

- (1) பக்கங்களின் எண்ணிக்கை 28
 (2) புதுக்கித் திருப்பிய நாள் 1/89
 (3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் 6/89

தமிழ்நாடு ஆவணக் காப்பகம்.

(78)

தமிழ்நாடு அரசு

P.W.O. துறை

அரசாணை எண்.	510	அச்சகம்
மு. கோப்புத் தாள் எண்.		பலவகை
நாள் :	20-2-1889	~~10/8~~

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

14 Sheets

ஆவண. கா-1-18,006-15-6-87.

14 sheets
laminated

510
20TH FEBRUARY 1889, No. 510 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper:—

From Lieutenant-Colonel R. R. E. DRAKE-BROCKMAN, R.E., Superintending Engineer, I Circle, to the Chief Engineer, Public Works Department, dated Dowlaishweram, 28th January 1889, No. 2838 G.D.

I have the honor to submit, herewith, plan and estimate amounting to Rs. 9,230 for constructing a wooden bridge on the Madderu drain received from the Government Agent, Godávári district, and to request that the sanction of Government may be obtained to the same. The plan and estimate have been scrutinized by this office.

Note by the Chief Engineer, Public Works Department.

The Superintending Engineer, I Circle, submits an estimate amounting to Rs. 9,230 for a wooden bridge, which the Godávári District Board propose to construct across the Madderu drain near Timmapuram.

2. The undersigned has the honor to annex a rough estimate of the cost of constructing an iron bridge in accordance with the type design recently received from England and to point out that such a bridge would be stronger and more permanent than a wooden one.

3. If the District Board can afford the extra cost of about one-third, it seems advisable that the type design should be adopted.

(Signed) H. R. MEAD, Colonel, R.E.,
Ag. Chief Engineer, P.W.D.

12th February 1889.

ORDER—dated 20th February 1889, No. 510 W., Public Works.

The estimate amounting to Rs. 9,230 for constructing a wooden bridge across the Madderu drain near Timmapuram in the Godávári district is sanctioned.

2. The suggestion of the Chief Engineer that an iron bridge be substituted for the proposed wooden bridge will, however, be referred to the District Board for consideration.

3. This sanction has been registered as Local No. 21 W. of 1888-89.

(True Extract.)

Captain, R.E.,
Under-Secy. to Govt., P.W.D.

To the Superintending Engineer, I Circle.
„ Local and Municipal Department, with three enclosures and rough estimate.

Exd. A. D. Xavier.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1889} Madras.
PUBLIC WORKS.

Dated February 20th.

Recd.

Encl.

G.O., 20th Feb. 1889, No. 510 W.

FEBRUARY.

Wooden Bridge

Estimate for a — across the Madderu
drain near Timmapuram in the Godavari
district, sanctioned with remarks.

No. 2838 E.D. 1P

FROM,

Lt Col R.R.E. Drake-Brockman
THE SUPERINTENDING ENGINEER

FIRST CIRCLE.

TO,

THE CHIEF ENGINEER

PUBLIC WORKS DEPARTMENT.

DOWLAISHWARAM, 28th January 1889

SIR,

I have the honor to submit here-
with plan and estimate amounting
to Rs. 9,230 for constructing a wooden
bridge on the Madderu drain received
from the Government Agent Goda-
vari District and to request that the
sanction of Government may be ob-
tained to the same. The plan and
estimate have been scrutinised by this
office.

I have the honor to be,

Sir,

your most obedient Lt.

R.R.E. Drake-Brockman Lt Col R.E.

2 Sup^d Eng^r 1st Circle.

FROM,

1058
Lt Col. R. R. E. Drake-Brockman.

THE SUPERINTENDING ENGINEER

FIRST CIRCLE.

TO,

THE CHIEF ENGINEER

PUBLIC WORKS DEPARTMENT.

DATED 28th

DESPTCHED 29th

RECEIVED

January 1899



No. 2838 G.D.

ENCLOSURES. 2

SUBJECT.

Constructing a wooden
Bridge on the Maddur
Drain near Timmapuram.

Submit for sanction
plan and estimate for

*comp
4/2/89*

P. W. Dept
210

Note by the Chief Engineer P. W. D.

510

The Superintending
Engineer I Circle submits
an estimate amounting to
Rs 9,230 for a wooden
bridge, which the Madras
District Board propose
to construct across the
Maddur Drain near
Timmapuram.

2. The undersigned has
the honor to annex a
rough estimate of the cost
of constructing an iron
bridge in accordance
with the type design recently
received from England,
and to point out that
such a bridge would be
stronger and more permanent
than a wooden one.

3. If the District Board
can afford the extra
cost of about one-third,
it

*omitted to be sent
in the case, costs*

4

it seems advisable that the
type-design should be
adopted.

Wm
12.2.59
12/2/89
SW

Cu

Public Works Department.

