

(1) Number of pages 1(2) Date of repair 14-3-37(3) Initials of the Referencer Q**MADRAS RECORD OFFICE.****Government of Madras.***Public Works* **DEPARTMENT.**

G.O. No.	2532	Press Mis.
113-14 Dated	8-12-	1860.

Not to be folded or roughly handled

No. 113. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Acting Secretary to Government, dated Chepauk, 30th November 1860, No. 7,527:—

SIR,

No. 84, dated 15th October 1859.
In Proceedings of Government, No. 2,524, dated 26th October 1859.

1 Letter from District Engineer, Godavery, No. 1,093, dated 5th November 1860.
1 Abstract Estimate.
1 Report.
2 Plans.

1. In paragraph 6 of his Minute on the Godavery, &c., the late Governor Sir C. Trevelyan wrote as follows:—"The town of Cocanada consists of Cocanada proper on the northern, and Jagganaikpuram on the southern side of the river. These places are joined by a temporary narrow wooden bridge in a very rickety condition. The early construction of a Stone or Iron bridge, or of one partly composed of both these materials, is an indispensable improvement, and a Plan and Estimate should be called for. On an average 13,000 persons passed over this bridge every day last year," and in the Order of Government, No. 2,524, dated 26th October 1859, the Chief Engineer was desired to call for and submit an Estimate for the same.

2. In paragraph 7 of my Diary of Proceedings in the Godavery District, I reported generally on the proposed design for the new bridge, stating that it was to consist of "five arches, the centre arch 80 feet span and the side arches 56 and 38 feet respectively," but in paragraph 2 of their Order No. 1,124 of the 30th May 1860, Government expressed a belief that 80 feet was a span not yet attempted in this country nor did such an opening appear necessary, and for other reasons also given, they desired that a revised design should be submitted.

No. 9,030, dated 11th January 1860. 3. The late Chief Engineer recommended 40 feet as a limitation size for the arches, and as affording ample way for any boat to pass. A plan of bridge was accordingly forwarded by the District Engineer having 7 arches of that span, but as the increased depth to be given to the river by means of dredging, as part of the improvements to be carried out at the above port renders a great height of piers necessary, the design had an unsightly appearance, so that I thought it better to revise it in the Central Office, giving arches of dimensions better proportioned to the general height of the work, and at the same time not exceeding the limits which have already been successfully attained in bridge building in this country.

4. Such a design is that which I have now the honor to forward. The centre arch is to be 63 feet (which is only 6 inches more than that which spans the Veerasholagen river near Myaveram in the District of Tanjore) the two adjoining arches are to be 58 feet, and those next to the bank 53 feet, by this means additional height will be afforded for boats to pass through the centre arch, while the incline of road caused thereby (being only a gradient of 1 in 60) will offer no inconvenience to the traffic.

5. In their order before quoted, Government directed that care should be taken that full provision be made in the Estimate for the necessary means of laying the foundation under water. The practice in England of forming coffer dams of double rows of timber driven by pile drivers, and strongly braced together, and filled in between, round each pier, and then pumping out the water from the space enclosed is not ordinarily followed in this country. The Acting District Engineer has provided for the usual temporary earthen bunds, above and below, to shut out the summer waters of the Yallairoo on the one hand and the tidal waters on the other, in fact for making a well rivetted earthen, in lieu of a wooden coffer dam. As no doubt immense difficulty will be experienced in keeping under the water, a large item has been allowed for "Bailing."

6. As His Excellency Sir C. Trevelyan suggested also a bridge partly of masonry, and partly of iron, Captain Stoddard has forwarded in addition to the foregoing, a very neat design for a wrought iron Girder Bridge (with piers of masonry) of 3 bays of 100 feet each. The amount required for this structure is about double what the design above treated of would cost, and is, I fear, so high as to render it unlikely to find acceptance with Government.

Estimate sent for sanction... 62,850
Girder Bridge.. .. 1,35,000

7. There is much in the circumstances of the port of Cocanada to justify me in applying for a liberal outlay on its improvement, and I have the less hesitation in advising the construction of a handsome, though costly, bridge across the river at that place, because I see no reason why it should not be made eventually to repay itself by establishing a toll.

