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(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works

DEPARTMENT.

G.O. No.

15

Press
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Dated

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Not to be folded or roughly handled

No. 28. Read the following letter from Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 27th December 1876, No. 649:—

In continuation of my letter, No. 578, dated the 24th November 1876, I have the honor to lay before His Grace the Governor in Council a Note by Captain Coaker,

Deputy Consulting Engineer, upon the
Dated 22nd December 1876. state of progress of the works upon the

section of the South Indian Railway between Tindevanum and Cuddalore.

2. There seems to be every prospect that this part of the Company's system will be opened for passenger traffic on the 1st January. I propose to make a final inspection during this week; and, subject to the result of that inspection, I have authorized the Agent to open the line to the public.

Note on an Inspection of the Tindevanum-Cuddalore Section of the South Indian Railway with a view to its being opened for public traffic on the 1st January 1877.

This section extends from 76 to 128 miles from Madras and comprises six stations; their names and distances being as follows:—

	MILES.
Vickravandi	91
Villapoorum	99
Panrutti	111½
Nellikuppum	119½
Tirupapuliyur	125½
Cuddalore	128

The steepest gradient is 1 in 200, except in the inclines for crossing the Thondyar, Pennar, and Guddelum rivers which are made 1 in 60.

The fencing is incomplete. On the greater part of the section the aloe appears to thrive well, and, with the addition of the sanctioned quantity of wire, an efficient fence may eventually be attained.

This inspection was made in company with the Acting Deputy Chief Engineer on the 19th, 20th and 21st December, so that a period of ten days was then available for completing the various works. I propose to deal with the standard requirements in the order in which they are given in the Proceedings of Government, dated 10th April 1876, No. 945.

(1.) The permanent-way of the main line is complete throughout, with the exception of fang-bolts for a few lengths of rail on each side of some of the bridges where the road has only lately been made up. At two of the stations (Panrutti and Nellikuppum) the through sidings are not complete, but these will probably be ready in a few days. A good deal of ballasting remains to be done in miles 87 to 89 and 92 to 95, where the line also requires lifting and packing, and the rails want to be straightened. These lengths are now being worked at vigorously, and there seems every probability of their being brought up to standard by the date fixed for opening.

(2.) The erection of the permanent telegraph by Government has just been completed, and the offices will be ready in a few days.

(3.) The station buildings are well advanced, and all passenger requirements should be met by 1st January. It is not proposed, I believe, to open for goods until somewhat later.

(4.) Cuddalore will be a locomotive depôt; but the engine-shed is very backward and some temporary provision seems necessary. The ash-pits are nearly completed, and it is proposed to erect a temporary shed over one or more of them and to complete the washing-out arrangements. The iron roof has not yet been received from England.

*Proceedings of the Madras Government, Public Works Department,
5th January 1877. No. 15.*

(5.) All Station-masters' bungalows will, it is believed, be ready for occupation by 1st January. At Cuddalore one double bungalow for drivers will, it is hoped, be completed by the same date, and another ten days later. This will provide for the present requirements of the Traffic Department; the ballast drivers now live in the town where accommodation is easily procured.

(6.) The watering arrangements at Villapoorum, Panrutti, and Cuddalore are nearly completed, and should be in working order on 1st January. The supply of water is short at the two first-named stations, and the wells are to be deepened or supplemented by others. At Vickravandi, which it has been recently determined to make a watering station so as to provide against a possible failure of the supply at Villapoorum or Tindevanum, it will probably be necessary to erect a temporary tank in the first instance.

(7.) Most of the gates are in position, and it is believed that all will be ready by 1st January. In cases where this is not found practicable barriers should be erected and the fencing be made up on both sides. The gate-lodges are for the most part completed.

(8.) The telegraph number plates are being removed from the temporary to the permanent posts, and will all be in position by 1st January.

(8a.) The turn-table at Cuddalore should be ready by 1st January. It would appear desirable to retain the triangle at Tindevanum for the present, as it would be a convenience in case of interruptions to traffic at the temporary bridges across the large rivers.