Current No. 1058

Letter No. 2538

Dated 28th January 1889

From the Supy. Engineer I. Lick

NOTE OF REMARKS.

The estimate under
notice amounting
to Rs 9230 provides
for constructing
a wooden bridge
of two spans, each
37', across the
Madddam Drain
near Guimapuram
in the Godavari
District.

The proposed
arrangement is
a very simple
one consisting
of a tie beam 2
queen posts, 2 struts,
a straining beam,
a king rod connecting
the tie beam to the
straining beam
and four sets of tie bars.

The timber to be used
is Lomete.

The width of the
roadway is 4' 15".

The foundations
are to be of rough
stone 5' deep laid
on a mass of concrete
4' deep.

The abutments
piers & wing, are
to be of rough stone
in masonry.

The height of the
piers & abutments
is from bed level
to bottom of the
beam is 23' 9".

The width of the
piers is to be 6'
and the mean
width of the
abutment is
to be 6 1/2'.

An iron bridge
on the lines of one
of the type designs
received from the
Secretary of State

would be far
more durable
and perhaps
more economical
in the end.

The difference
of the cost would
be approximately
as follows

Iron Bridge \$12,854
Wooden - do - " 9,230

Difference \$3,624

This admits of
the iron work
being obtained
from England
and includes
freight & exchange.

No report or
specification
has been submitted
with the plan
& section.

5/10
* In making this
calculation
the type plan
of 40' span
has been taken

The plan was
 set down with
 your Commission
 as the President
 of the Dist. Board
 If this set is
 to go back it
 may be well
 to call for
 a few cross
 sections of
 the Madison
 Drain -

C. W. P.
 5/2/89

Some of the values
 are slightly in
 excess of the values
 given in the schedule
 but the surplus is
 only \$70 and not
 worth questioning.
 C. W. P. 5/2

Please check and record
 the figures of the cost
 of the Iron Bridge
 according to the Standard
 type plans *Wm* 510
 and with a sheet with
 figures, and that the iron
 bridge is stronger and more
 permanent and if the Local F.
 Board can afford the extra
 cost of about 1/3 it seems
 advisable that the type design
 should be adopted
 If the Board sanctions the estimate
 but for reference & consideration
 the fact that it is the Q. of the

The timber
is to plan wood

substitute ~~timber~~ of the
in iron Bricks & the
lighter chains for the
wooden one preferred

Grate 15 ft heavy chain
like heavy as 16 ft
scumming 10" x 6"
disbursed about 2" 9"

W¹ distributed

$$W = \frac{12K B^2}{Z} \quad 510$$

$$B = 6 \quad 8 = 10 \quad Z = 192$$

W cut Brumby ³ weight K = 19

$$W = \frac{72 \times 19 \times 6 \times 100}{792 \times 68}$$

$$= \frac{5700}{8}$$

$$= 712 \text{ cut}$$

$$\text{Left weight } \frac{1}{10} = 71 \text{ cut}$$

$$\text{area in beam } 15 \times 2.75$$

$$= 41.25 \text{ sq ft}$$

$$\text{area per sq ft } = \frac{71}{41.25}$$

$$= 1.7 \text{ cut} = 190 \text{ lbs}$$

6" of gravel is shown in

the plan this with weight

with standing say 200 lbs of

Leaving 110 lbs per sq

for sand this is sufficient

probably

To see concrete work in L

be used this is not so strong

as Trade building & coops should be

The time

On 19 & 22 15 at least
 this could make each
 garden work

11/2/00

125 88

51.5 01.8
 125 88

0072

115

17 = 1/2

12.5 x 21

11.5 x 21

17.5 x 21

11.5 x 21

17.5 x 21

11.5 x 21

17.5 x 21

11.5 x 21

17.5 x 21

11.5 x 21

17.5 x 21

11.5 x 21

C. 11/1050

C. 11/11

510

Herewith this
 you are in the
 proposed according
 to the design
 for the construction
 of the, it may be
 recorded with the
 file to be retained
 in the office.

So change from
 fitting at site has
 been provided in
 the table. The length
 of the bridge according
 to the design plan
 is 6 feet longer than
 actual requirement
 than with the
 in a design of the
 and the table which
 should more than
 9 come in cost of
 fitting at site.

C. 11/11
 11/11/00

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

From the Supty. Engineer I Circle. H. E. No: 28384. D. d/28 January 1889.
 into the Chief Engr. P.W. Dept. 27 Jan 1889

The estimate amounting to Rs. 9,230, for constructing a wooden bridge across the Maddur Drain near Sinnapuram in the Godavari District, is sanctioned.

2.3 This sanction has been registered as Local No: Nof 1888-89.

Wm
 9.2.89

2. The suggestion of the Chief Engr. that an iron bridge be substituted for the proposed wooden bridge, will however be referred to the Dist. Board for consideration.

