tested by a crowd of coolies carrying up the ~~MI~~ C.I. columns for the top storey, its demolition need not be insisted on. The staircase moreover is only temporarily needed, for the adjoining property (Southwards) has been purchased and it is proposed to build another half to the building as shown on the accompanying pencil sketch, when the staircase will be replaced by a central main staircase as shown in the sketch.

7. Apart from the unknown and probably overloaded foundations the weakest part of the building is the pillar marked P-6 on the blue print (see para 2 of your Note above-quoted). Since this pillar has not been enlarged the pressures at its base (assuming an imaginary line of spread of 60°) work out, according to calculations made in my office, to 6.20 tons per s.ft. at A (marginal sketch) and 4.57 tons at B, the width of the pillar (at right angles to the plane of the paper) being 1'-10 $\frac{1}{2}$ " and of the wall (on the double girder) 1'-11 $\frac{1}{2}$ ".

There is no cure for this but to pull the whole front of the building down and redesign it or rebuild the over-loaded parts in cement.



8. I would draw your attention to the fact that the design for the building was made by an Overseer of the Presidency Division sent for the purpose by the Executive Engineer at the request of the school authorities. I do not know how far, if at all, this exempts the School authorities from the consequences of that design being now found to be defective.

I have the honour to be,

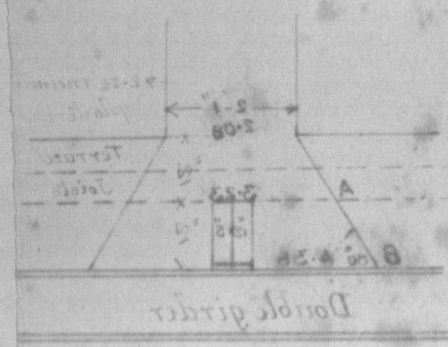
Sir,

Your most obedient servant,

S. D. Rao
5. 4. 13.

Supg. Engineer, V Circle.

ad
9. 4. 13



Calculations.

Pressure at P-6 is given in Chief Engineer's calculations as 8.44 tons.
Total weight 26.92 tons.

P-5 This will be reduced as the terrace roof in front is to be omitted.

$\frac{1}{2}$ load of one bay (calculation 9(IV)) = 1.98 tons

Weight of portion of terrace roof of the 12' square room.
(calculation 22) 2.96 tons

Weight of pilaster 3 cft

Weight of wall above.

$6\frac{1}{2} \times 1-1\frac{1}{2} \times 15'-6" = 113.34$

116.34

Deduct 22.00

94 cft x 120 lbs 5 tons.

Total tons. 9.94

Area = 4.13

Pressure = $\frac{9.94}{4.13} = 2.4$ tons.

P-6 Load as above. 9.94
(same as calculation 23) 12.57

Total 22.51 tons.

Area of pilaster 3 sq.ft.

At bottom of pilaster pressure. 7.5 tons

The width of the wall above the double girder is assumed as $1'-1\frac{1}{2}"$

Pressure at A = $22.5 / 1.125 \times 3.23$
= 6.20 tons per sq.ft.

Pressure at B. = $22.5 / 1.125 \times 4.38$
= 4.57 tons per sq.ft.

NOTE BY THE CHIEF ENGINEER, P.W.D. 23-2-8
24-4-13

The Chief Engineer recommends the following measures for increasing the stability of the Muthialpet High School -

(1) The staircase should be demolished and rebuilt.

(2) The pressures on the piers and external wall, and on the soil under them should be relieved by carrying the weight of the first floor and second floor on stanchions placed against the piers and wall in the manner indicated on the accompanying diagram. C.A.93/1913. This diagram represents the treatment proposed for the pier P.1. but the treatment of the five other piers (vide ground plan) and of the seven points of support of the 12 x 5 x 32 lbs girders in the external wall will be similar.

All new work should be built in quick setting cement.

(3) The pier P.6 on first floor, with its super-incumbent load should be demolished and rebuilt. Below P.6 a new pier should be constructed (on the ground floor) with suitable foundations, in order to relieve pressure on the over loaded pier P.1.

The weight of the first floor and second floor transmitted to P.6 may be carried on stanchions as recommended in the case of the other piers and external wall. There will thus be required 14 stanchions on the ground floor and 14 on the first floor.

C.A.S.
23-4-13.

C.No.1413 D.R. From the Supdtg.Engr. Fifth Circle,
No. 217 W, d/ 19-2-1913.

Extensions to the Muthialpet High School
Building, Madras.

D.S.

Perusal of the Supdtg.Engr's letter is solicited. G.O., No.40, Educational, dated 15th Jan. 1913 referred to in para 1 of the Supdtg.Engr's letter is being communicated to the S.E. Plans and estimates for this work were scrutinised by the Chief Engineer and his remarks are embodied in his note No.62 C., dated 3rd January 1913 printed in the above G.O. It is for orders what action should be taken with reference to the Executive Engineer's remarks on page 3 c.f.

2. Para 2 of the S.E's letter will be remitted to Educational Department for necessary action.

K.R.
28-2-13. T.S.R.
3-3-13

Please see the Executive Engineer's letter page 3 c.f. from which ^{it} will be seen that the correspondent proposed starting the building in August last. The plans reached this office in September last for scrutiny and it is quite possible that the foundations were put in before this. In such cases the scrutiny and suggestions made in this office serve no useful purpose and are simply a waste of time. Submitted that the case may be sent to Educational for remarks.

D.M.
3-3-13

I consider that generally it is very inadvisable to allow School buildings to be put in hand until the designs have been scrutinised and passed by competent professional authority. The best procedure in the present case will be I think for the Superintending Engineer to inspect the building and report exactly what must be done to make it safe, but in the meantime I think that the School authorities should be told that the building should not be occupied until it has been passed as safe.

