

(1) Number of pages _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 481,482	2058	Press Mis.
Dated	28 8	18 12.

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
28th August 1872.*

No. 481. Read the following letter from the Consulting Engineer for Railways, to the Secretary to Government, Public Works Department, dated Madras, 3rd August 1872, No. 412:—

I HAVE the honour to report, for the information of Government, that I inspected, on the 30th ultimo, the new bridge which is now under construction across the Cheyaur river on the North-West Line of the Madras Railway.

2. The estimate for the bridge, amounting to Rupees 5,19,232, was sanctioned by the Government of India on the 8th December 1871.* It is to consist of

* *Vide* G. O., 10th January 1872, No. 68.
forty-six openings, each 70 feet from centre to centre of piers, and spanned by wrought-iron girders. Of the forty-five piers, thirteen are to be formed of masonry founded upon rock, and the remainder of cast-iron cylinders, 6 feet in diameter, carried down to the rock.

3. At the time of my visit, the south abutment and the five piers next to it were completed up to girder level. Pier No. 7 was also nearly completed. In the case of pier No. 6, the coffer-dam has been sunk to its full depth, but the commencement of the foundation has been delayed partly by freshes in the river and partly by the necessity of removing large boulders which were here found to overlie the surface of the rock. At pier No. 9, the coffer-dam was being prepared.

4. The north abutment is designed to rest on five wells of brickwork in chunam, sunk to a depth of 40 feet, the thickness of the brickwork in each well being 3 feet. I found that one of these wells had been sunk to a depth of 15 feet, and that the construction of another had been commenced. The iron work for the cylinders has not yet been received from England.

5. In preparing for the foundations of the piers, two direct action steam pumps are used with very great success. They are on Gwynne's centrifugal principle, and can each discharge 1,200 gallons of water per minute.

6. In sinking the wells at the north abutment, one of Bull's patent dredgers is used, also with marked success. It has been found to raise about $1\frac{1}{2}$ cubic feet of sand at each hoist.

7. The masonry in the abutment and piers which have been built is excellent, and does great credit to Mr. West, the Engineer in charge. In the foundations the material used is a hard sandstone found in the neighbourhood; but the upper part of the masonry consists of the fine blue limestone brought from the Nurjee quarries, about 50 miles distant.

No. 482. ORDER THEREON, 28th August 1872, No. 2,058.

RAILWAY, No. 78.

His Excellency the Governor in Council has received with satisfaction the testimony borne by the Consulting

Engineer to the good progress and excellence of the work in course of execution for the re-construction of the Cheyaur bridge.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the Consulting Engineer for Railways.
Encl. E. C. Shunker.

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE.

No. 412

From

Lieut. Col. J. H. B. Shaw Stewart, C.E.,
Consulting Engineer for Railways,

To

Colonel J. W. Walker, C.E.,
Secretary to Government,
Public Works Department,
Fort Saint George.

SIR,

I have the honour to report,
for the information of Government, that I inspected,
on the 30th ultimo, the new bridge which is
now under construction across the Chyau river,
on the North-West line of the Madras Railway.

The estimate for the bridge,
amounting to Rs 5,19,232, was sanctioned by

vide G.O. 10th January 1872. No. 68. the Government of India on the 8th December 1871. It is to consist of 46 openings, each 70

feet from centre to centre of piers, and spanned
by wrought-iron girders. Of the 46 piers, 13 are to

be

be formed of masonry-founded upon rock, and the remainder of cast-iron cylinders, 6 feet in diameter, carried down to the rock.

3. At the time of my visit, the south abutment and the five piers next to it were completed up to girder level. Pier N: 7 was also nearly completed. On the case of pier N: 6, the coffer-dam has been sunk to its full depth, but the commencement of the foundation has been delayed, partly by freshes in the river, and partly by the necessity of removing large boulders which were here found to overlie the surface of the rock. At pier N: 9 the coffer-dam was being prepared.

4. The North abutment is designed to rest on five wells of brickwork in chunam, sunk to a depth of 40 feet, the thickness of the brickwork in each well being 3 feet. It is found that one of these wells had been sunk to a depth of 15 feet, and that the construction of another had been commenced. The iron work for the cylinders has not yet been received from England.

England.

5. In preparing for the foundations of the piers two direct action steam pumps are used with very great success. They are on Gwynne's centrifugal principle, and can each discharge 1200 gallons of water per minute.

6. In sinking the wells at the North abutment one of Pull's patent dredgers is used, also with marked success. It has been found to raise about $1\frac{1}{2}$ cubic feet of sand at each hoist.

7. The masonry in the abutment and piers which have been built is excellent, and does great credit to Mr West, the Engineer in charge. In the foundations the material used is a hard sandstone, found in the neighbourhood; but the upper part of the masonry consists of the fine blue limestone, brought from the Purja quarries, about 50 miles distant.

I have the honour to be

Sir

Your most obedient servant

Wm. M. M. M. M. M.

Cons. Engineer for Railways.

Madras
3rd August 1873

July 2058 J. M. Seph

Proceedings of the Madras Government
Under date the August 1872
Read the following

From the Comd. Engrs
for Railways (Here enters No 412 of 3 Aug 72)

His Excellency the
Governor in Council has
received with satisfaction
the testimony borne by
the Consulting Engineer
to the good progress and
excellence of the work in
course of execution.
for the recon-
struction of the Cheyair
bridge.

A. A.
J. H.

36/2

The Comd. Engineer
for Railways!
Recd 3/9/72

W. M.

Mr. 1872 Richard
Proprietor for Engrs.
No 3786.

RAILWAY DEPARTMENT.
1872.

From
The Consulting Engineer
for Railways,

To
The Secretary to Government,
P. W. Department,
Fort Saint George.

Dated 3/1 Aug 72
Recd 3/1 Aug 72.

No 412

Submitted by
Mr. Cheyair Bridge
made in 30 sections.

No 2058. 28 Aug 72.

Recd 6/10/72

C/3786

Govt. of 1872 Madras.

PUBLIC WORKS. ✓

To the Consulting Eng^s
for Railways.

Dated

Recd.

Encl.

G. O. 28th Aug. N. 2058.

Nos. 48/4482

Cheyar Bridge on the N. W.
line of the Madras Ry.
Expressing satisfaction
~~at the~~ at the good
proper excellence
of the work in course
of execution for the
reconstruction of the
Cheyar Bridge.