

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1577	Press
B.P. No.		Mis.
Dated	4 - 6 -	C875 - 195 -

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
4th June 1875.*

No. 109. Read the following Proceedings of the Government of India, Public Works Department, (Railway,) dated Simla, 15th May 1875, Nos. 1,233—38 R. :—

Provisional list of standard dimensions proposed for adoption on Indian Railways, on the metre gauge and on the 5' 6" gauge.

Read again—

Public Works Department, Nos. 772—76 R., dated 13th April 1874, to the Governments of Madras and Bombay, and to the Consulting Engineers for Guaranteed Railways at Calcutta, Lahore, and Lucknow.

Read also—

From Consulting Engineer for Guaranteed Railways at Lucknow, No. 812, dated 17th April 1874.

From do. No. 1,009, dated 8th May 1874.

From Government of Bombay, No. 711, dated 19th May 1874.

From Consulting Engineer for Guaranteed Railways at Lahore, No. 708, dated 23rd May 1874.

From do. No. 758, dated 9th June 1874.

From Government of Bombay, No. 874, dated 24th June 1874.

From Consulting Engineer for Guaranteed Railways at Calcutta, No. 1,942, dated 27th June 1874.

From do. No. 2,036, dated 7th July 1874.

From do. at Lahore, " 929, " 10th " "

From do. at Lucknow, " 1,868, " 1st April "

From Government of Madras, No. 2,957, dated 16th October 1874.

OBSERVATIONS.—In the letter above read, dated 13th April 1874, the Government of India observed that there was no uniformity in the dimensions of platforms of the several Guaranteed Railways, or even in those of any one Railway, and that this caused great inconvenience in the conduct and interchange of traffic, that the Government were anxious to consider remedial measures, and in this view called for sections of each description of platform on the several Railways, together with any suggestions which the Railway or Government controlling officers might desire to offer.

2. The Government of India have considered the replies received, and are of opinion that it is highly desirable to prepare a complete list of standard dimensions for all State Railways of the 5' 6" gauge, and to be adopted, so far as is reasonably practicable, on all Railways. It is, of course, not intended that any great expense should be incurred by the Guaranteed Railways, in carrying out such alterations as may be considered advisable. The Consulting Engineer to the Government of India for State Railways, to whom the question was referred, has prepared such a list, which is now circulated with this Resolution. Diagrams will follow. The opinions of the Governments of Madras and Bombay, of the Consulting Engineers for Guaranteed Railways at Calcutta, Lahore, and Lucknow, and of the Director of State Railways, are invited as to the suitability of the dimensions proposed for general adoption.

3. It has been suggested to the Government of India that it would be well to get together representatives from all the Railways in India of the 5' 6" gauge to consider this very important subject, and, if this can be arranged without inconvenience, the Government of India will be glad to see it done. As a preliminary step, the local Governments and Consulting Engineers above named are requested to invite the opinions of the officers of the Guaranteed Railway Companies on the subject of the proposed standard dimensions, and of the suggested meeting to discuss them.

ORDER.—Ordered that this Resolution, with the list of provisional dimensions therein referred to, be forwarded to the Governments of Madras and Bombay, to the Consulting Engineers at Calcutta, Lahore, and Lucknow, and to the Director of State Railways, for consideration and replies to paragraphs 2 and 3.

(Signed) C. H. DICKENS, Colonel, R.A.,
Secretary.

*Proceedings of the Madras Government, Public Works Department,
4th June 1875.*

PROVISIONAL

List of Dimensions to be observed on State Railways in India of one Metre and 5 ft. 6 in. Gauge.

(The letter A denotes that the dimensions refer to the future, not to the past.)	Metre Gauge.		5 FT. 6 IN. GAUGE.			
			Ordinary.		Light.	
	FT.	IN.	FT.	IN.	FT.	IN.
Gauge ...	3	3½	5	6	5	6
" on curves of 660 feet radius ... A	3	3½	5	6½	5	6½
" of 330 " " ... A	3	4				
Minimum distance from centre to centre of tracks outside stations ...	11	10	12	0	12	0
Minimum radius of curve in sidings and difficult country ...	330	0	660	0	660	0
Ditto ditto elsewhere ...	900	0	1,200	0	1,200	0
Formation—						
Minimum width in bank or cutting ...	14	0	18	0	18	0
Standard widths of formation ...	14	0	18	0	18	0
Slope of formation from centre to sides ...	16	0	20	0	20	0
	18	0	22	0	22	0
	1 in 30		1 in 30		1 in 30	
Rolling loads* to be assumed for calculation—						
On a single pair of wheels ... A	6 tons.		12 tons.		7·5 tons.	
Per foot run on a bridge for single line of railway of 6 feet span ...	2		4		2·5	
12 " ...	1·85		3		2·25	
20 " ...	1·5		2·5		1·75	
50 " ...	1		1·5		1·25	
100 " ...	0·85		1·3		1·00	
150 " ...	0·75		1·25		0·85	
Ballast—						
Minimum depth below sleepers ...	FT.	IN.	FT.	IN.	FT.	IN.
" width at top ...	0	6	0	8	0	6
	7	0	10	6	10	0
Sleepers—						
Minimum number per mile ... A	Per mile.		Per mile.		Per mile.	
" standard length ...	2,000		1,760		2,000	
" " breadth ...	FT.	IN.	FT.	IN.	FT.	IN.
" " depth ...	6	0	9	6	9	0
	0	8	0	10	0	9
	0	4	0	5	0	4½
Rails—						
Standard weight per yard ...	40 lbs.		60 lbs.		45 lbs.	
" width of top table ...	1½ in.		2½ in.		2 in.	
" of bottom flange ...	3½		4		3½	
" depth of rail ...	3½		4½		4½	
Minimum clearance of guard rail ...	1½		1½		1½	
Points and crossings—						
Standard lengths of tongue rails ...	FT.	IN.	FT.	IN.	FT.	IN.
" angles of crossings ...	12	0	15	0	15	0
	9	0	12	0	12	0
	5°	30'	5°	45'	5°	45'
	7°	45'	7°	45'	7°	45'
	11°	0'	10°	45'	10°	45'