Draft Memo. to the Supdtg. Engineer is sent for acceptance.

(Sd) C.A.S.

5.3.13.

Pw 2000 1413 AM Educational. A.S.
5-3-13

PO
6/3

ED 694
6-3-13



Educational Department

From the Executive Engineer's letter on page 3 of C.F. it appears that the Correspondent of the Muthialpet high school gave notice to the D.P.O. about August 1912 that he intended starting construction there. That the ^{work was actually begun before permission} ~~authorities do not, however, permit the~~ ^{was given} ~~Correspondent to begin the construction~~ of approval of plans by Govt. is clear from the last sentence of his letter disposed of in G.O. 40 Vol. 4, 15-1-13. in which he recommended to Govt. that the commencement of the construction of

of the additional accommodation without permission might be condoned and grant sanctioned. In the absence of the special permission of the Director or the Govt, the Correspondent should not have commenced the building operations - vide art. 51 of the Grant-in-aid Code on page 10 of Gono 370 Dtd 1-5-12. The building ~~was completed~~ ^{has been} nearly finished by the school authorities on their own responsibility, and the Govt are not bound to contribute anything towards its cost. The conditions attached to the payment of the grant are -

(i) that the suggestions of the Chief Engineer should be adopted, and

(ii) the conditions of the Grant-in-aid Code should be complied with.

2. The building being already nearly finished condition (i) cannot be complied with. Under art. 53 of the Grant-in-aid Code before the grant is paid in full the Engineer or other responsible officer deputed to examine the building should certify that the work has been completed in accordance with the approved plan and estimate. In the present case such a certificate is impossible - ^{Compare also} para.

2 of Executive Engineer's letter on page 3 of C.F. ^{Under} any grant is to be given it should be only as a ~~special case~~ ^{very} special case. ^{According to a decision as to the question of grant}

3. The draft memo. put up by P.W.D may be accepted & the file returned to that dept. ^{that default may be asked to contribute} a copy of the memo. with comments & remarks, so that the 16.3.13 may be apprised of the facts. ^{Ch} 16.3.13

Page 10 of Gono 370
1-5-12 F.

Mr. Smith's opinion that A n p. 2. refers
ought to be communicated today to
the D.P.I.; if the building is being used,
as is possible, an accident & loss of life
might be caused any day. The management
ought to be warned at once.

The quickest way will be to send this
over to the D.P.I. no. for note &
return - before re transfer to P.W.D. I
accept the draft memo

T-317

S.P.I. no. 64 of 10.2.13
The School authorities have been instructed
accordingly.

g. in 17



Educational Department

The file may now be returned
to P.W.D. The Secy. has accepted the draft
memo.



LD
11-3-13

P.W.D. no.

P.W.D.

OS

The draft memo in this file may remain
and also the order in the linked file may remain

12/3/13

12/3/13

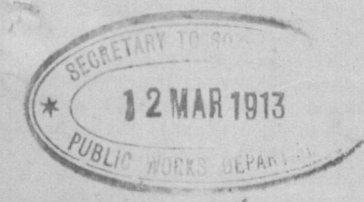
Today
2/3
1-47 PM

Eol no. 694-1

7.3.13
Recd 7.3.13

Eol no. 694-2

11.3.13



(Encl)
Dm 13

552
12/3/13

NOTES.

Page 5

page 4 of CF

pp 5-9

page 10.

Memo to S.E. V Aide P 1413DA-2 D 13.3.13

CP 2459DA from 421 W 10.4.13

Note by the C.E. P.W.D. D 23.4.13

W

In his note of 23.4.13, The Chief Engineer has recommended measures to be adopted for ensuring the stability of the Kuthialpet High School building. The file may be forwarded to the Educational Deptt for the issue of orders to the School Authorities to carry out the measures.

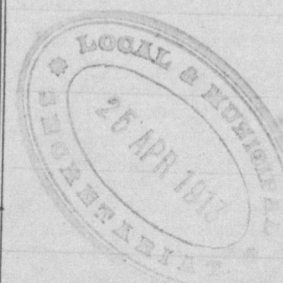
MD

23.4.13

P.W. No. 1413 OR-3
24-4-13.

C. 1358 CP
25/4/13

Educational u.o 25/4/13



Educational Department.

The Chief Engineer's note (p. 10 of C.E.) may be communicated to the D.P.O. and he may be requested to issue instructions to the school authorities to carry out the Chief Engineer's suggestions.

2. A draft order is submitted for approval.

MD
26.4.13

I have made an addition

✓

28.4.13

” ” ” ” ” ” 191

191

22 Note by the C. E. PWD 23-8 24-4-1913

Mi

No. 386 Sol^{his}, dated 29-4 1913.

The note by the Chief Engineer,
P.W.D, No. 23.D of 24-4-13 will be communi-
cated to the S.P.O and he will be requested
to instruct the school authorities to carry
out the suggestions contained ^{therein} ~~in the~~ note.

12-13 CR failing which the grant
26-12-13 27-4-13 sanctioned on 90. to
40 Educ. of 15. 1. 13 should be
with held

28 Feb 12

Notes in CB
30.4.13

29-4-13

To, the ~~org~~ with copy of C. E.'s note
" ~~now~~ plan

29/4/13

When given for copying _____
 When copied _____
 When examined _____
 When signed _____

191

READ AGAIN G.O. No. 191

DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT.

A A A A A A A

LETTER OF GOVERNMENT.

STATEMENT WITH DETO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
 IN ORIGINAL.

V.E.—

A = Copy in full
 B = Not to be copied.
 P = Copy abstract only.
 Q = Copy Heading only