To
 The Supty. Engineer I Circle
 " Local & Municipal Deptt.
 with 3 encls.

(To The Chief Secy for Govt of Counties - initials)

Cu

9/12

1200

CL 1058

Superadded

First Class Roads.

Type design No 15.

Wrought Iron Pony Truss with pin connections.

40 ft span centres of bearings.

Quantities in one span.

510

	Ins.	Cu. ft.	Dz.	Lbs.
In top boom	3	2	1	0
In bottom chords	0	11	2	0
In diagonals	0	11	2	21
In verticals	1	4	2	14
In steel pins, screws, C.I caps, and large washers.	0	6	2	21
In intermediate cross girders	1	17	0	14
In end cross girders	1	3	2	0
In longitudinal girders and fastenings	3	1	1	0
In railings, standards, and fastenings	1	3	0	21
In timber bolts & clamps	0	5	1	14
In wind bracing, gussets, and fastenings	0	14	1	21
In C.I bed and bearings, plates, and Lewis bolts	1	4	3	0

Total for one span complete 15-6-1-14

Extra Quantities per span.

20 per cent. of all sizes of bolts, nuts, and washers.	0	3	2	0
10 per cent. of large washers and caps for pins.	0	0	2	0
Double-ended spanners for $\frac{3}{4}$ " bolts & nuts			1	dozen
" for $\frac{5}{8}$ " and $\frac{7}{8}$ " bolts & nuts			$\frac{1}{2}$	dozen

15-10-1-14

or say $15\frac{1}{2}$ Tons for one span

31 Tons for two spans.

31 Tons at $162\frac{1}{2}$ ^{oh} per Ton including
Current year's exchange } \$ 5037.8--

31 Tons at \$21-3-- per Ton including
Current year's exchange for freight } \$ 656-13--

Total for Iron work \$ 5694-5--
Fitting charges -- 200

Add the following items ^{from the} as per Estimate
Submitted for Sanction. --

7520 cft - concrete in Chunnam @ $11\frac{1}{4}$ per 100 cft = 870 --

33728 cft - Rough stone in Chunnam @ $12\frac{1}{4}$ = 4363 --

54 $\frac{1}{2}$ sq ft - Rough pointing @ $2\frac{1}{4}$ per sq ft = 136 --

1200 cft - Rough stone recruitment @ $4\frac{1}{4}$ per 100 cft = 48 --

54 cft - Cub stone @ $40\frac{1}{2}$ = 22 --

N^o 4 - Guard stones @ $2\frac{1}{4}$ each = 10 --

Excavation foundation & filling in -- 300 --

Baling -- 250 --

Scaffolding -- 50 --

11943-5--

Contingencies at $4\frac{1}{2}$ percent = 528

Petty supervision at 5 percent = 587-6--

Grand Total \$ 13059 --

Deduct for wooden bridge \$ 9200 --

Difference \$ 3829 --

N.B. No provision has been made in the Estimate for fitting at site which may be taken about \$200. But as the estimate has been framed on the type design for 40 ft span whereas only 2 spans of 37 ft is required, the additional charge may cover cost of fitting at site.

Wm
12.2.89

12.2.89

Cs 1058/89

Estimate for an iron
bridge prepared
according to type
design No. 15 for
the Maddern Drain
near Timmapuram
in the Godavari Dist.

Estimate Rs ¹³⁰⁵⁹
~~12859~~

131 R
C. W. R.
PUBLIC WORKS DEPARTMENT.

Rs 510 W

3P

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 20 Feb/89

Read the following

From the Superintending Engineer, I Circle, No 2838
D. 28th January 1889.
Note by the Chief Engineer, P.W. Department dated
February 1889 —

The estimate amounting
to Rs 9230, for constructing
a wooden bridge across
the Maddern Drain near
Timmapuram in the
Godavari District is sanctioned.

2. The suggestion of the
Chief Engineer that an iron
bridge be substituted for
the proposed wooden bridge
will however be referred
to the District Board for
consideration.

3. This sanction has
been registered as Local
No. 21 W of 1888-89.

To the Deputy Engineer I Circle
" Local Municipal
Dept with 3 Enclos.
& rough estimate.

(To the Chief Secy for favor
of counter-initials)

12.2.89

C. W. R.
12/2/89

[Handwritten signature]

CHIEF SECRETARY
15 FEB 1899
GOVERNMENT OF MADRAS

7-10-1899

[Handwritten initials]

13.2.89.
R. 16.2.89
R. 20.2.89

4

50

14

Gabt. of (1889) Madras.

PUBLIC WORKS.

Dated

Recd.

Encl.

G.O. No. 14 1889 No. 570 W

Wooden Bridge

Let for a — across
the Maddur Drain
near Tirumapuram
in the podanari St.,
sanctioned with re-
marks.

90
14

(14)

2