* These loads are on the rails.

* These loads are on the assumption that not more than three engines on the metre and ordinary 5 ft. 6 in. gauge or two engines on the light 5 ft. 6 in. gauge, are to be allowed on any span at one and the same time.

*Proceedings of the Madras Government, Public Works Department,
4th June 1875.*

List of Dimensions to be observed on State Railways in India of one Metre and 5 ft. 6 in. Gauge.—
(Continued.)

(The letter A denotes that the dimensions refer to the future, not to the past.)	Metre Gauge.		5 FT. 6 IN. GAUGE.					
			Ordinary.		Light.			
	FT.	IN.	FT.	IN.	FT.	IN.		
<i>Stations and fixed structures—</i>								
Minimum distance from centre to centre of tracks in stations ...	11	10	14	0	14	0		
Minimum height above rail level of over bridges or other structures over the railway at centre of any track where the said track has not a passenger platform in use with it. .	11	10	14	6	14	6		
Minimum height above rail level of over bridges or other structures over the railway at centre of any track where the said track has a passenger platform in use with it. ... A	*15	0	*18	0	*18	0		
Minimum horizontal distance from centre of track to passenger platform ...	+4	5	+5	6	+5	6		
Minimum horizontal distance from edge of platform, of pillars, columns or other fixed structures on or about passenger platforms within 7 feet 7 inches, measured vertically of platform level ...	6	0	6	0	6	0		
Minimum horizontal distance from centre of track to any structure not on a passenger platform from 2 feet to 7 feet 6 inches above rail level on the metre gauge or from 3 feet to 9 feet above rail level on the 5 ft. 6 in. gauge.	6	6	7	0	7	0		
Maximum height of passenger platforms above rail level ... A	2	0	3	0	3	0		
Standard ditto at minor stations ... A	1	0	1	8	1	8		
" height of goods platform ... A	2	0	3	0	3	0		
Minimum length of passenger platform clear available length of siding for passing stations ...	350	0	600	0	500	0		
Standard distance of minor passenger station buildings and water tanks from centre of track ... A	1,300	0	2,000	0	1,800	0		
Minimum capacity of tanks ...	20	0	25	0	25	0		
" height of bottom of tank above rails.	300 c. ft.		300 c. ft.		300 c. ft.			
Standard ditto ... A	FT. IN.		FT. IN.		FT. IN.			
" ditto at engine stations ... A	12	0	15	0	15	0		
Minimum height of top of hose of water crane above rails ...	15	0	15	0	15	0		
" " " " " before	30	0	30	0	30	0		
" " " " " "	9	6	10	0	10	0		
<i>Tables, &c.—</i>								
Minimum diameter of carriage turn-table ... A	12	0	15	0	15	0		
" " of engine ...	33	0	45	0	45	0		
Minimum length of traversers ...	13	0	18	0	18	0		
" of weigh bridges ...	14	0	15	0	15	0		
" depth of ash-pits below rails ...	2	6	2	9	2	9		
" of " " " before	3	6	3	6	3	6		
" engine-sheds ...	40	0	60	0	50	0		
" length of ash-pits ...								
<i>Sheds, &c.—</i>								
Standard width of engine and goods-sheds inside.	30	0	35	0	35	0		
Minimum width of goods-shed or engine-shed doors ...	10	0	12	0	12	0		

* In the case of a covered station it is not intended that the underside of the roof framing or any continuous covering should be only 15 or 18 feet from rail level. For such covering 18 feet for the metre gauge and 21 feet for the 5 ft. 6 in. gauge may be regarded as the minimum height except in very exceptional circumstances.