(8b.) Only a few of the gradient posts are erected, but arrangements have been made for completing these within the date fixed.

(9.) This requirement has been complied with.

(10.) Do. do.

(11.) The following are the large bridges:—

	No. of Spans.	Span.	Distance from Madras.	
Thondyar			MS.	CHS.
Ginjee	2	100	84	29
Vickravandi	11	30	85	69
Pombay	5	30	92	14
Pillur	3	30	97	4
Pennar	3	40	103	41
Guddelum	17	100	105	3
Cuddalore backwater	10	100	124	4
	1	70	127	34

The bridges over the Thondyar, Pennar and Guddelum will not be completed till next year, and these rivers will for the present be crossed on temporary roads laid along the bed, with three, fifteen and ten openings respectively, each of 15 feet span, to pass the water during slight freshes. These temporary bridges are complete, excepting the Guddelum where the baulks are not yet put on. This will, however, be ready by 1st January. At all these rivers the precautions adopted at the Palar will be observed.

The 30 feet and 40 feet spans have plate girders, which have been tested satisfactorily, the deflection being .25 inch with standing, and .31 inch with running load, the results showing but little variation throughout. In the 70 feet span across the Cuddalore backwater, the girders are of the same type as those in the Adyar bridge, but the roadway is suspended from the bottom boom. The testing gave satisfactory results; diagrams were taken for both the top and bottom booms, and the total oscillation did not in any case exceed .31 inch; the deflection being .30 inch with standing, and .70 inch with running load. The minor bridges are complete throughout, except in about six cases where the rail bearers have not been put on; these can, however, be made ready by the date fixed. Uniformity has been observed in the bedding of the girders and rail bearers, and the general finish of the bridges is excellent.

*Proceedings of the Madras Government, Public Works Department,
5th January 1877. No. 15.*

(12.) The semaphores will, it is hoped, be ready by the 1st January, though there seems some doubt about the distant signals for Villapoorum. As the platform signal is already in position and is well seen from both sides, I think the absence of distant signals in this case need not delay the opening of the line.

Under heads 3, 4 and 6 discretion is allowed to the Agent to open the line with the accommodation available and, subject to the points here noted regarding the other requirements being complied with, I would recommend that sanction be given for the opening of the line on 1st January 1877.

MADRAS,
22nd December 1876.

(Signed) W. H. COAKER, Captain, R.E.,
Dy. Consulting Engineer for Railways.

No. 29.

ORDER THEREON, 5th January 1877, No. 15.

RAILWAY, No. 5.

THE opening of the section in question on the 1st January 1877 is approved, subject to the result of the Consulting Engineer's prior inspection.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. E. C. Shunker.
Spare Copies

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Notes on inspection of the
Indwani - Buddalur section
of the South Indian Railway with
a view to its being opened for public
traffic in the 1st January 1877.

This section extends from
76 to 120 miles from Madras, and
comprises six stations, the names
and distances being as follows:

Vikravandi 11 1/2

Villapooram 99

Pinnittu 11 1/4

Kelikkuppam 119 1/2

Tirupapulur 125 1/2

Buddalore 120

The steep gradient is not so
except in the incline for crossing the

Shandyam Canal and Buddalore

where the incline is not so steep.

The fueling is incomplete. But

the greater part of the section there is

also appears to show with and with

the addition of the sanctioned

quantity

is very backward and some temporary provision seems necessary. The depots are nearly completed, and it is proposed to erect a temporary shed over one or more of them, and to complete the watering-out arrangements. The iron roof has not yet been received from England.

(5) All station masters' bungalows will, it is believed, be ready for occupation by 1st January. At Buddalur one double bungalow for drivers will, it is hoped, be completed by the same date, and another ten days later. This will provide for the present requirements of the Traffic Department: the bullash drivers now live in the town where accommodation is easily procured.