8. The Estimate which I have now the honor to forward for the bridge of masonry, amounts in the aggregate to Rupees (62,850) sixty-two thousand eight hundred and fifty, which has been carefully examined in this Office and corrected where required, and the early permission of Government is solicited for its entry in the Budget of 1861-62, and for work to the value of Rupees (35,000) thirty-five thousand, being executed in that year.

Proceedings of the Madras Government, Public Works Department,
8th December 1860.

No. 114.

ORDER THEREON, 8th December 1860, No. 2,532.

26th October 1859, No. 2,524, paragraph 4.
30th May 1860, " 1,124, " 2.

1. Pursuant to the orders noted in the margin, the Chief Engineer submits for entry in the Budget for 1861-62 a Plan and Estimate amounting to Rupees 62,850 for a masonry bridge, in lieu of the existing wooden bridge, over the Cocanada river in the Godavery District.

2. The Governor in Council is not of opinion that this project is one which he can recommend for the sanction of the Government of India, when more important lines of traffic are left unbridged; such as the Palár in the Madras District, the Vellár near Chellambram in South Arcot, and several others. Till the wants of such important lines are supplied, it seems best to repair the existing Cocanada bridge. The Chief Engineer is requested to state whether this structure is unsafe in its present condition, and if so, what amount of outlay will be required to render it secure.

(Signed) J. D. SIM,
Acting Secretary to Government.

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Central Office of Public Works
Chepauk 30th November 1860.

N^o 7527.

From,

Lieutenant Colonel W. H. Horsley,
Chief Engineer D. P. W.

To,

J. D. Sim Esquire
Acting Secretary to Government P. W. D.
Fort Saint George.

Roads and
Communication

Sir,

In Para 6 of his Minute on the
N^o dated 15th Oct^r 59. Godavery &c the late Governor Sir C. Trevelyan
In Pro. of Govt N^o 2524.
dated 26th October 1859. wrote as follows:- "The town of Cocanada
"consists of Cocanada proper on the Northern,
"and Jagganaitpuram on the Southern
"side of the River. These places are joined
"by a temporary narrow wooden bridge in a
"very rickety condition. The early construction
"of a Stone or Iron Bridge, or of one partly
"composed of both these materials, is an
"indispensable improvement and a plan and
"estimate should be called for. On an average
"13,000 persons passed over this Bridge
"every day last year," and in the Order
of

of Government N^o 2524 dated 26th October 1859,
the Chief Engineer was desired to call for
and submit an Estimate for the same.

2. In Para 7 of my Diary of Pro-
ceedings in the Godavery District I reported
generally on the proposed design for the new
Bridge stating that it was to consist of five
"Arches the centre Arch 80 feet span and
the side Arches 56 and 38 feet respectively,"
but in Para 2 of their Order N^o 1124 of the
30th May 1860 Government expressed a
belief that 80 feet was a span not yet at-
tempted in this Country nor did such an
opening appear necessary, and for other
reasons also given, they desired that a revised
design should be submitted.

3. The late Chief Engineer recom-
mended 40 feet as a limitation size for the
Arches, and as affording ample way for
any boat to pass. A plan of Bridge was
accordingly forwarded by the District
Engineer having 7 Arches of that span,
but as the increased depth to be given
to the River by means of dredging, as a
part of the improvements to be carried
out at the above port renders a great
height

N^o 9030 dated
11th January 1860.

63, 58, 53

36
height of Piers necessary; the design had an
unsightly appearance, so that I thought
it better to revise it in the Central Office,
giving Arches of dimensions better pro-
portioned to the general height of the
work, and at the same time not exceeding
the limits which have already been suc-
cessfully attained in Bridge building in
this country.

4. Such a design is that which
I have now the honor to forward. The centre
Arch is to be 63 feet (which is only 6
inches more than that which spans the
Veerasholagen River near Myavaram in
the District of Tanjore) the 2 adjoining
Arches are to be 58 feet, and those next
to the Banks 53 feet, by this means ad-
ditional height will be afforded for boats
to pass through the centre arch, while
the incline of road caused thereby (being
only a gradient of 1 in 60) will offer
no inconvenience to the traffic.

5. In their order before quoted
Government directed that care should
be taken that full provision be made
in the Estimate for the necessary means
of

of laying the foundation under water. The practice in England of forming coffer dams of double rows of timber driven by pile drivers, and strongly braced together, and filled in between, round each pier, and then pumping out the water from the space enclosed is not ordinarily followed in this country. The Acting District Engineer has provided for the usual temporary earthen bunds, above and below, to shut out the summer waters of the Gailairoo on the one hand and the tidal waters on the other, in fact for making a well rivetted earthen, in lieu of a wooden coffer dam. No doubt immense difficulty will be experienced in keeping under the water, a large item has been allowed for in 'Baling'.