*Proceedings of the Madras Government, Public Works Department,
4th June 1875.*

*List of Dimensions to be observed on State Railways in India of one Metre and 5 ft. 6 in. Gauge.—
(Concluded.)*

(The letter A denotes that the dimensions refer to the future, not to the past.)	Metre Gauge.		5 FT. 6 IN. GAUGE.			
			Ordinary.		Light.	
	FT.	IN.	FT.	IN.	FT.	IN.
<i>Sheds, &c.—(Continued.)</i>						
Minimum height of goods-shed or engine-shed doors if flat at top ...	11	10	14	0	14	0
Do. if arched ...	13	0	16	6	16	6
Maximum width of ordinary loading gauge ...	7	4	10	6	10	6
" height at centre ...	9	10	13	6	13	6
" " at sides ...	9	10	11	6	11	6
<i>Rolling-stock—</i>						
Maximum rigid wheel base ...	A					
Standard do. for passenger stock ...	10	0	14	0	14	0
Do. do. goods do. ...	10	0	14	0	12	0
Maximum gross load per wheel of engines ...	8	0	11	0	10	0
Do. do. do. other vehicles ...	3 tons.		6 tons.		3½ tons.	
Standard section of tire ...	2		4		3½	
Drawing to be agreed upon.						
Minimum diameter of engine driving wheels ...	3	0	5	0	4	0
Do. do. of carriage wheels ...	2	0	3	6	3	0
Maximum projection of tire below rails ...	A					
Minimum distance of tires apart ...	0	1½	0	1½	0	1½
Maximum width of passenger carriage bodies not including brake-van ...	3	0½	5	3	5	3
Standard do. ...	A					
Maximum width of roof, and over-hanging portions ...	7	0	9	0	9	0
Maximum height from rail of any moving vehicle at centre ...	6	9	8	0	8	0
Do. do. at sides ...	8	4	10	6	10	6
Standard height of floor of vehicles above rails ...	11	0	13	6	13	6
Minimum height from inside of carriages at side from floor ...	10	2	11	6	11	6
Standard height of covered goods vans from floor at centre ...	2	5½	4	2	4	2
Do. do. at sides ...	6	2	6	4	6	4
Do. do. of high-sided wagons ...	6	0	6	9	6	9
Do. do. of low do. ...	5	6	5	6	5	6
Do. do. of ballast do. ...	4	0	4	0	4	0
Standard length outside of passenger stock ...	2	0	2	0	2	0
Do. do. goods stock ...	1	0	1	6	1	6
Standard total length over buffers of passenger stock ...	18	0	24	6	24	6
Do. goods stock ...	14	0	16	6	16	6
* Mean height of centre of buffers above rails ...	21	3	27	6	27	
Maximum height of centre of buffers in unloaded wagons ...	17	3	20	0	20	
Minimum height of buffers in loaded wagons ...	1	10	3	6	3	
Do. do. width of doors in passenger carriages ...	1	10½	3	7½	3	
Distance of buffers apart centre to centre ...	1	9½	3	4½	3	
Minimum cubic feet of space in carriages per passenger ...	1	10	1	10	1	10
	20	c. ft.	20	c. ft.	20	c. ft.

* The mean buffer height in engine may be assumed when the fire-box is half full of fuel and the water half way up the gauge glass.
In tenders when the tank is half filled and half of the full supply of fuel stacked.
In passenger carriages when half filled with passengers.
In goods wagons when an equivalent of half the full load is in them.

5th October 1874.

(Signed) GUILFORD L. MOLESWORTH.

*Proceedings of the Madras Government, Public Works Department,
4th June 1875.*

No. 110.

ORDER THEREON, 4th June 1875, No. 1,577.

RAILWAY, No. .

COMMUNICATED to the Consulting
Engineer for Railways with reference to
G. O., No. 2,956, dated 16th October
1874.

2. The subjects of paragraphs 2 and 3 are remitted for report in communication
with the Railway authorities.

(True Extract.)

Major, R.E.,
Offg. Joint Secretary to Government.

To the Consulting Engineer for Railways.

Exd. A. Grubert.
Spare Copies

W. 1875

GOVERNMENT OF INDIA
PUBLIC WORKS DEPARTMENT,
RAILWAY.

No: 3612

To

Nos. 1233-38 R.

Dated SIMLA, May 15, 1875.

Received June 2nd-3

4. 2. 295 / 10 Oct 74
No. 2789. 2nd Oct 74
No. 1236-8th May 74

Carriage for the
SC Road - 17-5-75

30

for

with reference to the No. 2906 dated 16 October 1874
The subject of Memo 2789 and Memo 1236-8th May 74
Communication with the Railway Authorities.

Provisional list of standard dimensions proposed for
adoption on Indian Railways, on the metre
gauge and on the 5' 6" gauge.

109-100

22-7-12 ✓

3612 ✓
Govt. of 1875 Madras.

PUBLIC WORKS.

To

The Engineer-in-Chief

Dated

Issued

Recd.

Encl.

G. O. 4 June 75, No.

15-77

Nos. 109-110

Provisional list of Standard
dimensions proposed for adoption
on Indian Railways, on the
metre gauge and on the 5'6" gauge. - Letter of the Govt.
of India forwarding
communicated
with instructions to the
Consulting Engineer.