(6) The watering arrangements at Villapooram, Peruvelli, and Buddalur are nearly completed, and should be in working order on 1st January. The supply of water is shut at the two fresh-watered stations and the wells are

are to be depended on supplemented by others. At Vicerandi, which it has been recently determined to make a watering station so as to provide against a possible failure of the supply at Villapooram or Induram, it will probably be necessary to erect a temporary tank in the first instance.

(7) Most of the gates are in position, and it is believed that all will be ready by 1st January. In cases where this is not found ^{practicable} possible barriers should be erected, and the fencing be made up on both sides. The gate hedges are for the most part completed.

(8) The telegraph number plates are being removed from the temporary to the permanent posts, and will all be in position by 1st January.

(9)

(85) The timetable at Buddalane should be ready by 1st January. It would appear desirable to retain the triangle at Buddalane for the present with only the convenience in case of interruptions to traffic with the temporary bridge across the large overpass.

(86) Only a few of the gradient posts are in place but arrangements have been made for completing these within the date fixed.

(87) The arrangements for the construction of the bridge at Buddalane are as follows:

(88) The following are the large bridges.

	Span	Span	Distance from Buddalane
Thandyan	2	100	84.29
Ginjee	11	30	85.69
Vickravandi	5	30	92.14
Pombay	3	30	97.4
Pillur	3	40	103.41
Pannar	17	100	105.3
Buddalane	10	100	124.4
Buddalane backwater	1	70	127.34

The bridge over the Thandyan, Pannar and Buddalane will not be completed till next year, and therefore will for the present be covered with temporary spans. The spans are 30 feet and 40 feet respectively, and of 15 feet span to pass the water during slight floods. These temporary bridges are complete excepting the Buddalane where the banks are not yet put on. This will however be ready by 1st January. At all these points the precautions adopted at the Palar will be observed. The 30 feet and 40 feet spans have plate girders, which have been tested satisfactorily, the deflection being .25 inch with standing, and .31 inch with running load, the results showing but little variation throughout. In the 70 feet span across the Buddalane backwater

(12) The newspaper will be
is hoped be ready by the 1st January
though

Under heads 3, 4 and 6 discretion is allowed to the Agent to open the line with the accommodation available, and subject to the points here noted regarding the other requirements, being complied with, I would recommend that sanction be given for the opening of the line on 1st January 1877.

Wm. Mapho
Expenses Super Pachung.

10²
Company's system will be opened
for passenger traffic on the
1st January. I propose to make
a final inspection during this
week; and, subject to the result
of that inspection, I have autho-
rized the agent to open the line
to the public.

I have the honor to be,

Sir,

Your most obedt servant

Maudslayi

Lt Col R R E.

Cms: Capt J. G. G.

G6 No 945-10 app/6

P.W.D.
89DEC76
NR. 9500

W 1575-1007
The opening of the
Section in question on
the 1st January 1877 is
approved. Subject to
the result of the
Consulting Engineer's
prior inspection.

G.M.

Cd for Pp. 12-1-77

State of inspection
by Captain Carlier
upon the state of
progress of works
on the section of 9.000
Return and return
and (Canada) 12-1-77

H.I.

Dated 27th } December 1876.
Received

No. 149.

To
The Consulting Engineer
for Railways,
RAILWAY DEPARTMENT.
The Secretary to Government,
P. W. Department,
Fort Saint George.

25-5-36

9870
Govt. of Madras.

PUBLIC WORKS.

To Hon. Secy. of P.W.D.

Dated

Issued

Recd.

Encl.

O. O. S. 1870 No. 15

Nos. 28 & 29. —

Letter between Mr. [unclear]

& Mr. [unclear] S. S. [unclear] —

The [unclear] of the —

on the 1st Jan'y 77, [unclear] —

— and, [unclear] to the [unclear] —

— list of the Consulting [unclear] —

— [unclear] [unclear] —

Not in [unclear]

29-14-76