Rupees 7000.

b. As His Excellency Sir C. Trevelyan suggested also a Bridge partly of Masonry, and partly of Iron, Captain Stoddard has forwarded in addition to the foregoing a very neat design for a wrought Iron Girder Bridge (with Piers of Masonry) of 3 Bays of 100 feet each. The amount required for this structure

62850. is about double what the design above
5000 treated of would cost, and is I fear so high as to render it unlikely to find acceptance with Government.

7. There is much in the circumstances of the Port of Cocanada to justify me in applying for a liberal outlay on its improvement; and I have the less hesitation in advising the construction of a handsome, though costly, Bridge across the River at that place, because I see no reason why it should not be made eventually to repay itself by establishing a toll.

8. The Estimate which I have now the honor to forward for the Bridge of Masonry amounts in the aggregate to Rupees (62,850) sixty two thousand eight hundred and fifty, which has been carefully examined in this Office and corrected where required, and the early permission of Government is solicited for its entry in the Budget of 1861/62, and for work to

to the value of Rupees (35,000) Thirty five thousand, being executed in that year.

I have the honor to be,
Sir,
Your Most Obedient Servant,
W. Rossall Lieut. Col.
Chief Engineer.

Central Office of
Chepauk
30th November 1860

A.B. Lieut. Colonel
No. 1 Dep. Chief Eng. N. C.

To,
J. D. Sim Esquire
Acting Secretary to Government P. W. D.
Fort Saint George.

E. J. W. Harper

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Government

Read the following

Letter from the Blue Eagle

Submits and recommends for
entry in the Budget of 1861/62
Plans and Estimate amounting
to Rs 5,850 for the construction
of a Bridge over the Cocanada
River in the Godavari District

(Kier. index 3d inter 60.10)

26 Oct/99 No 2524 para 10.
30 May/00 - 1124 - 2

Return to the

orders noted in the margin,
the Chief Engr. submits
for entry in the Budget for
1861/2 a plan and estimate

amounting to \$2050 for
a masonry bridge, in lieu
of the existing wooden bridge
over the Coanada river in
the Godavery district

2. The Gov^{mt} is not of opinion that this Report is one which he can recommend for

He,

26 Oct 1859 - 83-84 -
30 May 1860 - 153-154

4

1668 Defiant
May 25 for 1000
1892.

d. J. J. Fine & Co
Hoboken N. J.
East River Bridge.

etate 30^{ae} Novembris 1866
 Dec 14th Dec 1866

Dr. J. C. H.
Enclosure 5. 1864

district and warrants for entry in Budget of 1861/62 in favor of district amounting to \$4,850 for the construction of a bridge over the Occochee River in the Capital District.

Ms. A. 9.2.13.

3-5 Dec 1974

No 7537. 8.^e. Demander

Th. M. Arnold

We want other bridges, where there are none at all now are more important lines of traffic - viz the Palace at Changchun. The Yellow River near Chienmen without which the new great Colerom bridge loses in value. We then the Southern traffic into Hedong requires a better roadway than the Harbin bridge affords. Still there are important wants are supplied. It seems best to patch up the Coramida bridge.

of the present case -
- another Person is
not unsafe or con-
trary to the public
be made to see, the
injection of this new
Bridge had better
be deferred till
the future are more
abundant. It is
important that the
Palliser & Keller
Rivers should be
bridged & they no
doubt it will be
before a new bridge
is built at the mouth
of the river one mile
made to last better
than a new one.
The Palliser River R.
has sufficient water in

James M. Wall

Went as indicated for

the sanction of the Govt
of India, the most im-
portant lines of traffic
are left unprotected, such
as the Palār in the Madras
district, and the Kollār near
Chellambur in the
Creek. Till the wants
of such important lines,
are supplied, it seems best
to repair the existing
Coconut bridge. The
Chief Eng^r is requested
to state whether this
structure is unsafe in
its present condition,
and to state amount of
outlay to be required
to render it secure.

Sd/-

Copies
to the Chief Engineer with 5 copies
Distt V.